2014

VIRTUAL ISSUE NO. 2

The EMERGENCE *of* ANALYTIC PHILOSOPHY *and a* CONTROVERSY *at the* ARISTOTELIAN SOCIETY, 1900-1916

Edited by OMAR W. NASIM

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

VI

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An Aristotelian Society Publication

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Guest Editor OMAR W. NASIM

G. F. STOUT / G. E. MOORE
G. DAWES HICKS / T. PERCY NUNN
S. ALEXANDER / JAMES WARD
CARVETH READ / ABRAHAM WOLF
F. C. S. SCHILLER / BERTRAND RUSSELL

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First published 2014 by
The Aristotelian Society

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The Aristotelian Society, founded in 1880, meets fortnightly in London to hear and dicuss philosophical papers. The Proceedings is published as a journal in one annual print edition, with three online journals appearing via Wiley Online Library in March, June and September. The Supplementary Volume, published annually in June, contains the papers to be read at the Joint Session of the Aristotelian Society and the Mind Association in July. The Virtual Issue, published annually in the autumn, contains classic papers from the Society's archive. Information about individual subscriptions can be found on the Society's website at http://www.aristoteliansociety.org.uk.

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INTRODUCTION

ABOUT THE GUEST EDITOR

Omar W. Nasim is the author of *Bertrand Russell and the Edwardian Philosophers: Constructing the World* (2008); and more recently, *Observing by Hand: Sketching the Nebulae in the Nineteenth Century* (2013). His research interests include the history of early analytic philosophy, and the history and philosophy of science. Nasim is particularly interested in the history of the observational sciences, their practices and how they relate to theories of perception. His work productively spans the fields of philosophy, art history, visual and media studies.

Nasim completed a PhD in philosophy from the University of Toronto, and a few years later a Habilitation in the history of science from the ETH-Zurich (Swiss Federal Institute of Technology). He has worked in Berlin, Florence, Basel, Zurich and Oxford; and at institutes for the history of science, art, the humanities and the image. Currently he is historian of modern science and technology at the School of History at University of Kent and remains a research affiliate at the Research Centre for the Humanities at the University of Oxford.

THE EMERGENCE OF ANALYTIC PHILOSOPHY AND A CONTROVERSY AT THE ARISTOTELIAN SOCIETY: 1900-1916[1]

Introduction

OMAR W. NASIM

I AM DELIGHTED to have the opportunity to introduce a collection of papers reprinted here in one place for the first time. They represent a substantial part of a long and multifaceted polemic that contributed to the emergence of analytic philosophy in Britain at the turn of the last century. As such, I trust that this collection will act as a resource to historians and philosophers alike. Before we get into some of the details concerning the controversy, allow me to make a few remarks about its context and significance.

Critical engagement with the history of analytic philosophy has in recent years led to a growing and veritable enterprise within academia. With its own journal, society, conferences, handbooks, and book series, the study of the history of analytic philosophy is reshaping how we understand not only the appearance of a specific tradition in philosophy, but also the intellectual climate of the nineteenth and twentieth centuries.[2] And despite some recent relapses into teleological and anachronistic narratives of its history, there has been a growing appreciation for contextualized studies that go beyond rehearsing the supposedly linear progress of the standard train of heroes. [3] Although finding intricate ways to include

[1] I would like to thank Matthew Soteriou and the Aristotelian Society for their invitation to guest this Virtual Issue. And I would like to show my gratitude to the editorial staff, but especially to Mark Cortes Favis for his hard work in helping to put this issue together.

[2] See the superb contributions by M. Beaney in the "Introduction" section of *The Oxford Handbook of the History of Analytic Philosophy*, ed. M. Beaney, Oxford, 2013, pp. 3-224.

[3] In recent years few have contributed as prolifically to the teleological brand of historical narrative than Scott Soames; see his *Philosophical Analysis in the Twentieth Century, Volumes 1 and 2*, Princeton University Press, 2003. There have been many valuable critiques of Soames' naïve historiography, but see Michael Kremer, "What is the Good of Philosophical History?" *The Historical Turn in Analytic Philosophy*, edited by Erich H. Reck, 2013, pp. 294-325. I would add that Soames' story of "progress" in philosophy should be regarded as pedagogical—as he himself urges—rather than as an historical work, precisely in the same way many historians of science regard the potted histories of heroes found in introductions to science textbooks written by scientists for science students. Foucault explained that such text-book histories are important for internally

some, while excluding many others on this train might still be interesting to a few, nuanced historical embedding of philosophers like Frege, Russell, and Carnap has only enriched and widened the scope of relevant historical actors. This has had the refreshing effect of putting them back into conversation with forgotten historical trajectories, and, perhaps more poignantly, with neglected persons and ideas, problems and arguments contemporaneous to them. In this there are benefits for both philosophy and history, because in widening the historical scope of a given period, more resources for accurate interpretation of arguments, problems, and positions become available.

Among other things, it is essential to identify such overlapping things as institutions, societies, and persons contemporary to a philosopher of historical interest. There are different ways to embed a philosopher into these and other surrounding features of his or her historical period. But if it can be shown that a philosopher was involved with particular contemporary networks or audiences, it might not only cast new light on the relevance of these to the history of analytic philosophy, but might also speak, for instance, to the motivations involved in a philosopher's choice of problems or articulation of solutions. From choosing which premises to highlight, to the suitability and selection of terminology, and which venues and strategies to employ in communicating problems and their solution, such choices often depended on the audience(s) being addressed by a philosopher. Appreciating the nature of these audiences and their philosophical concerns may thus be paramount in understanding a philosopher's views, and their reception by contemporaries.

It is precisely this kind of exercise that I attempted in my *Bertrand Russell and the Edwardian Philosophers: Constructing the World* (2008). There I was interested in Russell's attempts to directly apply methodological tools he had developed earlier, while working on specific esoteric problems in the philosophy of mathematics, to much broader traditional problems of philosophy. In particular, I was interested in detailing what made Russell's methodological proposals with regard to the problem of the external world—especially as he dealt with them between 1911-1916—as unique and original as he was branding them to be. Doing so provided information about the decisive roles played by Russell's "logical-analytic method," and the technique of logical construction in the early development of analytic philosophy.

What I soon realized, however, was that I had first to recognize *who* Russell was trying to convince when he made enthusiastic claims about his novel method and technique. In search for answers to this question

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consolidating academic disciplines, especially the formal sciences. It is thus no surprise that Soames appeals to the history of logic as his model (Michel Foucault, *The Archaeology of Knowledge*, Routledge, 2002, p. 209).

I uncovered for the first time an extensive polemic that raged for nearly two decades, and chose to flamboyantly label it, for the purposes of the book, the controversy. This long and sustained debate was primarily concerned with the problem of the external world, more generally, and a host of related sub-problems, like, for instance, the nature of the distinctions between reality and appearance, matter and mind, representation and presentation, data and inference or construction. What became apparent was that what counted as the traditional problem of the external world itself was up for grabs thanks to the ways in which those in the controversy managed to reframe it in light of recent intellectual, cultural and institutional developments in psychology, physics, and philosophy. In other words, the problem of the external world was recast at the turn of the last century in ways that did not simply match up with what one might find in Locke, Hume or even Mill.[4] It was in relation to this very controversy, then, that Russell's contemporary forays into the same problem have to be understood, including—but not limited to—his papers: "Knowledge by Acquaintance and Knowledge by Description" (read on March 6, 1911; T. P. Nunn was Chair of session), "Analytic Realism" (1911), and his books, *Problems of Philosophy* (1912), and *Our Knowledge of the External World* (1914).[5] I argued that notions as central to Russell—if not to analytic philosophy—as sense-data, acquaintance, and logical construction (of space, time and matter), when interpreted in light of the controversy, have to be understood in much fuller ways than they standardly had been. And far from simply reducing or dispersing Russell's novelty to others, this historical work enabled me to detail what made Russell's philosophical approach so unique and compelling, especially in relation to those around him who were entangled in similar problems.

Continuity with respect to the issues, persons, terminology, examples,

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[4] Indeed, how could the problems be the same after the radical changes in both the scientific understanding of perception, and everyday sensual experiences of the world? Numerous authoritative historical studies have described how the experience on trains, for instance, artificial lighting, photography, film, and the personal equation altered modes of perception in the nineteenth century; entire scientific treatments, in fact, recognized these changes and studied them (e.g., studies in attention, fatigue, stress and so on). The attentive reader will find significant clues as to how these shaped the work of Russell, who, for example, employed examples such as photography and painting. In the case of the latter, and like Stout (who also centered his psychology on the study of attention), the claim was that painters are better at recognizing things like patches of color in their experience of the world, rather than discrete things like tables. In addition, one of the problems for realists like Moore and Russell—and recognized as such—was the temporal delay, discovered by the physiologists and astronomers, in the sense-experience of the world; cf. H. W. Carr, F. B. Jevons, et. al., "Symposium: The Time Difficulty in Realist Theories of Perception," *PAS*, NS, vol. 12, (1911 - 1912), pp. 124-187.

5 Let us not forget Russell's six articles taken from his unpublished manuscript, *Theory of Knowledge* (written in the spring of 1913), and published in *The Monist* in 1914 and 1915. In these Russell directly engages the psychological work of Stout, among others.

and even metaphors used in the controversy is astounding. It was comprised of a close-knit community of thinkers in Britain, who rarely agreed with one another's overall conclusions or methods, but who, nevertheless, shared a surprising amount of common ground—not to mention that they quite enjoyed a good conversation. This chemistry resulted in at least two commingled features of the controversy and some participants that should be kept in mind. The first is that though many of the contributions are directly addressing issues raised by others in the controversy, it is not always made explicit. So on the one hand, one finds a subtle, fine-tuned, jargon-filled, and sometimes convoluted quality to many of the contributions, which, when taken in the context of the controversy as a whole, often gives away the fact that their moves were governed by the dialectical confines established by previous contributions. But one also finds a tendency to begin again, as it were, as if a reset button were pushed so that the fundamentals might again be considered. As to the second related feature, it has to do with the fact that since the controversy was an on-going and advanced dialectic about a definite set of issues, many, such as G. F. Stout and G. E. Moore, used it as an opportunity to develop and refine their own positions. A number of contributions might thus be regarded as trial runs, dropped as nets into the turbulent waters of the controversy, so that proposals might return with weaknesses exposed or strengths accentuated. One thus finds a productive, two-way give-and-take among those involved. And whether it was G. Dawes Hicks or Russell, few left the controversy as they had entered it.

In order to make sense of the above two features of the controversy we must appreciate something that is easily overlooked but which cannot be stressed enough: though much of the controversy is made up of printed materials, there is a prominent culture of unprinted conversation (mostly face-to-face discussions in seminar rooms, corridors, or private homes, and by way of personal correspondence) that underlies the whole texture of the controversy. It is no wonder that explicit references were often deemed unnecessary in contributions, for many had a pretty good sense of who or what was being addressed. After all, the majority of contributions were first verbally presented at seminars or symposia and discussed in person or by way of letters before they were published. But what were the venues that made this kind of discussion not only possible but also sustained and encouraged it?

One of the things that made this underlying culture of conversation possible was the Aristotelian Society for the Systematic Study of Philosophy, where the controversy first began and where it continued until its end over a decade and half later. The Society was formed in 1880 as a platform for philosophical discussion in London, open to scientists, civil servants, businessman, philosophers without official university posts, and ladies. In contrast to the University of London, one of the only places

where philosophy was academically taught in the city, the Society was an avowedly non-academic space where the young and the old alike could regularly gather to engage philosophy not so much as a discipline but as a life or human interest. And as with so many other discussion circles or societies formed during this period, the Aristotelian Society was initiated in response to major social, cultural, and intellectual upheavals of the *fin de siècle*. In particular, it was formed in reaction to an acute disorientation of the place of philosophy due to its professionalization and to the blows dealt to its cultural status by the successes of the natural sciences. It is thus little surprise that the very first meeting of the newly formed Aristotelian Society on Monday May 3rd, 1880 (a fortnight after its constitution) had for its discussion "What is Philosophy?" opened by a district police surgeon, medical officer with the Post Office, and "a brilliant dialectician" with Hegelian leanings, Dr. J. Burns-Gibson.[6]

It was the same doctor who three years later would lead a coup against the Society's first president, the philosopher Shadworth Hodgson. Apart from having to move to a new location (from Bloomsbury to Albemarle Street near Piccadilly), the rebellion had an interesting effect on the Society. Its remaining members began to recruit university professors, contributing thereby to the shift from meetings having the character of a "student's seminar to that of a society for original philosophical research." However, its non-academic character remained strong and was even "turned to advantage," so that "work done in the universities could now be discussed in the open forum."[7] This is no place for a detailed history of the Aristotelian Society, but the point to bear in mind is that right from the start the Society provided an open space for philosophical speculation and discussion, even on the nature and methods of philosophy itself. Considering the diversity of individuals and methods embroiled in the controversy, it must have been such institutionalized traits of the Society that were most conducive to the controversy. For at bottom, it was an arena for a number of different philosophical methods, and the Society, which eschewed propagating specific doctrines and taking sides, offered a suitable setting and audience for the introduction and assessment of methods.

An early episode in the post-coup era of the Society nicely highlights many of these facets of the Society's character. The episode is also an important component to our controversy's pre-history. In an early attempt to open up its membership and attract academics working at universities, the Society held one of its first meetings outside of London at Jesus College, Oxford on November 16, 1891. It was a "symposium" (an innovation of the Society) on the "The Origin of the Perception of the External World." Samuel Alexander chaired the session, and it was the Society's president,

[6] See H. Wildon Carr, "The Fiftieth Session: A Retrospect," *PAS*, NS, vol. 29 (1928-1929), pp. 359-386.

[7] Carr, "The Fiftieth Session: A Retrospect," pp. 372, 380.

Shadworth Hodgson, who read the leading paper.[8] Two replies followed, one by the idealist Bernard Bosanquet, and another by David G. Ritiche. Despite the fact that all those who had read papers had spent time at Oxford in some capacity or other; and despite the engagement of the Oxford realist philosopher, Thomas Case—author of the immensely suggestive *Physical Realism being an Analytic Philosophy From the Physical Objects of Science to the Physical Data of Sense* (1888)—the discussion that followed must have been awkward. In his retrospective, H. Wildon Carr, a long-time member of the Society, recalled that the Oxford meeting was a "failure" (380), and that "the meeting really proved the impossibility of carrying the atmosphere of Albemarle Street into the seat of learning" (381).

The point of view from Oxford might be gleaned from a satirical report on the meeting in *The Oxford Magazine*, called, "The External World on the Aristotelian Society."[9] In it, David Ritiche is parodied as urging, against Hodgson's contrasts of German experience of the world with the "English experience" of it, that "the plain man was a box within a box, and his self-consciousness was located in his digestive apparatus, but the metaphysical kitten and baby on the other hand gradually identified themselves respectively with their tail and toes." Case, as one of the Oxford hosts, hesitated "whether to call the Aristotelian Society or their hosts the external world, for the one was an extraneous body, the other purely exoteric, but he welcomed the visitors to the last home of Aristotle." It took Carr nearly forty years to get the joke, writing that, "the thought [now] comes to me that after all the Aristotelian Society must have appeared to the Oxford mind as an external world."[10] The magazine's report ends with a quip indicative of the confusion and unease that must have prevailed that evening: at some point "the External World, feeling aggrieved and seeing that the attention of the meeting was concentrated on other unconsidered trifles, slipped out unobserved, and (as Mr. Bosanquet had predicted) was never missed" (106).

In addition to gaining us an insight into the Society as a place where broad problems might be discussed in a fashion not so conducive to the university's academic setting, the symposium is significant for understanding the pre-history of the controversy. There are at least two reasons for this. On the one hand, some core participants of the impending controversy either read papers at the Oxford symposium or, though not present

[8] This was certainly one of the opportunities Hodgson took, as he says he often did in the context of the society, to develop his ideas on the problem of the external world that would later appear in a section of his *The Metaphysic of Experience* (1898). Let us also bear in mind that Hodgson continued to attend and actively contribute to the meetings of the Society until his death in 1912.

[9] *The Oxford Magazine*, 10:6, Wednesday, Nov. 25, 1891, pp. 105-106.

[10] Carr, "The Fiftieth Session: A Retrospect," p. 381.

in person, were present in spirit and explicitly referred to in the course of presentation and discussion. In the case of the former, Alexander and Bosanquet are particularly important, who twenty years later would be pitted against one another within the context of the controversy. In the case of the latter, it is Stout who looms large in the background as providing, at least in the English-speaking world, one of the most sophisticated psychological solutions to the problem of the external world. On the other hand, a number of key themes, terms, and techniques are made prominent at the Oxford meeting that would ten years later form elements of the controversy's framework. These are: (1) attempts to strictly separate the psychological problem of the external world from the philosophical one; (2) an exploration of which—the psychological, physiological, or philosophical—is more fundamental to the other; (3) the significance of the "plain man's" experience of the external world to the problem; (4) vigilance in not surreptitiously introducing assumptions or postulations into any solution that actually presuppose a solution—in other words, determining the order of the inquiry itself was a part of the problem; (5) the challenges posed in distinguishing between self and "not-self", external and internal, and mental and extra-mental; and (6) the relevance of, in Hodgson's words, the "fog-making Germans" (28) like Kant or Hegel in understanding the problem of the external world. How these issues developed and carried over to the controversy are important questions, but ones that cannot be addressed here. What is clear, however, is that these issues gave particular shape to the problem of the external world for many participants of the controversy that was to follow, including Russell and Moore (both had been elected members of the Society in 1896).

Now, I do not want to suggest that the Aristotelian Society was the only game in town. There were other venues where the controversy unfolded, like the journal *Mind: A Quarterly Review of Psychology and Philosophy* (est. 1876), the Mind Association (est. 1900), the British Academy (est. 1902), and workshops which took place in newly formed philosophy chairs all over Britain. However, it is also true that the controversy was first initiated at meetings of the Society, and abruptly came to a close within them as well. And in between its start and close, the majority of contributions, including the many core papers of the controversy, were tailored for the Society's fortnightly meetings, discussed there, and published in the *Proceedings of the Aristotelian Society* (est. 1888). At the same time, let us not forget that between 1897-1900 many of the papers that were presented to the Society were actually printed in the annals of *Mind*. There are a number of reasons for this, but for our purposes it is important to highlight one: that a renowned member of the Aristotelian Society was also the chief-editor of *Mind*. This was no other than George Frederick Stout—one of the influential teachers of both Russell and Moore at Cambridge—elected to the Society in 1887. And as president of the So-

ciety between 1899-1904, he also acted as a conduit between the Society and Oxford, where he was residing.

Due to limits on space, I cannot get into the many personalities and positions that were involved in the controversy. But it is worthwhile to say a few brief words about a few of them, including Stout—after all, it was he who had sparked the controversy and kept its flame going in a number of invaluable rejoinders. Although Stout had already tackled the problem of the external world as early as 1890,[11] and again in his two great works, *Analytic Psychology* (1896) and *Manual of Psychology* (1898), these ventures into the problem were psychological in outlook and method. Stout, to be sure, had himself made it abundantly clear that the problem of the external world had at least two faces that had to be distinguished and treated separately: the psychological and philosophical (epistemological or metaphysical). He also held that the psychological components of the problem had to be suitably established *before* one treated it as a philosophical problem (Hodgson, in contrast, had stated the reverse methodological policy at the Oxford symposium).[12] It was thus after Stout took up the first Wilde readership in mental philosophy at the University of Oxford in 1898 that he, armed with data, findings, and techniques acquired in the course of his extensive psychological studies, began to confront philosophical problems.[13]

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[11] G. F. Stout, "The Genesis of the Cognition of Physical Reality," *Mind*, Vol. 15, 1890, pp. 22-45. It is this that participants of the Oxford symposium had in mind when referring to Stout. It is also this paper that ignited a "hostile" response from the Hungarian statistician, jurist and experimental psychologist Julius Pikler in his, "The Genesis of Cognition of Physical Reality," *Mind*, Vol. 15, 1890, pp. 394-400. Stout's Reply to Pikler is, "Dr. Pikler on the Cognition of Physical Reality," *Mind*, 15, 1890, pp. 545-550. Relevant is also Pikler's, *The Psychology of the Belief in Objective Existence*, London, 1890.

[12] See the invaluable contribution made by Maria van der Schaar, *G. F. Stout and the Psychological Origins of Analytic Philosophy*, 2013. There she argues that when Stout's analytic psychology is properly understood and distinguished from genetic psychology—as no doubt Stout did, being inspired by Brentano's descriptive psychology—the charge of psychologism does not apply. Though sympathetic to this view, I believe more needs to be said to accommodate the *empirical* technique of introspection so important to Stout's analytic psychology.

[13] Another important strand of the controversy must be highlighted, and that is the reaction to Stout's approach to epistemology in so far as it should be grounded in psychology. Reactions came mainly from the students of John Cook Wilson, the Oxford Realists H. W. B. Joseph and H. A. Prichard. It begins with Prichard's "A Criticism of the Psychologists' Treatment of Knowledge," *Mind*, NS, vol. 16 (1907), pp. 27-53; Stout responds in his "Mr. Prichard's Criticism of Psychology," *Mind*, NS, vol. 16 (1907), pp. 236-243. A few years later comes Joseph's three-part onslaught in his "The Psychological Explanation of the Development of the Perception of External Objects," (I), *Mind*, NS, vol. 19 (1910), pp. 305-321; (II) in *Mind*, NS, vol. 19 (1910), pp. 457-469; ending with a reply to Stout in in *Mind*, NS, vol. 20 (1911), pp. 161-180. Stout's response to Joseph is in *Mind*, NS, vol. 20 (1911), pp. 1-14. It should also be noted that Russell was much closer to Stout than to Pritchard or Joseph.

While at Oxford, besides challenging F. H. Bradley and John Cook Wilson in conversation and in print, Stout composed what might be regarded as the first paper in the controversy: a presidential address to the Aristotelian Society with the title, "The Common-Sense Conception of a Material Thing" (read November 5, 1900). Stout's presidential address laid down a set of challenges that were to echo well into the first decades of the twentieth century. These included an attempt to evaluate an epistemology that was psychologically informed by how well it explained the "plain man's" view of the persistence and change of material things in the world, for instance. Notwithstanding this paper's importance, it was another one delivered to the Society years later that directly ignited the controversy. This was his "Primary and Secondary Qualities" (read to the Society on June 6, 1904), a paper that continued his interests in methodology, but applied to a specific problem formulated by Thomas Reid: "Is there anything common to the primary which belongs not to the secondary [qualities]?"

Without getting into the details, let me simply mention that among the important themes developed by Stout in 1904, and which reoccur throughout the controversy, surround the apparent conflict between the world of physics (and physiology) and psychology; the related conflict of "real space" with the space of the sensations; and the problem of how to connect what is immediately "given" in sense-experience with what is not. As these filter through the controversy, all, at some point or other, find their way into Russell's work. It is in Stout's 1904 paper, moreover, that one finds operational, at least in the background (but made more and more explicit as the controversy unfolds), his important notion of presentation. This is a notion that Stout, in his *Analytic Psychology*, distinguished from James Ward's notion, and is one that, as I've argued elsewhere, was a crucial component in the development of Moore and Russell's notions of "sense-data."[14] Presentations are understood as what are immediately presented to a subject when perceiving or sensing. As a matter of fact, Stout, inspired by the work of Franz Brentano, had, independently of Kazimierz Twardowski, developed a tripartite distinction between a mental act, content, and object—where presentations are equivalent to content. Presentations are mental, according to Stout, and should not be understood

[14] When Moore first introduced the term "sense-data" he did it explicitly in relation to Stout's "sense-presentations"; see Moore, "The Subject-Matter of Psychology," *PAS*, NS, vol. 10 (1909-1910) pp. 36-62, p. 57. Before this, Moore had referred to "sense-content." It has been noted on a number of occasions, however, that Royce, Bradley, Case, James, Fraser, and even Venn had long before employed the term "sense-data" (or some form of it like "data of sense"). The trap we must not fall into is to simply presume that they all meant the same thing. By embedding the term within a particular set of problems, we can distinguish the variety of meanings attached to it. Before historical investigation, it is safer to assume in these cases difference rather than equivalence. Nonetheless, what is fascinating for the period is the conspicuous rise in the number of notions developed for the given.

atomistically but rather as continuous parts of a whole; a whole that can be demarcated in different ways depending on interest and attention. It is as parts of wholes that presentations have what Stout awkwardly calls a "representative function"; that is to say, presentations are always directed at something other than themselves. Presentations are not identified with physical objects, but are rather "psychical existents" in their own right (and thus are not the mere appearances of things) that point us to what they are correlated with in the physical world. In contrast to Locke and Berkley, then, Stout concludes in his paper that though distinct, *both* primary and secondary qualities of things are correlated but not identical with corresponding qualities of sensation.

The first reaction to Stout's work on primary and secondary qualities was by a student of Thomas Case, the Oxford realist, John Cook Wilson. In a long letter to Stout, he launched an attack from the perspective of an old or "natural realist" which assumed a subject's unmediated relation to physical things in the world themselves. As such, Cook Wilson challenged Stout's supposed representationalism. It was in reaction to this misunderstanding that Stout read a paper to the British Academy, "Things and Sensations" (1905), wherein he rejected a representational reading, and doubled-up on the distinctions between physical objects and sensible-presentations, and between the world of physics and the plain man's world of sense experience (the *explanandum* of analytic psychology). It is only a year later that one finds the idealist neo-Kantian, Dawes Hicks' prolix reactions to Stout (read May 7, 1906), and T. Percy Nunn's earliest articulation of new realism (read February 5, 1906).

It is noteworthy that many participants of the controversy came to the problem of the external world by way of psychology. Besides Dawes Hicks, who explicitly frames the issue as a psychological one in 1900, we must underline the fact that Samuel Alexander had independently developed a new realism, similar to that of Nunn's, in the context of a symposium on the nature of mental activity. It is after Stout directly challenges Alexander (read to the Society on July 5, 1909; among those who participated in discussion of the paper were Moore, Nunn, Hodgson, and Wolf), that the latter switches from a psychological mode to an epistemological (and eventually a metaphysical) one, which might be described as phenomenological, only to conclude, among other things, that sensible-presentations are not mental but rather "physical"; a position reminiscent of Nunn's more general thesis, defended earlier and inspired by Moore and Russell, that whatever a subject must "reckon with" in perception, imagination, or judgment, is "objective."

But it is really at a symposium on the question "Are Secondary Qualities Independent of Perception?" (read at a symposium at the joint meeting with the Mind Association on June 25, 1909) that Nunn not only defends

Alexander's general position about presentations being "extra-mental" but also articulates in the clearest way the position against Stout. The result is a powerful new realism that acknowledges the existence of countless extra-mental presentations (or sense-data), that are not to be identified with physical things, but which might all be related to a thing as consistently being in the same place at the same time as it —undercutting one of Stout's most potent postulates that contradictory sense-presentations cannot exist in the same place at the same time.[15] The British New Realism therefore conceded and framed the need for a new epistemology of space, matter, and time. It is exactly within this framework that the labour of Russell must be understood, particularly his: "On Matter," (1912), "The Relation of Sense-Data to Physics" (1914), "The Ultimate Constituents of Matter" (1915) and *Our Knowledge of the External World* (1914). Russell, in fact, openly acknowledges Nunn and Alexander in some of these papers, an acknowledgment that cannot be appreciated without an appreciation of their roles within the controversy as a whole.

It should be clear by now that when Russell proclaimed in 1914 that the "chief outcome" of his work on the problem of the external world was to bring the world of physics together with the world of psychology, that this claim must be understood in light of how others in the controversy framed and tackled similar problems.[16] I cannot get into other facets of the controversy which had an impact on Russell's philosophy in this period—a period that also overlaps in part with his presidency of the Aristotelian Society (1911-1913). But suffice it to point out at least four: (1) the complex interconnections between Stout's "ideal constructions," Nunn's "primary and secondary constructions," and Russell's own "logical constructions"; and the distinction gradually arrived at between inference and construction by both Stout and Russell;[17] (2) the distinc-

[15] It should be added that it was in the name of metaphysical paucity that the idealist, B. Bosanquet, composed a tract against the new realists, but particularly Alexander, with the title, *The Distinction Between Mind and Its Objects* (1913). Alexander responds in a pamphlet published by the British Academy as *The Basis of Realism* (1914). Both these works are important contributions to the controversy.

[16] See, O. Nasim, "The Spaces of Knowledge: Bertrand Russell, Logical Construction, and the Classification of the Sciences," *British Journal for the History of Philosophy*, vol. 20 (2012), pp. 1163-1182.

[17] It remains to be asked by historians: what were the conceptual and historical relationships between these notions of constructions and F. H. Bradley's extensive discussions of what he already referred to in 1883 as "ideal constructions"—a term used by James Sully in 1881 in a book on illusions that was reviewed, coincidently, by our own Dr. J. Burns-Gibson. As in the case of "sense-data," one must resist the temptation to simply presume that the same things are meant when the same terminology is employed. For one thing, Stout's "ideal constructions" are heavily psychologised as mental processes, mostly unconscious, and are actually modeled after Helmholtz's "unconscious inferences." Another important factor to keep in mind is that while for Bradley constructions are forms of inference, Stout would later distinguish construction from inference, as would Russell.

tion between acquaintance and description; (3) the nature of sense-data that are not data to any subject, i.e., Russell's sensibilia—a notion already dismissed by Stout as early as 1904, discussed by Moore, and revived by Nunn in 1909; and (4) the indispensable role played by psychologies (whether functional or structural, analytic or genetic, etc.) in this early period of British analytic philosophy.[18]

There are two further points that must be made before I conclude. The first is that I do not want to suggest that the only context in which to understand Russell's philosophy or the rise of analytic philosophy is the one provided by the controversy. There are a whole host of other factors at play, many of which still require research. But what is important about the controversy is that it brings together a number of different kinds of philosophical positions and methods to bear on a set of specific questions that Russell himself took up in order to showcase the applications of his own novel methods for philosophy. Indeed, the controversy is not only a source for understanding the evolution of Russell's philosophy in the period, but it is also an excellent resource for understanding the reception, impact, and absorption of Russell and Moore's thought by those around them.

The second point is that my research has focused, for the most part, on the impact the controversy had in shaping Russell's philosophy, and this in a very focused way. In so doing, I do not want to imply that there is nothing else to explore.[19] In fact, one of the reasons I believe it is worthwhile to collect a large bulk of the controversy in one place is so that it can act as a resource for a number of other, even alternative, avenues of exploration. Allow me to briefly state a couple that come to mind:

> (1) The import of the relationship between Stout and Moore—both of whom shared an interest in grounding their work in common sense—has recently been explored.[20] But it might also be of some interest to investigate the ways in which Moore's philosophy was embedded in the controversy. After all, he played a direct role in it as a participant, contributing not only arguments for problems posed, but also by proposing terminology that would aid in clarifying issues implicated in the controversy. One of these was of course his proposal for using "sense-data" instead of Stout's "sense-pre-

[18] For more details see, O. W. Nasim, *Bertrand Russell and the Edwardian Philosophers: Constructing the World*, 2008; and Nasim, "Spaces of Knowledge."

[19] See my, "The Spaces of Knowledge", where I attempt to broaden some aspects of the controversy to include others. For another expansion of the relevant circle, see the informed paper by Gary Hatfield, "Psychology, Epistemology, and the Problem of the External World: Russell and Before," *The Historical Turn in Analytic Philosophy*, edited by E. H. Reck, 2013, pp. 171-200.

[20] See for instance, Consuelo Preti, "On the origins of the contemporary notion of propositional content …", *Studies in History and Philosophy of Science* Part A, vol. 39 (2008), pp. 176–85.

sentations;" a proposal that, interestingly enough, Moore abandons in 1913 for the term "sensibles" instead.

(2) Given the fact that many participants of controversy were either trained in Germany or were deeply influenced by German-speaking philosophers and psychologists, the controversy should be an invaluable resource for those wanting to study the impact of this training and influence on English thought. Stout's mastery of the German sources is well known, including the fact that he was among the first to bring the likes of Herbert, Brentano, and Meinong to the attention of English thinkers, including Russell and Moore.[21] Less known is that Stout's own teacher, James Ward, and John Cook Wilson, were both pupils of R. Hermann Lotze in Germany; and that from 1891 onwards Dawes Hicks studied in Leipzig (where Wundt's influence dominated), finishing his doctorate on Kant a few years later. And while pursuing experimental psychology, Samuel Alexander left Oxford to study under Hugo Müsterberg at Freiburg im Breisgau. If not always by name, German-speaking philosophers and psychologists certainly loomed large in the controversy, providing, thereby, many opportunities to overcome a number of artificial divides, such as the continental and analytic ones.

Turning to what is included in the collection of reprints below, I should begin by saying that it is not complete. This is for reasons of space, but also due to the simple fact that I have been invited by the general editor to collect only those papers that were published in the *Proceedings of the Aristotelian Society* (abbreviated PAS below); anything published elsewhere has had to be excluded. Therefore, in order to provide as complete a picture of the controversy as possible, while complying with the limitations imposed on this collection, I've had to divide the papers into three categories. First, there are the classic papers from the Society's archive that have been reprinted, and which constitute, by in large, the core of the controversy. Then there are those that, while comprising the core, cannot here be reprinted and have therefore been designated as "Essential Reading." Finally, there are those that are important surrounding sources overlapping with and informing the controversy, which have been designated as "Additional Reading." Only those papers that are reprinted have been numbered for the reader's convenience.

[21] Stout was also read by German scientists and philosophers; see, for instance, the fascinating review by Theodor Lipps, "G. F. Stout: Analytic Psychology. London, Swan, Sonnenschein & Co., 1896. 2 Bände," *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, vol. 16 (1898), pp. 399-409.

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ESSENTIAL READING

G. F. Stout, "The Genesis of the Cognition of Physical Reality," *Mind*, Volume XV, 1890, pp. 22-45.

Shadworth H. Hodgson, B. Bosanquet and David G. Ritichie, "Symposium: Origin of the Perception of an External World," *PAS*, Volume II (1891-1892), pp. 26-43.

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I. CLASSIC PAPER

G. F. Stout, "Presidential Address: The Common-Sense Conception of a Material Thing," *PAS*, New Series, Volume I (1900-1901), pp. 1-17.

ADDITIONAL READING

G. Dawes Hicks, "The Belief in External Realities," *PAS*, New Series, Volume I (1900-1901), pp. 200-219.

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II. CLASSIC PAPER

G. F. Stout, "Primary and Secondary Qualities," *PAS*, New Series, Volume IV (1903-1904), pp. 141-160.

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John Cook Wilson, "Primary and Secondary Qualities: Letter in criticism of a paper on Primary and Secondary Qualities; July 1904," reprinted in *Statement and Inference: With Other Philosophical Papers,* edited by A. S. L. Farquharson, London: Oxford University Press, 1926, Volume II, pp. 764-800.

G. F. Stout, "Things and Sensations," British Academy, London; reprinted

from its *Proceedings*, Volume II, (1905) pp. 169-181.

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III. CLASSIC PAPER

G. E. Moore, "The Nature and Reality of Objects of Perception," *PAS*, New Series, Volume VI (1905-1906), pp. 68-127.

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IV. CLASSIC PAPER

G. Dawes Hicks, "Sense-Presentation and Thought," *PAS*, New Series, Volume VI (1905-1906), pp. 271-346.

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V. CLASSIC PAPER

T. Percy Nunn, "The Aims and Achievements of Scientific Method," *PAS*, New Series, Volume VI (1905-1906), pp. 141-182.

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G. F. Stout and G. Dawes Hicks, "Neo-Kantism as Represented by Dr. Dawes Hicks [with Reply], *PAS*, New Series, Volume VI (1905-1906), pp. 347-390.

ADDITIONAL READING

H. R. Marshall, "Presentation and Representation," *Mind*, Volume XV (1906), pp. 53-80.

J. S. Mackenzie, "The New Realism and the Old Idealism," *Mind*, Volume XV (1906), pp. 308-328.

T. Percy Nunn, "On the Concept of Epistemological Levels," *PAS*, New Series, Volume VIII (1907-1908), pp. 139-159.

G. Dawes Hicks, "The Relation of Subject and Object from the Point of View of Psychological Development," *PAS*, New Series, Volume VIII (1907-1908), pp. 160-214.

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VI. CLASSIC PAPER

S. Alexander, James Ward, Carveth Read and G. F. Stout, "The Nature of Mental Activity. A Symposium," *PAS*, New Series, Volume VIII (1907-1908), pp. 215-257.

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VII. CLASSIC PAPER

S. Alexander, "Mental Activity in Willing and in Ideas," *PAS*, New Series, Volume IX (1908-1909), pp. 1-40.

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VIII. CLASSIC PAPER

Abraham Wolf, "Natural Realism and Present Tendencies in Philosophy," *PAS*, New Series, Volume IX (1908-1909), pp. 141-182.

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IX. CLASSIC PAPER

G. F. Stout, "Are Presentations Mental or Physical? A Reply to Professor Alexander," *PAS*, New Series, Volume IX (1908-1909), pp. 226-247.

ADDITIONAL READING

H. Wodehouse, "Knowledge as Presentation," *Mind*, Volume XVIII (1909), pp. 391-399.

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X. CLASSIC PAPER

S. Alexander, "On Sensations and Images," *PAS*, New Series, Volume X (1909-1910), pp. 1-35.

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XI. CLASSIC PAPER

T. Percy Nunn and F. C. S. Schiller, "Are Secondary Qualities Independent of Perception? A Discussion Opened by T. Percy Nunn and F.C.S. Schiller," *PAS*, New Series, Volume X (1909-1910), pp. 191-231.

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XII. CLASSIC PAPER

G. E. Moore, "The Subject-Matter of Psychology," *PAS*, New Series, Volume X (1909-1910), pp. 36-62.

ESSENTIAL READING

G. Dawes Hicks, "Mr. G. E. Moore on 'The Subject-Matter of Psychology," *PAS,* New Series, Volume X (1909-1910), pp. 232-288.

G. E. Moore's lectures given in Morely College, London, 1910-11 in *Some Main Problems of Philosophy*, London, 1953.

ADDITIONAL READING

B. Dumville, "The Standpoint of Psychology," *PAS*, New Series, Volume XI (1910-1911), pp. 41-79.

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XIII. CLASSIC PAPER

Bertrand Russell, "Knowledge by Acquaintance and Knowledge by Description," *PAS*, New Series, Volume XI (1910-1911), pp. 108-128.[22]

ESSENTIAL READING

S. Alexander, "On Relations: and in Particular the Cognitive Relation," *Mind*, Volume LXXXIII, 1912, pp. 305-328.

[22] I have included this here not because it directly engages the controversy, but because of the many overlapping themes it shares with the controversy.

B. Bosanquet, *The Distinction Between Mind and Its Objects: The Adamson Lecture for 1913*, Manchester, 1913.

G. Dawes Hicks, "The Nature of Sense-Data." *Mind,* Volume XXI (1912), pp. 399-409.

Bertrand Russell, "On Matter" [1912], in *The Collected papers of Bertrand Russell,* Volume VI, edited by John Slater, London, 1992, pp. 77-96.

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A. O. Lovejoy, "Reflections of a Temporalist on the New Realism," *The Journal of Philosophy, Psychology and Scientific Methods*, Volume VIII, (1911), pp. 589-599.

Bertrand Russell, "Le Réalisme analytique" [1911], translated as "Analytic Realism," in *The Collected papers of Bertrand Russell*, Volume VI, edited by John Slater, London, 1992, pp. 133–46

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G. Dawes Hicks, "Appearances and Real Existence," *PAS*, New Series, Volume XIV (1913-1914), pp. 1-48.

ESSENTIAL READING

Bertrand Russell, *Our Knowledge of the External World as a Field for Scientific Method in Philosophy*, London, 1914.

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XV. CLASSIC PAPER

G.E. Moore and G. F. Stout, "Symposium: The Status of Sense-Data," *PAS*, New Series, Volume XIV (1913-1914), pp. 355-406.[23]

ESSENTIAL READING

S. Alexander, *The Basis of Realism,* London: Printed for the British Academy, 1914.

Bertrand Russell [1914], "The Relation of Sense-Data to Physics," in *The Collected Papers of Bertrand Russell: The Philosophy of Logical Atomism and Other Essays 1914-19,* Volume VIII, edited by John Slater, London, 1986, pp. 3-26.

Bertrand Russell [1915], "The Ultimate Constituents of Matter," *Mysticism and Logic*, London, 1932, pp. 125-144.

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C. D. Broad, "Phenomenalism," *PAS*, New Series, Volume XV (1914-1915), pp. 227-251.

J. W. Scott, "On the Common-Sense Distinction of Appearance and Reality," *PAS*, New Series, Volume XVI (1915-1916), pp. 63-103.

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XVI. CLASSIC PAPER

T. Percy Nunn, "Sense-Data and Physical Objects," *PAS*, New Series, Volume XVI (1915-1916), pp. 156-178.

ADDITIONAL READING

G. Dawes Hicks, "The Basis of Critical Realism," *PAS*, New Series, Volume XVII (1916-1917), pp. 300-359.

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[23] In an informal meeting afterwards, Moore "expounded," to the joint meeting, "Russell's theory of construction of physical reality by 'logical fiction,'" *Abstract of Minutes*, *PAS*, New Series, Volume XIV (1913-1914), p. 428.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

The Common-Sense Conception of a Material Thing

G. F. STOUT

VOLUME I

1901

EDITORIAL NOTE

G. F. Stout (1860-1944) was a leading English philosopher and psychologist who included Bertrand Russell and G. E. Moore among his students. He studied psychology at Cambridge University under James Ward and opposed the prevalent theory of associationism. G. F. Stout held positions as a fellow at St. John's College Cambridge (1884-96), a lecturer in Comparative Psychology at the University of Aberdeen (1896) and a reader in mental philosophy at Oxford (1898-1902) before serving as professor of logic and metaphysics at St. Andrews, Fife until his retirement in 1936.

G. F. Stout was president of the Aristotelian Society from 1899 to 1904.

The following paper - "The Common-Sense Conception of a Material Thing" - was Stout's Presidential Address to the Aristotelian Society. It was published in *Proceedings of the Aristotelian Society*, New Series, Volume I (1900-1901), pp. 1-17.

I. THE COMMON-SENSE CONCEPTION OF A MATERIAL THING

G. F. STOUT

WE have to enquire what constitutes a material thing, such as a stone, a tree, or a billiard ball, as it is apprehended by the ordinary consciousness. For purposes of exposition it will be convenient to deal first with things in their static aspect, and afterwards to consider them as subject to change. However true it may be that, as a matter of fact, all things are in perpetual flux, it is undeniable that to the ordinary consciousness most things appear to remain precisely in the same condition and position for long periods of time. For instance, I find my writing table this morning to all appearance exactly as I left it last night, and I presume that it has persisted unaltered in the interval. Considered in this static aspect, we may offer the following sketch of the essential constituents of the ordinary conception of a material thing.

To begin with, it is clear that a material thing has duration in time and position in space. Of these two characters spatial position is the more distinctive. For existences which are not material have temporal duration. Next we ask how the space occupied by a material thing is filled. What are its contents? We may give a partial answer to this question by saying the place occupied by a body is filled by a complex of sensible qualities. But not all sensible qualities have, in the strict sense, a position in space. Sounds and smells are not spatially localised as tangible and visible qualities are. We do, indeed, speak of localising a sound; but what we mean is that we fix the position of its source, determine its place of origin. We do not mean that the sound itself occupies this place. We say that a sound comes from a bell, not that it is in the bell, and we express by this such facts as that the sound is l heard when the bell is struck and not otherwise, and that it becomes fainter as we recede from the bell and intenser as we approach it. The position of the bell itself is the position of its visible and tangible qualities. All colour is spread out in space of two dimensions, and every coloured surface has a definite position relatively to other coloured surface. The same is true of tangible qualities, such as roughness and smoothness, hardness and softness, hotness and coldness. But the same place cannot be simultaneously occupied by different colours, and it cannot at the same time be both hot and cold, both hard and soft, both rough and smooth. These are mutually exclusive, because they are specific variations in the same respect of the same generic quality. On the other hand, specific variations of different generic qualities, or of the same

in different respects, can occupy the same place. A body may be hot, hard, and smooth in the same place. In particular, visible and tangible qualities are capable of having an identical position in space, and, as a rule, they are actually apprehended as spatially coincident and co-extensive on the bounding surfaces of material things. The exceptions are confined to instances, such as that of the air, in which a thing is tangible but not visible. The inverse exception does not occur; what is visible but intangible is regarded as a phantom, not as a material thing at all. We may then affirm in general that a material thing is a complex of sensible qualities, and that within this complex there is a central core constituted by visible and tangible qualities which have spatial extension and position, and are spatially coincident and co-extensive. Other sensible qualities are more loosely attached to this central core. They are attached to it in so far as their appearances, disappearances, and variations are connected in definite ways with change in it, and in its spatial relations.

Up to this point we have considered only sensible qualities and their interconnection, and our results harmonise with Mill's famous definition of a material thing as a group of permanent possibilities of sensation. But our next step brings us into conflict with Mill. Only the bounding surfaces of bodies are visible and tangible. But these bounding surfaces have something in between them, and this something, by its nature, is invisible and intangible. We may indeed be said to perceive it by means of sight and touch. But it is not in itself a visual or tactual or any other kind of sense-presentation.

Solidity in the strict sense is rather a permanent impossibility than a permanent possibility of sensation. It is true that it involves possibilities of sensation, but these possibilities *depend* on it; they do not of themselves constitute it. At any rate, this is the unsophisticated view of common sense. I have, let us say, a billiard ball before me. I can see and feel the surface, but not what lies beneath. But this surface is only the outer surface; there are an indefinite number of inner surfaces which it hides from me. I can suppose the billiard ball divided into an indefinite number of concentric layers, and I can suppose these concentric layers to be peeled off successively like the coats of an onion. In the process an indefinite number of visible tangible surfaces would be disclosed. Again, I can suppose the billiard ball to be sliced across in an infinite variety of ways, and each section would disclose two surfaces. Thus the solidity of the billiard ball involves a very complex system of permanent possibilities of sensations. None the less, the solidity itself remains a permanent impossibility of sensation. For no combination of surfaces can constitute solid thickness; the solid thickness is always apprehended as lying between them; they cannot constitute it just because they have no solid thickness themselves, and, if they had, would cease to be mere surfaces. The surface is in space of three dimensions what the line is in space of two dimensions, merely a boundary. The

line formed by the meeting of two coloured surfaces is no part of either of them. Similarly the surfaces, disclosed by slicing an apple form no part of the solid content of either half of the apple. The next item which seems essential to the ordinary conception of matter is impenetrability – the mutual exclusiveness of solids in space. Each occupies its own place, and no two can simultaneously occupy identically the same place. This characteristic of matter is most important for the conception of mechanical causation.

We have considered the material thing, as an impenetrable solid and as a complex of sensible qualities. We have now to add that it is also a complex of powers and susceptibilities, or in Locke's language, of powers *active* and *passive*. "Fire has a power to melt gold, and gold has a power to be melted. The sun has a power to blanch wax, and wax has a power to be blanched by the sun." A material thing has powers active and passive – powers corresponding to all the changes which it is capable of undergoing or producing. There is here an explicit reference to change and causation which points beyond the static point of view, but does not, I think, actually carry us beyond it. For reference is not to actual change and causation but only to their possibility. Arsenic is poisonous even though it poisons nobody, and tea-cups are fragile even though they remain unbroken. A material thing has a power or susceptibility corresponding to every change which it is capable of undergoing or producing under varying circumstances. It thus possesses an infinite number of powers – active and passive powers – which never have been and never will be actualised. Such attributes attach to the material thing because of their connection with its other characters, its position in space, sensible qualities, solidity, and impenetrability. The changes which the material thing is capable of undergoing are changes of position, of sensible quality, of the spatial relations of its parts at the bounding surfaces, or within the solid content and the like. Changes in other things are referred to it as their source, because they arise in connection with its own changes of position, sensible quality, etc., or with the varying spatial relations of other things relatively to it, or some such conditions. Here the question may be raised whether some of the other attributes of matter which we have enumerated are not in reality mere powers. "Sensible qualities," says Locke, "what are they but the powers of different bodies in relation to our perception?" Now an ordinary educated person who has some acquaintance with popular philosophy or science would perhaps be ready to acquiesce in this view, as far as regards colour, sound, smell, and taste. But he would be inclined to draw the line at touch. As a matter of fact, he would be quite illogical in doing so, for touch sensations are just as much effects produced in us by external things as visual sensations. In any case the whole question is for common sense merely speculative. In ordinary practical life we attribute to material things the sensible qualities themselves, not the mere power of producing them in something else. The whiteness of the sheet of paper

before me actually belongs to the paper: it is spread out over its surface; it is not spread out over the surface of my brain, or my retina, or my soul, or my consciousness. This is the natural view of common sense, and I cannot help adding that common sense seems to me to be in the right. Doubtless there is a problem here, but you cannot solve it by saying that colour is a state of the percipient mind or organism and not of the thing seen.

I have already said enough to show that solid occupation of space in three dimensions is not a power of producing sensations in us, and it seems evident that it cannot be reduced to a mere power of any kind. The case of impenetrability seems more doubtful. For impenetrability might be described as the power of a body to exclude other bodies from the space which it occupies itself. But this power may be regarded rather as a consequence of impenetrability than as identical with it. It involves a reference to possible movement or stress which is not necessary to the conception. No such reference is involved when we say that two different colours cannot simultaneously occupy the same place, and it need not be involved in the statement that two solid bodies cannot occupy the same place.

We have so far considered only the general conception of matter. In order to complete our inquiry we must also consider the characters which mark off one material thing from another. What constitutes the unity and distinctness which is implied in the use of the indefinite article when we speak of *a* material thing, or of the plural number when we speak of material *things*, or of the demonstrative pronoun when we speak of *this* or *that* material thing? Within wide limits this unity and distinctness is fluctuating, and varies as our own subjective interest varies. The cloud of dust which meets us on the highway is one thing, and we do not distinguish its portions or particles as separate things. But if a particle gets into our eye, it at once assumes individuality and independence. When we contemplate a tree from a distance, its parts may not assert themselves as separate things; but if we attempt to climb it, the protuberances of its trunk and each branch which offers foot-hold or hand-hold emerge from the whole as distinct portions of matter. In spite of this fluctuation, there are, none the less, relatively fixed and permanent unities corresponding to relatively fixed and permanent interests. We find a unity of this kind wherever a portion of matter is marked by a separate name. Thus chairs, tables, dogs, horses, trees, etc., are portions of matter permanently marked off from their environment, and, so to speak, ticketed as separate articles by the current use of language. In particular, those portions of matter which are the vehicles of conscious life appear to have a peculiar claim to independent individuality. Such are the living organisms and men and animals, and the material products of their activity as guided by intelligent purpose – horses, ploughs, steam engines, and the like. On the whole, we may affirm that the unity and distinctness of a material thing is bound up with the unity and distinctness of our interest in it, and that it is shifting or

permanent according as our interest is shifting or permanent. But this is only one side of the question. In order that we may have an independent interest in a thing, the thing must by its own nature be capable of exciting this independent interest. The conditions necessary and sufficient for this may, of course, vary indefinitely in different cases; but there is at least one condition which, though by no means always sufficient, appears to be nearly always necessary to the unity and distinctness of a thing – I refer to that definite limitation in space which is called shape. What is regarded as a single thing must, as a rule, have bounding surfaces which are sensibly distinguishable from empty space or from the bounding surfaces of other things. Of course, what I here call empty space is really filled with air: but as air is usually invisible, and as its tangible quality usually escapes attention, space which is only filled with air is generally regarded by common sense as if it were empty. Any portion of matter which is wholly or partially separated from other portions by this virtually empty space may be apprehended as a distinct thing. One branch of a tree is separated in this way from other branches, though it is spatially continuous with them in so far as they all spring from the trunk. Thus we may either regard the whole tree as one thing, or we may distinguish each branch as a separate thing. Portions of matter which are continuous with each other in space may be distinguished by difference in the sensible quality of their bounding surfaces. Where both means of distinction fail, we may introduce them by a mental artifice. In what appears as a uniform sheet of white paper there is nothing to prompt me to single out one portion from another. If I attempt to do so, I shall find myself looking for slight differences in the texture or shading of the different parts, and if I fail I must have recourse to the artifice of mentally introducing differences which are not actually present. For instance, I imagine black lines drawn on the paper or perhaps I represent a bit of the paper as torn off from the rest. Thus it seems that in all cases, in order to apprehend a portion of matter as a distinct thing, I must either perceive or imagine it as separated from other things by intervening empty space, or at least as discriminated from surrounding matter by difference in the sensible quality of its bounding surfaces.

I have now, I think, given a tolerably complete account of common sense conception of a material thing in its static aspect. Before taking up the question of change, it will be well to say something concerning an attribute of material existence which belongs to it equally whether we regard it as undergoing alteration or persisting unaltered – I refer to its independence of the processes by which it is perceived or ideally represented. This is a point on which Kant lays great stress, and he simply identifies it with the objectivity of matter. But he apparently fails to recognise that the objectivity which belongs to material things and process is only a special case of objectivity in general. Whatever we can in any way perceive or think has a being and nature of its own independently of the processes

by which we cognise it. We do not create it, but only become aware of it in the process of cognition. The number two, the fact that 2 + 1 = 3, the validity of a syllogism in Barbara, the necessity or the arbitrariness of the transitions in Hegel's *Logic*, a symphony of Beethoven, the moral law, all these are possible objects of our cognition, and all these, in as much as they are objects, possess a being and nature of their own, whether anyone is actually thinking of them or not. But their independent being and nature differs profoundly from that of material things, because it does not consist in independent persistence and change in time and space. 2 + 1 was equal to 3 *before* anyone began to count, and this planet existed *before* the appearance of life on it. But the word "before" has a different meaning in the two cases. When I say that this planet existed before the appearance of life on it, I mean that it has had an actual history lasting through successive moments of time from some determinate date up to the moment at which I am now speaking, and that in each of these successive moments it has had a definite position in space. When I say that 2 + 1 was equal to 3 before anyone began to count, I do not mean that this fact endured through successive moments in time, and had in each moment a definite position in space before it was discovered; I only mean that it has a being independent of its discovery, not affected by such occurrences as man beginning or ceasing to count. To put the case in another way; when I leave my house I regard the house as still existing, though I no longer perceive or think of it: I regard it as continuing to exist in time just as I myself and my conscious experience continue to exist in time, and just as the flow of my conscious existence is divisible into successive moments of duration, so I regard the continued existence of the house as divisible into successive moments, so that each moment of its history synchronises with a moment in in my history. It is true that the flow of my conscious life has, strictly speaking, no position in space such as the house possesses. But my body has always a determinate position in space, and my body is continually presented to sight and touch. I regard other things which I neither perceive or think of as maintaining or changing their position in space just as my body, which is continuously presented, maintains or changes its position in space. I emphasise this point because it seems to have an important bearing on Kantian criticism. Kant would investigate the conditions of the possibility of experience. He assumes that there can be no experience without an object, and this assumption is no doubt entirely justified. He also teaches that an object is such only so far as it has a being and nature independent of the actual occurrence of the subjective process by which it is cognised. So far we can follow him. But he also makes another tacit assumption which I cannot admit as legitimate. He seems to take it for granted that the independence necessary to constitute any object whatever, must be of the same kind as that which is characteristic of material things and processes – independent persistence and change – through successive moments of time. This assumption he in no way attempts to justify, and it seems quite unten-

able. It is abstractly conceivable that an experience might exist, concerned exclusively, let us say, with sounds. The sounds. might be compared as regards their pitch, intensity, and timbre, and arranged in series according to their resemblances or differences; their musical combination might be apprehended and enjoyed; all this, and the like of this, might take place, without ever a thought of the sounds as enduring, changing, and succeeding each other, apart from their actual presence to consciousness. When we speak of the possibility of experience, we ought to explain very carefully what kind of experience we mean.

We have next to deal with change in material things. In the first place it is necessary to distinguish between change in the thing itself and change in its appearance to the percipient. To the thing itself we ascribe those changes and those only which form part of its independent existence – of the existence which belongs to it whether or not it is actually perceived or thought of. But there are innumerable variations in the appearance of material objects which are not regarded as changes in the object itself; and all these variations have the common characteristic of being recognisably due to the varying conditions of the process of perception. If I close my eyes, the things around me disappear from sight. But I do not for that reason regard either the things or their visible qualities as having ceased to exist, or as having undergone any kind of alteration. Again, as I shift the position of my eyes, head, and body, the things around present constantly varying visible appearances corresponding to the constantly varying size, shape, and position of the images which they produce on my retina. But just so far as they arise in connection with movements of my eyes, head, and body, these variations are not regarded as changes in the material objects themselves. The things themselves are unaltered; it is only the point of view of the percipient which changes. When similar variations appear to take place independently of our own active movement or changing position they are regarded as changes in the things seen; the things are apprehended as varying in their position in space or in their shape and size. So when we look at a thing through yellow glasses we do not suppose that the thing itself becomes yellow. But if the same alteration in our experience took place without the use of the yellow glasses, or some equivalent condition, we should say that the thing itself had changed its colour. The same holds good for touch and the other senses as well as for sight. We do not regard things as having lost their odour because we have a cold in the head. If I move my finger tip along the edge of the table, I do not regard the variations in my tactual experience as changes in the tangible quality of the table. The succession is in me, not in it. If, on the contrary, similar variations occur while my finger is unmoved, I am aware of the table itself as moving, or otherwise undergoing alteration. It is to be noted that only variations due to *free* movement are thus regarded as attaching, not to the thing but to its appearance. Movement against resistance always involves

alteration in the position or shape of the thing which resists. The reason is plain: what lies within the sphere of our own initiative is the power to move or to attempt to move in a certain direction. It does not depend on us what kind or degree of resistance we shall encounter, whence or where we shall meet it, or whether we shall meet it at all. Hence the yielding of a resistant surface to our efforts when we push, pull, or compress it, is regarded as a change in the material object itself, not merely its appearance to us.

A word may here be added on Kant's treatment of this question. He also distinguishes between change in a material thing and change in its appearance to us. But he seems to me to draw the line between the two very incorrectly. He says that change in the thing itself is apprehended as such, because it is regarded as following on some other change according to a fixed rule, whereas mere variation in its subjective appearance is not so determined. But this seems quite untenable. The changes in appearance are just as much subject to rule as the changes in the thing itself. Take his own example. I survey a house, and in doing so my eyes travel from the top to the bottom, and again from the bottom to the top. The corresponding sequence of varying visual presentations is not regarded as change in the house. The roof is not transformed into the door. The change merely consists in looking at the door after looking at the roof. So far well and good. But can it be truly said that the sequence of visual presentations has no fixed order? On the contrary, it has just as much a fixed order as in the case which Kant contrasts with it, that of a ship being carried downstream by the current. In both cases the order is conditional. Given the starting point and direction of my ocular movements, the order of my visual impressions is predetermined according to a rule. Given that the ship is merely moved by the current, there is like fixity of order. But, as my ocular movement may vary, so the ship may steam or sail against the current. The difference lies in the nature of the condition in the two cases. In the case of the house the conditions belong to the perceptive process, in the case of the ship they do not.

In what follows we shall consider change in the thing itself as distinguished from change in its mode of appearance. We have three questions to consider. (1) What is the nexus between a thing and its changes which enables us to say that it is a change in this thing rather than in that? (2) At what point does change become transformation so that in undergoing the change the thing loses its identity? (3) When a thing changes, what is it that really undergoes the change? As for the first question, it is evident that all cognition of change involves the presentation or representation of a relatively new content of experience. When we ascribe the change to a material thing, we mean that the new content is a new state of that thing which previously existed in a different state. Now the question is this. In what relation must the new content be thought of as standing to the thing,

in order to be recognised as a state of that thing displacing a previous state? We answer: (*a*) The new content must be a specific determination of some general property or attribute of the thing, and before its emergence the thing must have possessed some other specific determination of the same general property or attribute. Every change in the thing is a change in some respect, a change in position, or in shape, or in size, or in colour, or in texture, or in temperature, or in solid content, or in powers active or passive, or the like. Each successive state is a specification of some more general character, and for that very reason they are incapable of belonging to the thing simultaneously. They are mutually exclusive alternatives which can only qualify the thing successively if at all. (*b*) These mutually exclusive alternatives must displace each other continuously in time. The commencement of the one must either coincide with the cessation of the other, or if there is an interval of time between them, this interval must be filled up by continuous transitions from one alternative to another. Let us take as an example the movement of a billiard ball. To the ball belongs the attribute of having position in space, and at any instant, this position must be completely determined. Further, it cannot occupy two positions at the same time, though it does so at different times. In order to occupy different places at different times, the varying positions must succeed each other continuously so that in passing from one it *ipso facto* enters another. (*c*) Finally we have to add that each successive determination must bear to the total complex of attributes constituting the thing, a relation analogous to that of the precedent state which it displaces. When the billiard ball moves, its new place, like its old place, is the place of its visible-tangible qualities, and of its solid content, and determines in like manner its other sensible qualities and its powers active and passive. Similarly when a leaf turns yellow, the relation of its colour and shape is maintained as it was when the leaf was green. Of course, what thus persists is only the general form of combination characteristic of a material thing. This general form receives various specific determinations as the general attributes vary either separately or together.

Our next question concerns the limits within which a thing is regarded as maintaining its individual identity in spite of the changes which it undergoes. The answer is that so long as the general conditions we have laid down are observed, there is no fixed limit except one, and even this is not absolutely fixed. A thing ceases to be regarded as the same when it suffers disruption,– when it is broken up into parts separate in space, so that each is thenceforth capable of having its independent history. When this happens, the thing no longer exists but only its fragments. Apart from this restriction, a material thing may always be regarded as maintaining its identity through change. I say that there is always a possibility of so regarding it. Whether in any given case a change is or is not treated as involving loss of identity depends upon subjective interest. So long, and as

far as the unity and continuity of our interest in the thing is unbroken it remains for us the same thing. "Imperial Cesar dead and turned to clay, may stop a hole to keep the wind away." The lump of clay is identified with the body of Imperial Cesar, simply because the poet is interested in the continuity of the transition by which the one became the other. Change the point of view and the identification will not be made. You say that Cesar is no more and that what is left is only a clod of earth. The embryologist, interested in continuity of development, may regard the egg as a stage in the continuous existence of the chicken. But for most people the egg is one thing, and the chicken another. The chicken hops about and feeds on corn, and the egg does nothing of the kind. Both are edible, but they are eaten in very different ways and have very different tastes. The knife which had its blade and handle several times replaced remained the same knife from the point of view of its possessor. It had a continuous history, and throughout its history the personal interest taken in it by its possessor was uninterrupted. Hence it is for him one thing, throughout its changes. On the other hand, the outsider who is without this personal interest will be likely to say that there have been several different knives, not one and the same knife.

Even the disruption of a thing into separate fragments does not unconditionally involve loss of individual identity. It only does so in so far as the fragments are regarded as having thenceforth an independent history with discontinuity of interest. But this is not so at the moment of the disruption. When a valuable china tea-cup falls and is broken into shivers, we naturally, for the moment, regard the collection of fragments as being the piece of china itself, as being the same thing in fragments. In the future we adopt the same attitude whenever our minds revert to the occurrence. Similarly, if we regard the fragments as capable of being put together again, we continue to think of them as preserving their individual identity with the unbroken cup. On the other hand, if we think of them as thrown on the dust-heap, so that each for the future is to have its own history independent of the rest, then from this point of view the cup is no more, and only fragments of pottery remain.

In more primitive stages of human development, solution of spatial continuity is less capable of interrupting continuity of interest and consequent identification. Primitive culture, as represented in savage races, regards the severed fragment of a thing as still capable of sympathetic communion with the whole from which it has been detached. On this view it is possible to make a man ill or cause his death by operating on the cuttings of his hair or the parings of his nails. Hence there is a very important difference between the primitive view of individual identity and our own – a difference which has an important bearing on the development of the concept of a thing.

The third question we raised was: When a material thing changes, what is it that really undergoes the change? The nature of the problem requires some explanation. It arises out of Kant's statement that only the unchanging changes. Kant said that successive states do not change, but only succeed each other. Each, in any moment, is just what it is, and nothing else. Hence the true subject of change must be the thing so far as it remains unchanged. Now, I cannot see that this statement is in reality any less nonsensical than it appears to be at the first blush. So far as the thing is unaltered, it is unaltered, and no more can be said. On the other hand, the successive states do change. This is obviously true if we consider any finite period in time, however small; for during, this period, the state includes changes. If, on the contrary, we consider the state as it is in a bare instant of time without duration, it is true that there is no change, but it is equally true that in that instant there is not, in any proper sense, a *state* of the thing. There is only a boundary between the immediately preceding and immediately succeeding state. There is only the transition from the one to another. Just as the surface is only the meeting, of two solids, so the instant of time is only the meeting of preceding and succeeding portions of duration. Like the surface, it is a boundary possessing a positive character, but still it is only a boundary. This is true, whether we apply it to the case of a state which is changing or to one which remains unchanged. Of course all change implies some qualitative continuity. It implies a generic content which receives varying specific determinations. But the change is not constituted by the generic content, nor yet by its specific determinations. The change is constituted by the continuous transition of one specific determination into another; the coincident emergence of the one and cessation of the other.

It will, however, be urged that we have not touched the essential point of Kant's criticism. We can only cognise change in a thing if we are able to recognise the thing as the same in spite of its differences in successive moments of time, and we attribute change to this something which is recognisably the same throughout its varying states. This seems beyond dispute. But we have still to enquire what we mean by the sameness of the thing. Do we mean material or individual identity? Do we mean merely likeness of quality, or do we mean that continuous connection of successive phases which makes possible unity and continuity of interest? Clearly it is the latter kind of identity we have in mind. In our conception of a thing we include all its actual changes past and future, and all the possible changes which it would undergo under varying conditions.

We comprehend all these changes in our thoughts of the thing so far as they do not interrupt the continuity of our interest in it. We mean to include them even if we do not know what they are. It is to the thing conceived in this manner that change is ascribed as a predicate.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Primary and Secondary Qualities

G. F. STOUT

VOLUME IV

1904

EDITORIAL NOTE

The following paper by G. F. Stout - "Primary and Secondary Qualities" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume IV (1903-1904), pp. 141-160.

For Stout's biography, please scroll up to page 33.

II. PRIMARY AND SECONDARY QUALITIES

G. F. STOUT

"EVERYONE," says Thomas Reid, "knows that extension, divisibility, figure, motion, solidity, hardness, softness, and fluidity were by Mr. Locke called primary qualities of body; and that sound, colour, taste, smell, and heat or cold were called secondary qualities. Is there a just foundation for this distinction? Is there anything common to the primary which belongs not to the secondary? And what is it?"

The first of the questions thus formulated by Reid may be regarded as settled. No competent person doubts that the distinction has a real foundation. But on the second question it seems to me that there is much room for discussion. The answer which is most familiar and also most precise and clear is, I think, definitely wrong. On the other hand, those philosophers who reject this false doctrine do not in general substitute for it any positive and detailed view of their own which I find myself able to accept. They are more bent on showing their opponents do not solve the problem than on solving it themselves.

The definite view commonly accepted by representatives of Physics and Physiology and also by many Philosophers is that, the primary qualities really do belong to bodies, whereas the so-called secondary qualities are not qualities of external things at all but qualities of sensations experienced by percipient minds when external things stimulate the organs of sense in certain ways.

Postponing consideration of that part of this theory which relates to primary attributes, let us first examine the contention that the secondary attributes are attributes not of bodies but of sensations. This contention is urged against what is presumed to be a natural fallacy of ordinary thinking. It is directed against a supposed confusion of common sense between qualities of sensation and properties of external things. When the plain man says that burning coal is hot he is taken to mean that the peculiar quality of the sensation felt by him when he holds his bands near the fire is actually part of the nature of the burning coal. Similarly, when he says that grass is green he is taken to mean that the specific quality of the visual appearance of the grass when he looks at it by ordinary daylight inheres in the grass itself. Against such a view it is urged that heat in this sense is no more in the fire, and that greenness in this sense is no more in the grass than pain is in the surgeon's knife. Grass and burning coal being, insentient cannot experience temperature-sensations or colour-sensations.

Hence, all that the plain man ought to mean in asserting, for example, that the fire in the grate is hot, is that it has a power of making him feel hot under certain conditions. If we enquire on what this power depends we are referred to the primary properties of the fire, such as the vibrations of its molecules.

Now, this criticism of common sense seems to me to be founded on a misconception of the actual procedure of ordinary thinking. In principle the plain man is not really guilty of the confusion with which he is charged. He does not in general confound intrinsic characters of his own sensations with attributes of external things. On the other hand, I admit and maintain that in ascribing secondary qualities to corporeal things he does not merely mean their power to produce certain sensations in us. His point of view is not that of his critics; but neither is it that which his critics ascribe to him. What it really is remains to be investigated. When it is fairly presented it will, I think, be found defensible, and indeed the only one which is defensible, for the case of primary as well as of secondary qualities.

In investigating the view of the plain man, the very worst course we can pursue is to ask the plain man himself what he means. His thought is through and through based on latent assumptions and implicit inferences which he does not ordinarily attempt to define and formulate. So soon as he attempts to define and formulate them he becomes a philosopher. But his first untrained ventures in philosophical analyses are sure to be extremely crude and unsatisfactory. To depend on his raw opinions about such topics as we are here concerned with is like depending on a child for an account of the psychology of his own mental processes. If we wish really to understand common sense we must follow and analyse its actual procedure with the view of bringing out the presupposition is which underlie this procedure. We must not ask it directly to give an account of these presuppositions.

This being understood, we may now proceed to enquire what is meant in ordinary, unreflective thought, when things are asserted to be hot, cold, sweet, red, blue, etc. We may take as typical the case of temperature. I touch a piece of iron and feel a sensation of heat. I consequently assert that the iron is hot. What do I mean by this assertion? Not merely that the body is actually producing a certain sensation in me. For I presume that the iron was hot before I touched it or came near it, and that it will continue to be so if I remove my hand and go away. Do I, then, regard the hotness of the iron as a power to produce a sensation of heat under certain assignable conditions? That is certainly a part of my meaning. But it is far from being the whole of it. On the contrary, the hotness of the iron is thought of as being a quality in it as specific and positive as the quality of my sensation when I touch it. The one is no more a mere possibility than

the other. This is shown by the fact that in ascribing secondary qualities to things we normally think of the things as if they were actually producing the sensations in a hypothetical percipient. When we think of iron as hot and gradually cooling down, we think of it as if it were in fact generating gradually diminishing sensations of heat in some one near enough to feel them, even though we are quite well aware that no one is actually present. When we now think of the books in our library as red, blue, green, and yellow, we think of them as they would appear to us were we there to look at them in ordinary daylight. But we proceed quite otherwise in the case of mere possibilities. When we think of a hayrick as inflammable we do not do so by representing it as if it were actually in flames. When we think of a window pane as brittle we do not represent it as actually being broken. In such case we consciously distinguish between possibility and its actualisation. We do not lose sight of the possibility as such and mentally substitute the actuality.

Are we then to conclude that common sense actually supposes sensations exist and change when no one actually experiences them? Before charging it with so flagrant an absurdity we ought, I think, to enquire first whether there may not be another and more defensible interpretation of its procedure. It seems to me that there is another which is not merely defensible, but the only one which is defensible.

There are two main points to be emphasised. The first is that the sensations which mediate our knowledge of the secondary qualities do so only in so far as they represent, express, or stand for something other than themselves; and their representative function being independent of their actual existence at this or that moment in this or that mind, they may be validly thought of as if they existed when in fact they do not and cannot exist The second point is that the distinction between what is represented and its sense-representation is only a latent presupposition of ordinary thinking. The plain man does not in general formulate it, though in our logical analysis of his procedure we must formulate it for him. What are called the secondary qualities of matter are not identified with what is represented in distinction from its sense-representation, nor yet with the sense-representation in distinction from what it stands for. It is rather the complex unity formed by both together and commonly left unanalysed.

The representative function of sensation may be best exhibited by contrast with cases in which it is absent.

The gradual diminution and final discontinuance of heat sensations which ensue when the sentient organism is withdrawn from the perceived object is without representative value. It depends on movements of the organism which neither produce nor imply any relevant change in the object. Hence the concomitant change of sensation is rightly regarded as

merely a change in the sensible appearance of the thing which does not express or represent any corresponding alteration in the thing itself. All such variations in sense experience may therefore be ignored or cancelled as irrelevant in mentally dealing with external objects. Now, if it is legitimate to cancel out variations of sensible appearance due merely to variable conditions of perception, it is for that very reason legitimate to represent the object as it would appear under uniform onditions of perception, whether or not it is actually so perceived, or indeed, whether or not it is perceived at all. All sensible changes and differences under uniform conditions of perception express or represent corresponding changes in things perceived; for by hypothesis they can be due to no other cause (and the principle of causality underlies the whole procedure). Hence we are interested in their representative value, and not in their actual existence. We may and do think of them as if they actually existed when they do not actually exist. We may, for instance, legitimately represent the sun as sensibly hot before any sentient beings appeared on this planet. Such procedure is logically justifiable provided always that one grand rule is observed. In comparing one thing with another, or different states of the same thing, it is always presupposed that the conditions of perception are sufficiently similar to prevent confusion between mere difference of sensible appearance and difference in the nature of the things compared. The uniformity is, of course not absolute, but only sufficient in view of the fineness of discrimination required.

Coming now to our second point, we must insist that, though this distinction between the independent nature of material things and the mode in which their nature is sensibly represented is logically presupposed in ordinary thinking, yet it is not, as a rule, explicitly recognised. On the contrary, both the sensible representation and what is represented are equally included in what are called the secondary properties of matter. Were it otherwise the secondary properties would be for common sense mere powers, or occult qualities, or if they had a positive and specific content, this would be definable only in terms of the primary properties. In fact, however, they have for common sense a positive and specific qualitative content of their own. They possess this content because the qualities and relations of temperature, colour, sound, smell, and taste sensations enter in virtue of their representative function into the essential constitution of the corresponding secondary attributes of matter.

If this analysis is correct it follows that the secondary attributes of matter are correlated but not identical with corresponding qualities of sensation. Hence, in ordinary language we speak not of a yellow sensation or a hot sensation, but of a sensation of yellow or a sensation of heat. In ordinary life our predominant interest is in the sensible properties of bodies with which we are conversant through the medium of sense, and therefore we name these directly. The corresponding sensations are named

indirectly by reference to these. But it would be a gross error to suppose on this account that the sensations as such are without qualitative content. On the contrary, whatever qualitative content belongs to the secondary properties of matter presupposes and is derived from the qualitative content of sensations *qua* sensations. This is to be borne in mind when we come to deal with primary qualities.

We have seen that in comparing objects with each other as regards their secondary qualities, standard conditions of perception are presupposed. The selection of the standard conditions is, of course, in part determined by convenience of reference. But there is also another motive which involves an important principle. Distinct sensible appearances are preferred to those which are relatively indistinct. The principle involved is that difference in the sensible appearance under uniform conditions of perception always expresses difference in the things perceived, whereas absence of difference in the sensible appearance does not necessarily express absence of difference in the things perceived. In the latter case all that is implied is that the differences which fail to appear are slighter than those which do appear. For this reason a near view of an object is preferred to a more distant view, and in determining, the proper or constant colours of things we think of them as they appear by ordinary daylight and not as they appear in the dusk when only different shades of grey are discernible and other colour distinctions are hidden from view.

This analysis of the secondary attributes of matter holds good in all essential respects for the primary also. The primary, like the secondary, are correlated but not identical with intrinsic characters of sensation, especially visual, tactual, and motor sensation. The correlation is essentially of the same kind for both. Sensation enters into the constitution of the primary attributes only in so far as certain features of sense-experience represent something other than themselves, and it is only because this representative function is logically independent of the actual occurrence and fluctuation of sense-affections that the primary qualities can be validly thought of as existing in the absence of percipients. We are justified in thinking of matter as extended and movable in space before the existence of sentient being. But we have exactly the same justification for thinking of it as hot or coloured. Finally, the positive and specific nature of the primary qualities no less than that of the secondary is derived from corresponding sensations.

We may take as our chief example the most fundamental of the primary qualities – Extension. In ordinary language it seems strange to speak of sensations as extended. The reason is that they are not extended in the same sense as corporeal things. Bodies are extended in space. But touch and sight sensations do not in the ordinary sense of the words occupy Space. They do not occupy any part of the single, homogeneous, infinite space which embraces all material things and their distances. They do

not occupy any part of the space in which Cardiff or Oxford is so many miles from London, and in which bodies attract each other inversely as the square of their distance. None the less, touch and sight sensations have an intrinsic character correlated with spatial size and shape, just as the quality of sensations of yellow is correlated with the yellowness of buttercups arid oranges. We may call this intrinsic character sensible extension. Since in ordinary life we are interested in sensible extension mainly as an expression or manifestation of spatial extension, spatial extension may be called real and sensible extension apparent. Thus we contrast the apparent size of a thing as seen at this or that distance from the eye with its real size as measured in feet or inches. Spatial or real extension is throughout homogeneous; sensible extension is of two kinds, the visual and the tactual. Their difference is perhaps comparable to that of the intensity of light sensations and the intensity of sound sensations.

Consider first visual extension. On closing the eyes though we cease to see external objects or any part of our own bodies, there is still a field or expanse of visual sensation which may be entirely grey or variegated with colour. Each distinguishable part of this field or expanse has local relations of position and distance to other parts, and the whole is a single continuous extensive quantum. Yet the visual expanse thus presented for our attentive scrutiny does not occupy any part of space. If it is in space it must be here or there. But we cannot from the nature of the case say where it is. There is no room for it in the space occupied by bodies. It may be suggested that the extent of the visual field coincides with that of the retina. To this it seems a sufficient reply that the extent of the visual field or its parts is not merely dependent on the size of the retina or its parts, but also on its anatomical structure – on the packing of rods and cones. Thus, the same stimulation of the lateral portions of the retina gives a less extensive sensation than stimulation of the *fovea centralis*. Again, if the expanse of visual sensation occupies any portion of space it must be conterminous with other outlying portions of space. But in this sense it is boundless though not of course infinite in magnitude. Parts within it are bounded by other contiguous parts, but in its totality it does not form part of a more extensive whole, and it has therefore no limits which are in any sense spatial. It has no shape. If you doubt this try to discover what its shape is. In the next place, if it occupied space, it would be commensurable with other spatial quanta. It ought to be possible to express its magnitude in feet or inches. But this is an intrinsic impossibility. We cannot, for instance, say that it is equal in extent to the total tract of the external world which comes within the range of vision when the eyes are open. For what we can thus embrace in one view may vary indefinitely in extent. It may include the expanse of the starry heavens or it may be confined to the walls of a room. Again, a part of space may be conceivably empty; but the conception of a vacuum has no application to visual extension. There is no visual

extension where there are no colour and brightness sensations.

Finally, space is a common object, in principle equally accessible to all of us. But each of us is directly acquainted only with his own visual field. The extension of colour and brightness sensations disappears with the sensations themselves, when a man dies or is afflicted with cortical blindness. But no part of space is thereby annihilated.

What has been said of the visual field of the closed eye holds also in all essentials for the visual field of the open eye. To avoid tedious repetition, I shall leave you to make the application for yourselves. I now pass on to consider the relation of real or spatial extension to the visual extension, which is its sensible appearance. The relevant facts are familiar to everyone. Everyone knows that the size and shape of the visible appearance of a thing vary indefinitely as we approach or recede from it, or otherwise change our position in relation to it, while the thing remains constant in shape and size. The visual appearance of a match-box in in my hand may be co-extensive with the visual appearance of a distant mountain. The entire disappearance of things when we go far enough away is a limiting case of such variations. Now, we cannot identify the real size of a thing with the whole series of possible changes in the extent of its visible appearance, nor yet with the fixed order of their possible occurrence. For the real extension may remain constant, while its appearance alters, and it does not in its own nature include or imply the concept of change. Still less can we select this or that apparent extension and identify it with the real. For each of them has in principle just as much and just as little logical title to be so regarded as any of the others. They pass into one another by continuous gradations, so that it is impossible to fix on one only, to the exclusion of all others differing ever so slightly from it. We do, indeed, usually think of the real extension in terms of its visual appearance under certain conditions. But these conditions are loosely determined, and they are variable according to our convenience or the degree of accuracy required. We may choose any conditions we please, provided we abide by them with sufficient strictness in comparing one object with another, and provided they yield visual appearances sufficiently distinct in view of the required fineness of discrimination. If we are interested in differences too slight to be revealed to the naked eye, we have recourse to a magnifying glass; and the visible extent of the thing under the magnifying glass has just as much claim to be identified with its real magnitude as its extent when it is seen by the naked eye.

In general, extension as a characteristic of visual sensation is quite distinct from the extension of things in space. And yet if we leave tactual experience out of count, extension as a property of bodies and the space in which bodies are extended derive their positive and distinctive content from the extensiveness of visual sensation. Real extension is, indeed,

something other than visual extension; but its extensive character belongs to it only inasmuch as this something is represented in terms of the extensiveness of sight sensations or of touch sensations.

Since Berkeley's time it has been customary to assume that touch affords an immediate revelation of the real size and shape which is denied to sight. Visual extension is admitted to have a merely representative value, but the reality represented is identified with tactual extension. It is easy to show that this distinction is indefensible. Apply the blunt end of a pencil to the forehead, to the lips, to the back of the hand, to the tip of a finger, to the drum of the ear. The resulting tactual sensations vary conspicuously in extent, though time areas of the skin affected are throughout equal and the surface with which they are brought in contact remains constant in size. None of the tactual extensions has any better logical claim than the others to be identified with the real extent either of the skin stimulated or of the surface applied to it; and their rival claims are mutually destructive. Skin sensibility is also variable in this respect from one individual to another; it is different in the child and the adult; it is affected by diseases of the brain, and by the use of drugs such as narcotics.

The case is not altered if we turn to what are called kinaesthetic sensations-muscle, joint, and tendon sensations. Berkeley identified the real distance between one body and another with the series of joint, muscle and tendon sensations which would be experienced in moving, from one to the other. We ask what series is meant? Is it that which would be experienced in walking, or in running, or in hopping on one leg? Is it that which would be experienced by a child of three or by an adult with a long stride? Which of these series consists of feet and of yards? There is only one tenable answer to such questions, whatever sense-experience we may be considering. Given uniform conditions of perception, whatever these may be, differences of sensible extension and differences of more and less in the series of motor sensations represent differences in the external world and the differences as thus represented – the differences together with the mode of representing them are what we call differences of real, physical, or spatial extension. The more differences are discernible in the sensible appearance under sufficiently uniform conditions, the fuller and more exact is our knowledge of real size, shape, and distance. But we cannot fix on any set of conditions and identify the corresponding sensible extension with extension in space. Neither tactual nor visual extension occupy any part of the space in which bodies attract each other inversely as the square of the distance.

It follows that the single infinite all embracing Space of Kant is not, as he assumes, a form of sensibility at all. It is essentially a form of what he calls external objects, and as such already presupposes the work which he ascribes to the categories. Yet it is presented by him at the outset as a

pre-condition of the work of the categories, and is from the outset confounded with sensible extension. No wonder that he found in it a most convenient middle term between the pure concepts of the understanding and the disparate matter of sense. This confusion, and a similar one relating to time, seem to me to vitiate the argument of *Critique of Pure Reason* from beginning to end.

It is needless for me to deal separately with the other primary qualities, resistance and mobility. These are correlated with sensations of muscular tension and with sensible displacement within the field of sight and touch just as real extension is correlated with tactual and visual extension.

Our general result up to this point is that there is no essential difference between the primary and secondary attributes of matter so far as regards their connexion with sense-experience. Both are in one way independent of sense and in another dependent on it. Both are dependent on it for the positive content which makes them more than mere powers or occult qualities. Both are in the sense explained independent of it as regards their existence.

What, then, is the true foundation of the undoubted distinction between them which is marked by calling them respectively primary and secondary qualities? So far as I can see the difference lies in their respective relation to the interaction of material things. The executive order of the material world can be expressed only in terms of the primary and not in terms of the secondary properties of matter. The unity and continuity of material processes is intelligible only through the unity and continuity of Space. The system of uniformities of co-existence and sequence, and of quantative equivalences and correspondences which constitutes the order of physical nature in its causal aspect can be formulated only in terms of extension, motion, and tension. On the other hand, we find no such constancy, continuity, and quantitative equivalence in the occurrence of sounds, colours, or smells. There is, e.g., no system of laws according to which sounds succeed each other or vary concomitantly in loudness. But you can always obtain a certain note by striking, the right key of a piano, and by striking more or less hard you can make it louder or softer.

This is mere common-place and needs no further exposition. But something must be said concerning the implications of this common-place. For an attempt may be made to use it so as to upset the results of our previous analysis. It may be urged that if agency belongs to matter in virtue of its primary properties, these properties must have an existence independent of sense-experience such as does not belong to the secondary. The steam hammer beats out the bar of steel and the sun attracts the planets independently of anyone's sensations. The primary properties are presupposed in the processes by which the organs of sense are stimulated; how, then, can

they be dependent on the resulting sensations? Again, science finds itself bound to postulate operative conditions and therefore primary qualities where the secondary can have no place. Thus the particles of luminiferous ether cannot themselves be coloured. Does not this point to a radical difference between the primary and the secondary qualities in their relation to sense-experience?

In reply to such contentions, I need only refer again to the distinction between sensible representation and that which is represented. What is represented exists and operates independently of the coming and going of the sensuous presentations through which we express its existence and operation. It is independent of these as the topography of England is independent of the map of England, or as the rise and fall of temperature is independent of the rise and fall of the mercury in a thermometer. There is a systematic agency which we express in terms of sensible extension, motion, and muscular tension; so expressed it is what we call material causation – the interaction of bodies in space. But the features of sense-experience through which we represent it, contribute nothing to its agency. On the other hand, since the representative value of sense-experience is independent of the existence of sensations, we may validly represent in terms of sensible extension, motion, and resistance, the processes through which these and other sense-experiences come to be and cease to be. From the same point of view, it is easy to account for the existence of primary qualities in the absence of the secondary. There is no reason why sensible extension, motion, and resistance should not have a representative value, where sensible colour, sound, heat, and taste have none, just as relative positions and distance on a map have representative value where the flatness of the map, its absolute size, and the colouring of the counties have none. Similarly, in thinking of empty space, representative value attaches only to sensible extension and the series of muscle joint, and tendon sensations.

And now I might regard my immediate problem as disposed of, so far as I am able to deal with it, were it not that a rival theory still demands attention – the theory which resolves the material world into a system of possibilities of sensation. This view is advocated in its purity by Mill, and with a well known reservation by Berkeley, and Kant at times seems to lean to the same side. According to it sensations have indeed a representative value, but what they represent is always only the possibility of getting other sensations in a fixed and systematic order. The material world is supposed by it to be constituted of actual sense-experiences, together with the systematic order of possible sense-experience. Against this doctrine I urge in the first place that the order of possible sensations is widely divergent from the order of the physical world and its processes. Consider the fluctuation of the visible appearance of a body as we approach or recede from it, and the variations of tactual extent as a body is applied

to different parts of the skin. Such differences are not differences in the size of the body itself, and they are not included in what we mean when we say, for instance, that the body is three inches long. Again, as Kant has insisted, there is a contrast between the succession of our sensations and co-existence in the external world. The back and front of a house co-exist, but the corresponding sensations are successive. Finally, how can the internal content of a solid body be resolved into any possible series of sensory presentations. Slice it as you will you only disclose surfaces; not solid content, but only the boundaries of solid content. The supporters of the theory usually meet such arguments by the help of extravagant illustrative hypotheses. They urge, for instance, that sentient beings, otherwise conditioned than ourselves, would experience simultaneously the sensations which we can experience only successively. But the appeal to such an imaginary percipient implies that at least the successive order of *our own* sensations, in spite of its fixed and systematic character, forms no part of the order of the physical world. Nor can the theory so long as it remain self-consistent supply us with any reason why the imaginary experience should be preferred to ours. The relevant difference cannot lie in the diverse conditions of perception. For these conditions, according to the theory, can themselves consist only in an order of actual and possible sensations. There seems to be no assignable ground for preferring the fictitious experience unless we already presuppose a knowledge that, e.g., the order of the external world is co-existent as contrasted with the successive order of its sensible appearance to us. There is a still more fundamental objection to the doctrine. It dislocates and transposes the relation of the possible and actual. It commits the old blunder of dogmatic metaphysics, making essence prior to existence, investing it with a pseudo-existence, and deriving actual existence from it. Possibility essentially presupposes actuality. To say that something is possible is to say that there is something actual which would behave in a certain way under certain conditions. But the doctrine we are discussing deals freely in mere possibilities without any such relation to anything actual; these naked possibilities it regards as the source of actual sensations, and to intensify the absurdity it supposes that actual changes take place in these naked possibilities, and also that change in one naked possibility determines changes in others. Take Mill's example of the table which is believed to exist when no one is present to perceive it. This belief is construed as meaning that if any one went into the room, or were now in it, and suitably directing his organs of sense he would be aware of certain sensations, e.g., of a group of visual sensations. Now, the going into the room and the being in the room and the adjustment of the sense organs must, of course, in accordance with the theory be simply identified with having certain possible sensations in a certain order. Suppose these sensations actualised. It does not therefore follow that a table become visible. I should have just the same sensations without seeing any table if no table were there. The table itself is that which so reacts,

or would so react under the assigned conditions, as to give rise to those actual sensations which are called the visible appearance of the table. But according to the theory under discussion the table is nothing actual but only a naked possibility. Thus a naked possibility is supposed to operate as an agent giving rise to something actual – to actual sensations. To crown the absurdity, it is supposed to effect this by determining other naked and unactualised possibilities of sensation which again consist in changes taking place in yet other naked and unactualised possibilities. For such is the only interpretation which the theory can put on the proposition that the table affects the sentient organ is by reflecting light to the eye and so setting up molecular processes in the nervous system.

For these, among other reasons, I feel bound to reject the doctrine of Mill and Berkeley, though I imagine it is held in substance by some at the present day who belong to a very different school of thought. I am quite prepared to be told by thinkers with whom I have at bottom much in common that my own position is at least as untenable. I expect to be charged with reviving the exploded doctrine of things in themselves, disparate and discontinuous with our immediate experience. With a clear conscience I plead not guilty to all counts of this indictment.

There is, indeed, a sense in which I postulate things in themselves. But in this sense I do not see how anyone can deny them. I postulate things in themselves in the sense in which another man's toothache is relatively to me thing in itself as having an inner being of its own which I do not immediately experience though I may know of it. I postulate them in the sense in which my own past toothache is a thing in itself relatively to my present existence inasmuch as I do not immediately experience it when I remember it. But so understood things in themselves are surely admitted facts and not exploded figments of an obsolete metaphysics.

In distinguishing between sensible representation and what it represents I do not commit myself to any irreducible dualism. I do not divide the universe into disparate and discontinuous parts. On the contrary, the existences and processes which have an inner being of their own are the very same existences and processes which as sensibly represented constitute the world of material phenomena. It is with the things in them selves, if we choose to name them thus, that we are incessantly conversant through the medium of sense. They constitute the constant presupposition and necessary complement of our conscious experience. Their inner being cannot therefore be disparate and discontinuous with our own conscious life. On the contrary, we and they must form part of one continuous whole. They must be bone of our bone and flesh of our flesh. This means for me that their inner being is ultimately psychical. Indeed, like Lotze, I fail to understand what "inner being" can possibly mean unless it means "psychical being."

But how, it will be asked, can we know all this? Am I not begging the question in assuming that in any relevant sense we are or can be conversant with the things in themselves so as to be able to represent them in terms of sensation? Granted that they determine modifications of our sense-experience how can we be aware of anything except the resulting sensation. The scratch, as H. Stirling, says, knows nothing of the thorn.

Confined at the outset to our own states – our own immediate experience – by what possibility can we ever transcend these? Evidently we can only do so by way of inference. But how can we infer from A to B, when B is supposed to be something with which we are totally unacquainted?

As regards this last question I would point out that unless what is inferred is other than the datum there is no inference. All that is necessary for inference is (1) that the datum shall be by its intrinsic nature a fragment of a wider whole, and shall therefore point beyond itself to its own necessary complement; (2) that there shall be a thinking and willing being capable of discerning and actively eliciting the implication. Turning to our special problem, I admit that on my view the primary datum for the individual mind is its own immediate experience. But this proposition seems to me to be not only distinct from but in direct contradiction to the statement that in the first instance we know only our own states. If our own states could be known in pure isolation from naught else, they would not be data. An isolated datum is a contradiction in terms. A datum is a datum only because being essentially a fragment it points beyond itself; and what it thus implies cannot be merely being in general or merely the absolute, but always something as specific as itself. A state of feeling incapable of revealing anything beyond itself that would be a petty absolute. This applies to the primary datum – immediate experience; the immediate experience of each of us being a fragment of the one continuous universe must manifest itself as such to a thinking being. Immediate experience must from the outset be inseparably blended with immediate inference, and this in manifold ways. It is in this direction and not in any *a priori* contribution of the understanding, that I would look for the source and the justification of the Kantian categories.

I can here only say one word or two to indicate the bearing of these general remarks on the question, how we can know the existence and processes which, as represented in terms of sensation, constitute the external world. The only answer which I have to offer is an old one, but one which has not, so far as I can discover, been yet properly stated or understood or intelligently criticised. I turn for a solution to the intrinsic nature of conation and will and the mode in which conation and will find themselves conditioned as regards success or failure in the control of sense-experience. From the same source I coincidently derive the concept of tendency which seems to be the most distinctive and indispensable ele-

ment in concrete causality. It lies beyond the limits of this paper to follow out this line of thought in detail. It is sufficient for my present purpose if I have succeeded in showing how I conceive the problem without attempting to solve it.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

The Nature and Reality of Objects of Perception

G. E. MOORE

VOLUME VI

1906

EDITORIAL NOTE

G. E. Moore (1873-1958) was one of the founders of what we now call 'analytic philosophy'. Along with Bertrand Russell, he led the turn away from idealism in British philosophy and became well known for his advocacy of common sense concepts, his contributions to ethics, epistemology and metaphysics. G.E. Moore studied Classics at Trinity College, Cambridge, graduating with a First Class degree in 1896. In 1898 he won a Prize Fellowship at Trinity to continue the study of philosophy, and remained at Cambridge for the rest of his career, eventually becoming Professor of Philosophy there. He was highly influential in the Bloomsbury Group, editor of *Mind*, and elected a fellow of the British Academy in 1918. He retired from Cambridge in 1939 and as editor of Mind in 1944.

G. E. Moore was President of the Aristotelian Society from 1918 to 1919.

The following paper - "The Nature and Reality of Objects of Perception" - was published in *Proceedings of the Aristotelian Society*, New Series, Volume VI (1905-1906), pp. 68-127.

III. THE NATURE AND REALITY OF OBJECTS OF PERCEPTION

G. E. MOORE

THERE are two beliefs in which almost all philosophers, and almost all ordinary people are agreed. Almost everyone believes that he himself and what he directly perceives do not constitute the whole of reality: he believes that *something* other than himself and what he directly perceives *exists* or is *real*. I do not mean to say that almost everyone believes that what he directly perceives is real: I only mean that he does believe that, whether what he directly perceives is real or not, something other than it and other than himself certainly is so. And not only does each of us thus agree in believing that *something* other than himself and what he directly perceives is real: almost everyone also believes that *among* the real things, other than himself and what he directly perceives, are other persons who have thoughts and perceptions in some respects similar to his own. That most people believe this I think I need scarcely try to show. But since a good many philosophers may appear to have held views contradictory of this one, I will briefly point out my reason for asserting that most philosophers, even among those (if any) who have believed the contradictory of this, have yet held this as well. Almost all philosophers tell us something about the nature of *human* knowledge and *human* perception. They tell us that *we* perceive so and so; that the nature or origin of *our* perceptions is such and such; or (as I have just been telling you) that men in general have such and such beliefs. It might, indeed, be said that we are not to interpret such language too strictly: that, though a philosopher talks about *human* knowledge and *our* perceptions, he only means to talk about his own. But in many cases a philosopher will leave no doubt upon this point, by expressly assuming that there are other perceptions, which differ in some respects from his own: such, for instance, is the case when (as is so common nowadays) a philosopher introduces psycho-genetic considerations into his arguments – considerations concerning the nature of the perceptions of men who existed before and at a much lower stage of culture than himself. Any philosopher, who uses such arguments, obviously assumes that perceptions other than his own have existed or been real. And even those philosophers who think themselves justified in the conclusion that neither their own perceptions nor any perceptions like theirs are *ultimately* real, would, I think admit, that *phenomenally*, at least, they *are* real, and are certainly *more* real than some other things.

Almost everyone, then, does believe that some perceptions other than

his own, and which he himself does not directly perceive, are real; and believing this, he believes that something other than himself and what he directly perceives is real. But how do we know that anything exists except our own perception is, and what we directly perceive? How do we know that there are any other people, who have perceptions in some respects similar to our own?

I believe that these two questions express very exactly the nature of the problem which it is my chief object, in this paper, to discuss. When I say these words to you, they will at once suggest to your minds the very question, to which I desire to find an answer; they will convey to you the very same meaning which I have before my mind, when I use the words. You will understand at once what question it is that I mean to ask. But, for all that, the words which I have used are highly ambiguous. If you begin to ask yourselves what I do mean by them, you will find that there are several quite different things which I might mean. And there is, I think, great danger of confusing these different meanings with one another. I think that philosophers, when they have asked this question in one sense, have often answered it in quite a different sense; and yet have supposed that the answer which they have given is an answer to the very same question which they originally asked. It is precisely because there is this ambiguity – this danger of confusion, in the words which I have used, that I have chosen to use them. I wish to point out as clearly as I can, not only what I do mean by them, but also some things which I do *not* mean; and I wish to make it clear that the questions which I do *not* mean to ask, are different questions from that which I do mean to ask.

I will take the second of my two questions, since there is in the other an additional ambiguity to which I do not now wish to call attention. My second question was: How do we know that there exist any other people who have perceptions in some respects similar to our own ? What does this question mean?

Now I think you may have noticed that when you make a statement to another person, and he answers "How do you know that that is so?" he very often means to suggest that you do *not* know it. And yet, though he means to suggest that you do not *know* it, he may not for a moment wish to suggest that you do not *believe* it, nor even that you have not that degree or kind of conviction, which goes beyond mere belief, and which may be taken to be essential to anything which can properly be called knowledge. He does not mean to suggest for a moment that you are saying something which you do not believe to be true, or even that you are not thoroughly convinced of its truth. What he does mean to suggest is that what you asserted was not *true*, even though you may not only have believed it but felt sure that it was true. He suggests that you don't *know* it, in the sense that what you believe or feel sure of is not true.

Now I point this out, not because I myself mean to suggest that we don't know the existence of other persons, but merely in order to show that the word "know" is sometimes used in a sense in which it is not merely equivalent to "believe" or "feel sure of." When the question "How do you *know* that?" is asked, the questioner does not merely mean to ask – "How do you come to believe that, or to be convinced of it?" He sometimes, and I think generally, means to ask a question with regard to the *truth*, and not with regard to the *existence* of your belief. And similarly when I ask the question "How do we know that other people exist?" I do *not* mean to ask "How do we come to believe in or be convinced of their existence?" I do not intend to discuss this question *at all*. I shall not ask what *suggests* to us our belief in the existence of other persons or of an external world; I shall not ask whether we arrive at it by inference or by "instinct" or in any other manner, which ever has been or may be suggested: I shall discuss no question of any kind whatever with regard to its origin, or cause, or the way in which it arises. These psychological questions are not what I propose to discuss. When I ask the question "How do we know that other people exist?" I do *not* mean: "How does our belief in their existence arise?"

But if I do not mean this, what do I mean? I have said that I mean to ask a question with regard to the *truth* of that belief; and the particular question which I mean to ask might be expressed in the words: *What reason have* we for our belief in the existence of other persons? But these are words which themselves need some explanation, and I will try to give it.

In the first place, then, when I talk of "a reason," I mean *only* a good reason and *not* a bad one. A bad reason is, no doubt, a reason, in one sense of the word; but I mean to use the word "reason" exclusively in the sense in which it is equivalent to "good reason." But what, then, is meant by a good reason for a belief? I think I can express sufficiently accurately what I mean by it in this connection, as follows:- A good reason for a belief is a proposition which is true, and which would not be true unless the belief were also true. We should, I think, commonly say that when a man knows such a proposition he has a good reason for his belief; and, when he knows no such proposition, we should say that he has no reason for it. When he knows such a proposition, we should say he knows something which is a reason for thinking his belief to be true – something from which it *could* be validly inferred. And if, in answer to the question "How do you know so and so?" he were to state such a proposition, we should, I think, feel that he had answered the question which we meant to ask. Suppose, for instance, in answer to the question "How do you know that?" he were to say "I saw it in the *Times*." Then, if we believed that he had seen it in the *Times*, and also believed that it would not have been in the *Times*, unless it had been true, we should admit that he had answered our question. We should no longer doubt that he did know what he asserted,

we should no longer doubt that his belief was true. But if, on the other hand, we believed that he had not seen it in the *Times* – if, for instance, we had reason to believe that what he saw was not the statement which he made, but some other statement which he mistook for it; or if we believed that the kind of statement in question was one with regard to which there was no presumption that, being, in the *Times*, it would be true: in *either* of these cases we should, I think, feel that he had *not* answered our question. We should still doubt whether what he had said was true. We should still doubt whether he *knew* what he asserted; and since a man cannot tell you how he knows a thing, unless he does know that thing, we should think that, though he might have told us truly how he *came to believe it*, he had certainly not told us how he *knew* it. But though we should thus hold that he had *not* told us *how he knew* what he had asserted, and that he had given us no reason for believing it to be true; we must yet admit that he had given us a reason, in a sense – a *bad* reason, a reason which was no reason because it had no tendency to show that what he believed was true; and we might also be perfectly convinced that he had given us *the reason* why he believed it – the proposition by believing which he was induced also to believe his original assertion.

I mean, then, by my question, "How do we know that other people exist?" what, I believe, is ordinarily meant, namely, "What reason have we for believing that they exist?" and by this again I mean, what I also believe is ordinarily meant, namely, "What proposition do we believe, which is both true itself and is also such that it would not be true, unless other people existed?" And I hope it is plain that this question, thus explained, is quite a different question from the psychological question, which I said I did *not* mean to ask – from the question, "How does our belief in the existence of other people arise?" My illustration, I hope, has made this plain. For I have pointed out that we may quite well hold that a man has told us how a belief of his arises, and even what was the reason which made him adopt that belief, and yet may have failed to give us any *good reason* for his belief – any proposition which is both true itself, and also such that the truth of his belief follows from it. And, indeed, it is plain that if any one ever believes what is false, he is believing something for which there is no good reason, in the sense which I have explained, and for which, therefore, he cannot possibly have a good reason; and yet it plainly does not follow that his belief did not arise in any way whatever, nor even that he had no reason for it – no bad reason. It is plain that false beliefs do arise in some way or other – they have origins and causes: and many people who hold them *have* bad reasons for holding them – their belief does arise (by inference or otherwise) from their belief in some other proposition, which is not itself true, or else is not a *good* reason for holding that which they infer from it, or which, in some other way, it induces them to believe. I submit, therefore, that the question, "What good reason have we for be-

lieving in the existence of other people?" is different from the question, "How does that belief arise?" But when I say this, I must not be misunderstood; I must not be understood to affirm that the answer to both questions cannot, in a sense, be the same. I fully admit that the very same fact, which suggests to us the belief in the existence of other people, *may* also be a good reason for believing that they do exist. All that I maintain is that the question whether it is a good reason for that belief is a different question from the question whether it suggests that belief: if we assert that a certain fact *both* suggests our belief in the existence of other persons and is *also* a good reason for holding that belief, we are asserting two different things and not one only. And hence, when I assert, as I shall assert, that we have a good reason for our belief in the existence of other persons, I must not be understood also to assert either that we infer the existence of other persons from this good reason, or that our belief in that good reason suggests our belief in the existence of other persons in any other way. It is plain, I think, that a man may believe two true propositions, of which the one would not be true, unless the other were true too, without, in any sense whatever, having arrived at his belief in the one *from* his belief in the other; and it is plain at all events, that the question whether his belief in the one *did* arise from his belief in the other, is a different question from the question whether the truth of the one belief follows from the truth of the other.

I hope, then, that I have made it a little clearer what I mean by the question: "What reason have we for believing in the existence of other people?" and that what I mean by it is at all events different from what is meant by the question: "How does our belief in the existence of other people arise?" But I am sorry to say that I have not yet reached the end of my explanations as to what my meaning is. I am afraid that the subject may seem very tedious. I can assure you that I have found it excessively tedious to try to make my meaning clear to myself. I have constantly found that I was confusing one question with another, and that, where I had thought I had a good reason for some assertion, I had in reality no good reason. But I may perhaps remind you that this question, "How do we know so and so?" "What reason have we for believing it?" is one of which philosophy is full; and one to which the most various answers have been given. Philosophy rarely consists in giving reasons; and the question what are good reasons for a particular conclusion and what are bad, is one upon which philosophers have disagreed as much as on any other question. For one and the same conclusion different philosophers have given not only different, but incompatible, reasons; and conversely different philosophers have maintained that one and the same fact is a reason for incompatible conclusions. We are apt, I think, sometimes to pay too little attention to this fact. When we have taken, perhaps, no little pains to assure ourselves that our own reasoning is correct, and especially when we know that a great many

other philosophers agree with us, we are apt to assume that the arguments of those philosophers, who have come to a contradictory conclusion, are scarcely worthy of serious consideration. And yet, I think, there is scarcely a single reasoned conclusion in philosophy, as to which we shall not find that some other philosopher, who has, so far as we know, bestowed equal pains on his reasoning, and with equal ability, has reached a conclusion incompatible with ours. We may be satisfied that we are right, and we may, in fact, be so; but it is certain that *both* cannot be right: either our opponent or we must have mistaken bad reasons for good. And this being so, however satisfied we may be that it is not we who have done so, I think we should at least draw the conclusion that it is by no means easy to avoid mistaking bad reasons for good; and that no process, however laborious, which is in the least likely to help us in avoiding this should be evaded. But it is at least possible that one source of error lies in mistaking one kind of reason for another – in supposing that, because there is, in one sense, a reason for a given conclusion, there is also a reason in another, or that because there is, in one sense, no reason for a given conclusion, there is, therefore, no reason at all. I believe myself that this is a very frequent source of error: but it is at least a possible one. And where, as disagreements show, there certainly is error on one side or the other, and reason, too, to suppose that the error is not easy to detect, I think we should spare no pains in investing rating any source, from which it is even possible that the error may arise. For these reasons I think I am perhaps doing right in trying to explain as clearly as possible not only what reasons we have for believing in an external world, but also in what sense I take them to be reasons.

I proceed, then, with my explanation. And there is one thing, which, I think my illustration has shown that I do not mean. I have defined a reason for a belief as a true proposition, which would not be true unless the belief itself – what is believed – were also true; and I have used, as synonymous with this form of words, the expressions: A reason for a belief is a true proposition from which the truth of the belief *follows* from which it *could* be *validly inferred*. Now these expressions might suggest the idea that I mean to restrict the word "reason" to what, in the strictest sense, might be called a *logical* reason – to propositions from which the belief in question *follows*, according to the rules of inference accepted by Formal Logic. But I am *not* using the words "follow," "validly inferred," in this narrow sense; I do *not* mean to restrict the words "reason for a belief" to propositions from which the laws of Formal Logic state that the belief could be deduced. The illustration which I gave is inconsistent with this restricted meaning. I said that the fact that a statement appeared in the *Times* might be a good reason for believing that that statement was true. And I am using the word "reason" in the wide and popular sense, in which it really might be. If, for instance, the *Times* stated that the King

was dead, we should think that was a good reason for believing that the King was dead; we should think that the *Times* would not have made such a statement as that unless the King really were dead. We should, indeed, not think that the statement in the *Times* rendered it absolutely *certain* that the King was dead. But it is extremely unlikely that the *Times* would make a statement of this kind unless it were true; and, in that sense, the fact of the statement appearing in the *Times* would render it *highly probable* – much more likely than not – that the King was dead. And I wish it to be understood that I am using the words "reason for a belief" in this extremely wide sense. When I look for a good reason for our belief in the existence of other people, I shall not reject any proposition merely on the ground that it only renders their existence probable – only shows it to be more likely than not that they exist. Provided that the proposition in question does render it *positively* probable that they exist, then, if it also conforms to the conditions which I am about to mention, I shall call it a "good reason."

But it is not every proposition which renders it probable that other people exist, which I shall consider to be a good answer to my question. I have just explained that my meaning is wide in one direction – in admitting *some* propositions which render a belief merely probable; but I have now to explain that it is restricted in two other directions: I do mean to exclude certain propositions which do render that belief probable. When I ask: What reason have *we* for believing in the existence of other people? a certain ambiguity is introduced by the use of the plural "we." If each of several different persons has a reason for believing that he himself exists, then it is not merely probable, but certain, according to the rules of Formal Logic, that, in a sense, *they* "have a reason for believing" that several people exist; each has a reason for believing that he himself exists; and, therefore, all of them, taken together, have reasons for supposing that several persons exist. If, therefore, I were asking the question: What reason have *we* for believing in the existence of other persons? in this sense, it would follow that if each of us has a reason for believing in his own existence, these reasons, taken together, would be a reason for believing in the existence of all of us. But I am not asking the question in this sense: it is plain that this is not its natural sense. What I do mean to ask is: Does *each single one* of us know any proposition, which is a reason for believing that *others* exist? I am using "we," that is to say, in the sense of "each of us." But again I do mean *each* of us: I am not merely asking whether some *one* man knows a proposition which is a reason for believing, that other men exist. It would be possible that some one man, or some few men, should know such a proposition, and yet the rest know no such proposition. But I am not asking whether this is the case. I am asking whether among propositions of the kind which (as we commonly suppose) all or almost all men know, there is any which is a reason for supposing that other men exist.

And in asking this question I am not begging the question by supposing that all men do exist. My question might, I think, be put quite accurately as follows. There are certain kinds of belief which, as we commonly suppose, all or almost all men share, I describe this kind of belief as "our" beliefs, simply as an easy way of pointing out which kind of belief I mean, but without assuming that all men do share them. And I then ask: Supposing a single man to have beliefs of this kind, which among them would be a good reason for supposing that other men existed having like beliefs?

This, then, is the first restriction which I put upon the meaning of my question. And it is, I think, a restriction which, in their natural meaning, the words suggest. When we ask: What reason have we for believing that other people exist? we naturally understand that question to be equivalent to: What reason has *each* of us for that belief? And this question again is naturally equivalent to the question: Which among the propositions that a single man believes, but which are of the kind which (rightly or wrongly) we assume all men to believe, are such that they would not be true unless some other person than that man existed? But there is another restriction which, I think, the words of my question also naturally suggest. If we were to ask anyone the question: How do you know that you did see that statement in the *Times*? and he were to answer "Because I did see it in the *Times* and in the *Standard* too," we should not think that he had given us a reason for the belief that he saw it in the *Times*. We should not think his answer a *reason*, because it asserts the very thing for which we require a reason. And similarly when I ask: How do we know that any thing, or person exists, other than ourselves and what we directly perceive? What reason have we for believing this? I must naturally be understood to mean: What proposition, *other* than one which itself asserts or presupposes the existence of something beyond ourselves and our own perceptions, is a reason for supposing that such a thing exists? And this restriction obviously excludes an immense number of propositions of a kind which all of us do believe. We all of us believe an immense number of different propositions about the existence of things which we do not directly perceive, and many of these propositions are, in my sense, good reasons for believing in the existence of still other things. The belief in the existence of a statement in the *Times*, when we have not seen that statement, may, as I implied, be a good reason for believing, that someone is dead. But no such proposition can be a good answer to my question, because it asserts the very kind of thing for which I require a reason: it asserts the existence of something other than myself and what I directly perceive. When I am asking: What reason have I for believing in the existence of anything but myself, my own perceptions, and what I do directly perceive? you would naturally understand me to mean: What reason, *other* than the existence of such a thing, have I for this belief?

Each of us, then, we commonly assume, believes some true proposi-

tions, which do not themselves assert the existence of anything *other than* himself, his own perceptions, or what he directly perceives. Each of us, for instance, believes that he himself has and has had certain particular perceptions: and these propositions are propositions of the kind I mean – propositions which do not themselves assert the existence of anything other than himself, his own perceptions, and what he directly believes: they are, I think, by no means the only propositions of this kind, which most of us believe: but they *are* propositions of this kind. But, as I say, I am not assuming that each of us – each of several different people-does believe propositions of this kind. All that I assume is that at least one man does believe some such propositions. And then I ask: Which among those true propositions, which one man believes, are such that they would probably not be true, unless some other man existed and had certain particular perceptions? Which among them are such that it *follows* (in the wide sense, which I have explained) from their truth, that it is more likely than not that some other man has perceptions? This is the meaning of my question, so far as I have hitherto explained it: and I hope this meaning is quite clear. It is in this sense that I am asking: What reason have we for believing that other people exist? How do we know that they exist? This, indeed, is not *all* that I mean by that question: there is one other point – the most important one – which remains to be explained. But this is *part* of what I mean to ask; and before I go on to explain what else I mean, I wish first to stop and enquire what is the answer to this part of my question. What is the answer to the question: Which among the true propositions, of a kind which (as we commonly assume) each of us believes, and which do not themselves assert the existence of anything other than that person himself, his own perceptions, or what he directly perceives, are such that they would probably not be true unless some other person existed, who had perceptions in some respects similar to his own?

Now to this question the answer is very obvious. It is very obvious that in this sense we have reasons for believing in the existence of other persons, and also what some of those reasons are. But I wish to make it quite plain that this is so: that in this sense one man *has* a reason for believing that another has certain perceptions. All that I am asking you to grant, is, you see, that some of you would not be having just those perceptions which you now have, unless I, as I read this paper, were perceiving more or less black marks on a more or less white ground; or that I on the other hand, should not be having just those perceptions which I now have, unless some other persons than myself were hearing the sounds of my voice. And I am not asking you even to grant that this is certain – only that it is positively probable – more likely than not. Surely it is very obvious that this proposition is true. But I wish to make it quite clear what would be the consequences of denying that any such propositions are true – propositions which assert that the existence of certain perceptions in one man

are a reason for believing the existence of certain perceptions in another man – which assert that one man would probably not have had just those perceptions which he did have, unless some other man had had certain particular perceptions. It is plain, I think, that, unless some such propositions are true, we have no more reason for supposing that Alexander the Great ever saw an elephant, than for supposing that Sindbad the Sailor saw a Roc; we have no more reason for supposing, that anybody saw Julius Caesar murdered in the Senate House at Rome, than for supposing that somebody saw him carried up to Heaven in a fiery chariot. It is plain, I think, that if we have any reason at all for supposing that in all probability Alexander the Great did see an elephant, and that in all probability no such person as Sindbad the Sailor ever saw a Roc, part of that reason consists in the assumption that some other person would probably not have had just those perceptions which he did have, unless Alexander the Great had seen an elephant, and unless Sindbad the Sailor had not seen a Roc. And most philosophers, I think, are willing, to admit that we have some reason, in some sense or other, for such propositions as these. They are willing to admit not only that some persons probably did see Julius Caesar murdered in the Senate House; but also that some persons, other than those who saw it, had and have some reason for supposing that some one else probably saw it. Some sceptical philosophers might, indeed, deny both propositions; and to refute their views, I admit, other arguments are needed than any which I shall bring forward in this paper. But most philosophers will, I think, admit not only that facts, for which there is, as we say, good historical evidence, are probably true; but also that what we call good historical evidence really is in some sense a good reason for thinking them true. Accordingly I am going to assume that many propositions of the following kind are true. Propositions, namely, which assert that one man would probably not have certain perceptions which he does have, unless some other man had certain particular perceptions. That some of you, for instance, would probably not be having precisely the perceptions which you are having, unless I were having the perception of more or less black marks on a more or less white ground. And, in this sense, I say, we certainly have reasons for supposing that other people have perceptions similar, in some respects, to those which we sometimes have.

But when I said I was going to ask the question: What reason have we for supposing that other people exist? you will certainly not have thought that I merely meant to ask the question which I have just answered. My words will have suggested to you something much more important than merely this. When, for instance, I said that to the question "How do you know that?" the answer "I saw it in the *Times*" would be a satisfactory answer, you may have felt, as I felt, that it would not in all circumstances be regarded as such. The person who asked the question might, in some cases, fairly reply: "That is no answer: how do you know that, because

you saw a thing, in the *Times*, it is therefore true?" In other words he might ask for a *reason* for supposing that the occurrence of a particular statement in the *Times* was a reason for supposing that statement true. And this is a question to which we all believe that there may be an answer. We believe that, with regard to some kinds of statements which the *Times* makes – some kinds of statements with regard to Fiscal Policy for example – the fact that the *Times* makes them is no reason for supposing them to be true: whereas with regard to other kinds of statement which it makes, such a statement, for instance, as that the King was dead, the fact that it makes them is a reason for supposing them true. We believe that there are some kinds of statement, which it is very unlikely the *Times* would make, unless they were true; and others which it is not at all unlikely that the *Times* might make, although they were not true. And we believe that a reason might be given for distinguishing, in this way, between the two different kinds of statement: for thinking that, in some cases (on points, for instance, which, as we should say, are not simple questions of fact) the *Times* is fallible, whereas in other cases, it is, though not absolutely infallible, very unlikely to state what is not true.

Now it is precisely in this further sense that I wish to consider: what reason have we for believing that certain particular things, other than ourselves, our own perceptions, and what we directly perceive, are real? I have asserted that I do have certain perceptions, which it is very unlikely I should have, unless some other person had certain particular perceptions: that, for instance, it is very unlikely that I should be having precisely those perceptions which I am now having, unless someone else were hearing the sound of my voice. And I now wish to ask: What reason have I for supposing that this is unlikely? What reason has any of us for supposing that any such proposition is true? And I mean by "having a reason" precisely what I formerly meant. I mean: What other proposition do I know, which would not be true, unless my perception were connected with someone else's perception, in the manner in which I asserted them to be connected? Here again I am asking for *a good reason*; and am not asking a psychological question with regard to origin. Here again I am not asking for a reason, in the strict sense of Formal Logic; I am merely asking for a proposition, which would probably not be true, unless what I asserted were true. Here again I am asking for some proposition of a kind which *each* of us believes; I am asking: What reason has *each* of us for believing that some of his perceptions are connected with particular perceptions of other people in the manner I asserted?– for believing that he would not believe certain perceptions that he does have, unless some other person had certain particular perceptions? And here again I am asking for a *reason* – I am asking for some proposition *other* than one which itself asserts: When one man has a perception of such and such a particular kind, it is probable that another man has a perception or thought of this or that other kind.

But what kind of reason can l be given for believing a proposition of this sort ? For believing a proposition which asserts that, since one particular thing exists, it is probable that another particular thing also exists? One thing I think is plain, namely that we can have no good reason for believing such a proposition, unless we have good reason for believing some *generalisation*. It is commonly believed, for instance, that certain so-called flint arrow-heads, which have been discovered, were probably made by prehistoric men; and I think it is plain that we have no reason for believing this unless we have reason to suppose that objects which resemble these in certain particular respects are generally made by men – are *more often* made by men than by any other agency. Unless certain particular characteristics which those arrow-heads have were characteristics which belonged at least more frequently to articles of human manufacture than to any articles not made by men, it would surely be just as likely as not that these arrow-heads were not made by men – that they were, in fact, not arrow-heads. That is to say, unless we have reason to assert a *generalisation* – the generalisation that objects of a certain kind are *generally* made by men, we have no reason to suppose that these particular objects, which are of the kind in question, *were* made by men. And the same, so far as I can see, is true universally. If we ever have any reason for asserting that, since one particular thing exists, another probably exists or existed or will exist also, part of our reason, at least, must consist in reasons for asserting some generalization – for asserting that the existence of things of a particular kind is, more often than not, accompanied or preceded or followed by the existence of things of another particular kind. It is, I think, sometimes assumed that an alternative to this theory may be found in the theory that the existence of one kind of thing "intrinsically points to," or is "intrinsically a sign or symbol of" the existence of another thing. It is suggested that when a thing which thus "points to" the existence of another thing exists, then it is at least probable that the thing "pointed to" exists also. But this theory, I think, offers no real alternative. For, in the first place, when we say that the existence of one thing A is a "sign" of or "points to" the existence of another thing B, we very commonly actually mean to say that when a thing like A exists, a thing like B *generally* exists too. We may, no doubt, mean something else *too*; but this we do mean. We say, for instance, that certain particular words, which we hear or read, are a "sign" that somebody has thought of the particular things which we call the meaning of those words. But we should certainly hesitate to admit that the hearing or reading of certain words could be called a "sign" of the existence of certain thoughts, unless it were true that when those words are heard or read, the thoughts in question *generally* have existed. If when those words were heard or read, the thoughts had generally *not* existed, we should say that, in one sense of the word at all events, the hearing of the words was *not* a sign of the existence of the thoughts. In this sense, therefore, to say that the existence of A "points to" or "is a sign of" the

existence of B, is actually to say that when A exists, B *generally* exists also. But, no doubt, the words "points to," "is a sign of" may be used in some other sense: they may, for instance, mean only that the existence of A *suggests* in some way the belief that B exists. And in such a case we might certainly know that the existence of A pointed to the existence of B, without knowing that when A existed B generally existed also. Let us suppose, then, that in some such sense A does "point to" the existence of B; can this fact give us a reason for supposing it even probable that B exists? Certainly it can, *provided* it is true that when A *does* point to the existence of B, B *generally* exists. But surely it can do so, only on this condition. If when A *points* to the existence of B, B, nevertheless, does *not* generally exist, then surely the fact that A points to the existence of B can constitute no probability that B does not exist: on the contrary it will then be probable that, even though A "points to" the existence of B, B does *not* exist. We have, in fact, only substituted the generalisation that A's *pointing* to B is generally accompanied by the existence of B, for the generalisation that A's *existence* is generally accompanied by the existence of B. If we are to have any reason for asserting that, when A *points to* or is a sign of the existence of B, B probably exists, we must still have a reason for some generalization – for a generalisation which asserts that when one thing points to the existence of another, that other *generally* exists.

It is plain, then, I think, that if we are to find a reason for the assertion that some particular perception of mine would probably not exist, unless someone else were having or had had a perception of a kind which I can name, we must find a reason for *some* generalisation. And it is also plain, I think, that in many cases of this kind the generalisation must consist in an assertion that when one man has a certain kind of perception, some other man generally has had some other perception or belief. We assume, for instance, that when we hear or read certain words, somebody besides ourselves has thought the thoughts, which constitute the meaning of those words; and it is plain, I think, that we have no reason for this assumption except one which is also a reason for the assumption that when certain words are heard or read, somebody generally has had certain thoughts. And my enquiry, therefore, at least includes the enquiry: What reason have we for such generalisations as these? for generalisations which assert a connection between the existence of a certain kind of perception in one man, and that of a certain kind of perception or belief in another man?

And to this question, I think, but one answer can be given. If we have any reason for such generalisations at all, some reason must be given, in one way or another, by observation – by observation, understood in the wide sense in which it includes "experiment." No philosopher, I think, has ever failed to assume that observation does give a reason for *some* generalisations – for some propositions which assert that when one kind of thing exists, another generally exists or has existed in a certain relation to it.

Even those who, like Hume, imply that observation cannot give a *reason* for anything, yet constantly appeal to observation in support of generalisations of their own. And even those who hold that observation can give no reason for any generalisation about the relation of one man's perceptions to another's, yet hold that it *can* give a reason for generalisations about the relation of some to others among a man's own perceptions. It is, indeed, by no means agreed *how* observation can give a reason for any generalisation. Nobody knows what reason we have, if we have any, for supposing that it can. But *that* it can, everyone, I think, assumes. I think, therefore, most philosophers will agree, that if we can find any reason at all for generalisations of the kind in which I am interested, a reason for *some* of them at all events must be found in observation. And what I propose to ask is: What reason can be found in observation for even a single proposition of the kind I have described? for a proposition which asserts that when one man has one kind of perception, another man generally has or has had another?

But, when it is said that observation gives us a reason for generalisations, two things may be meant, neither of which I mean. In the first place, we popularly use "observation" in a sense in which we can be said to *observe* the perceptions, feelings, and thoughts of other people: in which, therefore, we can be said to observe the very things with regard to which I am asking what reason we have for believing in their existence. But it is universally agreed that there is a sense in which no man can observe the perceptions, feelings or thoughts of any other man. And it is to this strict sense that I propose to confine the word. I shall use it in a sense, in which we can certainly be said to observe nothing, but ourselves, our own perceptions, thoughts and feelings, and what we directly perceive. And in the second place, it may be said that observations made by another person may give *me* a reason for believing some generalisation. And it is certainly the case that for many of the generalisations in which we all believe, if we have a reason in observation at all, it is not in *our own* observation that we have it: part of our reason, at all events, lies in things which *other* people have observed but which we ourselves have not observed. But in asking this particular question, I am not asking for reasons of this sort. The very question that I am asking is: What reason has any one of us for supposing that any other person whatever has ever made any observations? And just as, in the first meaning which I gave to this question, it meant: What thing, that any single man observes is such that it would probably not have existed, unless some other man had made a particular observation? So now I am asking: Which among the things, which *one single man observes* are such that they would probably not have existed, unless it were true that some of them generally stood in certain relations to observations of some other person ? I am asking: Which among *my own* observations give me a reason for supposing that some of them are of a kind which are generally

preceded or accompanied by observations of other people? Which, for instance, among my own observations give a good reason for the generalisation that when I hear certain words, somebody else has generally had certain particular thoughts, or that whenever anyone hears certain words, somebody else has generally had the thoughts which constitute what we call the meaning of those words? I am asking: Which among the vast series of observations, which any other individual makes during his lifetime, give a good reason for any generalisation *whatever* of this kind – a generalisation which asserts that some of them are generally preceded by certain thoughts perceptions or feelings in other persons? I quite admit that there are some generalisations of this kind for which the observations of *some* particular men will *not* give a reason. All that I ask is: Is there even *one* generalisation of this kind, for which the kind of observations, which (as we commonly assume) each man, or nearly every man, does make, do give a reason? Among observations of the kind which (as we commonly assume) are common to you and to me, do yours, by themselves, give any reason for even *one* such generalisation? And do mine, by themselves, give any reason for even *one* such generalisation? And if they do, which, among these observations, is it which do so?

My question is, then: What reason do my own observations give me, for supposing that any perception whatever, which I have, would probably not occur, unless some other person had a certain kind of perception ? What reason do my own observations give me for supposing, for instance, that I should not be perceiving what I do now perceive, unless someone were hearing the sound of my voice? What reason do your own observations give you for supposing that you would not be perceiving just what you are perceiving, unless I were perceiving more or less black marks on a more or less white ground? The question does, I think, appear to be a reasonable one; and most philosophers, I think, have assumed that there is an answer to it. Yet it may be said that there is no answer to it: that my own observations give me no reason whatever for any single proposition of this kind. There are certain philosophers (even apart from thorough sceptics, with whom, as I have said, I am not now arguing) who have denied that they do. There are certain philosophers who hold that nothing which any single one of us observes or can observe, gives the slightest reason for supposing that any of his own perceptions are generally connected with certain perceptions in other people. There are philosophers who hold that the only generalisations for which our own observations do give any warrant are generalisations concerning the manner in which our own perceptions, thoughts and feelings do and probably will succeed one another; and who conclude that, this being so, we have no reason whatever for believing in the existence of any other people. And these philosophers are, I think, right in drawing this conclusion from this premiss. It does not, indeed, follow from their premiss that we have not a reason

in the sense in which I first explained, and in which, I insisted, it must be admitted that we have a reason. It does not follow that some of our perceptions *are* not such as would probably not exist, unless some other person had certain perceptions. But, as l have urged, when we say that we have a reason for asserting the existence of something not perceived, we commonly mean something more than this. We mean not only that, since what we perceive does exist, the unperceived thing probably exists too; we mean also that we have some reason for asserting this connection between the perceived and the unperceived. And holding, as we do, that no reason can be given for asserting such a connection, except observation, we should say that, if observation gives no reason for asserting it, we have *no* reason for asserting it; and having no reason for asserting this connection between the perceived and the unperceived, we should say that we have none either for asserting the even probable existence of the unperceived. This, I think, is what we commonly mean by saying that we have no reason to believe in the existence of a particular thing which we do not perceive. And hence, I think, those philosophers who hold that our own observations give us no reason whatever for any generalisation whatever concerning the connection of any of them with those of other people, are quite right in concluding that we have no reason to assert that any other person ever did have any particular thought or perception whatever. I think that the words of this conclusion, understood in their natural meaning, express precisely what the premiss asserts. We need not, indeed, conclude, as many of these philosophers are inclined to do, that, because we have no reason for believing in the existence of other people, it is therefore highly doubtful whether they do exist. The philosophers who advocate this opinion commonly refute themselves by assigning the existence of other people as part of their reason for believing that it is very doubtful whether any other people exist. That for which we have no reason may, nevertheless, be certainly true. And, indeed, one of the philosophers who holds most clearly and expressly that we do know not only the existence of other people but also that of material objects, is also one of those who denies most emphatically that our own observations can give any reason for believing either in the one or in the other. I refer to Thomas Reid. Reid, indeed, allows himself to use not only the word "observe," but even the word "perceive," in that wide sense in which it might be said that we observe or perceive the thoughts and feelings of others: and I think that the fact that he uses the words in this sense, has misled him into thinking, that his view is more plausible and more in accordance with Common Sense than it really is: by using the words in this sense he is able to plead that "observation" really does give a reason for some of those generalisations, for which Common Sense holds that "observation" (in a narrower sense) does give a reason. But with regard to what we observe or perceive, in the strict sense to which I am confining those words, he asserts quite explicitly that it gives us no reason either for believing in the existence of material

objects or for believing in the existence of other minds. Berkeley, he says, has proved incontrovertibly that it gives us no reason for the one, and Hume that it gives us no reason for the other.

Now these philosophers maybe right in holding this. It may, perhaps, be true that, in this sense, my own observations give me no reason whatever for believing, that any other person ever has or will perceive anything like or unlike what I perceive. But I think it it desirable we should realise, how paradoxical are the consequences which must be admitted if this is true. It must then be admitted that the very large part of our knowledge, which we suppose to have some basis in experience, is by no means based upon experience, in the sense, and to the extent, which we suppose. We do for instance, commonly suppose that there is some basis in experience for the assertion that some people, whom we call Germans, use one set of words, to express much the same meaning, which we express by using a different set of words. But, if this view be correct, we must admit that no person's experience gives him any reason whatever for supposing that, when he hears certain words, anyone else has ever heard or thought of the same words, or meant anything by them. The view admits, indeed, that I do know that, when I hear certain words, somebody else has generally had thoughts more or less similar to those which I suppose him to have had: but it denies that my own observations could ever give me the least reason for supposing that this is so. It admits that my own observations may give me reason for supposing that *if* anyone has ever had perceptions like mine in some respects, he will also have had other perceptions like others of mine: but it denies that they give me any reason for supposing that anyone else ever has had a perception like one of mine. It admits that my own observations may give me reason for supposing that certain perceptions and thoughts in *one* person (*if* they exist) will be followed or preceded by certain other perceptions and thoughts in that person: but it denies that they give me any reason whatever for any similar generalisation concerning the connection of a certain kind of perception in one person with a certain kind of perception in another. It admits that I should not have certain perceptions, which I do have, unless someone else had had certain other perceptions; but it denies that my own observations can give me any reason for saying so – for saying that I should not have had this perception, unless someone else had had that. No observations of mine, it holds, can ever render it probable that such a generalisation is true: no observation of mine can ever confirm or verify such a generalisation. If we are to say that any such generalisation whatever is based upon observation, we can onlu mean what Reid means, that it is based on a series of assumptions. When I observe this particular thing, I assume that that particular thing, which I do not observe, exists; when I observe another particular thing, I again assume that a second particular thing, which I do not observe, exists; when I observe a third particular thing, I again assume that a third particular

thing, which I do not observe, exists. These assumed facts – the assumed fact that one observation of mine is accompanied by the existence of one particular kind of thing, and that another observation of mine is accompanied by the existence of a different particular kind of thing,will then give me a reason for different generalisations concerning the connection of different perceptions of mine with different external objects – objects which I do not perceive. But (it is maintained) nothing but a mass of such assumptions will give me a reason for any such generalisation.

Now I think it must be admitted that there is something paradoxical in such a view. I think it may be admitted that, in holding it, the philosopher of Common Sense departs from Common Sense at least as far in one direction as his opponents had done in another. But I think that there is some excuse for those who hold it: I think that, in one respect, they are more in the right than those who do not hold it – than those who hold that my own observations do give me a reason for believing in the existence of other people. For those who hold that my observations do give me a reason, have, I believe, universally supposed that the reason lies in a part of my observations, in which no such reason is to be found. This is why I have chosen to ask the question: *What* reason do my observations give me for believing that another person has any particular perceptions or beliefs? I wish to consider *which* among the things which I observe will give such a reason. For this is a question to which no answer, that I have ever seen, appears to me to be correct. Those who have asked it have, so far as I know, answered it *either* by denying that my observations give me any reason *or* by pointing to a part of my observations, which, as it seems to me, really do give none. Those who deny are, it seems to me, right in holding that the reason given by those who affirm it is *no* reason. And their correct opinion on this point will, I think, partly serve to explain their denial. They have supposed that if our observations give us any reason at all for asserting the existence of other people, that reason must lie where it has been supposed to lie by those who hold that they do give a reason. And then, finding that this assigned reason is no reason, they have assumed that there is no other.

I am proposing then to ask: Which among the observations, which I make, and which (as we commonly suppose) are similar in kind to those which all or almost all men make, will give a reason for supposing that the existence of any of them is generally connected with the existence of certain kinds of perception or belief in other people? And in order to answer this question, it is obvious we must first consider two others. We must consider, in the first place: Of what nature must observations be, if they are to give a reason for any generalisation asserting that the existence of one kind of thing is generally connected with that of another? And we must consider in the second place: What kinds of things do we observe?

Now to the first of these questions I am not going to attempt to give

a complete answer. The question concerning the rules of Inductive Logic, which is the question at issue, is an immensely difficult and intricate question. And I am not going to attempt to say, what kind of observations are *sufficient* to justify a generalisation. But it is comparatively easy to point out that a certain kind of observations are *necessary* to justify a generalisation; and this is all that I propose to do. I wish to point out certain conditions which observations must satisfy, if they are to justify a generalisation; without in any way implying that all observations which do satisfy these conditions, *will* justify a generalisation. The conditions, I shall mention, are ones which are certainly *not* sufficient to justify a generalisation; but they are, I think, conditions, without which no generalisation can be justified. If a particular kind of observations do not satisfy these conditions, we can say with certainty that those observations give us *no* reason for believing in the existence of other people; though, with regard to observations which *do* satisfy them, we shall only be able to say that they *may* give a reason.

What conditions, then, must observations satisfy, if they are to justify a generalisation? Let us suppose that the generalisation to be justified is one which asserts that the existence of a kind of object, which we will call A, is generally preceded, accompanied, or followed by the existence of a kind of object, which we will call B. A, for instance, might be the hearing of a certain word by one person, and B the thought of that which we call the meaning of the word, in another person; and the generalisation to be justified might be that when one person hears a word, not spoken by himself, someone else has generally thought of the meaning of that word. What must I have observed, if the generalisation that the existence of A is generally preceded by the existence of B, is to be justified by my observations? One first point, I think, is plain. I must have observed both some object, which is in some respects like A, and which I will call α, and also some object in some respects like B, which I will call b: I must have observed both α and β, and also I must have observed β preceding α. This, at least, I must have observed. But I do not pretend to say *how* like α and β must be to A and B; nor do I pretend to say how often I must, have observed β preceding α, although it is generally held that I must have observed this more than once. These are questions, which would have to be discussed, if we were trying to discover what observations were *sufficient* to justify the generalisation that the existence of A is generally preceded by that of B. But I am only trying to lay down the minimum, which is *necessary* to justify this generalisation; and therefore I am content to say that we must have observed something more or less like B preceding something more or less like A, at least once.

But there is yet another minimum condition. If my observation of β preceding α is to justify the generalisation that the *existence* of A is generally preceded by the *existence* of B, it is plain, I think, that both the β and

the α, which I observed, must have *existed* or been *real*; and that also the existence of β must *really* have preceded that of α. It is plain that if, when I observed α and β, α existed but β did not, this observation could give me no reason to suppose that on another occasion when A existed, B *would* exist. Or again, if, when I observed β preceding α, both β and α existed, but the existence of β did not *really* precede that of α, but, on the contrary, followed it, this observation could certainly give me no reason to suppose that, in general, the existence of A was *preceded* by the existence of B. Indeed this condition that what is observed must have been *real* might be said to be included in the very meaning of the word "observation." We should, in this connection, say that we had *not* observed β preceding α, unless β and α were both real, and β had really preceded α. If I say "I have *observed* that, on one occasion, my hearing of the word 'moon' was followed by my imagining a luminous silvery disc," I commonly mean to include in my statement the assertion that I did, on that occasion, really hear the word "moon," and really did have a visual image of a luminous disc, and that my perception was really followed by my imagination. If it were proved to me that this had not really happened, I should admit that I had not really observed it. But though this condition that, if observation is to give reason for a generalisation, what is observed must be real, may thus be said to be implied in the very word "observation," it was necessary for me to mention the condition explicitly. It was necessary, because, as I shall presently show, we do and must also use the word "observation" in a sense in which the assertion "I observe A" by no means includes the assertion "A exists" – in a sense in which it *may* be true that though I did observe A, yet A did *not* exist.

But there is also, I think, a third necessary condition, which is very apt to be overlooked. It may, perhaps, be allowed that observation gives some reason for the proposition that hens' eggs are generally laid by hens. I do not mean to say that anyone man's observation can give a reason for this proposition: I do not assume either that it can or that it cannot. Nor do I mean to make any assumption as to what must be meant by the words "hens" and "eggs," if this proposition is to be true. I am quite willing to allow for the moment that, if it is true at all, we must understand by "hens" and "eggs," objects very unlike that which we directly observe, when we see a hen in a yard, or an egg on the breakfast-table. I am willing, to allow the possibility that, as some Idealists would say, the proposition "Hens lay eggs" is false, unless we mean by it: A certain kind of collection of spirits or monads sometimes has a certain intelligible relation to another kind of collection of spirits or monads. I am willing to allow the possibility that, as Reid and some scientists would say, the proposition "Hens lay eggs" is false, if we mean by it anything more than that: Certain configurations of invisible material particles sometimes have a certain spatio-temporal relation to another kind of configuration of invisible material particles.

Or again I am willing to allow, with certain other philosophers, that we must, if it is to be true, interpret this proposition as meaning that certain kinds of sensations have to certain other kinds a relation which may be expressed by saying that the one kind of sensations "lay" the other kind. Or again, as other philosophers say, the proposition "Hens lay eggs" may possibly mean: Certain sensations of mine *would*, under certain conditions, have to certain other sensations of mine a relation which may be expressed by saying, that the one set would "lay" the other set. But whatever the proposition "Hens' eggs are generally laid by hens" may *mean*, most philosophers would, I think, allow that, in some sense or other, this proposition was true. And they would also I think allow that we have *some* reason for it; and that *part* of this reason at all events lies in observation: they would allow that we should have no reason for it unless certain things had been observed, which have been observed. Few, I think, would say that the existence of an egg "intrinsically points" to that of a hen, in such a sense that, even if we had had no experience of any kind concerning the manner in which objects like eggs are connected with animals like hens, the mere inspection of an egg would justify the assertion: A hen has probably existed.

I assume, then, that objects having all the characteristics which hens' eggs have (whatever these may be) are generally laid by hens (whatever hens may be); and I assume that, if we have any reason for this generalisation at all, observation gives us some reason for it. But now, let us suppose that the only observations we had made were those which we should commonly describe by saying that we had seen a hen laying an egg. I do not say that any number of such observations, by themselves, would be *sufficient* to justify our generalisation: I think it is plain that they would not. But let us suppose, for the moment, that we had observed nothing else which bore upon the connection between hens and eggs; and that, if therefore our generalisation was justified by any observations at all, it was justified by these. We are supposing, then, that the observations which we describe as "seeing hens lay eggs" give some reason for the generalisation that eggs of that kind are generally laid by hens. And if these observations give reason for this, obviously *in a sense* they give reason for the generalisation that the existence of such an egg is generally preceded by that of a hen; and hence also, they give us reason to suppose that if such an egg exists, a hen has probably existed also that unless a hen had existed, the egg would not have existed. But the point to which I wish to call attention is that it is *only* in a limited sense that they do give reason for this. They only give us reason to suppose that, for each egg, there has existed a hen, which was at some time *near* the place where the egg in question then was, and which existed at a time *near* to that at which the egg began to exist. The only kind of hens, whose existence they do give us reason to suppose, are hens, of which each was at some time in spatial and temporal proximity (or, if

Idealists prefer, in the relations which are the "intelligible counterparts" of these) to an egg. They give us no information at all about the existence of hens (if there are any) which never came within a thousand miles of an egg, or which were dead a thousand years before any egg existed. That is to say, they *do* give us reason to suppose that, if a particular egg exists, there has probably existed a hen which was at some time near that egg; but they give us no reason to suppose that, if a particular egg exists, there must have existed a hen which never came near that egg. They do give us reason to suppose that, for each egg, there has probably existed a hen, which at some time stood to the egg in question in that relation which we have observed to hold between an egg and a hen, when we observed the hen laying an egg. But they give us no reason to infer from the existence of an egg any other kind of hen: any hen which *never* stood to the egg in the relation in which we have observed that some hens do stand to eggs.

What I wish to suggest is that this condition is a universal condition for sound inductions. If the observation of β preceding α can ever give us any reason at all for supposing that the existence of A is generally preceded by that of B, it can at most only give us reason to suppose that the existence of an A is generally preceded by that of a B which stands to A in the same relation in which β has been observed to stand to α. It cannot give the least reason for supposing that the existence of an A must have been preceded by that of a B, which did *not* stand to A in the observed relation, but in some quite different one. If we are to have any reason to infer from the existence of an A the existence of such a B, the reason must lie in some different observations. That this is so, in the case of hens' eggs and hens, is, I think, obvious; and, if the rule is *not* universal, some reason should at least be given for supposing that it does apply in one case and not in another.

Having thus attempted to point out some conditions which seem to be necessary, though not *sufficient*, where observation is to give any reason for a generalisation, I may now proceed to my second preliminary question What kinds of things do we observe?

In order to illustrate how much and how little I mean by "observation" or "direct perception," I will take as an instance a very common visual perception. Most of us are familiar with the experience which we should describe by saying that we had seen a red book and a blue book side by side upon a shelf. What exactly can we be said to observe or directly perceive when we have such an experience? We certainly observe one colour, which we call blue, and a different colour, which we call red; each of these we observe as having a particular size and shape; and we observe also these two coloured patches as having to one another the spatial relation which we express by saying that they are side by side. All this we certainly see or directly perceive *now*, whatever may have been the process by

which we have come to perceive so much. But when we say, as in ordinary talk we should, that the objects we perceive are *books*, we certainly mean to ascribe to them properties, which, in a sense which we all understand, are not actually seen by us, at the moment when we are merely looking at two books on a shelf two yards off. And all such properties I mean to exclude as not being then *observed* or *directly perceived* by us. When I speak of what we *observe*, when we see two books on a shelf, I mean to limit the expression to that which is actually seen. And, thus understood, the expression does include colours, and the size and shape of colours, and spatial relations in three dimensions between these patches of colour, but it includes nothing else.

But I am also using observation in a sense in which we can be said actually to observe a movement. We commonly say that we can sometimes *see* a red billiard-ball moving towards a white one on a green table. And, here again, I do not mean to include in what is directly perceived or observed, all that we mean by saying that the two objects perceived are billiard-balls. But I do mean to include what (we should say) we *actually see*. We actually see a more or less round red patch moving towards a more or less round white patch; we *see* the stretch of green between them diminishing in size. And this perception is not merely the same as a series of perceptions – first a perception of a red patch with a green stretch of one size between it and the white; then a perception of a red patch with a green stretch of a different size between it and the white; and so on. In order to perceive a movement we must have a different perception from any one of these or from the sum of them. We must *actually see* the green stretch diminishing in size.

Now it is undoubtedly difficult, in some instances, to decide precisely what is perceived in this sense and what is not. But I hope I have said enough to show that I am using "perceive" and "observe" in a sense in which, on a given occasion, it is easy to decide that *some* things certainly are perceived, and other things, as certainly, are not perceived. I am using it in a sense in which we do perceive such a complex object as a white patch moving towards a red one on a green field; but I am not using it in any sense in which we could be said to "perceive" or "observe" that what we saw moving was a billiard-ball. And in the same way I think we can distinguish roughly between what, on any given occasion, we perceive, as we say, "by any one of the other senses," and what we do not perceive by it. We can say with certainty that, on any given occasion, there are certain kinds of "content" which we are actually hearing, and others which we are *not* actually hearing; though with regard to some again it is difficult to say whether we are actually hearing them or not. And similarly we can distinguish with certainty in some instances, between what we are, on a given occasion, actually smelling or feeling, and what we are not actually smelling or feeling.

But now, besides these kinds of "things," "objects," or "contents," which we perceive, as we say, "by the senses," there is also another kind which we can be said to observe. Not only can I observe a red and a blue book side by side; I can also observe myself observing, them. I can perceive a red patch moving towards a white, and I can also perceive my perception of this movement. And what I wish to make as plain as I can is that my perception of the movement of a coloured patch can at least be distinguished from that movement itself. I wish to make it plain that to observe a coloured patch moving is to observe one thing; and to observe myself observing a coloured patch moving is another. When I observe my own perception of a movement, I observe something *more* than when I merely observe the movement, and something very different from the movement. I may perceive a red and a blue book side by side on a shelf; and at another time I may perceive a red ball moving towards a white. The red and the blue patch, of one shape, at rest side by side, are different from the red, of another shape, moving towards the white; and yet, when I say that both are "perceived," I mean by "perceived" one and the same thing. And since, thus, two different things may both be perceived, there must also be some difference between each of them and what is meant by saying that it is perceived. Indeed, in precisely the same way in which I may observe a spatial relation between a red patch and a blue (when I observe them "side by side") I do, when I observe my own perception of them, observe a spatial relation between it and them. I observe a distance between my perception and the red and blue books which I perceive, comparable in magnitude with the breadth or height of the red book, or the breadth or height of the blue book, just as these are comparable in magnitude with one another. And when I say I observe a distance between my perception of a red book and that red book itself, I do not mean that I observe a distance between my eyes, or any other part of what I call my body, and the red patch in question. I am talking not of my eyes, but of my actual perception. I observe my perception of a book to be near the book and further from the table, in exactly the same sense in which I observe the book to be near the shelf on which it stands, and further from the table. And just as, if the distance between a red patch and a white is to be perceived, the red patch must be different from the white, so, if I perceive a certain distance between my perception and the red patch, my perception must be different from the red patch which I perceive.

I assume, then, that we observe, on the one hand, coloured patches of certain shapes and sizes, and their spatial relations to one another, together with all the other kinds of "contents," which we should usually be said to perceive "through the senses." And, on the other hand, we also sometimes observe our own perceptions of such "contents" and our thoughts. And these two kinds of "content" are different from one another: my perception of a red patch with gold letters on it, is not itself a red

patch with gold letters on it; and hence, when I observe my perception of this patch, I observe something different from that which I observe when I merely perceive the patch. Either of these two kinds of "contents" – either colours, moving or at rest, sounds, smells, and all the rest – or, on the other hand, my perceptions of these – either of these two kinds, or both, might conceivably, since both are observed, give grounds for a generalisation concerning what exists. But, as I have said, if observations are to give any ground for such a generalisation, it must be assumed that what is observed *exists* or is *real*. And since, as I have insisted, when I observe my *perception* of a red patch with gold letters on it, I observe something different from what I observe when I merely observe a red patch with gold letters on it, it follows that to assume the existence of my perception of this red and gold is *not* the same thing as to assume the existence of the red and gold itself.

But what, it may be asked, do I mean by this property of "existence" or "reality," which may, it would seem, belong to every content, which I observe, or may again belong to none, or which may belong to some and not to others? What is this property which may belong to my perception of a movement, and yet not belong to the movement perceived, or which may again belong to the movement perceived and not to my perception of it; or which may again belong to both or to neither?

It is necessary, I think, to ask this question at this point, because there are some philosophers who hold that, in the case of some kinds of "contents," at all events, to say that they "exist" is to say that they are "perceived." Some hold that to say "A exists" is to say neither more nor less than "A is perceived" – that the two expressions are perfect synonyms; and others again would say that by "A exists or is real" we may mean *more* than that "A is perceived," but that we must at least mean this. Now, I have hitherto used the word "existence" pretty freely, and I think that, when I used it, I used it in its ordinary sense. I think it will generally have suggested to you precisely what I meant to convey, and I think that, in some cases at all events, it will not even have occurred to you to doubt whether you did understand what I meant by it. But, if these philosophers are right, then, if you *have* understood what I meant by it, I have all along been using it in a sense, which renders the end of my last paragraph perfect nonsense. If these philosophers are right, then, when I assert that what *is* perceived may yet *not* exist, I am really asserting, that what *is* perceived may yet *not* be perceived – I am contradicting myself. I am, of course, quite unaware that I am doing so. But these philosophers would say *either* you are contradicting yourself, *or* you are not using, the word "exists" in its ordinary sense. And either of these alternatives would be fatal to my purpose. If I am not using the word in its ordinary sense, then I shall not be understood by anyone; and, if I am contradicting, myself, then what I say will not be worth understanding.

Now, with one class of these philosophers – the class to which, I think, Berkeley belongs – I think I can put myself rihht comparatively easily. The philosophers I mean are those who say that it is only in the case of one particular class of "contents" (the kind of "content" which Berkeley calls "ideas") that to say "the 'content' A. exists" is to say "A is perceived," and who admit that in the case of other contents – myself and my perceptions and thoughts, for example – to say that *these* exist or are real, is to say of them something different from this. These philosophers admit, that is to say, that the word "exists" has two different senses: and that in only one of these senses is it synonymous with the words "is perceived." When (they hold) I say of such a content as a red patch with gold letters on it that it "exists" I *do* mean that it is perceived; but when I say of my *perception* of such a patch that *it* exists, I do *not* mean that my perception is perceived, but something different from this. Now, it would be nothing strange that one and the same word should be used in two different senses; many words are used in many different senses. But it, would, I think, be something very strange indeed, if in the case of a word which we constantly apply to all sorts of different objects, we should uniformly apply it to one large class of objects in the one sense and the one sense only, and to another large class in the other sense and the other sense only. Usually, in the case of such ambiguous words, it happens that, in different contexts, we apply it to one and the same object in *both* senses. We sometimes wish to say of a given object that it has the one property, and sometimes we wish to say of the same object that it has the other property; and hence we apply the same word to the same object, at one time in one sense, and at another in the other. I think, therefore, that, even if there were these two different senses of the word "existence," it would be very unlikely that we should not commonly, in some contexts, apply it in the sense, in which (as is alleged) it does apply to perceptions, to "contents" which are not perceptions. Indeed, I think, it is quite plain that we constantly do ask, with regard to what is not a perception, whether *it* exists, in precisely the same sense, in which we ask, with regard to a perception, whether *it* exists. We ask in precisely the same sense: Was the Roc a real bird, or merely an imaginary one? and, Did Sinbad's perception of the Roc really exist, or is it a fiction that he perceived a Roc? I think, therefore, that the sense in which these philosophers admit that we do apply the word "existence" to perceptions, is one in which we also commonly apply it to "contents" other than perceptions. But, even if this is not the case, I can set myself right with them by a simple explanation. I need merely explain that the sense in which I am proposing to enquire whether a red patch exists, is precisely the sense in which they admit that my perception of a red patch does exist. And in this sense, it is plain that to suppose that a thing may exist, which is not perceived, or that it may *not* exist, although it is perceived, is at least not self- contradictory.

But there may be other philosophers who will say that, in the case of a perception also, to say that it exists or is real is to say that it is perceived- either that alone or something more as well. And to these philosophers I would first point out that they are admitting that the proposition "This perception is real" is significant. There is some sense or other in which we may say: "Alexander's perception of an elephant was real or did exist, but Sindbad's perception of a Roc was *not* real – never did exist": the latter proposition is, in some sense or other, not self-contradictory. And then I would ask of them: When they say, that to call a perception "real" is to assert that it is perceived, do they mean by this that to call it real is to assert that it is *really* perceived, or not? If they say "No," then they are asserting that to call a perception "real" is merely to say that it was perceived in the sense in which Sindbad *did* perceive a Roc: they are asserting that to call it "real" is not to say, in any sense, that it was *really* perceived: they are asserting that to call a perception "real" is to say that it was perceived, in some sense quite other than that in which we ordinarily use the word: for we certainly commonly mean, when we say "A was perceived," that a perception of A was "real": we should commonly say that Sindbad did *not* perceive a Roc – meaning, that no such perception ever did exist. I do not think they do mean this; and, in any case, if they do, I think it is plain that they are wrong. When we say that a perception is "real," we certainly do not mean merely that it is the object of another perception, which may itself be quite unreal – purely imaginary. I assume, therefore, that when they say: To call a perception "real" is to say that it is perceived; they mean, what we should naturally understand, namely, that: To call it "real" is to say that it is *really* perceived – to say that it is the object of another perception, which is also *real* in the same sense. And, if they mean this, then what they say is certainly untrue. Their definition of reality is circular. It cannot be the case that the *only* sense in which a perception may be said to be real, is one in which to call it so is to assert that not it alone, but another perception is real also. It cannot be the case that the assertion "A is real" is *identical* with the assertion "A and B are both real," where A and B are different, and "real" is used in the same sense as applied to both. If it is to be true that the assertion "A is real" *ever*, in any sense, includes the assertion "A is *really* perceived," there must be another sense of the word "real," in which to assert "A is real" is to assert *less* than "A is *really* perceived" – the sense, namely, in which we here assert that the *perception* of A is real.

We find, therefore, that the other class of philosophers were at least right in this: they were right in allowing that the sense in which we commonly say that our perceptions exist is one in which "exist" does not include, even as a part of its meaning, "is perceived." We find that there is a common sense of the word "existence," in which to say "A exists" must mean *less* than "A is *really* perceived": since, otherwise, the only possible

definition of the word "existence" would be a circular definition. And I may point out that two other definitions, which have been sometimes suggested by philosophers as giving what we commonly mean by "reality" or "existence" are vitiated by the same fault – they also are circular. Some philosophers have sometimes suggested that when we call a thing "real," we mean that it is "systematically connected" in some way with other things. But, when we look into their meaning, we find that what they mean is (what, indeed, is alone plausible) – systematically connected with other *real* things. And it may possibly be the case that we sometimes use the word "real" in this sense: but, at least, it must be certainly the case, that, if we do, we *also* use it in another and simpler sense – the sense in which it is employed in the proposed definition. And other philosophers have suggested that what we mean by "real" is – "connected in some way with a purpose–helping or hindering, or the object of a purpose." But if we look into their meaning, we find they mean-connected with a *real* purpose. And hence, even if we do sometimes mean by "real," "connected with a *real* purpose," it is plain we also sometimes mean by "real" something simpler than this – that, namely, which is meant by "real" in the proposed definition.

It is certain, therefore, that we do commonly use the word "existence" in a sense, in which to say "A exists" is *not* to say "A is perceived," or "A is systematically connected with other real things," or "A is purposive." There is a simpler sense than any of these – the sense in which we say that our own perceptions do exist, and that Sindbad's perceptions did not exist. But when I say this, I am by no means denying that what exists, in this simple sense, may not always *also* exist in all the others; and that what exists in any of them may not *also* always exist in this. It is quite possible that what exists is always *also* perceived, and that what is perceived always *also* exists. All that I am saying is that, even if this is so, this proposition is significant – is not merely a proposition about the meaning of a word. It is not self-contradictory to suppose that some things which exist are not perceived, and that some things which are perceived do not exist.

But, it may be asked: What is this common simple sense of the word "exists"? For my own part, it seems to me to be so simple that it cannot be expressed in any other words, except those which are recognised as its synonyms. I think we are all perfectly familiar with its meaning: it is the meaning which you understood me to have throughout this paper, until I began this discussion. I think we can perceive at once what is meant by asserting that my perception of black marks on a white ground is "real," and that no such perception as Sindbad's of a Roc ever was "real": we are perfectly familiar with the property which the one perception is affirmed to possess, and the other to be without. And I think, as I have said, that this property is a simple one. But, whatever it is, this, which we ordinarily mean, is what I mean by "existence" or "reality." And this property, we

have seen, is certainly neither identical with nor inclusive of that complex one which we mean by the words "is perceived."

I may now, then, at last approach the main question of my paper. Which among the "contents" which I observe will give me reason to suppose that my observation of some of them is generally preceded or accompanied or followed by the existence of certain particular perceptions, thoughts or feelings in another person? I have explained that the "contents" which I actually observe may be divided into two classes: on the one hand, those which, as we commonly say, we perceive "through the senses"; and, on the other hand, my perceptions of these last, my thoughts, and my feelings. I have explained that if any of these observed contents are to give reason for a generalisation about what exists, *they* must exist. And I have explained that with regard to both classes of "contents" I am using the word "exist" in precisely the same sense – a sense, in which it is certainly not self-contradictory to suppose that what *is* perceived, does not exist, and that what is *not* perceived, does exist; and, in which, therefore, the assumption that a red patch with gold letters on it exists, is a *different* assumption from the assumption that my *perception* of a red patch with gold letters on it exists; and the assumption that my *perception* of a red patch with gold letters on it exists, is a *different* assumption from the assumption that a red patch with gold letters on it exists.

What, then, that we observe, can give us any reason for believing that anyone else has certain particular perceptions, thoughts, or feelings? It has, I think, been very commonly assumed that the observation of my own perceptions, thoughts, and feelings, can, by itself, give me such a reason. And I propose, therefore, to examine this assumption. If, as I hope to show, it is false; it will then follow, that if our own observations give us any reason whatever, for believing in the existence of other persons, we must assume the existence, not only of our own perceptions, thoughts, and feelings, but also of some, at least, among that other class of data, which I may now, for the sake of brevity, call "sense-contents"; we must assume that some of them exist, in precisely the same sense in which we assume that our perceptions, thoughts, and feelings exist.

The theory which I propose to examine is, then, the following. My observation of my own thoughts, feelings, and perceptions may, it asserts, give me some reason to suppose that another person has thoughts, feelings, and perceptions similar to some of mine. Let us assume, accordingly, that my own thoughts, feelings, and perceptions do exist; but that none of the "sense-contents," which I also observe, do so. Where, among my perceptions am I to look for any which might conceivably give me a reason for supposing the existence of other perceptions similar to my own? It is obvious where I must look. I have perceptions which I call perceptions of other people's bodies; and these are certainly similar in many respects

to other perceptions of mine – to the perceptions which I call perceptions of my own body. But I also observe that certain kinds of perceptions of my own body are preceded by certain other perceptions, thoughts, or feelings of mine. I may, for instance, observe that when I perceive my hand suddenly catch hold of my foot in a particular way, this perception was preceded by a particular kind of feeling of pain. I may. perhaps, observe this often enough to justify the generalisation that the perception of that particular motion of my body is generally preceded by that particular feeling of pain. And in this way I may perhaps have reason for quite a number of generalisations which assert that particular kinds of perceptions of my own body are generally preceded by other particular kinds of perceptions, thoughts, or feelings of my own.

But I may also, no doubt, have the perception, which I call the perception of another person's hand catching hold of his foot, in a manner similar to that in which I have perceived my own hand catch hold of my own foot. And my perception of another person's hand catching hold of his foot may undoubtedly be similar in many respects to my perception of my own hand catching hold of my own foot. But I shall not observe the same kind of feeling of pain preceding my perception of *his* hand catching hold of his foot, which I have observed preceding my perception of *my* hand catching hold of my foot. Will my generalisation, then, give me any reason to suppose that nevertheless my perception of his hand catching hold of his foot *is* preceded by a similar feeling of pain, not in me but in him? We undoubtedly do assume that when I perceive another person's body making movements similar to those which I have observed my own body making, this perception has generally been preceded by some feeling or perception of his similar to that which I have observed to precede my perception of similar movements in my own body. We do assume this; and it is precisely the kind of generalisation, which, I have insisted, must be admitted to be true. But my present question is: Will such observations as I have described give any reason for thinking any such generalisation true? I think it is plain that they will not give the slightest reason for thinking so. In the first place, all the perceptions which I call perceptions of another person's body differ very considerably from any of those, which I call perceptions of my own. But I am willing to waive this objection. I am not offering any theory as to what degree of likeness is *sufficient* to justify a generalisation: and therefore I will allow that the degree of likeness may be sufficient. But there remains an objection which is, I think, quite fatal to the proposed inference. This objection is that the inference in question plainly does not satisfy the third condition which I suggested above as *necessary*, wherever any generalisation is to be justified by observation. I am willing to allow that my observations of the fact that my perception of a certain movement in my own body is preceded by a certain feeling of pain, *will* justify the generalisation that my perception of any such move-

ment, whether in my own body *or* in that of another person, is generally preceded by a similar feeling of pain. And I allow, therefore, that when I perceive a certain movement in another's body, it *is* probable that the feeling of pain exists, though I do not perceive it. But, if it *is* probable that such a feeling of pain exists, such a feeling must stand *in the same relation* to my perception of the movement in another person's body, in which a similar feeling of pain has been observed by me to stand to my perception of such a movement in my own body. That is to say the only kind of feeling of pain, which my observations do justify me in inferring, if (as I admit they may) they justify me in inferring any at all, is a feeling of pain of *my own*. They cannot possibly justify the belief in the existence of any such feeling *except* one which stands to my perception in the same relation in which my feelings do stand to *my* perceptions – one, that is to say, which is my own. I have no more reason to believe that the feeling of pain which probably precedes my perception of a movement in another person's body can be the feeling *of another person*, than, in my former example, I had reason to suppose that the hen, whose existence probably preceded that of a given egg, could be a hen, which had never been near the egg in question. The two cases are exactly analogous. I observe a feeling of pain *of my own* preceding a perception *of my own*. I observe the two, that is to say, as standing to one another in those relations (whatever they may be) in which any perception of mine stands to any other thought, perception or feeling of mine, and which are, at all events, different from any relation in which a perception or feeling of another person can stand to one of mine. I never perceive the feeling and the perception as standing in any other relation. In any case, therefore, where I do observe something like the perception, but do not observe the feeling, I can only be justified (*if* justified in inferring any feeling at all), in inferring an unperceived feeling *of my own*.

For this reason I think that no observations of my own perceptions, feelings or thoughts can give me the slightest reason for supposing a connection between any of them and any feeling, perception, or thought in another person. The argument is perfectly general, since *all* my perceptions, feelings and thoughts do have to one another those relations, in virtue of which I call them mine; and which, when I talk of a perception, feeling or thought as being *another person's*, I mean to say that it has *not* got to any of mine. I can, therefore, merely from observation of *this* class of data never obtain the slightest reason for belief in the existence of a feeling, perception, or thought which does *not* stand in these relations to one of mine – which *is*, that is to say, the feeling, perception or thought, of another person. But how different is the case, if we adopt the hypothesis, which I wish to recommend – if we assume the existence of that other class of data which I have called "sense-contents"! On this hypothesis, that which I perceive, when I perceive a movement of my own body, is

real; that which I perceive when I perceive a movement of another's body, is *real* also. I can now observe not merely the relation between my *perception* of a movement of my body and my own feelings, but also a relation between a *real* movement of my body and my own feelings. And there is no reason why I should not be justified in inferring that another person's feelings stand *in the same relation* to the real movements of his body, in which I observe my own feelings to stand to similar real movements of mine.

But there is another argument which may still be urged by those who hold that my own perceptions, thoughts, and feelings, by themselves, may be sufficient to justify a belief in the existence of other persons. It may be said: "Our observation of our own perceptions may be sufficient to *verify* or *confirm* the hypothesis that other persons exist." This hypothesis is one which "works." The assumption that other persons have particular thoughts, feelings, and perceptions enables us to predict that they will have others and that our own perceptions will be modified accordingly: it enables us to predict future perceptions of our own; and we find that these predictions are constantly verified. We observe that we do have the perceptions, which the hypothesis leads us to expect we should have. In short, our perceptions occur just as they would do, *if* the hypothesis were true; our perceptions behave *as if* other persons had the perceptions, thoughts, and feelings which we suppose them to have. Surely, then, they confirm the truth of the hypothesis – they give some reason to think it probably true?"

All this, which I have supposed an opponent to urge, I admit to be true. I admit that the fact that an hypothesis works may give some reason to suppose it true. I admit that my perceptions occur just as they would do, if other people had the perceptions which I suppose them to have. I admit that that assumption enables me to make predictions as to future perceptions of my own, and that I observe these predictions to come true. I admit all this. But I admit it only in a sense in which it in no way conflicts with the position which I am maintaining. The words, which I have put into the mouth of a supposed opponent, may, in fact, mean three different things, which it is worth while to distinguish. In two of those meanings, which I shall admit to be true and which are what make them seem plausible, they do not deny what I assert. Only in the third sense are they an objection to my position: and in that sense they are false.

One of the meanings which I admit to be true is as follows:– I have not only admitted but insisted that some of my perceptions are just such as would occur if another person had certain particular feelings: I have insisted that I should not have just those perceptions which I do have, unless some other person had certain feelings and perceptions which I suppose him to have. And I admit further that the fact that I have one of

the perceptions in question – for instance, that of another person's hand catching hold of his foot – this fact, *together with* the true assumption that I should not have this perception, unless some other person felt pain, will justify the assertion that another person has felt pain. In this sense, I admit, the fact that I perceive what I do perceive will give me reason to suppose that another person has felt pain. And, on the other hand, I also admit that the fact that I have this perception, *together with* the true assumption that when I have it another person has felt pain, may help to justify the assumption that the perception in question is one which I should not have unless another person had felt pain – it helps to justify the generalisation that certain of my perceptions are just what would occur, *if* another person had felt pain. In general terms, that is to say, I admit that the occurrence of B, *together with* the assumption that B is just the sort of thing which would occur if A existed, will justify the assertion that A exists in that particular instance. And I also admit that the occurrence of B, *together with* the assumption that A exists in that particular instance, may help to justify the assumption that B is just the sort of thing which would exist, if A existed. In other words: When it is said that the observation of B's existence confirms or verifies the assumption that A exists, either of two things may be meant. It may be meant that, assuming B to be the sort of thing which would exist if A existed, the observation of B confirms the assumption that A exists *in this particular instance*. Or, on the other hand, it may be meant that, assuming A to exist in this particular instance, the observation of B may confirm the generalisation that B is just the sort of thing which would exist, if A existed. *Either* the one *or* the other of these two things is, I think, what is generally assumed, when it is assumed that what we do observe confirms or verifies the assumption that there exists some particular thing which we don't observe. And I am admitting that both these assumptions are true.

But neither of them conflicts in any way with the position I am maintaining,. What I am maintaining is that no observation of my own perceptions, *by itself*, can confirm the generalisation that any one of them *is* just what would occur if another person had a particular feeling. I admit this generalisation to be true; and I admit that my observation of my own perceptions and feelings may give me *reason* to suppose that *if* another person has certain perceptions or feelings *he* will also have certain others. What I deny is that they give me the slightest reason to suppose that the existence of any such feeling or perception in another has any connection with the existence of any perception *of my own* – to suppose that any perception of my own is the sort of thing which would occur *if* another person had a particular feeling. What, therefore, my opponent must affirm is that the observation of a perception of my own, *without* the assumption (which Reid makes) that in that particular instance any feeling or perception of another person, of any kind whatever, has preceded it, may give

me reason to suppose that that perception of my own is of a kind which is generally preceded by a particular kind of feeling in another person. And this, I thinik, is plainly false.

But there is yet a third thing which may be meant, and which I am willing to admit may be true. It may be said: "I believe many generalisations of the following kind. I believe that when I have a perception A, some other person has generally had a feeling X; I believe that the existence of the feeling X is generally followed, in the same person, by that of the feeling Y; and I believe also that when another person has the feeling Y, I generally have the perception B. I believe all this." And it must, I think, be admitted that we do believe generalisations of this kind, and generalisations in which there are not merely two steps between A and B, but a great number of steps. "But, then," it may be said, "my belief in this generalisation causes me, when I observe my perception A, to expect that I shall have the perception B; and such expectations, I observe, are constantly realised." And this also, I think, must be admitted to be true. "But, finally," it may be said, "beliefs which produce expectations which are constantly realised are generally true. And hence the fact that these beliefs of mine about the connection of feelings in other persons with perceptions of my own do lead to expectations which are realised, gives me reason to suppose that these generalisations are true and hence that other persons do have particular kinds of feelings." And I am willing to admit that this also is true. I am willing to admit that true predictions can, as a rule, only be produced by true beliefs. The generalisation that this is so, is, indeed, one which can only be justified by the observation of beliefs, which are, in some way, independently proved to be true; and hence, if it is to be justified, without assuming the existence of anything other than my own perceptions, thoughts, and feelings, it can only be justified by my observation that beliefs with regard to the manner in which *these* succeed one another, generally lead to true predictions. Whether the observation of such beliefs *alone* could give sufficient reason for it, is, I think doubtful; but I am willing to admit that it may be so. One thing, however, is, I think, quite plain: namely, that this generalisation "Beliefs which lead to true predictions are generally true" cannot be true, *unless* some other of the "contents" which I observe, beside my own perceptions, thoughts, and feelings, do exist. That is to say, in giving a reason for supposing the existence of other people, this generalisation also gives a reason for the very theory which I am advocating, namely, that some of those data which I have called "sense-contents" do exist. It does this, because it is quite certain that beliefs in generalisations about the existence of sense-contents *can* (and do) constantly lead to true predictions. The belief that when I have observed a fire of a certain size in my grate, something similar to what I have observed will continue to exist for a certain time, can, and constantly does, lead to the true prediction that, when I come back to my

room in half an hour's time, I shall observe a fire of a certain size still burning. We make predictions on such grounds, I think, every day and all day long. And hence unless such beliefs as that what I observe, when I see a fire burning, *does* exist, *are* true, we certainly have no reason to suppose that beliefs which lead to true predictions are generally true. And hence on this hypothesis also it remains true that, unless some of the contents which I observe *other* than my own perceptions, thoughts, and feelings, do exist, I cannot have the slightest reason for supposing that the existence of certain perceptions of my own is generally connected with that of certain perceptions, thoughts, or feelings in any other person.

I conclude therefore that, unless some of the observed data which I have called sense-contents *do* exist, my own observations cannot give me the slightest reason for believing that anybody else has ever had any particular perception, thought, or feeling. And, having arrived so far towards an answer to my first question: How do we know that any other persons exist? I may now point out that precisely the same answer must be given to my second question: How do we know that *any* particular kind of thing exists, other than ourselves, our perceptions, thoughts, and feelings, and what we directly perceive? There is a view concerning what exists, which deserves, I think, much more respect than it generally receives from philosophers nowadays. The view I mean is the view that material objects, such as they are conceived by physical science, do really exist. It is held by some persons (and Reid is among them) that we *do* know of the existence, not only of other persons, but also of the movements of matter in space. It is held that we do know, with considerable precision, what kinds of movements of matter generally precede my perception, when I have a particular perception. It is held, for instance, that when I perceive a red and blue book side by side on a shelf, at a certain distance from me, there have existed, between two material objects, which may be called books, and another kind of material object, which may be called my eyes, certain wave-like motions of a material medium; that there have existed two different sets of waves, of which the one is connected with my perception of red and the other with my perception of blue; and that the relative heights and breadths of the two different sets of waves, and the relative velocity of their movements are very exactly known. It is held that some men have a vast amount of very precise information about the existence of objects of this kind; and I think the view that this is so deserves a great deal of respect. But what I wish now to point out is that no one's observation of his own perceptions, thoughts and feelings, can, by itself, give him the slightest reason for believing in the existence of any such material objects. All the arguments by which I have tried to show that this kind of observation alone can give me no reason to believe in the existence of any kind of perception or feeling in another person, apply, with at least equal force, to show that it can give me no reason to believe in the existence of any kind

of material object. On the other hand, if we are to admit the principle that "Beliefs which lead to true predictions, are generally true," this principle will give us at least as much reason to believe in the existence of certain kinds of material objects as to believe in the existence of other persons; since one of the most remarkable facts about beliefs in the existence of such objects is that they do so often lead to true predictions. But it must be remembered that we can have no reason for believing this principle itself, *unless* our own perceptions, thoughts and feelings are *not* the only kind of observed "content" which really does exist: we can have no reason for it, unless some such things, as what I perceive, when I see a red and blue book side by side, do really exist.

It would seem, therefore, that if my own observations do give me any reason whatever for believing in the existence either of any perception in any other person or of any material object, it must be true that not only my own perceptions, thoughts and feelings, but also *some* of the other kinds of things which I directly perceive – colours, sounds, smells, etc. – do really exist: it must be true that some objects of this kind *exist* or are *real* in precisely the same simple sense in which my perceptions of them exist or are real. Is there then any reason to think that this is not true? Is there any reason to think, for instance, that *none* of the colours which I perceive as occupying areas of certain shapes and sizes really exist in the areas which they appear to occupy? This is a question which I wished to discuss at length, because I think that it is one in which there are real difficulties. But I have given so much space to other questions, that I can only deal with it very briefly here.

Some philosophers are very fond of asserting, that a colour cannot exist except when it is perceived; and it might possibly be thought that when I suggest that colours do really exist, I am suggesting that they do exist when they are not perceived. I wish, therefore, briefly to point out that the question whether anything does exist, when it is not perceived, is one which I have not argued and shall not attempt to argue in this paper. I have, indeed, tried to show that, since "exists" does not *mean* "is perceived," it is, at least, conceivable that things should exist, when they are not perceived. But I have admitted that it is quite possible none *do* so: it *may* be the case that whenever a thing exists, it is *also* at the same time perceived, for anything that I have said or shall say to the contrary. I think, indeed, that, if such things as colours *do* exist, my observation of their behaviour will justify me in concluding that they also exist when I myself am, at least, not aware of perceiving them: but since I have not attempted to determine what kinds of observation are sufficient to justify a generalisation, I do not pretend to say whether this is so or not: and still less do I pretend to say whether, *if* they exist when *I* do not perceive them, we are justified in supposing that someone else must be perceiving them. The question whether anything exists, when it is not perceived, and, if so,

what things, seems to me to be one which can only be settled by observation; and thus, I conceive, observation might justify us in concluding that certain kinds of things – pains, for example, do *not* exist, when they are not perceived and that other kinds of things – colours, for example, *do* exist, when they are not perceived. The only way, in which, so far as I am aware, the theory I am advocating does conflict with ordinary Idealistic conclusions, is that it does suggest that things, which are *not* "spiritual," do *sometimes* exist, as really and as truly, as things which are.

The theory, therefore, that nothing exists, except when it is perceived, is no objection (even if it be true) to the supposition that colours do exist. What objections are there to this supposition? All serious objections to it are, I think, of one type. They all rest upon the assumption that, if a certain kind of thing exists at a certain time in a certain place, certain other kinds of things cannot exist at the same time in the same place. They are all, that is to say, of the same type as Berkeley's argument: that, though the same body of water may *appear* to be simultaneously both hot and cold (if one of the hands we plunge into it is warm and the other cold), yet the heat and the cold cannot both *really* be in the same body at the same time. And, it is worth noticing, that anyone who uses this argument must admit that he understands what is meant by "really existing in a given place," and that he means by it something *other* than "being perceived as in a given place." For the argument itself admits that *both* the heat *and* the cold *are* really *perceived* as being in the same place, and that there is no difficulty in supposing, that they are so; whereas it urges that there *is* a difficulty in supposing that they both *really exist* in it.

Now there is one obvious defect in this type of argument, if designed to prove that *no* sensible quality exists at any place where it is perceived as being – a defect, which Berkeley himself admits in his "Principles," though he omits to notice it, where he repeats the argument in his "Hylas." Even if we assume that the heat and the cold cannot *both* exist in the same place (and I admit that, in this case, the contrary assumption does seem repugnant to Common Sense), it does not follow that *neither* exists there. That is to say this type of argument, even if we grant its initial assumption, will only entitle us to conclude that *some* sensible qualities which we perceive as being in a certain place at a certain time, do not exist in that place at that time. And this conclusion, I am inclined to think, is true. In the case, for instance, of the so-called "images" which we perceive in a looking-glass, we may very readily admit that the colours and shapes which we perceive do *not* exist at the places where they appear to be – namely at various distances behind the glass. But yet, so far as I can see, we have no reason whatever for supposing that they do not, *except* the assumption that our observations give us reason to believe that *other* sensible qualities *do* exist in those positions behind the glass; and the assumption that *where* these *other* sensible qualities do exist, those which we see in the

glass do *not* exist. I should, therefore, admit that *some* sensible qualities which we perceive as being in certain places, do *not* exist in those places, while still retaining my belief that others do. And *perhaps* this explanation is the one which should also be adopted in the case of sensible qualities which appear to be at a great distance from us. When, for instance (as we say), "we see the moon," *what* we perceive (if the moon be full) is a round bright silver disc, of a small size, at a place very distant from us. Does that silver disc exist at that place? With what suppositions does the assumption that it *does*, conflict? Only, so far as I can see, with the supposition that the place in question is *really* occupied by a body such as science has taught us to suppose that the moon *really* is – a spherical body immensely larger than objects, in comparison with which the silver disc which we perceive is small; *or else* with the supposition that the place in question is really occupied by some part of our atmosphere, or some part of the medium which science supposes to exist between our atmosphere and the moon; *or else* with the supposition that the place in question is really occupied by what we might see, if the moon were nearer to us by many thousands of miles. Unless we suppose that some other object *is* in the place, in which the silver disc appears to be, and that this object is of a kind which cannot occupy the *same* place which is occupied by a silver disc, we have no reason to suppose that the silver disc does *not* really exist in the place where it appears to be. And, in this case, we *perhaps* have reason for both suppositions and should therefore conclude that the silver disc, which we perceive, does not exist in any real place.

Part, therefore, of these objections to our theory may, I think, be met by admitting that *some* of the sensible qualities which we perceive do not exist at the places where they appear to exist, though others do. But there is, I think, another class of cases, in which we may be justified in denying that two things which (it is asserted) cannot occupy the same space, really cannot. I will take an instance which is, I think, typical. When we look at a drop of blood with the naked eye, we perceive a small red spot, uniformly red all over. But when (as we say) we look at the *same* object under a micro- scope of a certain power, I am informed that we see a much larger spot, of similar shape, indeed, but *not* uniformly red – having, in fact, small red spots at different positions in a yellowish field. And if we were again to look at the *same* object through a microscope of much higher power still, we might perceive yet a third different arrangement of colours. Is there any fatal objection to supposing that all *three* appearances – the uniform red spot, the yellowish field with reddish spots in it, and the third, whatever that may be – do all really occupy the same real spatial area? I cannot see that there is. We are familiar with the idea that a given spatial area may contain parts which are invisible to us. And hence, I think, it is quite conceivable that parts of a given area may be *really* occupied by one colour, while the whole is *really* occupied by another. And this, I think, is

what we actually *do* believe in many cases. At all events, we certainly believe that the area which appears to be occupied by one colour really is *the same area* as that which appears to be occupied by another. And, unless we assume that the area, in both cases, really is the same, we can certainly have no reason to deny that each colour does really occupy the area which it appears to occupy.

For these reasons I think that the difficulties in the way of supposing that *some* of the sensible qualities which we perceive as being in certain places, really exist in the places in which we perceive them to be, are not insuperable. I have indeed not done justice to these difficulties; but then, neither have I done justice to what is to be said on the other side. At all events, I think it is plain that we have no reason to assert, in any case whatever, that a perceived colour does *not* really exist in the place where it is perceived as being, *unless* we assume that that very same place really is occupied by something else – *either* by some different sensible qualities *or* by material objects such as physical science supposes to exist. But what reason can we give for such an assumption? I have tried to show that our own observations can give us none, *unless* we assume that some of the sensible qualities, which we observe as occupying certain places, do really exist in those places. And, if this is so, then we must admit that neither he who believes (with Reid) in the existence of other minds and of matter also, nor he who believes in the existence of other minds and denies that of matter, can have, in his own observations, the slightest reason either for his assertion or for his denial: we must admit that he can have no reason for either assertion or denial, except one which consists in the assumption of the existence or non-existence of something which he does *not* observe – something, therefore, of the very same kind as that for which he gives it as a reason. I am very unwilling to suppose that this is the case: I am very unwilling to suppose that he who believes that Sindbad the Sailor really saw, what the "Arabian Nights" represent him as seeing, has just as good reason (so far as his own observation goes) for believing this as he who denies it has for denying it. Still this may be the case. We *must*, perhaps, be content to assume as certain that for which our observation gives no reason: to assume such propositions as that Sindbad did *not* see a Roc, and that you *do* hear my voice. But if it is said that these things are certain; then it also appears to me to be certain that the colours which I perceive do exist (*some* of them) where I perceive them. The more I look at objects round me, the more I am unable to resist the conviction that what I see does exist, as truly and as really, as my perception of it. The conviction is overwhelming.

This being, then, the state of the case, I think I may at least plead that we have grounds for suspense of judgment as to whether what I see does *not* really exist; grounds, too, for renewed enquiry, more careful than such enquiry has sometimes been in the past.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Sense-Presentation and Thought

G. DAWES HICKS

VOLUME VI

1906

EDITORIAL NOTE

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The following paper - "Sense-Presentation and Thought" - was published in *Proceedings of the Aristotelian Society*, New Series, Volume VI (1905-1906), pp. 271-346.

IV. SENSE-PRESENTATION AND THOUGHT

G. DAWES HICKS

THE subject I am going to discuss is a psychological one, and as such I shall, in the main, treat it. But the relation of thought to sense perception has formed, since the time of Kant, the central theme of discussion in the field of theoretical philosophy generally, and in dealing with the more specifically psychological problem it is scarcely possible, even were it desirable, to lose sight of the wider issues involved. In point of fact, however, many of the hard and fast distinctions which formerly separated opposing systems of philosophical speculation break down when looked at in the light of results obtained from a genetic study of concrete psychical phenomena. Herbert Spencer evinced perhaps greater insight than he is sometimes credited with when he discerned in the doctrine of Evolution a mode of mediating between the extreme contentions of empiricism and rationalism, even though the precise lines of mediation he himself suggested may not have been happily chosen. In the present paper, for example, I shall be endeavouring to show that the activity of thought, in the psychological sense of the term, is to be traced back to simpler and more elementary processes of mind, and to that extent, at least, I shall be giving adhesion to what has always been a fundamental principle of empiricism. With Mr. Bradley I am convinced that "thought proper is a product" and that psychological science can trace its probable generation. But like him I am persuaded that such a position can be maintained only if we are prepared to allow that much more is involved in the simpler processes of mind than writers of the empirical school have generally been willing to recognise. And with that proviso, I believe the really valuable portions of Kant's epistemological theory retain their significance. If we are justified in regarding one form of conscious experience as a product evolved from a lower form, then it must be fundamentally the same process that is at work in both, and whatever can be shown to be a necessary condition of the possibility of the former must be implied also in the latter.

Obviously, in endeavouring to trace the development of what is specifically called "thinking" from more rudimentary states of mind, we are compelled to frame some conception of the condition of things characteristic of the earlier stages of mental life. In our mature experience there is no act or process of consciousness from which elements of thought are wholly absent, or the nature of which is not to a large extent influenced and determined by the fact that the subject in question is a thinking or reflectively self-conscious individual. Consequently, the sense perception as

it takes place in the mature mind is a much more elaborate operation than sense perception can possibly be in the primitive consciousness. Even the apprehension of the simplest sense quality, although no doubt it preserves a certain continuity of character throughout the entire range of conscious experience, cannot be supposed to have remained unaffected by the evolution and growth of the mental life as a whole. This circumstance occasions probably the most serious obstacle the psychologist has to encounter in attempting to explain or to describe the facts of mind. So far as method of procedure is concerned, there is for him no option. He is compelled to start with an analysis of experience as it actually comes before him in his own mental life, and the tendency, almost insuperable, of taking what there seems indispensable as ultimate and fundamental may readily enough lead to misinterpretation and error. The course of evolution is clearly much more subtle and complicated in the field of mental phenomena than in that of biology: it is impossible to find in physical nature an exact parallel for the peculiar mode of transformation the simpler kinds of psychical process undergo in the gradual advance to self-consciousness. In default of any direct information we can only pursue the more hazardous method of inference, and by reasoning backwards from the complex facts of our mature experience, as a basis of fairly assured knowledge, attempt to reconstruct in thought the constituents of the primitive mental life.

I. SENSE-PRESENTATION IN ITS RUDIMENTARY FORM

Mr. Bradley's conjectural sketch of the earliest stage of soul-life has often been quoted. "In the beginning," he believes, "there is nothing, beyond what is presented, what is and is felt, or is rather felt simply. There is no memory or imagination or hope or fear or thought or will, and no perception of difference or likeness." "There is nothing beyond presentation which has two sides, sensation and pleasure and pain."[1] Mr. Bradley is here attempting to describe the experience in question as a scientific psychologist would do if it were possible for him in some way to be a spectator of it. In one respect there is, I imagine, little ground for dissenting from his mode of statement. With a reservation that will appear immediately, the features he has excluded seem to me, at any rate, secondary and derivative, and therefore rightly regarded as factors of later growth. Difficulty begins when we proceed to inquire as to the nature of that which admittedly is present. I shall have something to say about the doctrine of sentience further on. Here, however, I would urge, at the outset, that if presentation is there at the start, then what is there is incorrectly described as "all one blur" within which differences may be contained but of which there is no recognition. Even the awareness of a "blurred whole" implies that such "blurred whole" is not absolutely devoid of any characterising mark. I can find no means of realising what a state of mind can be in

[1] *Mind*, xii, 1887, pp.363 and 367.

which there is in some sense awareness, and yet awareness of nothing. It seems to me that the simplest, and most rudimentary, phase of consciousness conceivable must be described as at least recognition, – as indefinite, vague, and confused as you will – of a quality or content possessing to some infinitesimal extent a distinguishable character. And the difference between infinitesimal and none at all is here of first-rate importance, because there is involved in it the crucial point as to the fundamental nature of the attitude of "being aware." The minimum which I have claimed as necessary for consciousness precludes the possibility of carrying back the mental life to a stage when it would consist entirely of what is simply "given" (even in Mr. Bradley's sense of "that which is simply, and comes as it is"), without the exercise of any activity on the part of the subject. I am fully mindful of the woeful ambiguity of the phrase "exercise of activity on the part of the subject." I am not committing the "barbarism" of supposing that the activity in question is an activity of which the subject itself is aware. Far from it. I gather that when Mr. Bradley speaks of psychical states as events or occurrences, he is himself assuming an ultimate mental agency of which they are modes or exemplifications.[2] For the subject a presentation may be simply what is presented and yet the hypothetical psychological spectator may misdescribe that presentation *even as it is for the subject*, if he leave out of account the fact that the presenting is not an external but an internal process, and fail to inquire into the conditions which render such internal process possible. Just as little ill the form of a chaotic undifferentiated whole as in that of a succession of atomic sensations can what is presented be psychologically treated as so much datum supplied to the subject and in relation to which the latter may be viewed as in an attitude of simple passivity. However far back in the history of mind we go, apprehension of any sort necessarily implies some amount of mental construction, dependent no doubt for its origination and continuance upon outer stimulation, but never itself to be reduced to mere reception of, or even reaction on, stimulation. If presentation, then, involves a mental act of presenting, the subject must necessarily be aware in and through such act of some distinguishable feature. For the act consists in presenting something, in being aware of something, even though that something be "one blurred whole."

To put the matter quite generally, it is precisely the peculiarity of mind, as contrasted with what we are accustomed to call phenomena of outer observation, that mental facts exhibit a unique double-sided aspect, sufficiently difficult to express with scientific exactitude, but neglect of which in any psychological treatment of mind cannot but lead to downright error and confusion. Apprehension, alike in its lowest and its highest forms, is invariably twofold in character: it implies (α) a process or occurrence, which takes place, an act, as we will call it, of apprehending, and (β) a more

[2] See, for instance, *Mind*, N.S. xii, 1903, p.166.

or less definite content of which the subject is aware in and through the act of apprehending. The distinction itself is, of course, sufficiently familiar;[3] certain considerations in connection with it need alone concern us here. In the first place, it is not a distinction which we in our mature experience have to wait for the psychologist to point out to us. It is a distinction with which all of us in ordinary everyday life are perfectly acquainted, however liable we may be to misinterpret it. No distinction seems to us more self-evident than that between hearing and the sound heard, seeing and that which is seen, imagining and that which is imagined, thinking and that about which we think. But it would, I think, be a mistake to conclude that the distinction, *in this form*, is an invariable feature of conscious experience; it would be a mistake to suppose that, because psychologically apprehension always involves process and content, that therefore every apprehending subject must be capable of distinguishing its apprehending from that which it apprehends. The subject can only draw that distinction through the aid of a number of ideas and thoughts that lie completely beyond the scope of a primitive mental life. As such it can only make its appearance in conscious experience when through reflection the content presented has come to be definitely connected with the objective order of things. In fact, for the subject itself it is practically synonymous with the distinction between self and not-self, a distinction which we can hardly hesitate to admit lies beyond the range of the earlier stages of conscious experience. From the very beginning, then, process and content are undoubtedly there, and must be psychologically distinguished; the subject's own distinction between its act of apprehending and what it apprehends on the other hand is not there from the beginning, though the indispensable condition of its being afterwards attained is. In the second place, the distinction of process and content is not, psychologically considered, so it appears to me, at any stage a distinction of two separable facts. There is only one fact involved, the act, namely, of apprehending, which is in its nature the apprehending of a content.[4] In our mature experience, we readily enough come to regard the distinction as a distinction between two separate things. That we do so is due to the circumstance that in ordinary life we tend to identify the content perceived with the real thing which, for the moment we will say, it indicates; we seldom stay to consider that there

[3] One of the earliest writers to emphasise its importance was Arnauld, in his exceedingly suggestive little work, *Des Vraies et des Fausses Idées*, published in 1683. In Chapter V, for instance, occurs the following passage: - "J'ai dit que je prenais pour la même chose *la perception* et *l'idée*. Il faut néanmoins remarquer que cette chose, quoique unique, a deux rapports, l'un a l'âme qu'elle modifie, l'autre a la chose aperçue, en tant qu'elle est objectivement dans l'âme ; et que le mot *de perception* marque plus directement le premier rapport, et celui *d'idée* le dernier. Ainsi *la perception* d'un carré marque plus directement mon âme comme apercevant un carré : et *l'idée* d'un carré marque plus directement le carré, en tant qu'il est *objectivement* dans mon esprit."

[4] This consideration is repeatedly urged by Arnauld; immediately after the passage already quoted, for example, he proceeds to insist upon it.

is any difference between the appearance and that which appears. Such tendency on our part in no way militates against the view that process and content, though distinguishable, are inseparable, that the one is not without the other.

The consequences which result from assuming that process and content are two independent facts are nowhere more clearly illustrated than in the writings of the Herbartian psychologists. Volkmann, for example, lays stress, as Herbart had done before him, upon the distinction between presentative activity and presentation. "The presentation," he says, "is related to the act of presenting as product to process, as the qualitative determination of that which is produced to the quantitative character of that which produces. The presentation (*Vorstellung*) is the *presentatum* (*das Vorgestellte*), i.e., that which the presentative act brings forward and holds firm. It follows from this, "he admits, "that the notions of presentation and of presentative activity are correlative notions, and that ultimately it is impossible to think of a presentation without presentative activity or of a presentative activity without presentation."[5] But, he goes on, "since presenting is an activity and every activity may be inhibited by another opposed to it, it is as a matter of fact possible that the presenting of a presentation may be converted into a mere striving to present, into an activity which misses its effect. We should then have an act of presenting which for the time being produces nothing,; we should thus have a presentation which is not actually presented. Anyone, for instance, may quite well have the presentation, Hannibal, without actually now presenting it. In order to originate a presentation, the act of presenting is indispensable, but the presentation may continue, without the act of presenting continuing in its activity. Every presentation originates through an act of presenting, but the act of presenting continues, either as an actual presenting or as a mere striving to present." So soon as it is thus supposed that presentation and presentative activity may be altogether isolated, and exist in separation the one from the other, we lose all the help, it seems to me, that might otherwise be obtained for psychological analysis from the distinction itself. Presentations come then to be regarded as veritable entities, which act and react upon each other, and which in fact discharge all the functions we are accustomed to ascribe to actually existent things. It is true that Herbart him- self does assert that presentations are not in themselves forces (*Kräfte*), but he contends that a number of presentations when in conjunction-and they always are in conjunction by reason of the underlying unity of the soul-become forces and resist or oppose one an-

[5] *Lehrbuch der Psycholoqie*, 1875, Bd. i, p. 168 *sqq*. As an instance of the baffling confusion attaching to the term *Vorstellung*, it is of interest to note that Brentano employs it with exactly the opposite meaning to that adopted in the above quotation. "I understand by *Vorstellung*," he writes, "not that which is presented, but the act of presenting" (*Psychologie vom emipirischen Standpunkte*, p. 103).

other.[6] They may conflict with one another, they may be fused together or be mechanically combined in groups or series, they may exert energy and withstand pressure. In short, the Herbartian psychologists were driven by the exigencies of their method of treatment to attribute a quasi-substantive mode of existence to these so called presentations.

II. CONTENT AND PROCESS

With the Herbartian doctrine before us let us now draw by way of contrast what seem to be the legitimate consequences of the conception of apprehension as involving the distinguishable though inseparable aspects of content and process.

I consider, firstly, the content. The admission that process and content, understood in the sense explained at the commencement, are inseparable carries with it, I think, the further admission that to presentations, in the sense of contents, the predicate of existence does not rightly attach. I am not going to dispute that a meaning may be found for the term "existence" in the light of which it would be sheer nonsense to deny existence of presentations. But I have no hesitation in asserting that in precisely that significance with which we are constantly employing the word in question, the above statement correctly represents the assumption on which the common opinion of mankind tacitly proceeds. Ordinary popular usage consistently distinguishes an existing thing from an imaginary thing. In the former case, it is not the presentation of the thing, but the thing in the external world that is taken to exist. The ordinary man, when once he is brought to the point of recognising a distinction between content and external things at all, no more regards his visual image of the friend actually beside him as an existent reality than he regards his visual image of a friend a hundred miles away as an existent reality. Or, using, another illustration, it would be generally admitted that "the visual appearance of the full moon as seen from the earth's surface" is not an existent thing either in the sky or in the head of the observer. In other words, the content of an act of perception and the content of an act of imagination would be ordinarily recognised as standing, so far as existence is concerned, upon exactly the same level; the predicate of existence would be withheld from both. And the principle involved in this denial is not difficult to decipher. Ordinary reflection implicitly recognises that a presentation or content forms in itself no element in that system of interconnected facts or events which together make up what is usually described as "the real world," that, adopting Dr. Shadworth Hodgson's terminology, it is not a "real condition" in the realm of change and genesis. That implicit assurance of the ordinary consciousness seems to me to be philosophically justified. The apprehension of any specific quality involves as we have seen, an act

[6] Herbart's *Werke* (Hartenistein), Bd. v, pp. 15 and 16.

or process, whether material, as Dr. Hodgson holds, or psychical as I hope to show reason for thinking. On the latter hypothesis, we have described what happens as an act of mind in and through which there is awareness of a relatively definite content, which content may be compared with the contents of other acts of mind. But this content ought not itself to be spoken of as a mental fact, as an existing constituent of consciousness; the mental fact, the constituent of consciousness as an existent, is the act of apprehending. Of the content what Herbart maintained of presentations generally is doubtless true, – it may be said to have a perpetual and unchanging mode of being. Nothing can alter it, simply because it is not something that can be operated upon or that itself can operate upon anything else. But just in this sense it neither was nor is a component part of the existing reality called the individual mind, and it is to mix up in hopeless fashion two totally heterogeneous lines of consideration to apply to process and content indiscriminately the same set of attributes.

It may perhaps be worth while to add that the view here taken of the nature of the content is by no means new. It is at least as old as Aristotle. Sense-perception, Aristotle explains in a well-known reference (*Dc An.*, ii, 12) is the power of apprehending the form of sensible things without the matter of them, just as wax receives the impress of the seal without the iron or gold of which it is composed. The apprehended content, therefore, is not an existent concrete thing, a τόδε τι, but a τοιονδί, a qualitative determination; the αἰσθητὸν as apprehended is, in Aristotelian phraseology, an αἰσθητὸν κατ᾽ἐνέργειαν (*lb.*, iii, 2). And here it is interesting to observe that it is just because sense perception is of this character that, according to Aristotle, it has what is implicitly universal for its content, and the advance from it to the higher kinds of knowledge is possible. The Aristotelian contrast between what is apprehended by the mind in the process of knowing and what belongs to existent facts in the external world reappears in numerous pairs of terms that belong to the rich vocabulary of scholastic philosophy. The scholastic distinctions between subjective (in the sense of *substantia*) and objective (in the sense of that which is involved in *objicere*, in the act namely of bringing before the mind), between existence and essence, between *esse reale* and *esse intentionale*, all refer with varying shades of significance, to the same fundamental consideration. The distinction is preserved in slightly different phraseology throughout the whole body of Cartesian literature. Descartes himself repeatedly sets over against one another the *realitas objectiva* attaching to the *idea* of a thing and the *realitas actualis* or *formalis* attaching to the *thing* in its independence of the act of apprehension (*vide*, e.g., *Med.*, iii and v). Similarly Spinoza distinguishes the *essentia objectiva* of a thing, *i.e.*, the nature of a thing as represented in an act of apprehension, or as content of an idea, from the *essentia formalis* of a thing, *i.e.*, its real or "formal" nature, as a mode in the system of *natura naturata* (*vide*, e.g., *De intell. Emend.*, § 33).

The distinction was lost sight of in subsequent philosophical discussion, mainly, I take it, in consequence of Locke's unfortunate use of the term "idea," his application of it indifferently either to mental process or to apprehended content, a confusion which perpetuated itself in the writings of those who followed him.

The distinction as it reappears in the works of Lotze and Mr. Bradley has, I venture to think, retained not a little of Locke's confusion, and thereby lost much of its original value. It comes before us there as the distinction between idea in the sense of psychical existence and idea in the sense of logical meaning or significance. Lotze, for example, starts by assuming an "unconscious psychical mechanism," capable of preparing, given sensuous material for the supervening activity of thought, regarded as a special and unique faculty of the mind. The first operation of thought is, he considers, to set in movement that process of the "objectification of the subjective," the ultimate outcome of which is the body of systematised knowledge. The operation itself consists in separating something previously unseparated, namely, the sensitive act from the sensible matter to which it refers, and, as a consequence, we present the latter to ourselves no longer as a state or event which we undergo, but as a content, which itself is what it is, and means what it means, whether we are conscious of it or not. In other words, mere impressions are converted into ideas. But, in order that this process of severance should take place, it is essential that the sensuous states or impressions should themselves be there, entering, by the very fact of their co-existence, into relations, and, in virtue of the grouping to which the psychical mechanism gives rise, forming felt combinations which may be described as sensuous images or pictures. In other words, the psychical state or event is itself, according to this view, what we have called a content: it is that which is apprehended prior to the act of judgment. Mr. Bradley's treatment of the subject does not, in regard to the particular point I am referring to, differ greatly from Lotze's. He, too, holds that the psychical event or existence is a mental image. "Neither outside my head, nor yet inside it," he writes, "can ideas have existence; for the idea is a content, which, being universal, is no phenomenon. The image in my head exists psychologically, and outside it the fact has particular existence, for they both are events. But the idea does not happen, and it cannot possess a place in the series."[7] The whole view on which the statement I have quoted is based will call for discussion further on. I anticipate here only to the extent of asking on what plea it can be maintained that, whilst an idea is *not* something that happens, a mental image *is* something that happens. What happens, as an event in my mental history is surely, in either case, the process or act of apprehending; and the process or act in question is as little an image in the one case as it is a logical idea in the other. A mental image, I presume, does not, any more

[7] *Principles of Logic*, p. 526.

than a logical idea, apprehend itself; it involves, therefore, just as the logical idea does, an act or process whereby it is apprehended. And there is no more appropriateness that I can discover in saying that what imaged is "in my head" than, in saying that what is conceived is stationed there. Moreover, I venture to urge, that if we start by assuming so fundamental a difference between, what I will call for the moment, mere perceiving and thinking, if we ascribe existence to a sensuous image and deny it of the logical idea, we have *ex hypothesi* shut ourselves off from the possibility of finding a psychological means of transition from the one to the other. The cleft between sense and thought would be complete and final, and could not be bridged over by any amount of psychical development. Evolution can be called in to aid us only if the earlier and the later stages are the *same in kind*; it is helpless as a means of explanation if they are not. Lotze, indeed, is consistent in this respect: he postulates a unique and special activity to account for the products of thought. Mr. Bradley, on the other hand, seeks to make the passage partly by means of the principle of Association, although, as I shall try to show, the interpretation he puts upon that principle itself contradicts the notion that ideal contents differ in kind from sensuous contents.

I consider, secondly, the act of apprehending. The act of apprehending is, we have maintained, an existing fact, and therefore is not as such a content apprehended. But although it be true, as I think, that we have no direct or immediate knowledge of the nature of a psychical state, we can legitimately enough seek to secure inferential knowledge about it from a consideration of the results to which it gives rise. As a convenient way of leading to such inference, I refer here to Professor Huxley's somewhat remarkable defence of Hume's theory of the original "furniture of the mind." Huxley admits that, in treating of "ideas of relation," Hume fell into "a chaos of confusion and self-contradiction." But he conceives it possible by the introduction of a slight modification to save the doctrine from inconsistency. Huxley's own solution of the problem over which, he thinks, Hume stumbled is the following, "When a red light," he declares, "flashes across the field of vision, there arises in the mind an 'impression of sensation' which we will call red. It appears to me that this sensation, red, is a something which may exist altogether independently of any other impression, or idea, as an individual existence." So far he is in accord with Hume. But if a second flash of red light were to follow the first, then presuming the sentient being is endowed with memory there might, so Huxley conceives, arise in his mind two altogether new impressions, those of succession and of similarity. Or if two flashes of red light were to occur together, then there might arise in addition an impression of co-existence. Such impressions of relation are, he holds, ultimate, simple, unanalysable facts of mind. "They differ from other impressions in requiring the pre-existence of at least two of the latter. Though devoid of resemblance to the

other impressions, they are, in a manner generated by them. We may regard them as a kind of impressions of impressions."[8] This mode of surmounting the difficulty is interesting because it exhibits with undisguised clearness an assumption which lies at the root, not only of the doctrine of psychological Atomism, but also of other ways of solving the problem indicated, more in favour at the present day. It is assumed namely that presentations already formed, with distinguishable traits of resemblance and difference, become *first* of all the possession of the mind, and *then, through a subsequent process,* are compared and distinguished. They are taken to be the material upon which the process of recognising features of relatedness supervenes. The Atomism implied in Huxley's statement need not detain us. Let that statement be so far modified as to involve the admission that if on the appearance of two presentations *a* and *b*, a third new idea γ arises, expressing their likeness or, difference, there must be some inner activity of mind at work, which at once holds *a* and *b* together and holds them apart. Even then the assumption remains that this idea of comparison springs up *de novo* when the presentations, *a* and *b*, already with definiteness and precision of outline, are compared or discriminated from one another, in the inner field of the mind's contemplation; the assumption remains that the presentations are so many given or prepared entities upon which a unique activity operates and produces by its operation the new ideas of relation. One can hardly avoid the reflection that such a mode of viewing the matter simply precludes us from framing any intelligible theory of how the results we are anxious to explain come about; it is at least certain that it offers none. If, however, we are in earnest with the contention that the content apprehended is not an existing fact, then we are bound to reject the assumption in question as unwarranted and untenable. For, in that case, presentations, as we have seen, are not offered data which we have merely to accept, but are themselves in all cases products. In that case, recognition of a sense-presentation as a separate content is only possible if there be furnished in the inner life sufficient means of discriminating it from whatever else may happen to be presented. In other words, the act of presenting is itself an act of discriminating, comparing and relating; there could be no presentation at all, not even the crudest, without the exercise of an activity identical in kind with, however it may differ in degree of complexity from, the more mature and elaborate activity to which the name thinking is specifically assigned. I quite acknowledge that definite apprehension of relations as distinguishable features in the whole complex of contents is not there at the outset, that only by degrees do we become able, partially at least, to contemplate relations in their generality, as apart from the concrete whole in which at first they make their appearance. In other words, I do not imagine that, even though discrimination and assimilation are primitive processes, involved even in the simplest form of sense-presentation, the subject would, therefore, be

[8] Hume (*English Men of Letters*), pp. 68 and 69.

originally capable in any way of separating from the like or different contents the more general, the more abstract conceptions, of likeness or difference. But that is not at all inconsistent with the view that even the simplest apprehension of a sense content takes place through means of an activity the same in kind as that with which we are acquainted when we regard in isolation the relations of likeness and difference, of equality and inequality, and so on. Let me try to make my meaning clear in yet another way. Mental development does not begin with differing presentations already given, and then by a process of subsequent reflection upon them discover wherein they differ. Subsequent reflection is mainly concerned in clearing up, in giving prominence to, characteristics already involved in having different presentations at all. Some amount of recognition of their difference is, that is to say, an indispensable part of the presentations themselves. Thus, instead of assuming an initial multiplicity of separately given presentations, by comparison of which we attain to ideas of relation – of similarity, dissimilarity, and the like – we are entitled, in conformity with the principle on which we are proceeding, to maintain that the experience of a primitive mind would consist of a vague, confused, ill-differentiated, whole of presentation, and that, by successive acts of discriminating there would gradually emerge definite contents, the relations of which, in consequence of a development, some of the chief steps of which I hope to show it is not impossible to trace, come later to be apprehended by us in the form of concepts or notions. The further back we go in the history of the mental life the cruder and more incomplete we must suppose its contents to be – wanting in sharpness of outline, loosely distinguished from one another. At such a stage, the several stimulations of sense would be taken up and interpreted by a mind containing but scanty preparation for the purpose. Moreover, the vagueness of apprehension at this early period would be aggravated by the fact that the sole general point of reference in the mental life would consist almost entirely of that obscure mass of sense-presentations and feelings connected primarily with organic changes in the body. No background of self-consciousness would as yet have been formed, over against which successive presentations might stand out as referring to that which was other than self. In consequence there would be a certain want of continuity in the mental life, it would be easily distracted and essentially aimless in character. And in like manner a correspondingly rudimentary type of being, would be exhibited by the process of apprehending; the several modes in which the mind ultimately comes to operate would not yet have acquired definiteness of character; the elementary activities which lie at the root of all the after developments would be as yet in closest conjunction with one another, there would, for example, be few marks of demarcation between feeling and perceiving and striving. Accordingly, in respect both to content and process, there would be manifested the same features of vague formlessness and indefiniteness. So far as the content is concerned, development would take place

through increase in the number of points of difference that were recognised, through increase in the lines of connectedness by which the several features were grouped together, and through change in the character of the relations by which they were united one with another. So far as the act of apprehending is concerned, development would take place through the elementary processes gradually acquiring distinct characteristics – perceiving, for example, coming to be distinguished from imagining, or remembering – and through increasing ease and quickness in their exercise. Alike, then, in its earlier and in its more developed stages, the essence of an act of apprehending would appear to consist in discriminating, comparing, and relating.

III. APPREHENSION CONSIDERED AS ATTENTION

A comparison of the position just sketched with Dr. Ward's much discussed theory of Attention may serve as a means of further elucidation. Dr. Ward proposes to denote by the term "Attention" the one common element at the root of all psychical processes, the activity namely of the subject manifested in them. Recognising the somewhat formidable enlargement of the ordinary meaning of the word involved in his proposal, Dr. Ward defends it on the ground that to use Attention in this wider sense would be following the precedent of physicists in their usage of the terms "magnitude" or "heat" (*i.e.* temperature). "Many an unsophisticated old lady would demur to one who described the minuteness of a snow crystal in terms of magnitude or its temperature as so many degrees of 'heat' (reckoning from absolute zero)."[9]

I note, at the outset, that what has been said above about the act of apprehending agrees in certain not unimportant respects with Dr. Ward's account of Attention. We have followed him in holding that an ultimate psychical activity is involved in the apprehension of any presentation whatsoever, whether such presentation take the form of the crude contents of the primitive consciousness or of the most elaborate concepts of scientific reasoning. We have followed him, also, in resisting the attempt to transfer this activity from the side of the subject to that of the presented contents, and to endow the latter with mysterious powers of interacting, of attracting and repelling one another. And, once more we have accepted his principle that the activity in question is not *qua* actually occurring a content of apprehension. The grounds offered, however, in support of this last principle are different in the two cases. According to Dr. Ward, attending cannot itself be attended to, because whilst Attention is psychologically subjective, presentations are not, and, since the subjective *qua* subjective cannot be presented, we can only know of Attention by its effects, by the changes it produces in the character and succession of our

[9] *Mind*, xii, 1887, p. 56.

presentations. According to the view I am trying to explain, on the other hand, an act of apprehending does not apprehend directly its own activity, because that activity consists in discriminating a content, and cannot, therefore, at the same moment, and in the same relation, be itself that which is discriminated. Moreover, if by a further act of apprehending a previous act of apprehending is made matter of contemplation, – and I am far from denying, that it can be, – then it has become an object, and there is no more reason to suppose that content and object are identical in its case than in any other case of apprehension.

The difference just indicated leads at once to the fundamental point concerning which I find myself compelled to dissent from Dr. Ward's theory. Dr. Ward, if I understand him rightly, regards activity and presentation as *toto genere* separate and distinct; the subjective faculty or function of Attention or Consciousness, on the one band, and the field of Consciousness, consisting of presentations or ideas, on the other, seen to him to belong to two entirely independent orders of psychological facts. Attention has its seat in the "pure" ego, presentations go to constitute what in contrast thereto may be called the "empirical" ego. Presentations are "given" and may be said to be there, *before* the direction of Attention upon them; Attention may not unfairly be described in Lotze's words as "a moveable light which the mind directs on to the presentations it receives," Dr. Ward, if I mistake not, would be ready to admit that Attention, as psychical activity, may be conceived as practically identical in character throughout the course of mental evolution, somewhat after the manner in which biologists may conceive of vital force as practically identical in character throughout the various stages of the evolution of living organisms; what grows or develops is the objective *continuum*, which is gradually differentiated into increasingly distinct and definite presentations and ideas. Here, then, we have a conception of conscious experience, worked out with great care and thoroughness, which presupposes a severance between activity and content precisely such as I have been attempting to show is inadmissible. And I cannot think that the severance, as it appears in Dr. Ward's treatment of the mental life, is either in itself justified or that it enables us in any way to account for the facts it is supposed to explain. I do not think it is justified in itself. The argument offered for it appears to be based on the around that either the severance must be allowed or else we stand committed to the "Presentationism," which would resolve psychical activity ultimately into a property of "contents of consciousness," considered as independent existences that act and react upon one another. But these alternatives are not by any means exhaustive of the possibilities of the case. They only seem to be so through our inveterate habit of ascribing a mode of existence to presentations which, if there be any validity at all in the considerations I have been urging, cannot maintain itself as a result of critical examination. I venture to suggest that Dr. Ward has made in reality

too large a concession to "Presentationism." If presentations, full fledged, are allowed to be there prior to the exercise of attention or psychical activity, if the chief function of the latter be limited to bringing, the former into clearness and distinctness of apprehension, then the fundamental position of "Presentationism" has been already conceded. It is surely from the constitution of presentations themselves that the main evidence of the mind's activity must be sought; it is the appearance at all of presentations, which "Presentationism" has simply to accept, that is rendered wholly enigmatical on the assumption that no such activity is involved. Again, I do not think that the severance in question enables us in any way to account for the facts it is supposed to explain. I mean, in other words, that no insight into the psychological character of these facts is possible if we conceive of Attention as a unique and separate power, the variations in which depend only on the way in which it is exercised. By concentrating attention upon presentations we are said to increase their intensity, their clearness, their distinctness. But, as Lotze long ago pointed out, a mere gazing at anything, even if it were heightened to infinity, would in itself be utterly powerless to achieve this result. The clearness or obscurity of the content does not signify that we apprehend with more or less energy the same content, but that in the one case we are, and in the other case we are not, able to apprehend a sufficient number of distinguishable marks. The possibility of recognising such distinguishable marks is evidently conditioned to a large extent by the amount of experience that can be brought to bear upon the content attended to. It is only in so far as there are means at hand of comparing the presented content with, of relating it to, trains of representations and ideas already acquired by the mind, that a larger number of characteristic marks will be ascribed to it, and that it will stand out with greater definiteness and distinctness. In strictness, we are not, I should say, psychologically warranted in regarding that which we apprehend now more and now less intensely as the same content. It is, in truth, in each case a different content, just as in each case the act of apprehending is different.

I believe, then, that we can furnish a psychological explanation of the clearness and distinctness, which form at least one familiar result of attending, only by connecting the whole process of attending with what seems to me the more comprehensive and ultimate activity of discriminating and comparing, of recognising differences and likenesses. But the activity of discriminating and comparing, is never a bare activity, never a mere putting forth of force or energy. It exists only in its .concrete modes of operation, and it derives its concreteness, its specific character, from the variety of content with which it is inseparably connected. We have not, therefore, here, let me repeat, two independent facts. The content apprehended possesses whatsoever mode of being we may consider ourselves justified in ascribing to it only in and through the process of apprehend-

ing itself. It is in this respect a product (although, as we shall see later, to call it a product in another, and very different, respect is an error), and any individuality or distinctness it may exhibit depends in large part upon acquired experiences which in and through the act of apprehending may be brought to bear upon it. I say "in part," because it is not intended, by any means, to assert that what may be described as the positive nature of sense-presentations is generated by any node of subjective agency. Quite the contrary. That we should distinguish, for example, red from blue is possible only if there be, in addition to stimulation of the senses, discriminating activity on our part, but the positive nature which renders each of these colours what it is depends undoubtedly upon what is peculiar to the specific kind of stimulation involved. The stimulation itself, however, forms no part of the apprehended content, and, whatever its exact relation to the latter may be, is, in any case, only one of the determining conditions that occasion the process in and through which the content makes its appearance. The acts of apprehension which constitute the veritable movements in the life of the subject are carried out under varying conditions, and similar stimuli may be, and will be, followed by presentations of very great variety of characteristics in successive apprehensions. In other words, although the general character of such acts be preserved through all the stages of mental development, there must needs be endless differences in the specific modes in which this general character will be manifested, depending on the degree of richness and fullness of the mental life in question.

IV. THE THEORY OF SENTIENCE

I have sought in the preceding section to bring out, through means of a criticism of Dr. Ward's theory of Attention, some of the implications of the view I am taking of the nature of an act of apprehension. I propose now to attack once more the problem before us from the other side and to contrast the view we have taken of the content apprehended with a widely accepted doctrine of current psychology. I refer to the doctrine of what is described as "sentience," or "anoetic consciousness."

The meaning which is attached to these terms has been explained from two points of view, from the point of view of analysis of what is involved in mature experience and from the point of view of mental growth or development. From the first point of view, it has been maintained that there is a certain body of indirect evidence confirming the conclusion that there is more in consciousness at any one moment than can be discriminated or known. "My thought discrimination," it is contended, "is very far from keeping pace with the differentiation of the sensory data as immediately experienced," and this statement is supported by reference to what psychologists have been accustomed to describe as the "area of inattention,"

and by reference to the mass of organic sensations, constantly present in consciousness though usually only in the vaguest way. On the strength of these and allied phenomena, the conclusion is drawn that "thought and sentience are fundamentally distinct mental functions," and that we ought to recognise even in the mature inner life a radical distinction between presentations as differentiations of sensory data immediately experienced on the one hand, and presentations which have been discriminated *by* thought and have thus become significant *for* thought, on the other. The former, the undiscriminated zone of presentations surrounding, at any moment those which are distinctly apprehended is, then, to be conceived as at all times an ultimate constituent of mind, having an existence relatively independent of thought, which is discriminative only because it has presentation for its vehicle.[10] From the second point of view, it has been maintained that the earliest stage of mental life must be regarded as a mere mass of undiscriminated presentations, which from one whole of feeling, in the sense of immediate experience. In the beginning, says Mr. Bradley, in the article to which reference has already been made, "there are no relations and no feelings, only feeling. It is all one blur with differences that work, and that are felt, but not discriminated." And again in the beginning there is for the mind "no discretion, or even discrimination." "All is feeling in the sense, not, of pleasure and pain, but of a whole given without relations, and given *therefore* as one with its own pain or pleasure."[11] From this basis of pure sentience it is, he considers, the business of psychology to trace the way in which apprehension of definitely discriminated presentations, with distinct objective reference, comes about. And in as much as a felt background of sentience is supposed to persist throughout all the stages of mental experience, forming one feature at least of the consciousness of self, this account of the matter may be regarded as supplementing from the genetic point of view the other analysis already referred to.

With regard to the substantial truth of much that is involved in these contentions one can entertain no doubt. As against the older doctrine of Atomism, for example, the theory has done good service in emphasising and working out the conception of experience as a continuous advance from a condition of vague, chaotic indeterminateness to a condition of relative definiteness and distinctness of apprehension, – an advance, which consists not in somehow connecting the unconnected but in the gradual differentiation of what was previously undifferentiated, and thus, by degrees, to use one of John Grote's metaphors, enabling a pattern to come out of what was originally a confused whole. It has done good service, again, in insisting upon the essentially discriminative character of thought, and in connecting this feature with what we call, obscurely enough, "reference to an object," although it does not follow that discrimination and

[10] G. F. Stout, *Analytic Psychology*, vol. i, p. 48 *sqq*.

[11] *Mind*, xii, 1887, pp. 363 and 367.

objective reference are rightly confined to thought, in the usual acceptation of that term. And it has done good service, also, in enforcing the consideration that, as we descend the scale of psychical existence, we must conceive of sense-presentations and feeling-tone as distinguishable from one another by fewer and fewer characteristics, although it has been too hastily interred that if these two become indistinguishable they must needs be identical, and too little recognised that feeling-tone no less than sense-presentation must be very different at the higher end of the scale from what it is at the lower, where definite self-reference would be no feature of it. The points, however, which concern us at present are whether, on the basis of the theory, a sufficient case has been made out: (*a*) for distinguishing a thought from a, sense-presentation on the ground that the former involves reference to something which is not a present modification of the individual's consciousness whilst the latter *per se* involves no such reference but is a "special mode of subjective experience," and (*b*) for supposing that differences may be felt or immediately experienced without the exercise of discriminative activity on the part of the subject.

There is difficulty in coming to close quarters with the first of these positions, on account of the ambiguity attaching to the term "subjective," an ambiguity which is liable fatally to confuse the question at issue. As to the differing meanings of the term "subjective," something will be said further on. Meanwhile, it must be pointed out that the term may be used to indicate a process or event taking place in the individual mind, more strictly a process or event of the individual mind or it may be applied to any content of apprehension which an individual for the time being includes in those trains of presentations, ideas and feelings that constitute what he calls himself as distinguished from the not self. Evidently it is the former and not the latter significance that the term is here intended to bear. But, when the appeal is made to introspection, when, in illustration of what is meant by sentience, we are directed to such experiences as those in the field of inattention, – "the rumble in the street, the ticking of the clock, the pressure of the seat on which we are sitting,"[12] and so on, – the plausibility of the contention that these are "special modes of subjective experience" lies, I think, in the fact that they may all of them be, *for us*, "subjective" in the latter sense. The *mature* mind tends, not of course invariably, but certainly in no small measure, to refer experiences that are vague, indefinite, incoherent, to what Professor James calls the *me*; extremely faint auditory and visual presentations *we* tend to assign to the "empirical ego," largely because the means of localising them in the objective sphere are absent. This, therefore, is one of the results of the formation in us of a distinct conception of self; it lends no confirmation to the view that presentations are, either for us or for the primitive mind, "subjective" in the former of the two senses I have mentioned.

[12] A. F. Shand, *Mind*, N.S. vii, p. 485.

Passing, then, now to the contention that presentations are "subjective" in the sense that they are immediately experienced as "modifications" of the individual consciousness, I urge, in the first place, that, if they are, the operation which, according to the theory, is performed by thought is altogether inexplicable. The function of thought is to refer "this very feeling or presentation to an object."[13] But why should thought refer a "modification" of the individual consciousness to something which is not a modification of the individual consciousness, but exists independently of that consciousness? And if this were thought's method of procedure, what possible logical validity could it possess? A modification of my consciousness is *eo ipso* precluded from being a modification of anything else either in earth or heaven and any "transcendence of immediate experience" as thus understood would be infected through and through with contradiction. The assumption of the "unity of the universe," even if we grant that thought is entitled to that assumption, would not save it from contradiction, for the universe may be a unity and yet full of the greatest variety of difference. The procedure of thought becomes all the more unaccountable when we remember that it, too, psychologically considered, is a "passing modification of consciousness," that it, too, as it occurs, is "an immediate experience or feeling." Why should one of the individual's feelings refer another of the individual's feelings to an object which is either outside the field of the individual's feeling, altogether, or, if inside, is essentially other than the particular feelings involved in the operation?[14] "Immediate experience," it is argued, "being essentially fragmentary, points beyond itself, so that in knowing it we *ipso facto* know that to which it is related."[15] But on what criterion can it be pronounced "fragmentary"? In the beginning, at any rate, we have no other experience with which to contrast it; the fact of its fragmentariness cannot therefore be used to explain how any other kind of experience arises on its basis. How does it happen that out of this immediate experience there should spring the mediate experience which knows it as related to what at the moment is not immediately experienced? And, assuming that one portion of immediate experience does come to cognise another in this way how can we ever be assured that it is not through the very act of cognition and not in virtue of its own inherent nature that immediate experience appears fragmentary and full of implications that point beyond itself? Moreover, the distinction between process and content, which has been denied in the case of immediate experience, is abruptly introduced, as a consciously recognised distinction, when, in the case of cognition, we advance beyond what is immediate, for then presentation becomes for thought a content, whilst thought itself as occurring is an "immediate experience or feeling." But why should a colour, in so far as at any moment it is actually being seen, be psychologically identi-

[13] *Ibid*., p. 479.

[14] *Cp. Ibid*., p. 502.

[15] G. F. Stout, *Things and Sensations* (in *Proceedings of British Academy*, vol. ii).

fied with the seeing, whilst, in so far as at any moment it is actually being cognised, it is not identified with the cognising? What difference is there *in the red* that I immediately experience and *in the red* that I cognise, to justify me describing the latter as a quality and the former as a process?

I urge, in the second place, that if we start with presentations as subjective modifications, it is even more a question of how we come to an awareness of self as an individuality, of "how we get into ourselves," as Dr. Caird puts it, than of how we come to an awareness of an independent not-self. If we begin with an experience in which experiencing and the experienced are identical, and if this experience remains the basis of our knowledge throughout, then it is impossible, so far as I can see, to account for the fact that we come to attribute the experiencing to our own finite personality. A succession of subjective modifications, in which experiencing and experienced were one, would be, in Dr. Ward's words, an "entirely impersonal and intransitive process," in regard to which the term subjective would really be meaningless. Even though it be allowed that in such a process the experiencing is distinguished from the content as "colour in general is distinguished from this or that special colour," the difficulty is not lightened, for the finite self is certainly not conceived as experiencing in general. Nor can I see that the fact of some of these subjective modifications becoming cognitive would mend the case. For, since presentation is its "vehicle" throughout, and since presentations are *all* subjective modifications, cognition would have no ground on which to found a distinction between subject and object. The basis of that distinction must be there from the beginning; there is no possibility of introducing it later on.[16]

[16] Dr. Stout, in his recent contribution to the *Proceedings of the British Academy* (vol. ii), has indicated how, in his view, some of the objections I have been raising can be met. He admits that "if we start by assuming that the individual is initially confined within the circle of his own immediate experiences, it seems impossible to discover how he can ever get beyond them." But, he argues, "from the outset, there, are features of our immediate experience which perpetually point beyond themselves to actual existence, other than our own, or than any immediate experience of ours." Such features are "our awareness of passivity in undergoing sensations, in combination with our awareness of activity in determining what sensations we shall undergo." It is to be regretted that within the limits of his paper he was prevented from developing, this contention in detail. Certainly, the brief exposition which he gives of it suggests numerous difficulties. I do not understand, for example, how "specific modifications *of* the individual consciousness" can be described as "passive." Are we to suppose that the subject merely receives presentations as so much material imported into his being from without? But in that case, they would not be "specific modifications of the individual consciousness," that is to say, not processes of experiencing at all. And, on the other hand, if they are not thus received, if they are reactions of the mind on stimulation, how is the antithesis of passivity and activity to be constituted? Again, "our awareness of activity in determining what sensations we shall undergo," is a perplexing notion when used of experience "from the outset." If the primitive subject is already capable of determinations of this sort, and all that they involve, – the distinguishing of ideas from presentations, the representation of an end, awareness of self, and so on, – then, no doubt, it may accomplish much. But the crux comes when we attempt to conceive of all this as a "feature of immediate experience." Further, even

I turn to the other of the two points singled out for discussion. Has the theory we are considering succeeded in showing that differences may be felt or immediately experienced without the exercise of discriminative activity on the part of the subject? It is admitted that there is no direct evidence to be offered in favour of the position. We can only know what we do discriminate. But it is regarded as one of the characteristic marks which distinguish sentience from knowledge that the latter is discriminative whilst the former is not. I cannot agree that the facts adduced, which in themselves no one need he concerned to dispute, are in any way conclusive proof of the theory; they seem to me quite compatible with another mode of explanation. The difference between the presentations of an object in the area of inattention and the presentations of the same object in the area of attention need not, for example, be the difference between presentations discriminated and presentations undiscriminated; the difference may quite well be, as James and Lipps have maintained, between a greater and less degree of such discrimination. Dr. Stout quotes, as an illustration of the way in which thought discrimination fails to keep pace with the differentiation of the sensory data as immediately experienced, a case mentioned by Abraham Tucker, who says, – "we may see leaves falling from the trees, birds flying in the air or cattle grazing upon the ground, without affirming, or denying, or thinking anything concerning them; and yet, perhaps, upon being asked a minute afterwards, we could remember what we had seen." Quite so; but then these are not undiscriminated presentations. On the contrary they are presentations that are characterised by a very large amount of discrimination. And if it be argued, we know on reflection that there was more detail in those presentations than we did discriminate at the time, the reply is that such an assurance on our part is perfectly explicable without resorting to the hypothesis of merely felt differences that have not been discriminated. "Leaves falling from trees," "birds flying in the air," and so on, are familiar objects enough, and, although for the moment they occupy the area of inattention, they have been attended to over and over again. And when, on reflecting afterwards upon the circumstance depicted, we conclude that we might have seen very much more than we actually did see, we may be doing no more than bringing previous experience to bear upon the particular phenomena in question. And so with reference to another instance upon which stress has been laid.[17] "In cases of lingering illness and where a pain of low intensity is an almost constant accompaniment, the sufferer will say that he is able to forget it at times, using the word 'forget' in reference, not to past

granting that, in the manner indicated, the primitive subject does become aware of the not-self as an activity correlative with his activity, why should that suggest that it is like in kind to his own? His activity consists in "getting sensations," its activity consists in "determining their occurrence," – surely two very different operations.

[17] By Mr. A. F. Shand, in a suggestive article already referred to, on "Feeling and Thought" (*Mind*, N.S. vii, 1898, pp. 487 and 489).

feelings of pain which he no longer remembers, but to present feelings of pain which he ceases to discriminate." Here, once more, I believe the facts can be accounted for, and without in the least distorting them, by means of a different hypothesis. The patient, when the period of so-called "forgetfulness" has elapsed, is aware that all through this period he has been experiencing the pain in a lesser degree of intensity, that there has been in truth no break between the pain in its former acuteness and the pain in its present acuteness, he is aware that in the interval his "attention" has been "absorbed in a pursuit disconnected with it," and that if it had not been so absorbed the condition of things during the interval would have been for him otherwise. It is not, therefore, surprising that instead of describing his present experience as new, he should use the expression which our psychologist insists on interpreting with such literalness. And, indeed, on *any* hypothesis, it is impossible to maintain that the pain as a mental occurrence would be altogether uninfluenced by other mental occurrences going on contemporaneously; on *any* hypothesis there could not be processes of attention taking place in the way described without in some measure inhibiting other states of mind to which they were opposed. Moreover, particularly in regard to pain, the theory we are considering can be met by an appeal to ordinary experience. That theory implies that pain may and constantly does exist as a feeling, and yet the subject be totally unaware of its existence. For feeling in itself is "blind," is "unconscious";[18] in order to become conscious of it, the subject must discriminate and identify it by an act of thought or cognition. Now, if there is one thing certain to be obtained from introspection, it is that there may be experience of the most intense pain without anything of the nature of what is usually called thought or reflexion. This fact is, I submit, much more consonant with the view that the discrimination necessary for apprehending the pain comes about in and through the mental state by means of which it is experienced than it is with the view according to which the pain is one mental state and its discrimination another.

The theoretical objection to severing the discriminative acts from the contents of consciousness, regarded as so much data for discrimination, is precisely similar in import to that which we have already urged against Dr. Ward's theory of Attention. "I do not hesitate," says Dr. Stout, "to stigmatise this separation of activity from content as a most serious error."[19] If, however, it is an error in the one case, there seems little reason for supposing it to be anything else in the other. Yet, when presentations are described as "material" which thought may or may not utilise, when the objective reference of thought is spoken of as "supervening on purely anoetic experience" and giving rise to "a completely new psychical fact," it can hardly be denied that a separation of the kind stigmatised has, in

[18] *Mind*, N.S. vii, 1898, pp. 484 and 490.

[19] G. F. Stout, *Op. cit.*, vol. i, p. 201.

truth, been made. Presentations are taken to be differentiated facts upon which the activity of discriminating is directed, and which, as a result of such activity, are cognised by us as different facts. But the moment the question is asked, how, then, is the discrimination to be conceived as coming about, insuperable difficulties confront us. Suppose, for example, we say that the discrimination of a content A implies recognition of its resemblance to other presentations, its reference to a class of which A^1 A^2 A^3 are members, then if we separate the contents A, A^1, A^2, A^3 from the act of discriminating, we shall be unawares taking the content A as it is *after* the act of discrimination to be the fact given to be discriminated. The consequence is our answer to the question will involve us in a vicious circle, – on the one hand, we shall assume recognition of the resemblance between A and the other members of the class in order to explain the discrimination, and on the other hand we shall assume discrimination in order to explain the recognition of resemblance to the other members of the class. And whenever the attempt is made to show in what way a presentation as immediately experienced differs from a presentation that is cognised, that same dilemma, in one form or another, breaks out afresh. On the one hand, it is contended that the cognition of a presentation implies that it is both immediately experienced and related to what at the moment is not presented; on the other hand, that the immediate experience of a presentation implies its differentiation, which differentiation must needs imply that it too is related to what at the moment is not presented.[20] In other words, although thought and sentience are declared to be "fundamentally distinct mental functions," there is no point save one on which the distinction can be made to turn. In the long run, it would have to be admitted that, according to the theory, thought involved the conscious use of ideas of relation recognised as such. But, in the first place, it could not be maintained that without such recognition, *knowledge* is impossible, and, in the second place, to suppose that ideas of relation spring up *de novo* when presentations already with definiteness and precision of outline are deliberately compared and contrasted is to relinquish the problem of giving any psychological account of their genesis.

Apparently, Dr. Stout does hold that, since sentience and thought are fundamentally distinct, any attempt to trace the psychological development of thought from sentience is *eo ipso* precluded. At all events, he expressly dissociates himself from Mr. Bradley's mode of effecting the passage from the one to the other.[21] Let us, however, look for a moment at Mr. Bradley's account of the matter. He starts, as we have said, with a mental life consisting of "a continuous mass of presentation in which

[20] *Cp*. Mr. Shand's article, p. 496, where he takes Mr. Bradley to task for denying the presence of relations in feeling, though the reason why the latter hesitates to take the step Mr. Shand desiderates is sufficiently obvious.

[21] G. F. Stout, *Op. cit.*, p. 51.

the separation of a single element from all context is never observed."[22] From certain of his descriptions one would be almost tempted to conclude that lie conceived the primitive mind somewhat after the fashion of a Leibnizian monad, containing preformed within itself as feeling all that later becomes articulated into the phenomenal world of knowledge, had he not, on various occasions, so decisively repudiated that conception as scarcely deserving criticism. Given, then, this original psychical ἄπειρον, and recognising its position as a part of the whole to which it belongs, Mr. Bradley undertakes to show how thought may have been generated, without importing into his analysis anything of the nature of a special power or faculty. The process he employs for the purpose is that of Association, but with its principles so modified that one can scarcely recognise in it any remnant of the traditional doctrine. The Atomism of the latter he banishes wholly, and in like manner the "Law of Similarity"; the "associated links" he regards no longer as conjunctions of existences, but as connexions of content. Every philosophical student is indebted to him for his masterly criticism of the discarded features, a criticism which is as convincing as it is brilliant. The question, however, presents itself whether Association as thus modified is not too delicate and refined a process for the work it is here called upon to do, and for the material with which it has here to deal. We shall see. First of all, Mr. Bradley restates the meaning of Contiguity so as to make it depend on identity of content: the law becomes that of Redintegration, expressed in the form "every mental element when present tends to reinstate those elements with which it has been presented." Then he postulates further what lie calls the law of Blending or Fusion, much neglected, so he thinks, by English psychologists, – the law, namely, that "where different elements (or relations of elements) have any feature the same, they may unite wholly or partially." And, finally, he considers that underlying these two laws there is to be discerned one principle, – the principle which we may describe as that of Individuation, according to which "every mental element strives to make itself a whole or to lose itself in one," or, in other words, "tends to give itself a context through identity of content."

I remark not now upon the prevailingly active character ascribed to mental elements by the use of such phrases as "striving" and "tendency"[23] – phraseology which forcibly recalls Herbartian conceptions. I confine attention rather to the one fundamental consideration as to how the principle of Individuation can find application to the contents of the rudimentary or primitive mind. Redintegration, we are repeatedly told, is an association not between particular facts but between universals; what op-

[22] *Mind*, xii, 1887, p. 357.

[23] It seems curious that in discussions about "psychical activity" it should be so persistently ignored that it is the activity to which the above expressions point that calls for explanation, and not specially the activity involved in volition.

erates in it is never an external relation between individuals, but an ideal identity within the individuals. Granted; but then in the mental life at the start there is nothing "beyond mere presentation, that is, feeling with the distinctions of quality, quantity, and 'tone,' which *we* abstract from one another, but which at first come within one blurred whole which merely *is*."[24] At the stage of sentience, existence and content form one unbroken totality, no feature in the "what" of given fact has been as yet alienated from its "that," and where this is the case, we are expressly told, there is nothing ideal.[25] How, then, is it possible for the principle of Individuation to come into operation? On the one hand, it is declared to be precisely one of the functions of thought to "separate an element from the concrete basis" in which it is imbedded, and prior to some degree of such separation the principle of Individuation, according to the account given of it, would be useless. And on the other hand, the principle of Individuation is called into requisition in order to explain how thought itself emerges from the condition of mere feeling. Mr. Bradley tries to deprive this objection of its force by arguing that some degree of idealizing is prior to thought proper. "From the outset universals," he says, "are used, and the difference between the fact and the idea, the existence and the meaning, is unconsciously active in the undeveloped intelligence."[26] Be it so, but in that case the difficulty has only been removed to some stages further back. If "from the very first beginnings of soul-life universals are used," then obviously *those* "very first beginnings" are no longer *the* "beginnings" out of which thought was to be shown to emerge. The latter were declared to be "unbroken wholes" of feeling, at a level below distinctions, the elements of which are but conjoined, and are not connected, in which, therefore, universals cannot be used, because they have not yet made their appearance. And the moment the effort is made to advance from the one assumed phase of primitive psychical life to the other, the dilemma, just noted recurs. Mr. Bradley points to the incoming of fresh sensations, the disappearance of the old ones, and the conflict involved therein, as the "machinery" by means of which the transition is effected. But he admits that it is only as working *together with* the laws of Association and Blending that "the blind pressure and the struggle of changed sensations first begins to loosen ideal content from psychical fact."[27] Here, then, we come again to the same i*mpasse,* – some loosening of ideal content from psychical fact there must be before the principle of Individuation can come into operation at all, whilst until the principle of Individuation has come into operation the loosening of ideal content from psychical fact cannot so much as begin.

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[24] *Mind*, xii, 1887, p. 365.

[25] *Appearance and Reality*, chapter xv.

[26] *Principles of Logic*, p. 39.

[27] *Appearance and Reality*, chapter xxvi.

In no respect do the implications of the theory we are considering, come more clearly to the surface than in the repeated stress laid by Mr. Bradley on the process of so-called Blending or Fusion. By that tern there appears to be understood the successive experience of contents possessing features indistinguishably alike, in consequence of which the contents unite, their differences are destroyed, and there ensues a transfer, of strength to the result. It would seem as though the formation of the fused or blended product came about by a kind of superposition of contents previously present as so many separate and independent facts in the mind of the individual. The whole phraseology accommodates itself readily: to that mode of regarding the mental life according to which isolated sense-presentations are conceived as the original units out of whose aggregations conscious experience in its richness and fullness proceeds. There would, of course, be no justification whatever for attributing this view to Mr. Bradley, –no one has criticised it with more vigour and thoroughness than he, – but his retention of the notion in question indicates that presentations and images are still treated by him as having a quasi-substantive mode of being, altogether different from what can be ascribed to ideas or concepts. And in the end he is bound to confess that, in spite of all his efforts, there is no road that we can discover from the first to the second. "We are," he says, "unable to make the transition from the fused to the relational condition of mind, in such a way as either to see *how* this particular result did come, or to feel simply that it must be so and that no further explanation is required."[28] The reason, I think, is obvious. The theory of sentience, according to which differentiation must necessarily be prior to discrimination in the order of time and continue to be its basis throughout, rests upon the assumption that sense contents are factual existences, "hard individuals," so unique that each one "not only differs from all others, but even from itself at subsequent moments." The contents of thought, on the other hand, are certainly not existing facts, they, at any rate, do not as such, as universal ideas, form part of the sum total of existence. These two, then, if the assumption referred to be warranted, are separated from one another by the whole diameter of being, and we ought, in that case, to recognise that we are propounding an illegitimate problem in proposing to trace the way in which the one has been developed from the other.

V. SENSE-CONTENT AND OBJECTIVE REALITY

The outcome of the foregoing criticism has been to confirm the position laid down at the outset that the term existence is wrongly applied to any contents of apprehension. I have tried to show that the opposite supposition which ascribes existence to the contents of sense-perception leads to contradiction and confusion. We may now seek to determine more in detail the implications of the view we have taken to be the true one. Let us

[28] *Mind*, xii, 1887, p. 377.

confine attention for the present to what, in the language of the theory we have just been considering, would be called the knowledge or cognition of a sense-presentation, and try to make clear to ourselves the meaning we attach to a sense-presentation in this context.

We have used the word "product" in reference to a sense-presentation, and I have indicated that we require to be on our guard in so describing it. A sense-presentation we have taken to be a product in the significance that it is not a given fact, something imported into the mind, but is essentially that which arises in and through the act of apprehension. But a sense-presentation we have not taken to be a product in the significance that it is formed by the putting together of mental elements that have existed previously in separation. The latter is in truth precisely the notion we have striven all along to avoid. To sever the shares supposed to be contributed by sense and thought, whether the contributions be regarded as due to the operations of these assumed powers or in whatsoever other way they may be accounted for, is inevitably to conceive of the presentation as a resultant, a compound, that has come about through a combination of what were originally two detached elements. This mode of viewing the matter meets us most undisguisedly perhaps in the philosophy of Locke, and in his hands it leads to the conclusion that the element of reality in knowledge is that which is furnished from without. External things act upon the mind through the senses and produce impressions, which, when received, become images or psychical states, that exist in the mind exactly as a quality is supposed to exist in an external thing. These images are the *data* of knowledge, the subject uses them to construct pictures or likenesses, so near as is possible, of external things. The external thing exists, the picture exists, and the latter is all that can immediately be known. It is a product in the second of the two senses mentioned and as a product, as an existing fact, it stands between the mind and the external thing, and by its very position there screens the external thing from our gaze. Locke, indeed, claimed to know how far the likeness was accurate, but that claim fell an easy prey to the sceptical criticism of his great successor.

I am quite aware that there are important points of difference between Locke's theory and the modern theory of sentience. Yet they have at least the one point in common that the presentation, or sensible appearance, and the external thing are regarded as two relatively separate and independent existences, of which only the latter can be immediately experienced. However much it may be insisted that there is no distinction to be drawn between the way in which we *know* external things and the way in which we *know* sensible appearances, since knowledge in both cases involves a transcendence of the immediately given, the fact remains that the immediately given which is a constituent of the second of these two acts of cognition possesses a very different significance for knowledge than the immediately given which is involved in the first. In the one case the imme-

diately given *is* what is known, – known it may be as in relation to what at the moment is not immediately given, but still known *as it is in itself*; in the other case, the immediately given *stands for, represents,* the external thing we are assumed to know, but is *not* that thing, and the external thing is known *not as it is in itself*, but only through means of something, whose existence is not its existence, but distinct therefrom. Whether we call the process by which we apprehend "the independent not-self," "inference," or "intuition," or prelogical "mediacy" matters in this respect but little; the "independent not-self" will not, in any case, come into knowledge as the sensible appearance comes into knowledge, and in some way you have got to get to the former through the latter. You may project the sensible appearance into, or fuse it with, the external thing, but still the projection or fusion is your act, not its, and there is no means of getting rid of the hypothetical character of the whole procedure. In other words, as in Locke's theory, the sensible appearance occupies the position of a *tertium quid* between the knowing mind and the thing it would know, and interposes an insuperable barrier to the mind acquiring any certain knowledge of what is beyond itself.

Now, according to the view for which I am contending, there is no such barrier between the mind and its objects as that just indicated. Apprehension, using the term to include awareness of whatsoever description, is the same in kind throughout. There is always the antithesis, whether recognised by the subject or not, between the act of apprehending and the content apprehended, but that antithesis, when rightly interpreted, instead of throwing doubt on the possibility of apprehending existent reality, is the one condition on which that possibility rests. To state the case briefly, there are not three existing facts involved in the apprehension of a sensuous object, – the object, the presentation, and the act of apprehending, but two only, – namely, the object and the act of apprehending. The presentation does not stand between the act of apprehending and the object; it is no other than the way in which we apprehend the object.[29] Our apprehension may be, and doubtless will be, faulty, imperfect, incomplete, but there is nothing, in the nature of the presentation, as such, that either must or can cause such faultiness, imperfection, or incompleteness. The presentation, in other words, is not a product in the second of the two senses mentioned above; it is not a compound of impressions and ideas; it is ideal in the sense that it is the interpretation or meaning which we, through the act of apprehending, put upon the object immediately before us.

Nor is there anything, so far as I can discover, in the conditions giving rise to sense perception on our part that in the least conflicts with what has just been said. Undoubtedly, in having, as we say, sense-presentations there is involved stimulation of certain definite portions of the nervous or-

[29] I am using the term "object" here to denote that to which the content of apprehension is referred, – probably, on the whole, the preferable usage.

ganism, undoubtedly the particular character of any particular presentation will depend upon the particular character of the stimulation involved, and upon the particular portion of the nervous organism stimulated. But neither does the stimulation itself form any part of what we apprehend, nor is there, as it seems to me, any justification for supposing that it produces a *subjective* modification that enters into the presentation. What, on the contrary, it does do is to give rise to a particular act of apprehension, in and through which we discriminate a certain sense quality *as belonging to*, or *appertaining to*, the *object* which, at the moment, we are apprehending. We may, for convenience, call that component of the act of apprehension which is due purely and solely to the stimulation sensation, but, if we do so, we are compelled, on pain otherwise of endless confusion, to recognise that sensation and sense quality are fundamentally distinct. The sensation is, in that case, part of the mental act or process, – and a part, which we can only, psychologically abstract from the whole fact; the sense quality, on the other hand, is not part of the mental process but part of what is discriminated thereby. For example, in and through certain processes of sensation, I apprehend an object as round or square, heavy or light, rough or smooth; I do not apprehend the sensation as having shape or weight or roughness or smoothness. And notwithstanding the arguments that have been put forward to the contrary, I must be dogmatic enough to assert that in visual sensation likewise a similar distinction holds. On looking at an orange, I become aware of its yellowness, and I know, on scientific grounds, that certain physiological and psychological processes have occurred by means of which the awareness has come about. But the yellow colour is apprehended by me as a quality of the orange, and not as a quality of the mental process through which I apprehend the orange. It is quite true that the yellow, as a sensible appearance, may vary in a way in which I conceive the yellow of the orange does not vary, but the variation arises from particular objective conditions, and in no way entitles me to suppose that what I am apprehending, is a yellow state of consciousness. The sensible appearance is still an appearance *to* me and not *in* me; it is as little entitled to be called *subjective* as that sensible appearance which I identify with the orange. In other words, it is still a sense quality and not a sensation-process. "The infant who is delighted by a bright colour does not of course conceive himself as face to face with an object, but neither does he conceive the colour as a subjective affection."[30]

A sense-presentation, then, is not something which we project or throw out into the real; it is not a *datum* produced in us by the action of the real; it is that which we *find* in the real, in and through the process of discrimination which, in some way, the action of the real upon us occasions or calls forth. When in analysing the process of sense-apprehension, we take for granted that the sense qualities come into being as *created*

[30] James Ward, Art. "Psychology," *Encycl. Brit.*, vol. xx, p. 41B.

products of that process, we are introducing an assumption of our own which most assuredly the analysis will not justify, and for which it would be hard to discover a warranty elsewhere. There is no reason to suppose that real things only appear to have sensuous qualities in consequence of the mental spectacles through which we observe them. From this, however, it does not follow in the least that no distinction ought to be drawn between the real that appears and the real as it appears. Even though it be admitted that our "experiencing makes no difference to the *facts*" (and I think there is a sense, and not an unimportant one, in which that assertion is eminently true), it does not follow in the least that the facts *are* as we experience them. Our mental spectacles may be truly transparent, but for all that there may be endless variety in their focussing and discriminating power. What they enable us to know may be in most cases but an inadequate, fragmentary and even erroneous representation of the real; and in any case, there will always be the difference between the representation and the actual fact. It is enough, if we can show that the representation is representation *of* actual fact and is not, itself a fact which prevents us from knowing any other. That is what is meant by insisting that the sensible appearance is not itself an existent reality.

In the paper above referred to, Dr. Stout has made an able attempt to controvert this position. It breaks down, he thinks, when brought to the test of accounting; for simple instances of the distinction between sensible appearance and material thing. He takes two such instances: (*a*) "I look at a candle flame, and, in doing so, I press against my right eyeball so as to displace it; immediately I become aware of two visual appearances instead of one. One of the visual presentations dances up and down as I move my eyeball while the other remains at rest." Now, insists Dr. Stout, "it is nonsense to say that the doubled visual appearance is the candle flame itself as imperfectly apprehended by me. On this view the imperfect apprehension must involve positive error." And why not? That is just what it would do were I not aware of the circumstances that have given rise to the appearance. Why may it not be a wrong interpretation that I involuntarily put upon certain conditions which ordinarily would indicate the presence of two candle flames? Because, the reply is, there is really no such misapprehension. "I know quite well that there is only a single candle flame, and yet the two visual appearances persist unaffected by this knowledge." A mistake, however, "vanishes when it is corrected." But does it – always? Men have known for some hundreds of years that it is a mistake to suppose that the sun revolves round the earth, and yet they continue to speak of the motion of the sun from east to west. Now, the sun's *motion* is certainly not itself a *sensible* appearance. Its apparent motion is no doubt based on certain sensible appearances, but then so is the greater part of our knowledge. (*b*) The second instance is that of "the visual appearance of the full moon as seen from the earth's surface." "This," says Dr. Stout,

"is certainly not a mere appearing but something which appears – a silvery patch with a perfectly determinate shape, and magnitude." And we cannot say that this something which appears is just the moon itself as imperfectly apprehended, because when the impression of its size is rectified by full astronomical knowledge, the visual appearance, as such, remains just as it was before. But why should I not say, as I believe most people would, that the silvery patch is just the moon itself as it appears at a distance of so many thousand miles from the observer? We are perfectly assured that if somehow the real moon were suddenly blotted out of existence, the silvery patch in a second or two would vanish along with it. If, however, it is itself something that appears, if it is itself an existent reality "distinct" from the material moon, then there is no obvious reason why the latter's extinction should involve its extinction.; Related to one another they may be, but existent things may be related to one another without the destruction of the one necessarily carrying with it the destruction of the other. Nor am I able to grasp Dr. Stout's meaning when he contends that a visual magnitude is incapable of being compared with the magnitude of a material thing. I do not grasp it, because immediately before he had been contending that ordinarily material thing and sensible appearance are blended in inseparable unity, and that our only knowledge of the extension of material things is obtained through our experience of the extensiveness of visual and tactual presentations.

To sum up. Sense-presentations, according to the view we have been taking, are not themselves existent facts, but manifestations of existent facts, as the latter are discriminated by apprehending minds. Our discriminative activity can never *be* what it *knows*, and just for that very reason it *can* know the world of which it forms a part. The colours and sounds, and other sensible qualities, which it discerns in nature, are not creations of its own modes of exercise, they are, what they purport to be, features of the reality which it discerns. The discriminative power of finite minds may be circumscribed and limited in countless ways, they may be exposed to endless sources of error, but there is nothing in the nature of knowing as such to incapacitate it for the work it has to do, or to prevent it approximating ever nearer and nearer to the truth of things.

VI. PERCEIVING AND THINKING

One way of expressing the main result of our enquiry so far would be to say that mind is cognitive from the first, that in its earliest experiences it knows reality and is never the spectator of subjective states as such, that even the simplest and most rudimentary modes of its activity are already in essence acts of judgment. There is, however, a psychological disadvantage in extending too widely the scope of the terms thought and "judgment." If we recognise that the elementary function of discriminating,

comparing and relating is present from the outset of the mental life's history, we may restrict the terms thought and judgment to the higher developments of mental activity, which involve both this elementary function and the results attained by it in the sphere of sense-perception. Thinking or judging as generally understood, is, of course, an extremely complex reflective act, which depends for its exercise on definite recognition of the distinction between the inner subjective experience of the individual and the real world apprehended by him about which his judgments turn. It is thought or judgment in this acceptation of the terms that I wish now to connect with sense-perception as we have interpreted it. I shall try to show grounds for holding that in thinking there is carried to a greater range of adequacy and completeness just that same activity, whose character we have exhibited in dealing with sense-perception.

I propose then to consider three of the chief characteristics that would usually be assigned to thought as distinguished from sense-perception, premising only that thinking, as thus characterised, is never, in our mature experience, really absent from processes of perceiving.

(i) *The Subjectivity of Thought*. – I refer, in the first place, to the familiar distinction between sense-perception as immediate knowledge and thinking as mediate knowledge. Few expressions in psychology are used with such ambiguity as these terms "mediate" and "immediate." Sometimes by "immediate" is meant primary as distinguished from derivative experience. If thus interpreted there are, it may safely be said, no elements in our mature mental life that can with any accuracy be pronounced "immediate," none, that is, that have simply preserved their original character unaffected by the process of psychical evolution as a whole. Undoubtedly we are justified in looking upon the state of mind involved in apprehension of thought relations as higher and more developed than that involved in the reinstatement of previously experienced features by redintegration. But obviously it would be an error to suppose that the attainment of the former stage in a mental life can have left the latter unaffected. Höffding very rightly points out that there is no ground whatever for regarding the process of Association which takes place in the mature mind as a low form of psychical existence since precisely the highest intellectual content can be elaborated through its means.[31] Similarly, one may fairly conclude that not even the simplest sensory feature can remain through various phases of mental development unchanged. More frequently, however, "immediate experience" is described as signifying I experience just present, apart from definition, articulation, and in general from any insight into its relationships," "brute fact," data of sense, as contrasted with experience more or less "idealized," experience, namely, which "in addition to its mere presence, possesses Meaning."[32] Without repeating what has already been said

[31] *Vierteljahrsschrift f wissenschaftl. Phil*., xiv, 1890, S. 204.

[32] Royce, *The World and the Individual*, vol. i, p, 56.

in regard to the theory of sentience, I content myself here with emphasizing, what would now be generally conceded, that in in no way can this interpretation of the difference between immediacy and mediacy be made to correspond with the difference between perception and thought. But there is, it seems to me, another way of expressing the distinction in question which does serve to bring out one of the prominent characteristics of thinking in opposition to perceiving as it takes place in mature experience. The distinction turns, I take it, not upon difference in the nature of the content but upon difference of relation to the object apprehended in the acts of perceiving and thinking respectively. In perceiving we appear to ourselves to stand in direct relation with the object perceived; in thinking, on the other hand, we appear to ourselves to stand in a much less direct relation with the object of our thought, the latter appears to be at a farther remove from our individual act of apprehension. It is this apparent remoteness of the object that furnishes at all events one of the grounds that lead us to represent thinking to ourselves as pre-eminently an inner activity. Thinking would ordinarily be contrasted with perceiving by what, for want of a better word, we may call its inwardness or reflective character.

"The advance of thought, in my view," writes John Grote, "is the simultaneous development of the distinct conception of ourselves, or our personality, and the distinct conception of objects of thought as independent of us; and each conception brings out the other. By an object of thought, as distinctly conceived, we mean something, standing off from, though connected with, our thinking, and we cannot mean this without a *co-conception* of ourselves, from which the other is relieved; nor is there any means of setting ourselves before ourselves, as something, to be thought of, without distinguishing ourselves from something else."[33] As to the intimate connection between the development of self-consciousness and the development of the process of conceptual thinking there can be no question; a thinking mind and a mind conscious of itself are, as Adamson puts it, two ways of naming the same thing.[34]

I should prefer to state the problem of the psychological genesis of the consciousness of self in the form, – how to account for the origin of the distinction we draw so unhesitatingly in mature experience between the act of apprehending and the content apprehended. The key to the solution of that problem is to be sought, one can hardly doubt, in a consideration of those conditions which enable the primitive mind to mark off the body from extra-organic things. Mr. Bradley lays stress, in this connection, upon the relative constancy of the organic or systemic sensations which early leads to the formation of an inner core of feeling, the latter attaching to itself the entire body group of sense-presentations. He points to the close and direct way in which changes in the body-group are

[33] *Exploratio Philosophica*, Part II, p. 146-7.

[34] *Development of Modern Philosophy*, vol. ii, p. 290

conjoined with feelings of pain and pleasure, and regards this feeling-mass as that which gradually grows into the self.[35] Without in the least disputing the soundness of this analysis so far as it goes, we are able, I think, to specify many other circumstances which tend in the same direction as those here indicated. In particular the experiences which come from movements of the body and its limbs are relatively regular as compared with the presentations which come about in consequence of such movements. The importance of the elementary experiences, hard, no doubt, to reconstruct psychologically, that precede and accompany the execution of movement can scarcely be overrated in any attempt to trace the development from their earliest beginnings of those complicated phenomena of strain or effort that come forward most prominently when the will has been definitely formed and when control is exercised over trains of conceptual ideas. Even within the sphere of what is often called purely perceptive experience, – and by that, according to the view I am here taking, we can only mean such experience as involves a relatively small amount of discrimination, – the muscular activity of the body gradually comes to be connected with the self, and whatever resists the exercise of muscular activity comes to be regarded as relatively external and objective. Neither thinking nor willing, in the strict sense of the terms, can make its appearance in the mental life until these motor factors have become closely connected on the one land with the permanent groups of ideas and feelings constituting the self in the more advanced stages of its development and on the other hand with the representations of anticipatory changes which the self is then able to form.

The gradual introduction of the more subtle distinction between the self and the bodily organism must again be the result of a variety of circumstances all of which, could we trace them, would be of moment in throwing light upon the psychological genesis of the reflective or mediate character ascribed to the products of thought. Evidently the apprehension of the inner self as distinct from the body involves as a precondition the possibility of definitely recognising the contrast between representation and presentation, between idea of imagination and percept. Evidently, too, it involves the possibility of combining, sense-presentations on the one hand and ideas of imagination on the other each into a unified series or group, so that whilst the latter may attach itself to the inner core of feelings and corporeal activities already referred to, and thus constitute part at least of what the subject comes to regard as its own mental life, the former, in contradistinction thereto, may come to be regarded as the appearance or manifestation of the objective world of fact.[36]

Thinking, in the strict sense of the word, we should habitually describe

[35] *Mind*, xii, p. 368 sqq.

[36] *Cp.* Adamson, *Op. cit.*, vol. ii, p. 290.

as voluntary activity; in thinking, I am not only active but am aware of myself as active. The problem that meets us here is essentially the same in kind as that which we encounter in reference to the voluntary execution or control of bodily movements. So soon as there has been established a definite separation in the mental life between trains of sense-presentations, feelings, and ideas, more or less habitual, and forming the individual self, and the transitory presentations and feelings which come and go, so soon as this consciousness of self has obtained a certain stability and fixedness, there is rendered possible that peculiar mode of discriminative apprehension which is dependent upon selection among a number of motives and upon forming ideas beforehand of changes to be effected. I allude here only to one point often lost sight of in psychological discussions of the problem. Whether the attitude of the subject be that which we denote as the initiation or as the control of movement, in both cases he is in total ignorance of the mechanism by means of which the actual movement is either brought about or restrained.[37] The mechanism of movement is at all events not worked by him in any such fashion as that in which a concrete individual may set in motion or stop a piece of apparatus the parts of which lie before him at his disposal, and no analogy could well be less appropriate than that between the relation of the operator to the movements of his machine and the relation of the conscious subject to the movements of his body. Bodily movements, however voluntary, come about as natural facts, and in consequence of strictly natural laws; the subject is in no way concerned in devising the conditions of their possibility. For him they are groups of motor presentations and the feelings in conjunction therewith – groups which become connected in his inner life with presentations and representations other than motor. The conscious control or direction of bodily movement must therefore depend upon the establishment of empirical correlations between certain phases of the inner life and certain states of the bodily mechanism. Just as in mature experience we can repress an emotion by inhibiting the physical movement through which such emotion finds manifestation, so in general we can restrain bodily movements by dwelling upon presentations or representations which involve as part of their content the cessation of such movements. Primarily, therefore, it is the process of Attention that lies at the root of any control we can exercise over bodily movement. And precisely the same process is involved in the control we exercise over a train of thought. Now, as already indicated, it is perfectly possible, and I believe psychologically imperative upon us, to offer an explanation of the phenomena of Attention by connecting, the process of Attending with the fundamental function of apprehension, the act namely of discriminating, of recognising differences and likenesses. When we consider that all sense-presentations through the mere fact of their bodily origin, are naturally conjoined with motor presentations, that those sense-presentations which are conjoined with motor experiences re-

[37] *Cp*. Lotze, *Medicinische Psychologie*, pp.287 *sqq*.

lated to the continuance of pleasure or the removal of pain will attain relatively the largest place in consciousness, that motor experiences connect themselves from the first with those permanent groups of presentations and feelings which gradually come to constitute the self, that the rise into consciousness of the distinction between self and not-self coincides for the most part with the gradual formation of the individual will, and that the conditions involved in the formation of the individual will are very largely the experiences connected with the movements of the body, we can, I think, understand to some extent, how it should come about that with the phenomena of Attention in its higher forms there should be associated those experiences of strain or of effort so familiar in the exercise of thinking in the strict sense of the term.

In the light of what has been said, there seems to be no insuperable difficulty in accounting for the fact that to the developed mind act and content do appear to be sharply distinguishable. If the discriminative activity involved in having the simplest sense-content is the same in kind as that involved in apprehension of a content of greatest complexity, if its procedure, whatever be the nature or variety of the contents discriminated, has a general similarity of character throughout, there is furnished by that circumstance alone an intelligible ground for the separation prominent enough in our mature experience.

Our apprehension of things tends, then, as mind develops to become less and less immediate and direct. The contents of our knowledge tend gradually to wear the aspect of an inward possession, almost of an instrument wherewith we may proceed perceptively to interpret the world to be known. Our thoughts seem to withdraw themselves further and further from the sensuous occasions of perceiving, and to be more and more the outcome of a purely subjective activity. This subjectivity, however, is very different from that which we have had before us at various stages of our inquiry. It is by no means inconsistent with the pre-eminently objective character of thought. It is a consequence of the formation in us of a permanent consciousness of self and of the ways whereby the consciousness of self obtains definiteness and distinctness in our mental life. But such consciousness does not spring up *de novo* from some hidden depths of our being; it develops along parallel lines and contemporaneously with our consciousness of the external world, and it would be deprived of all content and meaning apart from the latter.

(ii) *The Generality of Thought*. – I notice, in the second place, certain characteristics of the generality usually ascribed to the products of thought. Roughly, generalisation may be said to be based upon the process of selecting a mark or feature, or combination of marks or features, and liberating it from other marks or features with which it has been presented in experience. Generalisation, in other words, is reached through means of

abstraction, and by abstraction the content of any perception or imagination is freed from a variety of accidental or temporary concomitants and dwelt upon for itself apart from these. Generalisation is certainly not exhausted in the act of abstracting. For the present, however, we can confine ourselves to the latter. It implies the possibility of retaining and comparing presented contents: an inner life which had before it a mere stream of given contents, of presentations and their images, could never advance to the stage of isolating any aspect, quality or relation from the whole in which it had originally made its appearance. For whatever else may be given, it is clear that one content's difference from another cannot be given in that content, and without some recognition of difference the initial step in the liberation just referred to could never be taken. In our ordinary experience no content can be recognised as in any way different from another without thereby becoming to a certain extent generalised – loosened, that is to say, from some of the numerous details with which it had been originally apprehended; and every feature, thus detached from the content, and released from the limitations imposed upon it, acquires by that very fact a new significance.

Many psychologists have emphasised the truth that the process of abstraction must be operative throughout conscious experience, and that alike in its primitive and in its higher forms the process is in essence the same. Hamilton, for example, insists that a natural basis of abstraction may be found in the simplest cases of self-apprehension.[38] Adamson, on the other hand, finds the natural basis of abstraction in the capacity for reviving in idea what has been presented through sense-perception, – a capacity which must be accepted as ultimate, and in respect of which a psychological explanation cannot be offered. No content, he points out, is ever revived with all the detail it possessed on its original appearance. Some mutilation. some deprivation of those features which went along with its primary presentation it must have undergone, if only because it is now apprehended in a different setting and in changed surroundings; to a certain extent it will be severed from the *temporal* conditions of its original appearance.[39] And, as Mr. Bradley observes, there is every reason for supposing: that the lower we descend in the scale of animate nature, the more typical, the less distinct, the more vaguely universal will be the deposit of experience.[40] Gradually, then, through repetition of experiences more or less identical in character, and through the emphasis imparted to such identity by revived presentations disengaged from varying features which belonged to them as at first presented, the primitive mind would have at its disposal a stock of images which may not inappropriately be called generic, –images, that is, which, whilst representing characteristics

[38] *Lectures on Metaphysics*, xxxiv.

[39] Adamson, *Op. cit.*, vol. ii, p. 294.

[40] *Principles of Logic*, p. 39.

of an indefinite number of particulars, are not precisely copies of any one of them. In some such way we may conceive of the "pre-logical" stage in the development of cognition. Doubtless the process I have briefly indicated is to a large extent mechanical, but it is not mechanical in the sense that it could proceed a single step without involving that function of discriminating and comparing, which we have insisted it is an error to suppose only comes into operation when presentations, already with definiteness and precision of outline, are compared and related one to another by a deliberate act of reflection.

It is not, of course, suggested that the transition from the one stage of consciousness to the other is by any manner of means easy to retrace. No minimising of the difficulty involved in trying to recover the links of connection that unite the reflective with the primitive mind is implied in the contention that what separates the thinking consciousness from the rudimentary consciousness is not so much what one may call formal differences in the activity of apprehending as material differences in the content apprehended, the latter being dependent on the alteration which is brought about through the gradual development of the inner life. From the apprehension of different presentations to the apprehension of the differences *qua* differences, from the apprehension of related facts to the apprehension of the relations as distinct from the related facts, is probably the most tremendous stride that comes before us in the history of mind, but I believe it can be shown psychologically to be perfectly compatible with the course of mental evolution, without resort, after the manner of Lotze, to the hypothesis of a specific faculty of relating. Were we justified in assuming that *before* this distinction had been effected presentations and their images were themselves apprehended as completely formed and separate individuals in the way in which they are apprehended *after* the distinction has been established, then I admit it would be futile to seek for any continuous line of development from the one grade of consciousness to the other. But the relinquishment of Atoms in in psychology ought to carry with it acceptance of the view that the definite individuality, the independence, which in mature experience is assigned to presentations and their images, is itself a result of the recognition of relations as relations and would be impossible without it.

If, then, it be asked what conditions are involved in separating the differences from the contents that differ, in concentrating attention upon the relations apart from the contents related, the reply is, in the first place, precisely those which have been indicated as involved in the formation of that recognition of unity which is denoted by the term self-consciousness. In fact, consciousness of self and apprehension of relations among the parts of presentative experience must be conceived as coming about *pari passu;* the one is not without the other. A concrete example will perhaps serve to illustrate my meaning. It is, as Dr. Ward very truly remarks, "a

long step" from a "succession of presentations " to a "presentation of succession," and Lotze, too, dwells upon this antithesis as furnishing support for his own theory of a specific relating faculty. And, when the problem is formulated in that way there does seem to be a *prima facie* case for Lotze's position. For we immediately interpret the phrase a "succession of presentations" in the ordinary popular sense; we imagine the presentations A, B, C each as an apprehended content complete and distinct in itself, and then there seems to be no way of escaping the inference that the idea of succession must necessarily be imposed upon them from an independent source. But if our isolation of A, B, C is itself a result, —in part, at all events, —of our applying to them the idea of succession, then it is clearly a ὕστερον πρότερον to assume such isolation as one of the data of the problem. On any supposition, however, the expression referred to is an inadequate mode of representing to ourselves the total experience out of which we, even in mature reflection, arrive at the judgment "B follows A and C follows B." The situation is this. The presentations A, B, C appear in a whole complex of presentations and images, they are referred to the unity of the apprehending subject, they are attended to through a complicated process of discrimination and comparison, and although there is nothing in the content either of A or B or C to indicate that one is in a relation of sequence to the other, there may well be amongst the totality of the concomitants of each of them just those factors which enable us to recognise a relation of temporal sequence. Each of the presentations in question will be apprehended in connection with that group of perceptions, feelings and ideas, constituting the self, —a group, which, although as a whole relatively permanent, is yet also in the midst of constant change. The way, therefore, in which C stands to this identical factor will be different from the way in which B stood to it, and again from the way in which A stood to it, and we have thus data furnished on which the judgment of succession may be based. I do not pursue the analysis further; we are certainly not in a position to lay out anything like exhaustively the psychological factors involved. But enough has been said to indicate the extraordinarily complicated set of circumstances implied in even one of the simplest ideas of relation habitually employed by a thinking mind.

It may not be out of place to point out here that if this way of looking at the matter be the correct one, it defines our attitude towards a well-worn philosophical doctrine. T. H. Green's favourite Kantian dictum that "thought constitutes relations" expresses at the best only a half truth, and, at the worst, a positive error. What has been said would lead us rather to violently reverse the dictum and to insist that "relations constitute thought." Neither mode of statement is a happy one. What we do, however, need to realise is on the one hand that reflective thinking is only possible when relations have come to be recognised as relations, and on the other that we are not entitled to assert that such recognition is a neces-

sary precondition of perceptive experience.

Were we attempting to give anything like a systematic account of the process of abstraction, it would of course be necessary to refer to the all important function discharged in our thinking by language and the use of signs. It would be well nigh impossible to preserve the generalised contents of conceptual thinking without the establishment of associations between them and particular empirical facts which serve to retain them at our command. In one respect, signs are themselves the outcome of abstraction,—although particular empirical facts they are liberated from accidental features which would tie them down to this or that special circumstance of our experience; in another respect, they are the indispensable auxiliaries of our abstract thinking,—they serve to make abstract ideas concrete by connecting them with the particular objects around us. Further, a word or symbol gives to the content symbolised a definiteness and independence, that at once constitutes a contrast between it and the series of particular presentations on which the conception of it was based. A perception yields us a content with a complex of characteristics, such as were only to be found at one particular time and under one particular set of conditions. A name or symbol never suggests all the detail of the perceived object, but calls up what rightly or wrongly we have taken to be its essential nature, and what we tend to regard as remaining the same amid a variety of unessential concomitants. And, on that account alone, remembered facts tend to lose very largely their concrete character; we recall and depict to ourselves facts and events more by means of words than by means of concrete imagery.

Partly for this reason, one would be inclined to reject the view that there must always be present in the mind when we employ ideas or general notions a mental image or picture of some kind from which the idea is abstracted. One might indeed question whether we ever have before us in reflective thinking images that could possibly be called individual or particular. The immense variety in the contents of our thought,—a variety due not merely to differences in the power of abstraction but to the manifold nature of what may be object of contemplation,—renders it probable that it depends largely upon the nature of the matter under consideration whether there will be much or little or no imagery involved in our thinking. If the objects of our thought be concrete and particular, then doubtless we shall have before us a relatively large amount of representative imagery. Such imagery may take the form of a sort of typical instance, or of a rapid succession of different instances each possessing some special features, or of representations in vague indefinite fashion of some of the marks or attributes of the things about which we are thinking. But in all such cases, the images would be no more mental states or events, they would be as truly "meanings," however vaguely they might be apprehended, as the ideas conceived by their help. If, on the

other hand, the objects of our reflection be abstract or general in character, then probably representative imagery will be reduced to a minimum or be entirely absent. That we are able to apprehend abstract relations at all, to attend to some features of a thing and not to others, is in itself quite sufficient ground to warrant the assertion that in thinking we need not necessarily have before us any concrete mental picture.

(iii) *The Objectivity of Thought.* —Abstraction, we have said, is only one phase of generalisation. "The concept," as Nettleship puts it, "is not *made* general by being abstracted, its generality *means* its capability of being abstracted."[41] A concept or general notion is certainly very much more than a merely attenuated or impoverished particular, very much more than a "wandering adjective" divorced from the content of a mental image. Were it no more, what Mr. Bradley describes as thought's chief characteristic,—its invariable reference to an objective connection in the real world,—would be inexplicable. Let us look for a moment at this characteristic. Thinking seems to stand, so to speak, aloof from the mechanical order in which our presentations and representations happen to come and go; the principles according to which valid thinking is conditioned are not the laws according to which occurrences take place in the mental life. The content of thought refers to that, which in Lotze's phraseology, has its being and meaning in itself, and which continues to be what it is and to mean what it means, whether we are conscious of it or no.

So long as the old method of distinguishing Thinking from Perceiving,—by the help, namely, of the opposition between general, in the sense of abstract, and individual, in the sense of concrete,—is adhered to, it must be confessed that the characteristic of Thought just indicated raises an awkward psychological problem. How should we account for the fact that precisely those contents of apprehension which ought to bear upon them the very stamp of subjectivity should somehow exhibit the most decided reference to that which is not subjective? Let it, however, be granted that, in the history of mind, we start with vague, indefinite, crudely differentiated contents, that what comes first in experience can be described neither as general, if by that we mean the generality ascribed to concepts or judgments, nor yet as individual, if by that we mean the individuality ascribed to the concrete objects of our mature perception, then it would seem to follow that progress in knowledge ought to be conceived as taking place along two lines of advance, which need not by any means be diverging from one another, but may well be tending towards a common goal. A psychological examination of the activity of knowing would yield abundant evidence of the soundness of this position. No apprehending mind ever rests content with a bare abstract generality. Each generality acquired enables the relatively indefinite experience from amid which it has been gathered to be viewed as a group of more determi-

[41] *Philosophical Lectures and Remains*, vol. i, p. 220.

nate individual facts, these facts are at the same time disengaged from masses of irrelevant surroundings, and thus gradually come to stand out, as it were, in well-defined relief against a background whose parts form a confused and ill-differentiated whole. Each individual fact, thereby rendered determinate, is apprehended as sharing in features common to, participated in by, other individual facts, which latter facts in their turn are thus increasingly individualised and differentiated from one another. The child mind that has extracted from some fact of perceptive experience, say a chair, the elementary idea of hardness, never keeps this quality floating in the air, but forthwith proceeds to find it in as many other facts as possible. By a series of rudimentary judgments, the vague objects from which the child mind starts are seen to have general characteristics, and the larger the number of such characteristics recognised, the less vague, the more individual, do the objects of its experience become. And, conversely, the larger the number of objects to which a general characteristic is ascribed, and the greater the amount of difference they are otherwise seen to possess, so much the more definite and distinct does the general characteristic itself become. The child's first apprehension of a general notion is certainly no less vague that his first apprehension of a particular object; only by slow degrees does its essential meaning gradually begin to appear. And what is true in this respect of knowledge in its earlier stages is likewise true, *mutatis mutandis,* of knowledge in all its stages. Every great scientific generalisation carries with it a more accurate and definite individualising of the particulars in which it finds exemplification. If Newton abstracted from the particular phenomenon of a falling apple the law of universal gravitation, the falling apple must immediately have become transformed for him into a much more pronounced and distinctive individuality than it had ever been before. By discerning in it an identity with all other moving bodies, he was at the same time determining with greater precision its points of difference from them. Knowledge, then, advancing by a series of judgments, exhibits a two-fold progress, on the one hand analytical, and on the other synthetical,—on the one hand, an ever-increasing number of recognised distinctions, on the other, an ever-increasing richness and fulness of the individual concrete objects into which the whole has been differentiated. "It is not," as T. H. Green puts it, "that there is first analysis and then synthesis, or *vice versa,* but that in and with the putting together of experiences, the world before us, which is *for us* to begin with confusedly everything and definitely nothing, is resolved into distinctness; or, conversely, that as resolved into distinctness, it assumes definite features which can be combined."[42]

When, in the light of these considerations, we turn to the problem of the objective character of Thought, we find ourselves relieved of at least one perplexity that has baffled many of those who have attempted its solu-

[42] *Works of T. H. Green*, vol. ii, p. 193.

tion. We have no longer to account for the "objectification of the subjective"; that which in thinking we recognise as objective is not something which had a prior mode of appearance as subjective. The objectivity of Thought implies no sudden introduction of a new factor into conscious experience. It implies rather the explicit unfolding of what was implicitly involved in the more elementary processes of mind, those processes, already alluded to, whereby apprehension of the difference between self and not-self, inner experience and outer world of reality, gradually took its rise. If, with Adamson, we fix upon extendedness as that feature in the contents of primitive apprehension which furnished the earliest basis of the experience of the objective,[43] then it must not be assumed that such recognition of a quantitative extensity originally emerged from what at first was mere qualitative intensity. Our mode of expressing an ultimate distinction labours unavoidably under the disadvantage of making it appear as though one member of the distinction preceded the other,—in this case, as though the subject's recognition of its own character as purely psychical and qualitative preceded its recognition of quantitative extension on the part of the object. But if what we understand by qualitative intensity attained its peculiar meaning only in antithesis to, in contrast with quantitative extendedness, then the latter can by no means be regarded as logically posterior to the former, and, in however dim and crude a fashion, the opposing characteristics of extendedness and non-extendedness must have arisen in consciousness together. Starting, then, with this antithesis and taking account of that development in the mental life which later enables a distinction to be drawn between the direct immediate experience of perception and the indirect mediate experience of reflective thinking, we can represent to ourselves, in a general way, how it comes about that, whilst on the one hand the contents of thought acquire more and more the character of generality, they should yet, on the other, retain throughout that objective significance, the earlier and cruder manifestation of which was a feature in primitive perceptive experience. For the generalising and comparative work of thought will always appear to have space perception as its basis, as that on which its discriminating and reflective activity is directed. From first to last its distinctions will be made and its comparisons instituted between features in the objective sphere, so that there will be no reason why it should not, but every reason why it should, represent the laws of dependence amongst individual facts as being in no way less real than the individual facts which exemplify them. Even that highly specialised mode of reflective thinking which makes the inner life itself an object of contemplation can only be carried out in so far as that inner life is conceived as related to, and in intimate connection with, the world of extended things in space.

One other circumstance may be mentioned as contributing to the same

[43] *Op. cit.*, vol. i, p. 291 *sqq.*

result. In conceptual thinking, even though attention be strenuously exercised, there is a relatively small proportion of personal feeling. And this for two reasons. In the first place, as thinking tends to dwell more and more in the region of generalities, it will liberate itself no less from the concomitants of individual feeling than from the accidental concomitants of presentation. And in the second place, the explicit reference to the objective connections of what is signified by the contents of its reflections will tend to concentrate interest on those objective connections to the exclusion of mere personal interest.

VII. THOUGHT AND REALITY

Is, then, we may fitly ask in conclusion, the claim to objective significance which the contents of our thinking carry with them one that can stand the test of critical examination? Have we any reason for supposing either from the character of the thought process itself, or from the mode of its development, that the interpretation of reality which through the exercise of reflective thinking the human mind is gradually attaining, not merely falls short of expressing the full meaning of that reality, but so misrepresents it that it must for ever escape our grasp?

As in previous cases, we may draw out our answer to this question by criticising at first another answer. In Mr. Bradley's view, thought, as the interpreter of reality, suffers from an incurable limitation, inherent, so to speak, in its very nature. Briefly, that limitation arises from the fact that thought is from beginning to end discursive in character, —it never succeeds in surmounting the distinctions in instituting which its procedure consists. Mr. Bradley does not, of course, ignore the synthesis involved in an act of judgment; it is indeed the cardinal feature of his doctrine that in judging we re-unite a "what" and a "that," which have been provisionally estranged. But the synthesis or reunion of the distinguished implies, notwithstanding, a "separation, which, though it is over-ridden, is never unmade." In the midst of its synthetic function, in the act, namely, of attributing a quality to reality, thought has to consent to a partial abnegation. "It has to recognise the division of the 'what' from the 'that,' and it cannot so join these aspects as to get rid of mere ideas and arrive at actual reality." Even when the judgment is complete, the divorced elements never are restored to solid unity.[44]

If we start as Mr. Bradley does with a sensuous *datum,* assumed to be experienced in some unique way, in some way, that is to say, absolutely different from that in which the facts of the objective world are or can be apprehended by us, and if that unique experience furnishes the only hold we can secure on reality, then it follows inevitably that an attempt to reach

[44] *Appearance and Reality*, chapter xv.

a reality beyond is doomed, from the necessity of the case, to at least the degree of disability indicated in the above quotations. The only question one could raise would be whether its disability is not of a much more serious kind. For observe how we stand. Our mental life consists of psychical states or events, each possessed of two aspects, existence and content, the content being the complex of qualities and relations constituting the character of the existence. These psychical states are our data; their occurrence *is* our experiencing; in their case reality (or such degree of reality as belongs to them) and experience are one and the same. So far there is no thought and no logical judgment. But certain of these psychical states, *qua* existences, are signs of an immediate relation to, a direct encounter with, a reality beyond themselves. In sense-presentation we are in actual contact with this reality, but such contact in itself only assures us that the reality is and not what it is. By means of the judgment we qualify, interpret, impart meaning to the signified real. And we are enabled to do so, because the psychical state, which *qua* existence is in contact with the presented reality, is *qua* content a mental image, part of which can be used ideally and referred to that which is beyond itself. The subject of the judgment is the signified real, the predicate a portion of the content of the mental image, abstracted from the rest, fixed by the mind as a universal, and attached to the signified real. It is, then, clear why the unification involved in an act of judgment never can present us with a concrete reality, such as that which has been mutilated in order that the act of judging should take place. The subject of the judgment cannot own its predicate in the same way as the mental image owned its content, and that for two reasons. In the first place, it is a different existent from the mental image and its content, therefore, must be different from the content of the mental image; and, in the second place, a fragment of content torn from its particular setting in one context has not thereby been fitted, by being deprived of its clothing[45] for transportation into another context, "to live on strange soils, under other skies, and through changing seasons." But these do not exhaust the difficulties of the situation. Consider again the subject of the judgment. It is a "reality beyond the act," which the thinking mind encounters directly in sense-presentation. Yet that alone which the thinking mind can immediately experience, according to the view of "immediate experience" adopted by Mr. Bradley, will be the result of the encounter; that there has been an encounter, that the encounter signifies a reality beyond the act, that the reality beyond the act is continuous with the present sensation, and that it is of such a character as to permit the ascription to it of an ideal content,—all this may be true, but, in any case, is something of which the thinking subject can only become aware by judging, and, instead of guaranteeing the validity of judgment, itself presupposes such validity. Consider, once more, the predicate. It is an adjective, a meaning, a universal idea, and its universality consists in its being cut loose from its

[45] Cp. *Principles of Logic*, p. 9.

own existence and referred to a reality beyond. How, then, are we to account for this reference, and how are we to justify it? We have seen, at an earlier stage of our inquiry, how Mr. Bradley would answer the first part of the question. "Facts," he insists, "which are not ideal and which show no looseness of content from existence, seem hardly actual."[46] And by way of explanation we are reminded that given fact "changes in our hands," and "compels us to perceive inconsistency of content." Consequently, "this content cannot be referred merely to its given 'that' but is forced beyond it, and is made to qualify something outside." But, why should changes in given fact be perceived as inconsistency of content? Awareness of inconsistency involves surely some sort of idea of the demands of consistency and that the merely sentient mind is *ex hypothesi* not in a position to attain. In other words, the loosening of content from existence presupposes the objective reference of thought, and cannot, therefore, be assumed in order to account for its emergence. And even were it otherwise, it would still require to be shown on what grounds we are entitled to use an adjective abstracted from a psychical state to qualify an existence outside of it. For in the first place, granted that the psychical state is a sign, we can never be sure that it is a sign of the right meaning. And in the second place, if we take the immediate experience of a psychical state as our criterion of reality, then to dismember this reality which is immediately experienced and to use one of the *disjecta membra* to qualify the reality which is not immediately experienced seems to contradict in violent fashion the assumed criterion. As a "wandering adjective" the idea could no longer qualify so much as the psychical state, and its radical incapacity in this respect can hardly establish its claim to qualify that which lies beyond. Accordingly, the conclusion appears to be inevitable that the procedure of thinking has set out on the wrong track; that in attempting to reach reality, it is getting farther and farther away from it and that the more we think about the world, the less we know about it.

Thought, then, on this view of it, seems condemned to be confronted for ever by its own insoluble problem. The pathway to objective knowledge, to knowledge of the real world of fact, has been foreclosed at the outset by masses of psychical material which block up the mind's every way of exit to the realm of nature. No amount of manipulation of a mental state will make it more than a mental state, or constitute the "idea" that results therefrom into anything other than an attenuated mental image. In short, if we treat mental states not simply as modes of experiencing but as data experienced, they will possess the entire field, and thought will be no more able than sense to transcend them.

We have here before us the large problem of the validity of judgment, and I propose only to indicate briefly the way in which the line of reflection we have been pursuing has bearing upon it. That perhaps can best be

[46] *Appearance and Reality*, chapter xv.

done by bringing together for comparison the three different significations which the term "subjective" may possess when applied to thinking and its products.

The first of these we have been encountering in one form or another throughout the foregoing discussion, and it is prominent in the theory of judgment we have just been considering. Thought is subjective because besides being itself an activity of mind, the material from which it takes its departure is also psychical, because although the ideas which it employs are not psychical existences, they are yet abstracted from particular facts or events which are psychical existences, and can therefore never lose the mental colouring that saturates them from the start. If thought converts the "degradation" of psychical events to its "ideal uses," yet "it builds its own world out of them," and there is no escaping the conclusion that its world *may* be not only a "beggarly show" as contrasted with the real world, but a wretched and delusive caricature of the latter. In short, on these premisses, absolute scepticism can entrench itself with a security that is proof against any and every kind of attack.[47] Now, we have seen reason for holding that neither sense-presentation nor thought is subjective in this sense. Sense-presentations, as we have been regarding them, are no more affections or modifications of the individual mind, no more constituent parts of the mind's existent nature, than the most exalted idea ever framed. They are not bits of consciousness, not pieces of mental fact; from the outset, they are qualities which the mind discriminates in the reality that confronts it, such aspects of the real world as its powers of discriminating enable it to apprehend.

If the view we are defending be correct, it is misleading to say that the reference of an idea to reality is first introduced by the judgment, or that in the subject of a judgment there is an element of existence which is absent from the predicate. Both the subject and the predicate of a judgment are contents of apprehension, each is a discriminated aspect of the real. If the judgment be an assertion about some concrete fact, then its subject is the representation in the form of content of that concrete fact from which the person judging starts. He may, of course, take some feature of that content and predicate it of the subject, but in that case his judgment will be analytic, and will not advance his knowledge. Every synthetic judgment, on the other hand, will add a characteristic to the content from which he starts; it will thus transform for him the concrete fact, and enrich it by a new determination. In either case, the predicate will be an "idea," abstracted not from a mental event but from contents representative of objective reality. As Dr. Bosanquet puts it, although he seems often to depart from his dictum, "there is in knowledge no passage from subjective to objective, but only development of the objective." No doubt in every judgment the

[47] *Cp*. Mr. Carr's paper on "The Metaphysical Criterion and its Implications," in the last volume of the *Proceedings*.

"idea" is held suspended in thought before it is predicated of the subject. Such "division" of predicate from subject is not, however, the essence of an act of judgment. There is no judgment until the two are brought into connection, until there is a putting into one of two contents, a σύνθεσις νοημάτων, in Aristotle's phraseology.

In regard to a second signification of the term "subjective," the attitude we have taken has been of another kind. We have admitted, as, indeed, under any supposition must be admitted, that in one sense both thinking and perceiving are subjective. Even were we anxious to maintain that things exactly correspond with the ordinary popular conception of them, that they are known in their real relations by the finite minds apprehensive of them, it would still be the case that such knowing on the part of the subject would be subjective in the sense of being an act or process of the mind itself. There could be no knowledge without that antithesis between knowing and the known; even omniscient knowledge could not transcend it, for it is implied in the very notion of knowledge. To demand of knowledge that it shall be one with the object known is tantamount to demanding that knowledge shall both be and not be knowledge. But "does it not seem absurd to say, that by interposition of mind, by which alone knowledge is possible, knowledge is at the same time impossible? What alone renders something possible, alone renders it impossible! I know, but because I know, I do not know! I see, but because I see, I do not see! Is it a fact, then, that because both—subject and object—are present in cognition, the one must be destroyed by the other, and not that cognition may be made true, but that it may be made false? In a word, is it not worth while to consider the whole antithesis: an object is known because there is a subject to know it; an object is *not* known because there is a subject to know it."[48] The consideration here suggested is one that may be approached from many sides; we have come to it along the road of psychological inquiry. And unless our inquiry has been wholly misdirected, we have obtained a result of no small importance with respect to the antithesis thus propounded. For we are now in a position to assert that the subjectivity which is of necessity implied in all knowledge, inasmuch as knowledge is dependent on the activity of a knowing mind, has not in itself a vitiating influence upon the knowledge it is the means of obtaining. The activity of knowing throws no colour of its own upon that representation of the world of fact which through it is possible, simply because it has no colour of its own to throw. In essence, it is throughout a process of discriminating, comparing and relating; and there is nothing in such a process that need of necessity distort or falsify the contents which thus come into recognition. As an activity of this kind, it cannot itself get in the way of that which it discriminates, compares and relates; it gives no *form,* in the Kantian sense, no portion of its own being to the contents that in and through it make their appear-

[48] J. H. Stirling, Annotations to Schwegler's *History of Philosophy*, pp. 391-2.

ance. Accordingly, scepticism must relinquish the general ground it is enabled to occupy so long as subjectivity is interpreted in the way we have previously noticed, and, if it is to obtain a foothold at all, must depend upon the strength of the ease it can make out for distrusting knowledge on account of the difficulty of discriminating, comparing and relating the manifold and complex objects upon which the mind's activity is directed. This, however, implies a complete change of front so far as the sceptical argument is concerned; it is no longer the inherent nature of knowledge, as such, but the imperfection due to our limited powers of knowing, that is the rock of offence, —an imperfection which the growth and expansion of those powers will gradually tend to overcome.

Subjectivity has yet a third significance with reference more specifically to the process of thinking, a significance the basis of which I have tried to exhibit in dealing with the characteristics of thought as contrasted with sense-perception. We have seen how the contents of acquired knowledge gradually come to be conceived as the property of the self, which, in mature experience, we are able to make an object of our contemplation. The self is regarded as possessing a body of knowledge, as having at its disposal a whole storehouse of notions and categories wherewith to arrange and interpret the details of experience. In receding from sense-perception to ideas of imagination and concepts of discursive thinking, we see in to be withdrawing from the real word of fact into an inner world of our own construction, and the question inevitably arises whether the formation of the latter does not in turn distract and pervert our view of the former. In other words, is not the direct and immediate apprehension of an unreflecfcive mind more likely faithfully to discriminate the features of reality than the apprehension of a mind that brings to the task a host of ideas and thoughts with which to interpret what is actually presented in sense-experience? The characteristic of fact, it may be said, is its concreteness, whilst the characteristic of our ideas and concepts is their universality. In the order of fact, it may be urged, the parts seem to be connected through the relatively external relations of co-existence and sequence, whilst in the order of thought, ideas and concepts are connected through the relations of logical dependence. Does it not follow, then, that our thought proceeds after a fashion of its own and that it imposes on the materials furnished to it forms that are entirely peculiar to itself? Undoubtedly this conclusion would be difficult to resist on the assumption that thought is a "fundamentally distinct mental function" which operates upon presentations given to it by means of another "fundamentally distinct mental function." But if that assumption be, as we have contended, unwarranted, if the process of thinking be, in truth, a development from the more primitive process of sense apprehension and continuous with it in nature, then we are entitled to answer the question just propounded with a decided negative. We are entitled to point out that universality is not a feature abruptly introduced

into the contents of apprehension when we begin to contemplate them reflectively, that, on the contrary, it is implicitly involved in the crude presentations of the rudimentary consciousness, and that so soon as a perceived object is regarded as having a permanent existence of its own, and as being common to a number of percipient minds, the qualities discriminated in it are tacitly recognised as universal. Universality, therefore, instead of being a form of our individual thinking, is a characteristic which we discover in all the materials with which our modes of apprehension are concerned. And so, too, with reference to the relations of logical dependence. They are in no sense accidents due to the particular mechanism of thinking on the part of finite subjects. It is perfectly true that those relations which we represent by means of judgments and syllogisms are not to be regarded as precise copies or counterparts of relations that subsist in the world of real fact. But in the first place, we never, in our thinking, assume any such literal correspondence; thought never claims for its relations of logical dependence that they are more than generalised representations of those modes of systematic connectedness which we gradually come to discover in reality as a whole. And, in the second place, our activity of thinking is not some miraculous function suddenly transported into a world alien to it; it has itself originated and developed as part of that world; its growth has been throughout conditioned and determined by the very material upon which in turn it comes to be exercised, and which we have no ground whatever for supposing has been engaged in the strange freak of so shaping the discriminative process as to convert it into a mechanism for distorting and defiling that which fashioned it. The categories of thought, then, are not mere forms invented by capricious finite minds; they are contents with the aid of which reality becomes intelligible to finite minds, and which finite minds have been constrained to elaborate by the reality thus rendered intelligible. Subjectivity, therefore, in the sense we are now using the term, offers no inherent obstacle to the attainment of objective truth. And generally, it may be said, that a similar line of argument is relevant in regard to the influence of what is sometimes called the "personal equation" upon our intellectual representations of things. As the gradual result of development, the finite subject does, no doubt, reach a consciousness of self that has a pronounced and definite character of its own; and, in consequence, his apprehension of what is other than self will to a certain extent bear upon it the stamp of his particular individuality. "Strata upon strata, from acquired habit, through deep-seated hereditary instincts down to the vital energies of the body, lie beneath the clearer, thinner atmosphere of thinking, and he is a poor psychologist who does not recognise the enduring influence of these lower layers.[49] Yet, in this connection, it is in the first place again to be remembered that the individual self-consciousness is not, so far as any of its instincts or interests are concerned, a lawless or an unaccountable factor in the scheme of things, but has itself grown up and developed through participation in the world of real fact, apart from

[49] Adamson, *Moral Theory and Practice*, in the volume *Ethical Democracy*, p. 241.

which it would have no instincts or interests at all; and it is to be observed, in the second place, that the advance of knowledge largely consists in eliminating and correcting the errors that arise through the idiosyncrasies of this or that knowing mind.

Philosophical reflexion is, at the present day, face to face with an antithesis, the importance of which is only by degrees beginning to be realised. On the one hand, the assumption that "immediate experience" or sentience is the one and only hold we possess on reality leads by easy steps to the position of Mach, and in large measure also of Avenarius, that the activity of thinking has no other function to discharge than that of enabling us to arrange and systematise, in as simple and "economical" a way as possible what is thus "given" directly through sense. So regarded, thoughts or notions have only significance in so far as they subserve this purpose of "economy"; the concepts of science become mere signs or symbols, useful for reducing the multiplicity of sensuous experience to some kind of manageable order, but utterly misleading if they are supposed to represent anything actual in the universe of being. On the other hand, the rejection of the assumption in question need not by any means imply that thinking is to be identified with the structure of reality, or even that the products of thought are forthwith to be taken as strictly accurate representations of the real world of fact. But it does imply that the reflective scientific interpretation of nature is infinitely nearer the truth of things than the crude, uncritical discriminations of the ordinary consciousness. It does imply that Hegel's splendid confidence in reason was not unjustified, although the justification rests on other grounds than those upon which he reposed it. "There is," to use Adamson's weighty words, "a contradiction in supposing that thought—which is but the methodised fashion of reaching self-consciousness, of defining, therefore, in their relation to one another the parts of reality within our experience—should by its own nature be incapable of solving problems which it must put to itself, even although, as a continuous process, it has still much to achieve."

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

The Aims and Achievements of Scientific Method

T. PERCY NUNN

VOLUME VI

1906

EDITORIAL NOTE

Sir Thomas Percy Nunn (1870 - 1944) was a British educationalist, original member of the British Psychological Society and the First Chairman of the Education Section. He began his career as a secondary school teacher in 1891, and during the next ten years developed methods of teaching which revolutionised the teaching of mathematics in the UK. In 1903 he joined the staff of the London Day Training college, progressing from part-time lecturer to eventually become Professor of Education at the University of London, and in 1922 was appointed Principal. He published a number of books of fundamental importance on a variety of educational subjects. His approach was that of a realist philosopher whose main concern was to reconcile psychological with scientific judgments, examining as carefully as possible the data of experience in order to find the principles which held the data together.

T. Percy Nunn was president of the Aristotelian Society from 1923 to 1924.

The following paper - "The Aims and Achievements of Scientific Method" - was published in *Proceedings of the Aristotelian Society*, New Series, Volume VI (1905-1906), pp. 141-182.

V. THE AIMS AND ACHIEVEMENTS OF SCIENTIFIC METHOD

T. PERCY NUNN

I.

RECENT psychology, recent logic, and recent speculation are at one in laying stress upon the solidarity between man's "theoretical" and "practical" activities. Without the implication of acceptance or rejection of the metaphysical contentions of "Pragmatism" we may usefully fall in with the prevailing fashion in Thought so far as to replace the current static conception of Science as a body of truths by a dynamic conception of it as a definite pursuit. Such a conception of it is adopted in this paper. Science is here conceived as a definite secular conative process which may be distinguished in and traced through the conscious life of civilisation. Only when a scientific "result" is thus considered in connexion with the whole conscious process of 'which it is the "end" can we hope (as Mach taught us long ago) to submit it to profitable criticism. Since some such criticism is aimed at in this paper, it follows that either an attempt must be made to characterise that process or some current characterisation must be adopted as satisfactory. As I do not know one which I can accept as altogether suitable for my purpose, the former alternative must be embraced.

The statement that the conative process with which Science is identified reaches its end only in the enunciation of judgments of a certain class will probably be received without demur. Nor, if I say that these judgments refer to the Objective in experience will it be complained that I am ungenerously narrowing their field. The whole "furniture of earth and choir of heaven," " the starry heavens without and the moral law within" are but items in the inventory of the Objective. At the same time, although the Objective is here conceived as containing much more than "physical nature," it has its limits, and does not include everything that (in Mr. Bradley's phrase) can be set over against the set, and so become an "object" of attention; not everything that (because it can be thought of) is maintained by Mr. Moore and Mr. Russell to have Being. A round square and Colonel Newcome are examples of objects of thought which are to be excluded from the Objective. We can, it would seem, characterise them by saying that these objects lack a certain priority to and independence of our thinking which is the necessary mark and guarantee of undoubted items of the Objective. It may be difficult to refute the argument that Colonel Newcome must have had being before 1854 or Thackeray could not have thought of him, but it will hardly be maintained that Thackeray discovered him "in just the same sense in which Columbus discovered the

West Indies." At most it could be claimed (presumably) that "the elements so mixed in him" subsisted before Thackeray, by *selecting* them, brought them into a special relation in which they were not related prior to the act, and so "created" the Colonel.

The same distinction might have been indicated by saying, that the Objective contains everything that must be "reckoned with," everything that must be considered as a *datum* for human action. From this point of view it is clear that although Colonel Newcome forms no part of the Objective, Thackeray's conception of him does, being a thing that has influenced human action on a comparatively large scale, and being precisely the conception it was and no other in virtue of its particular content, which must be distinguished from its object. Similarly, the Objectivity of my *thought* of a round square is demonstrated if it moves me to mirth or becomes so irresistibly attractive as to make me a "case" for the alienist.

But I am not disposed – at least without a struggle – to accept the position that this relevance to action is the essence of the Objective, and not merely a property of it coordinate with others. My whole paper is in a sense a contribution to the discussion of this burning question, so that I will make here only one suggestion – a suggestion that has probably occurred to many. If to be Objective means to have a relevance to purpose and action, how is it that we recognise material things and thoughts as having that relevance before the course of events has revealed it? Why do I ascribe Objectivity to the hundred thalers on the table, and deny it to the content of my thought of a hundred thalers before I have attempted to spend or even to touch them? The reply that it is because the former are like in all respects to thalers which *have* been things "to reckon with" – or upon, while the latter are not, is plausible in this special case, but does not seem sufficient to meet the general case of the recognition of Objective existents before experience of their relevance to action. Surely, we may retort, the perception of this similarity which is the signal of subsequent relevance to action is the direct and simple perception of the presence of Objectivity as such – a property which as a matter of fact is accompanied by the property of relevance to action.

In a somewhat similar way we may meet the contention that the Objective is that which is "the same for all." Upon this view the "finite centres" in which all experience occurs, find it at once possible, and necessary for the development of intercourse with other centres, to "pool " a large part of their experience, and this common matter becomes the objective world, exterior to all and the same for all. Some writers (*e.g.*, M. Poincaré) attribute a very great importance in this connexion to language, which they seem to regard as actually the means by which a "same for all" comes to exist, and not merely the means of our becoming aware that it does exist. Here we may repeat our objection that the Objective is known directly

as such prior to the discovery that it is the same for all. We may add in this case the further objection that in the inventory of the Objective we include not only unique experiences in the world of physical existents – such as astronomical observations incapable of repetition – but also the whole world of psychical existents, whose very nature it is to appear in the "panorama" surrounding a single centre only. Not a single feature of such facts can be excluded from the operations of Science, yet how can they be regarded as "the same for all"? Only, I submit, by a kind of extrapolation from that part of the Objective – "physical reality" – which, as a matter of fact *is* the same for all. We must say, that is, of such experiences, not that being the same for all they become Objective, but that being Objective (*simpliciter*) they are regarded as the same for all, and therefore, part of the proper subject matter of Science. Being experiences whose content announces itself as independent of the self of the moment over against which they are set, they may be thought of as occurring with an identical character in any centre. They become, that is, objects whose features, like those of "material objects" are capable of exact determination without reference to their presentation at all – although, of course, their position as a class of existents is fixed by their peculiar relation to the "finite centre" in which they occur.

The actual contents of the Objective must be reviewed very briefly. "Everyone except a philosopher," says Mr. Russell,[1] "can see the difference between a post and my idea of a post." I ignore this uncomplimentary reservation and assume that we are all prepared to admit not only that they are existents of different orders, but also that both have (like all existents) the character of Objectivity – the post, because it would be the particular thing which it is, even if I did not happen to see it; the idea because it would be an idea with just that particular content, even if I did not happen to perceive that I had "had" it. Difficulty only arises in the absence of the plain guarantee of "priority" which the perception of existence itself gives. In this case, to quote Mr. Russell again, "there exists everywhere the greatest confusion" – confusion that can only be removed by the frank recognition of another type of Objectivity which we may call *Objective subsistence*. If we think of the number 100, or of π, or of the tangent to an ellipse it must be recognised that the object of our thought has a priority to our thinking, that entitles it to be called Objective in the same sense as existents must be called Objective. Such objects of thought present themselves as features of experience which must be "reckoned with," and are not subject to our caprice. They may not be obvious to untrained inspection any more than the finer details of a microscopic section are, but when once envisaged by the competent mental eye they are observed to *have* their peculiar features as a matter of fact, quite apart from the observation. In Mr. Russell's forcible phrase such "subsistents"

[1] Russell, *Principles of Mathematics*, i, p. 451.

must be "discovered in just the same sense in which Columbus discovered the West Indies": – they are *Objective* subsistents.

The Objective, of course, contains – and Science accepts at the outset of its task – a great deal more than the very general distinctions that have just been made. Lack of time forbids me to attempt more than to indicate its further contents roughly by saying that they constitute the "plain man's" view of the world. My omission to deal with them more fully is more than compensated by the fact that I am able to refer you to Professor Stout's convincing paper on "Primary and Secondary Qualities" read before this Society in 1903, with the results of which I cordially agree. The main point of Professor Stout's paper is his rehabilitation of the secondary qualities as equally objective with the primary qualities of things. The explanation of the prevailing confusion upon the subject is without doubt that subsequent criticism has tampered here so constantly and for so long a time with the unsophisticated deliverances of the "plain man's" consciousness that it is not easy to ascertain precisely what those deliverances are.

To take one or two simple instances. The thing which is bright at noon, becomes grey at nightfall. Two materials whose colours "match" in sunlight, in candlelight are obviously discordant. To credit these changes in colour to the things themselves is not (I submit) the consequence of "a natural fallacy of ordinary thinking," but only appears in that character in the light of special *scientific* attempts to "explain" the phenomena. But such explanations simply show that these objective facts are in necessary relation to other occurrences which may be conceived in terms of primary qualities only. This relation does not destroy the Objectivity of the phenomena in question any more than the demonstration of a necessary relation between psychoses and brain changes destroys the Objectivity of the former.

Without further argument, then, I assume the truth of what I take to be the view enunciated by Professor Stout, and reaffirmed recently before us by Mr. Moore, that secondary qualities have as indefeasible a claim as primary qualities to the Objectivity which I hold that the "plain man" ascribes to them.

Another characteristic of the Objective is so important that it would demand my detailed attention if I were not able as in the former case to subscribe assent to the conclusions of incomparably more competent students than myself. I refer particularly to the admirable chapters in the *Principles of Mathematics*, in which Mr. Russell has restated and completed the results of manly thinkers on the subject of *series*. The constituents of all the three orders of the Objective which we have recognised, may be considered as forming series in respect of many of their various charac-

ters. Among these the series which we know as the numerical series is of prime importance, for through correlation of its members with terms of other series distinguishable in the Objective, our race has advanced to that persistent and complicated *measuring*, which is the most salient feature of scientific activity.

II.

In attempting to exhibit the main outline of the Objective as it appears to the "plain man" before the advent of scientific interpretations, one runs the risk of an accusation of merely adding to the inhabitants of the shadowy land, where the "economic man" and the "natural man" who enters into "social contracts" already dwell. At the least one may be met by the objection that many or all of the plain man's "views" are, after all, interpretations – interpretations which themselves at one time represented the high water mark of "scientific" investigation. The objection undoubtedly has force and we must return to it later, but the accusation may be evaded by the admission: that the plain man as such *is* a fiction insofar as he is an abstraction from within the wider self of each of us. Much as the total outlook of mankind upon the world varies from China to Peru, there seems to be a solid core of agreement everywhere which alone truly answers to the description which we have given of the Objective. The scientific traveller on a high plateau of the Andes and his native guides view in different ways the impossibility of getting their potatoes to cook.[2] To the latter the impossibility is due to the simple fact that "the cursed pot," doubtless owing to the devil in it, "did not wish to cook potatoes"; to the former it is an interesting example of the dependence of the boiling point upon the pressure. But although the whole "situation" may be very different in the two cases, there is yet a common basis of inevitable *fact* upon which the scientist and the native (if he is intelligent enough) can see that their "animistic" or "scientific" *interpretations* are simply embroideries. If (remembering at this point that there exists a science of psychology) we say that the "things" before our travellers – the fire, the pot, the lukewarm yet boiling, water, the unsoftened potatoes – are all of them "constructs," we must admit at the same time that they are *inevitable* or *primary syntheses* which mankind everywhere would make from the same sensational data, while the whole situation as it exists for the two men is a *secondary synthesis* which, when one's attention is called to the matter, is seen *not* to be inevitable. Wherever the "objects" of attention dealt with in the former section must be held to have a synthetic character, only these primary syntheses were intended. Adopting this distinction we may say that the scientific process is one out of several possible alternative processes by means of which primary facts may be submitted to further construction, and it will be recognised as true that the object of this secondary synthesis is to

[2] Darwin, *The Voyage of the "Beagle."*

make the primary facts *intelligible*. But this characteristic, though of fundamental importance, does not suffice to distinguish the scientific from all the alternative processes contemplated. To assert that a thing is intelligible or that it has meaning is to imply that it forms an element in a *system* of terms in relation. Thus a word – for example the word "button" – standing alone has meaning chiefly in so far as it is recognised as belonging to the English vocabulary within which it may be either a verb or a noun. When I say, "Pray you, undo this button," the fact that the word is now brought into relation with other words in a definite system gives it a fuller but still incomplete meaning: I may mean a coat button or a door button. The doubt can be resolved only by the context, that is, by the position of the sentence in a still wider synthesis. In this way the request, "Pray you, undo this button," may have all manner of meanings from the trivial one which a common domestic context would give it, to the profound and pathetic significance it has on the dying lips of King Lear.[3]

The point in question could be illustrated indefinitely, but it seems necessary to note only that in every case the "system" in which an element finds its meaning must ultimately be an apperceptive system. This term, although it appears to have lost its former vogue in psychology, is, perhaps, yet the best available to suggest the integral, the vital connection of such systems with the past experience and present interests of an individual consciousness – the connection which is part of what I have already sought to suggest by speaking of Science as a conative process. No treatment, in fact, which isolates the efforts that have generated Science from their psychological *milieu* can hope to do justice to its subject, the true nature of which can only be brought out by placing the scientific process in its proper position in a Natural History of processes which all aim at rendering the Objective intelligible. Only by following such a method is it possible to reach a clear understanding of the relations to one another of the various elements which a cross section of contemporary scientific thought would exhibit.

Among the interpretations of the Objective which demand comparison with the scientific, the most important from the point of view of distribution is "animism," the system of beliefs upon which are based those practices of "magic " which not only are found to-day under curiously similar forms among all savage races, but also have preceded the existing modes of thought among all civilised peoples. Indeed, the researches of authors like Professor Frazer[4] have revealed these ancient ideas still persisting widely beneath the modern intellectual surface, and have even seemed to justify a fear lest the depths should some day be upturned and the results of centuries of man's toils and genius be overwhelmed. Moreover, they have

[3] Act v, scene iii.

[4] J.G. Frazer, *The Golden Bough*, 2nd ed., i, p. 74.

shown that magic, so far from being an unorganised collection of bizarre superstitions, has every claim to the title of a logical intellectual system based upon fundamental principles, to repudiate which would be at the same time to repudiate science.[5] At the base of the whole structure we find the "scientific" Principle of Uniformity, which differs from the fundamental principle of Logic, that "of the same the same is always true,"[6] only by the addition of what we may, perhaps, call an "existence postulate" that "the same" for the purpose of predication actually occurs. As Dr. Frazer points out,[7] the principle takes the special form of arguments based either upon Similarity or upon Contiguity. Thus to secure the destruction of a distant foe, you procure a waxen effigy of him, and submit it to slow-roasting or to other ill-treatment, in the confident expectation that the unfortunate original will suffer analogous torments. Your hope springs, of course, from the belief that the two cases have a "core of identity" sufficient to make the "substitution of similars" effective. Again, if you have succeeded in wounding your adversary, and seek to complete your work by recovering the spearhead and allowing it to rust away, in order that he may simultaneously languish and die, you are assuming this time, that the intimate association between weapon and wound has set up so much identity between two situations that their future developments must to a large extent be the same.

It seems highly probable that beliefs of this character arose as interpretations of observed facts, and it is most unlikely that they have survived through ages without the support of facts which have been taken to be verifications of them; there must, at least, have been a widespread *belief* that they "worked." *Formally*, then, the processes are unexceptionable, and differ from a modern investigation apparently only in the *material* circumstance that now-a-days we should not fix upon these particular "cores of identity" in the situations contemplated as having any relevance to the similarity between the courses of their subsequent development alleged to be observed. Since, however, mistaken beliefs as to the significance of certain elements of phenomena have been common in the history of Science, if we are to find an *essential* difference between Science and Magic we must look elsewhere.

We can find the *differentia* we are seeking only by considering the whole primitive attitude towards the Objective, the system of beliefs and interests by which new phenomena were "apperceived." The primitive thinker had not reached the clear distinctions we make between the dead world and our living and conscious selves, and peopled the physical environment with active individual principles whose wills had constantly to

[5] *Op. cit.*, i, pp. 61, 62.

[6] *Cf.* Bradley, *Principles of Logic*, p. 133.

[7] *Op. cit.,* i, Ch. II, esp. pp. 10-18 and 56 *et seq*.

be reckoned with. Moreover, his attitude towards this environment was determined to a predominant extent by considerations that touched the immediate safety and wellbeing of himself and of his tribe. To a very large extent it was the attitude of a being who combined with the passions and vices of a man the terror of the child in the presence of the unknown. Bearing these two facts in mind, the failure to distinguish between the animate and the inanimate which made him regard the environment as a great community of beings, for the most part to be dreaded or placated, and the constant pressure of the needs of defence and preservation, which made it necessary that *something should be done*, we can understand his at first sight capricious logic; and can see the psychological force of the considerations which led ultimately to his submission to the burden of a rigid system of beliefs and customary acts "heavy as frost and deep almost as life."

It was such a system of interpretations of the Objective which was losing its authority at the momentous epoch which we mark as that of the birth of Greek Philosophy. Philosophy, the child of Wonder, began when advancing knowledge was banishing the nymph and dryad from the world of practical activity to the fantasy world of the poet, when no longer the lonian could

> "Have sight of Proteus rising from the sea;
> Or hear old Triton blow his wreathèd horn."

With the realisation of the inadequacy of the once sufficing explanations of the world's happenings, there arose the need for more satisfactory ones, while the widening and deepening of intellectual interests that came with an age of comparative personal and social security, brought men face to face with the old problems of change and decay in a much more general form. The motive of the movement, which we commnonly date from the speculations of Thales, was to seek escape from the intellectual oppression of the world's ceaseless flux in some abiding reality. The animistic "moment" was passed, but men had not yet come to that realisation of the great gulf fixed between their real selves and physical nature which is the distinguishing mark of the modern consciousness.[8] We find accordingly that the new effort to render the Objective intelligible takes the form of an attempt "to give back to Nature the life of which it had been robbed by advancing knowledge .... simply by making it possible for that life which had hitherto been supposed to reside in *each* thing, to be transferred to the one thing of which all others were passing forms."[9] Animism was replaced by *Hylozoism*.

Once more we have to distinguish the "secular conative process" here

[8] Martineau, *Types of Ethical Theory*, i, pp. 123, 124.

[9] Burnet, *Early Greek Philosophers*, p. 13.

initiated from Science. That the Greeks collected material indispensable to the structure of Science is not to be disputed, whatever estimate we adopt of the actual value of their achievements on the whole and in detail. As a result of recent research that estimate has undoubtedly tended to rise.[10] We can no longer accuse them of an entire neglect of physical experiment, and. the late Professor Huxley, after a careful consideration of the existing records, arrived at "a very favourable estimate of the oldest anatomical investigations among" them.[11] Burnet has, moreover, defended the hastiness with which hypotheses were advanced upon the warrant of a very slender bridge of facts, regarding this haste as naturally characteristic of early undisciplined enthusiasm, and retorting effectively that the same fault is by no means absent from the history of modern investigation.[12] Finally, Jowett has attributed to these "general notions" a positive value, regarding them as "necessary to the apprehension of particular facts . . . Before men can observe the world, they must be able to conceive it."[13]

Against these apologies it must be maintained that, with certain exceptions that hardly affect the argument, the "scientific" achievements of the Greek thinkers were simply incidental to the search for the "abiding reality" which is the predominant characteristic of the whole intellectual movement. This which was true of Milesian Nature-philosophy, was still more obviously true when their speculations gave place to the "moralised"conceptual investigations in Being and Becoming of Heraclitus and his Eleatic opponents. We must maintain the same of Empedocles, though he "anticipated" the theory of organic evolution, though his ῥιζώματα were the direct ancestors of the modern elements, and though his "mechanical" *Weltbildung*, in which, besides these στοιχεῖα, only the forces of Love and Hate play their part, may not so fancifully be compared with the object of physical science as conceived (for example) by Helmholtz.[14] To be brief, not even the elaborate systems of Democritus and Aristotle can be exempted from the general statement that we are dealing here with attempts to render the Objective intelligible which, on the ground of an essential difference in the whole "situation", must be distinguished from Science.[15] To justify this statement fully would obviously require so much time that I must ask to be forgiven for stating dogmati-

[10] *See* Mach, *Science of Mechanics*, 2nd Eng. Ed., App. I.

[11] *On certain Errors attributed to Aristotle in Science and Culture,* p. 193.

[12] Burnet, *op. cit.*, p. 26.

[13] Introduction to the *Timaeus: Dialogues*, iv, p. 416.

[14] *Ueber die Erhaltung der Kraft,* Einleitung, p. 6: "Die Naturerscheinungen zurückzuführen auf [Materie und] unveränderliche, anziehende und abstossende Kräfte."

[15] *Cf.* Plato's view that "the movements of the stars are only bad diagrams illustrating the truths of ideal astronomy," or Aristotle's conception of laws valid only "ἐπὶ τὸ πολύ," with Galileo's conviction that unbiased investigation of matter will explain all apparent anomalies in its behavior. [*Dialogues*, Weston's trans., p.3]

cally a contention the principle of which you will, I hope, be inclined to admit without further argument.

For the same reason it is impossible to do more than illustrate the fact that my contention also holds good of many modern thinkers, who have yet made contributions to the fabric of Science, of fundamental importance. In the ease of these moderns the individual systems of ideas by which Objective facts were apperceived were dominated by theological as well as philosophical elements. Thus Descartes when, to complete his philosophical system, he turns his attention to the actual particulars of the behaviour of the *res extensa*, deduces (in an imperfect form) the modern doctrine of the Conservation of Momentum from considerations of the perfection of God![16] A little later Leibniz corrects the deficiencies of this principle, pointing out that Descartes had neglected to observe that the direction as well as the quantity of "force" (momentum) is conserved. Our interest fastens on his further remark that if Descartes had noticed the fact, "he would have fallen into my System of Pre-established Harmony."[17]

But for the illustrations most suitable to my purpose I must direct your attention to the writings of Keppler; for the student who picks his way discreetly through Frisch's monumental edition 18 of the *Omnia Opera* of that heroic astronomer, will gain as his reward a vivid idea of how profoundly the whole "situation" in which Objective facts are actually central is determined by the character of what I have already called the "embroidery"; and will, moreover, catch sight of the human spirit at the precise moment of one of its most interesting metamorphoses.

Keppler begins (in the *Mysterium Cosmographicum*, 1596) as an enthusiastic young convert to the heliocentric doctrine of Copernicus. He defends the view theory on the ground of its superior simplicity, not *bien ententdu*, its simplicity as a *description* of the facts, but its *real* and meritorious simplicity as an actual creative plan.

"Amat [Natura] simiplicitatem: amat unitatem. Nunquam in ipsa quicquam otiosum aut superfluum extitit; at saepius una res multis ab illa destinatur effectibus."[19] One form of orbit, then, should be *expected* to suffice for all the planets, instead of the deplorably diverse orbits of the Ptolemaic system. In the spirit thus indicated he proceeds to determine the reasons why the solar system could not but be precisely as it is. First we learn why a combination of curves and linear distances (from the Sun) should be exhibited: "Quantitatem autem Deus ideo ante Omnia existere

[16] Descartes, *Principia Philosophiae*, 2nd part, § 36.

[17] Leibniz, *Monadologie*, § 80; *Théodicée*, § 61.

[18] Keppler, *Omnia Opera*, ed. Frisch, Franfurt, 1858 71.

[19] Cap. I, p. 113 (Vol. I. of Frisch's ed.).

voluit, ut esset curvi ad rectum comparatio."[20] Moreover, these curves will lie upon spherical surfaces so as to exemplify the Trinity: "[Imago] Patris scilicet in centro, Filii in superficie, Spiritus in aequalitate σχεσεως inter punctum et ambitum."[21]

Similarly there must have been the best of reasons for the choice of the particular dimensions of the orbits, the general principle being, "Nefas est . . . . quicquam nisi pulcherrimum facere eum qui esset optimus."[22] So it was inevitable that the Creator should lay the foundations of the planetary worlds in accordance with the ideas He would gather from His contemplation of the Five Perfect Solid Figures. Imagine the sphere of which the circular orbit of Saturn is a central section, to be circumscribed about a cube, then the sphere which contains in a similar manner the orbit of Jupiter will be inscribed within this cube. Next, within the sphere of Jupiter let a regular tetrahedron be inscribed; this will in turn circumscribe the sphere of Mars. Thus we reach all the planets in turn, finding it obvious that Man – finis et mundi et omnis creationis – should have his habitation in the midst of the planetary host, three celestial bodies guarding, his path without, three (including the Sun) within.[23]

So far you will agree, the course of Keppler's investigation has exemplified my remark that, *formally*, non-scientific attempts to render the Objective intelligible may not differ from those which are admittedly scientific. We have the usual primary Objective basis and the usual secondary construction – the Objective facts qualified by aln "hypothesis." But the secondary construction here exhibited (you will object) is one that is capable of *verification* – *i.e.*, of predicting new Objective facts which contributed nothing to the determination of that construction. The relative distances of the planets from the sun in Keppler's system are open to calculation and comparison with data of observation. Keppler's theological prepossessions do not prevent him from recognising this truth in the clearest manner. "Transeamus modo," he says, "ad ἀποσηματα orbium astronomiae et demonstrations geometricos: quae nisi consentiant, procul dubio omnen praecedentem operam luserimus."[24] So the relative radii of the spheres imprisoned in this complicated way between the regular solids are computed, and the results compared with the estimates of Copernicus. The concordance is practically perfect![25]

In 1600 Keppler left his chair at Gratz, and received from Tycho Brahe

[20] Cap. II, p. 122.

[21] *Ibid*.

[22] Cap. II.

[23] Cap. IV, p. 128.

[24] Cap. XIII, p. 148.

[25] Table in Cap. XIV, p. 151.

that introduction to the Emperor Rudolph which led to consequences of the first importance in the development of Science. Brahe died in the same year, and the Imperial mathematician inherited his splendid collection of observations on the planet Mars. In 1609 appears the famous treatise, *De Motibus Stellae Martis*, in which he sets forth with the delightful long-windedness of a leisurely age the results of his patient study of these *data*. After the fashion of a day when philosophers reasoned even of Ethics *more geometrico*, Keppler prefixes to his work a collection of *Axiomata physica de motibus stellarum*. These are of the highest interest for they betray a complete change (since the *Mysterium Cosmographicum*) in the astronomer's attitude towards his facts. To determine the particulars of the orbits of the planets we are no longer invited to consider that they must move "ad majorem Dei gloriam: motus a spatio dependet; planetae aguntur vi naturali; vis motrix opus habet propagatum a fonte ceu effuxu"; are among the startling "axioms" that meet us.

The body of the work is largely occupied by Keppler's famous demonstration that the orbit of Mars instead of being a circle, as the prepossession in favour of "perfection" had hitherto compelled him to suppose, is actually an ellipse of which the sun occupies one focus. It will interest us more to attend to the remarkable change in his whole attitude towards the Objective upon which I have already remarked. We find the evidences of this change most prominent in the introduction and the later chapters of the treatise. *Ce n'est que le premier pas qui coûte*, and when Keppler has once been compelled to seek the secondary construction that is to make the primary facts intelligible in a disinterested study of those facts themselves in their quantitative determination, he travels fast towards a characteristically "modern" point of view. Since the planets no longer move in circles they must resign with these the crystal spheres in which since the days of Plato they have been "quiring to the young-eyed cherubim." These destroyed, what is to guide a planet's motion? The *anima mundi* remains, it is true, and Keppler, like his great contemporary Gilbert, finds nothing objectionable in the conception. He had, in fact, used the admitted existence of the *anima mundi* as an argument against the Ptolemaic orbits, inviting his readers to pity the condition of the distracted world-souls who in that complicated system "ad tam multa respicere jubentur ut planetam duobus permixtis motibus invehant!"[26] Similar considerations seem to deter Keppler from assigning to the *anima mundi* the perpetual solution of the mathematical difficulties incidental to following an elliptical path round an eccentric sun. He looks elsewhere for a means of, at least, lightening the world-soul's burden and finds what he wants *within the Objective itself* in a new conception of the sun as *fons motus*. This conception has not been reached without external suggestion, and when we meet the phrase *orbs virtutis tractoria* we are left in no doubt as to the

[26] *Introd.*, p. 149 (Vol. 3 of Frisch's ed.).

source of that suggestion. Keppler has been reading the newly-published treatise *De Magnete*, by Gilbert, of Colchester, the Father of Experimental Science, and has fastened upon the fruitful analogy between magnetic and stellar phenomena. The first result is a "true doctrine of gravity" which points directly to the complete doctrine of Newton. Repeating the argument given above in connexion with the *anima mundi* Keppler asserts the impossibility "ut forma lapidis movendo corpus suum quaerat punctum mathematicum aut mundi medium."[27] On the contrary, "gravitas est affectio corporea mutua inter cognata corpora ad unitionem seu conjunctionem (*quo rerum ordine est facultas magnetica*) ut multo magis Terra trahat lapidem quam lapis petit Terram."[28] There are, it is true, difficulties in the application of the analogy. The investigations of a Galileo were necessary before a Newton could see that the moon is actually and always falling towards the earth. For Keppler the difficulty is to account for their remaining apart: "Si Luna et Terra non retinerentur *vi animali aut alia aliqua acquipollenti* … Terra ascenderet ad Lunam … Luna descenderet ad Terram … ibique jungerentur."[29]

The words italicised in this passage illustrate at once Keppler's willingness to retain the conception of the *anima mundi* and his growing preference for a *facultas corporea* to a *facultas animalis* if the former can make the facts intelligible. We may leave the consideration of the development of his ideas at the point where he reaches a "secondary construction" of the facts of the stellar observations suggested altogether by such material analogies. In this conception the planetary movements are ascribed to a two-fold "virtue" – one of the planet and one of the sun. That of the planet is compared with the work of oars in rowing, that of the sun to the stream of the river. And so we reach the all-important conclusion, in which the soundness of this conception is based upon the solid experimental results of Gilbert: "Quale flumen, talis remus. Flumen est species immateriata virtutis in Sole magneticae. Quin igitur et remus de magnete quippiam habeat? Quid si ergo corpora planetarum omnia sunt ingentes quidam rotundi magnetes? De Terra (uno ex planetis, Copernico) non est dubium. Probavit id Gulielmus Gilbertus."[30]

It will be noted that Keppler's final conception of the planetary system is *formally* less satisfactory than the earlier one – since it fails to suggest quantitative determinations by which it could be verified. At the same time it will, I hope, be agreed that when, at some moment between 1600 and 1609, Keppler, wrestling with Brahe's records, forgot his pious prepossessions in his anxiety to understand the behaviour of Mars *for the*

[27] *Introd.*, p. 150.

[28] *Introd.*, p. 151.

[29] *Ibid.*

[30] Pars Quarta, Cap. LVII, p. 387

sake of understanding it, he adopted for the first time an attitude which was genuinely "scientific." The *differentia* of Science, then, as a conative process whose aim is to render the Objective intelligible is the presence of no motive except the desire to render it intelligible – particularly in its quantitative determinations. No philosophical leanings, not even the desire of power over Nature for which Bacon was willing to be her minister can be admitted beyond the "margin" of the apperceptive area in which the Objective facts are central. The scientific attitude is essentially that of the *savants* who, drinking to the next great discovery, coupled with their toast the hope that it might never be of any use to anybody.

I need hardly say that Keppler does not provide us with the first example on record of the scientific attitude. Mach holds that the beginnings of Science are to be found in the descriptive communications of the processes of the craft made by older members of a guild to beginners.[31] So Höffding,[32] with truth, says that "the appearance of a Leonardo or a Galileo[33] is only comprehensible when taken in connexion with Italian industry." But industrial pursuits, I suggest, can never do more than supply the *experience* which forms the starting point for the scientific process which follows only from a specific attitude towards that experience which I have tried already to characterise. Just as J. A. Symonds has shown us that in the epoch of the Crusades and dominant Scholasticism the Latin songs of the Wandering Students "gave clear and artistic utterance" to a "bold, fresh, natural, and pagan view of human life"; so, doubtless, ever and anon men of intellect turned aside from the theologico-philosophical studies of their day to the task of rendering intelligible objective facts in which they took an immediate interest and delight. Such a one in part, was Roger Bacon, such a one was his master, Peter of Maricourt,[34] such a one pre-eminently was Leonardo da Vinci who, though his discoveries do not appear actually to have affected the course of Science, left among his remarkable manuscripts a presentment of the scientific attitude which can hardly be improved. I conclude this section by quoting a typical expression of his opinion:[35] "In dealing with a scientific problem I first arrange several experiments, since my purpose is to determine the problem in accordance with experience and then to show why the bodies are compelled

[31] Mach, *Science of Mechanics*, p. 4.

[32] Höffding, *Hist. of Modern Philosophy*, i, p. 161.

[33] *Cf.* the opening words of Galileo's own Dialogues: "The constant employments in your famous arsenal of Venice, and especially those relating to what we call Mechanics, seem to me to afford, to a speculative genius, a large field to philosophise in." (Tr. Weston.)

[34] To whom Gilbert of Colchester was much indebted. See in Bridges' edition of Bacon's *Opus Majus*, 1897-1900.

[35] From Grothe, *Leonardo da Vinci also Ingenieur und Philosoph*, Berlin, 1874, p. 22. *Cf.* the following passage: "Le me pare che quelle scienze sieno vane e piene di errori, le quali non sono nati dall' experienza, madre di ogni certezza, e chi non terminano in nota experienza." *Frammenti litterari e filosophici*, p. 94.

so to act. That is the method which must be followed in all researches upon the phenomena of Nature. It is true that Nature as it were begins with reasoning and ends with experience, but nevertheless, *we* must begin with experience, and by means of it strive after the discovery of Truth."

"The interpreter of the wonders of Nature is experience. We must consult experience in the variety of cases and circumstances until we can draw from them a general rule that is contained in them. And for what purpose are these rules good? They lead us to further investigations of Nature and to creations of art. They prevent us from deceiving ourselves or others by promising results to ourselves which are not to be obtained."

III.

A "natural history" of the more sustained attempts that humanity has made to render the Objective intelligible – that is to give it a place in a definite apperceptive system – would lead us, then, to the conclusion that its *differentia* is not, as has been frequently supposed, a peculiar method, but simply and solely a definite attitude of the "Self of the moment" towards the Objective, a definite character of the system by which new elements are "apperceived," a character only to be expressed by saying that this system is dominated by a permanent interest in the particulars of the Objective as such. The next chapter in our natural history would examine in turn the various special attempts to make the Objective intelligible which are included in the genus "scientific." Such an examination would, I submit, bring out the fact that it is difficult to declare any concept essentially incapable of mediating a scientific interpretation of the Objective to some thinker. Thus it has already been pointed out that Keppler in his "scientific" period did not shrink from continuing to utilise the conception of the *anima mundi*. A less violent but essentially similar example is the use of the concept of *cause* in the sense of transeunt action – a notion with which some scientific thinkers have entirely dispensed, while to others it is of cardinal importance. Facts of the same order are the marked preference of Weber and his Continental school for the concept of action at a distance and the equally marked preference of the British school for the concept of an intervening mediums as a means of rendering action at a distance intelligible. Especially illuminating in this connexion are the well-known facts that Maxwell based his immensely important electro-magnetic theory upon the concept of a "displacement" to which it is impossible to assign a definite meaning,[36] while Lord Kelvin, speaking on the same subject said, "As long as I cannot make a mechanical model all the way through, I cannot understand, and that is why I cannot get the electro-magnetic theory of light."[37] An almost better illustration is af-

[36] See Merz, *Op. cit.*, ii, 93.

[37] Quoted by Ward, *Naturalism and Agnosticism*, i, p. 119.

forded by Mr. McDougall, who not only conceives his "neurin" as a fluid, but defends his practice in an excellent note[38] by arguments essentially the same as those I am advancing. Finally, it is clear, that this doctrine of the relation of the scientific concept to the primary facts does not exclude the concept of "end" from the investigator's armoury of interpretative weapons and so admits the methodological propriety of the practice of "neo-vitalists" such as Bunge and Rindefleisch. Our doctrine, moreover, has a normative value. It declares that a concept which is to render given primary facts intelligible must be formed as a reaction upon the stimulus of the presentation of those facts in their actual determinations. While it admits, then, the aid of any concept borrowed from any other context it refuses to allow objective facts to be annexed simply in order to widen the territories of an aggressive theory, and still less to permit their *prima facie* deliverances to be ignored through a bias in favour of any particular type of interpretation. Thus "electricity" and "neurin" may both be legitimately conceived as fluids, but the physicist is not to rule the concept of "interaction" or of a "soul"[39] out of court, and still less is he to refuse to entertain evidence in favour of "telepathy."[40]

The only restriction upon the secondary construction is that its form shall be determined by the actual particulars of the primary facts. This condition limits the usefulness of such a conception as the *anima mundi* or the "end" to a phase in the development of knowledge of the facts when the particulars are not capable of full determination.[41] At such a time such a concept as vitalism may legitimately be used "as a comfortable halting place where the reason may be laid to rest on a pillow of obscure ideas" when there is "danger of premature and, therefore, inadequate physico-chemical explanations of the phenomena of life."[42]

I am aware that in view of the vigorous and important attack upon "hypotheses" made by writers of such eminence as Ostwald[43] my defence of them will appear reactionary. I venture to think, however, that Ostwald fails to distinguish between the *real* value and the *psychological* value of hypotheses. Hypotheses, such as Maxwell's displacement, the weight of a molecule, electrons, the carbon-tetrahedron, entropy, heat itself, may not be *verifiable* and, therefore, have no real value, but their psychological value as "leading us to further investigations of Nature" and prompting

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[38] McDougall, "The Physiological Factors of the Attention Process," *Mind*, N.S., No. 43, p. 350.

[39] *Cf.* James, *Pr. of Psych.*, i, p. 137; McDougall, *Physiological Psychology*, pp. 8 *et seq.*, p. 78.

[40] As at least one very distinguished scientist is reported to have done.

[41] *Cf.* for "end," Boyce Gibson, *Philosophical Introduction to Ethics*, p. 53.

[42] Prof. Hering, quoted by McDougall, *loc. cit.*

[43] Ostwald, *Vorlesungen über Naturphilosophie*, X, esp. pp. 211-215

to fresh determinations of the Objective may be immense. Ostwald's assertion that scientific advance has taken place in spite of, and not by means of, hypothesis[44] is, at best, a half truth. It is true that hypotheses have temporarily delayed the progress of Science in some particular field, but when they have disappeared they have generally been devoured by their own children—objective determinations to which they led. To maintain that these determinations would have been made without the hypotheses—for example that Maxwell, without the concept of electro-magnetic displacements in the field around a varying current would have thought of locating at points in the field the disembodied relations expressed by his differential equations, the manipulation of which led Hertz to discoveries of the highest importance, seems itself to be an indulgence in hypothesis of a thoroughly unwarrantable character. The point of Ostwald's objection to a hypothesis—a *Bild*[45] used to make the phenomena intelligible—is that the *Bild* will invariably contain elements which are not present in the original observations. There are two answers to this objection. In the first place it may be urged that this property of the hypothesis is that which above all makes it valuable. The portion of the Objective under investigation must be the seat of other relations than those "apperceived" by the conception, and it is already probable that the original analogy will extend to the other properties of the concept whose correspondence with properties of the Objective under examination has not yet been established. Thus "a descriptive theory of this kind does more than serve as a vehicle for the clear expression of well-known results, it often renders important services by suggesting the possibility of the existence of new phenomena."[46]

In the second place, physicists are so sensible of the aid they receive from such a descriptive hypothesis, that they do not discard it even when it is recognised as containing elements actually inconsistent with known Objective determinations. The conception of the ether as a frictionless fluid passing among the molecules of matter "more freely than the wind through a grove of trees," has been none the less useful because incompatible with the rigidity which the facts also seem to demand. Ultimately, of course, such incompatibility will not be tolerated, but its very presence sets a further problem—the replacement of the inconsistent hypotheses, both having reference to the same province of Objective fact by another which shall do justice at once to all its elements. Such a complete correspondence between the elements of the descriptive hypotheses and of the province of the Objective is, of course, the ideal of the scientific process

[44] Ostwald, *op. cit.*, p. 225.

[45] "Dass .... man durch die Benutzung des Bildes in die Darstellung der Erscheinung Bestandtheile hineinbringt, die dem Bilde angehören, nicht aber der Erscheinung selbst," *op. cit.,* p. 212.

[46] Prof. J. J. Thomson, introducing his conception of the "Faraday tube" as an alternative to Maxwell's "displacement." *Recent Researches in Electricity and Magnetism*, 1893, p. 1.

to which the successive concepts by which it is sought to render the facts intelligible approach, as Mach says "asymptotically."[47] Were it attained the "picture" and the "object" would coincide[48] and we should have "a complete systematised representation," "a complete synoptic [*übersichtliches*] inventory of the facts of the province" of the Objective free from the extraneous elements that hypothesis admittedly introduces.[49] When this consummation has been reached in any department of Science, descriptive hypotheses will still have a psychological value for the purposes of exposition and assimilation. Meanwhile they will continue to play an indispensable part in the conquest of the Objective whether in definite form as Lord Kelvin's "mechanical model all through," or a vague form like Maxwell's "displacement," being, as it were, *points de repère* without which great systems of reasoning cannot be built, just as transient ones require the aid of shadowy visual, auditory or kinesthetic images.

Finally it may be pointed out that it is of small consequence to the progress of the special sciences whether the investigator attaches real value to his hypothesis, or whether he recognises that it is merely psychological. Lord Kelvin and Principal Bucker are quoted by Dr. Ward[50] as examples of the former class, holding that in the ether and in atoms and molecules we have realities behind the veil of phenomena, while Maxwell in his attitude towards his earlier model of the ether,[51] Wollaston, Davy, Liebig and Faraday in their attitude towards Dalton's atoms, are given by Dr. Merz[52] as examples of the second. It seems probable that in the case of the latter class of investigators their attitude towards their conception is rhythmic, at one time yielding to a temporary belief in them, at another time criticising them as from an external point of view.

Whenever in the foregoing allusion has been made to the fully determined particulars of a province of the Objective, it is highly probable that my hearers will have assumed that quantitative or at least numerical determinations were intended. It is a commonplace that Science only moves with security where she can measure. Quite recently we have seen this truth

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[47] Mach, *Principien der Würmelehre*, 1900, p. 461

[48] "Wenn Bild und Gegenstand in allen Stücken übereinstimmten, so wären sie eben dasselbe, d.h. man kann eine Erscheinung volkommen nur durch sich selbst abbilden." Ostwald, *op. cit.*, p. 212.

[49] Mach, *loc. cit.*

[50] Ward, *op. cit.*, i., pp. 113 and 306

[51] "I do not bring it forward as a mode of connection existing in nature….. It is, however, a mode of connection which is mechanically conceivable and easily investigated .... so that I venture to say that any one who understands the provisional and temporary character of this hypothesis, will find himself rather helped than hindered by it in his search after the true interpretation of the phenomena." *Collected Papers*, i, p. 486; quoted by Merz, *op. cit.*, ii, p. 83.

[52] Merz, *op. cit.*, i, p. 418.

demonstrated anew in the field of Biology, where Professor Karl Pearson[53] has so brilliantly illustrated old Roger Bacon's dictum that Mathematics is the "gateway and key to *all* other Sciences"; while, doubtless, even before Egyptian priests began to survey the lands left dry after the inundations of the Nile, men felt the application of number and measure to the spatial world to be natural and obvious.

But as Mr. Russell has shown, if A is 12 inches and B 24 inches from O, there is really an element of convention in the familiar assertion that B's distance from O is twice as great as A's.[54] Those distances are definite relations which cannot strictly be identified with the relation of one number to another. The fuller truth is that it is possible, since the numbers form a "continuous series," to correlate every position on the straight line O B with a single number, while there is a practical convenience in arranging the "one-one correlation" in such a way that if the distance (*i.e.*, the spatial relation itself before the advent of measurement) between O and A is equal to that between A and B, the difference between the numbers assigned to O and B is twice the difference between those assigned to A and O.

By the simple device of measuring with the foot rule, we are able to overcome the difficulty that different perceived distances between A and B have yet the same "representative value,"[55] that is, refer to the same real distance. Much the same holds good of such conceptions as temperature and weight. The same body at the same time may be pronounced by two different persons to be hot and cold, a result which is taken to mean not that the thing *is* both hot and cold, but that the felt hotness and coldness are simply different representatives of the same objective value. If a thermometer is placed in contact with the body it is taken for granted that the different positions of the surface of the mercury are each correlated with one objective condition of the body. Thus if the thermometer gives the same reading in the wind as it does behind a screen, then the air, although it feels colder in the open, must really be in the same objective condition, have, as Boyle vividly expresses it, the same *temper*, in both places.[56] If now we "graduate" the stem of the thermometer upon the foot-rule method, we shall have a series of numbers correlated with the various "tempers" or temperatures of the body. In this case the statement that one difference of temperature is double another has obviously still more

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[53] Pearson, *The Grammar of Science*, 2nd ed., and elsewhere.

[54] *Op. cit.*, p. 180.

[55] Stout, *Proc. Arist. Soc.*, 1903, *loc. cit.*

[56] This problem is discussed by Boyle in his *Experimental History of Cold*, 1665, First Discourse; also p. 513. The conclusion may be claimed as a proof of our contention that hotness and coldness are objective qualities of things.

of the conventional character than we noted in the case of distances,[57] for we have no method of deciding that the difference between temperatures A and B is equal to the difference in the case of B and C comparable with the use of the foot-rule in spatial measurement or of the pendulum in time determination.

When a hot body is placed near colder ones it gets colder, they get hotter. These primary facts become intelligible—are systematised—by the thought of a transference of "something" from the one to the other. This something is *heat*. Black,[58] who made such important conquests for Science by means of this concept, was one of those who are able to keep on their guard against the dangers which Ostwald sees in the *Bild*. He declines to form any definite conception of the relation of the heat to the substance which occupies the same space, on the ground that no Objective facts are before him to justify his doing so. But if heat is regarded as a substance at all, the "amount" of it which reaches the cold bodies must be thought of as equal to that which left the hot body. The problem is set therefore of finding "something constant" at both ends, so to speak, of the transaction. If a steady flame is the "source of heat," it is impossible not to suppose that the "quantity of heat" leaving the flame per minute is always the same. Let us place above the flame in succession different weights of water each for the same length of time. Examination of the results shows that the product of the weight of water by the rise of temperature is in each case the same. This constant product, then, may be identified with the "quantity of heat" of which we are in search.

This simple example will serve to illustrate the weighty remark, made so long ago as 1867 by Rankine,[59] that "one of the chief objects of mathematical physics is to ascertain, by the help of experiment and observation, what physical quantities are 'conserved.'"

The illustration also brings out the fact that the constancies established in such investigations are of an entirely conventional character and refer to nothing objectively "transferred." We *assumed* that the two temperature changes were different aspects of the same transaction, an assumption whose consequences are made psychologically available by throwing it into the form of a transfer of "heat." We correlated the various terms of the series of temperatures and weights which appear in this transaction with numbers. If our initial assumption was correct, it seems now that *some* manipulation of the *data*—here the weights and temperature changes—*must* yield an equality, the particular form of this manipulation depending upon the particular manner in which the number series has

[57] Kelvin's "absolute thermometric scale" seeks to avoid this conventionality, but is too technical for discussion here.

[58] Black, *Lectures on Chemistry*, 1803.

[59] Quoted by Merz, *op. cit.*, p. 140. *See also* Divers, in *B.A. Report*, 1902, p. 564.

been correlated with the series of Objective states of the body. Our success in finding the desired manipulation implies that, in the language of Lotze,[60] the bodies *do* "take note" of one another's changes of condition, and that the *data* we have manipulated, that is the original *data* with which numbers were correlated, is the complete expression of that "notice." In short, it is the verification in a particular case of the postulate of the rationality of the world.

We have now reached, perhaps, a point from which we obtain a clearer view of the circumstances under which, in the history of Science, psychical events came to be excluded from the causal series. To suppose that they are legally banished under the terms of Hume's famous edict against investigations that do not "contain any experimental reasoning concerning matter of fact and existence," is a view that no one could hold "except to save a theory."[61] And if they suffer through the condemnation pronounced against inquiries that do not "contain any abstract reasoning concerning quantity or number" we see that this defect is not essential to their nature as events, for "series" prevail in the psychical as widely as in the physical world. The difficulty is reduced to the practical difficulty of establishing for the terms of these series (which, as I have pointed out in the first section, are regarded as being "the same for all") an unambiguous correlation with the terms of the equally Objective number series which happens, like much of the physical, to be not only the same for all, but also accessible to all. Were such a correlation established it would apparently be possible to determine whether certain psychical changes and physical changes are or are not complete expressions of the "notice" which soul takes of body or body of soul.

IV.

The precritical view that in certain concepts of Science we reach the realities which lie at the back of perceived phenomena, is one which will always have an attraction for the actual workers in Science. It implies, perhaps, a certain aloofness from practical life to resist conclusions supported by evidence upon which one would act with confidence even in affairs of the highest moment. From this point of view Huxley[62] pours ridicule upon those who would decline to accept the geologist's reading of the palæontological record. If they were consistent, he argues, they would decline to draw the usual conclusions from the oyster shells outside the fishmonger's door, or the mutton bone in the dust-bin.

In the class of cases which Huxley adduces there are few who would

[60] Lotze, *Metaphysics* (Eng. Trans.), i, §45, p. 118.

[61] Bradley, *Appearance and Reality*, p. 324.

[62] In his lecture "On the Method of Zadig," *Science and Culture*, p. 139.

reject his conclusions; there are few of us, again, who would be satisfied, as Professor Karl Pearson leads us to suppose that he would be,[63] to "describe and classify [our] immediate sense-impressions and [our] stored sense-impresses by the aid of the theory of evolution," even "had the universe been created just as it is yesterday"; or with a theory of matter upon which the negative "ether-sinks" (to which nothing perceptual appears to correspond) "would long ago have passed out of the range of ether-squirts" (which correspond to perceptual matter), so that we need not concern ourselves about their fate. There are few, I repeat, who would not be troubled with "obstinate questionings" as to the *truth* as well as the "economy" of these conceptions. The scruples of such seem to imply the conviction—conscious or unconscious—that the business of Science is, as I have so often insisted, to render the Objective intelligible, and that the Objective thus systematised must ultimately be the whole Objective and nothing but the Objective.[64] No gap in either the spatial or the time series is to be tolerated, nor can we suffer any place in either of the series to be filled by the hypothetical masquerading as Objective.

But this principle, apparently so simple and so clear, discloses unsuspected difficulties of application when we try to determine by its aid the precise value and import of the concepts by means of which we seek to make accessible Objective phenomena intelligible. Many of these concepts assign positions in the spatial and temporal series to things which it is either essentially or else practically impossible to verify. "Attraction" is an example of the first class, "atoms" of the second. What is the actual standing of such entities? It cannot be denied that *some* of the evidence is forthcoming which, if completed, would establish their existence, and if this evidence actually produces conviction in men of the highest intellect supremely conversant with the facts, what more is to be said? The denudation which "the Razor of Occam" would produce would depend entirely upon the hand that wielded it. If it were applied by Lord Kelvin the ether, for example, would be safe; if by Professor Karl Pearson, its fate would be at least doubtful.[65] If it were handled by Professor J. J. Thomson, the "Faraday tubes" would disappear, while "ions" would, I imagine, remain. The truth seems to be that while cases of this kind were few and isolated, men's attitude towards them might be indeterminate—each case was judged upon its merits. But when with the advance of Science a whole compact system of concepts appeared claiming to represent what "goes on behind what we see and feel" over the whole surface of the Objective, it became inevitable that individuals should take up a definite general attitude towards them, only to be abandoned exceptionally: that is, that they should adopt a more or less explicit philosophy of Science. For those who

[63] Pearson, *The Grammar of Science*, 1st ed., pp. 418 and 319.

[64] See Sigwart, *Logic*, ii, § 61.

[65] *Grammar of Science*, 1st ed., p. 214.

accepted the claims of the new concepts, "atoms," "energy," "ether," and the like became metaphysical terms, the names of ultimate realities, or of an hierarchy of realities, of which what we have described as the Objective is only the appearance. As metaphysical entities it was inevitable that they should eventually claim to be able to account for the whole of experience. Thus was developed that "mechanical philosophy" which has recently suffered such a severe cross-examination by the author of *Naturalism and Agnosticism*.

Against this view many arguments have been brought. The one most relevant (from the standpoint here adopted) is that the concept of the "realities" which are to replace the sensible *data* are themselves abstracted from those data. Thus Duhem[66] not only argues, in a spirit entirely consonant with the spirit of this paper, that water is *not* really the hydrogen and oxygen which disappear when it is formed, but also shows that the atomic hypothesis upon which it is possible to conceive the "elements" as still present in the "compounds" is derived historically from Newton's famous Query 23. In this passage Newton suggests the application of the ideas that he had gained from his study of planetary bodies to the analysis of the behaviour of the bodies manipulated in experiments. Similar observations occur in several of Mr. Merz' splendid chapters. More recently still it has been pointed out[67] that the most thorough-going quasi-metaphysical attempt to account for perceived physical events is vitiated by the same circle. The most striking feature of the electric theory of matter is that it exhibits the property of "mass" as the consequence of the motion of "electrons." But to reach this result properties of the electromagnetic field are appealed to, and these properties are defined by differential equations into which the notion of mass derived from the study of molar bodies itself enters.

Opposed to the thinkers who adopt the view of the value of scientific concepts which has just been repudiated, are those who have felt themselves forced to take up one of the various positions included under the name of the *descriptive* view of Science. Most of these positions have a relation to the wider philosophical position of Humanism,[68] which makes them particularly interesting at the present moment.

"The great Poincaré," says Professor James,[69] misses Humanism by a hair. He has demonstrated[70] in a brilliant manner the conventional char-

[66] In his *Le Mixte et la Combinaison chimique*, 1902, and in other writings.

[67] See a review of works on "Electrontheorie," by H. A. Wilson, in *Nature* for June 22, 1905.

[68] See James, "Humanism and Truth," *Mind*, N.S., No. 52, p. 462.

[69] James, *loc. cit.*

[70] In the essays reprinted in *La Science et l'Hypothèse*, and the more recent *La Valeur de la Science*.

acter of Science, and has laid special stress upon the manner in which one theory has succeeded another in the same physical field.[71] He appears to accept what we may perhaps call the disintegrating results of mathematical physics, regarding perceived things and events as really due to the superposition of a great number of similar elementary phenomena.[72] Moreover, he removes from the Objective every element—such as the secondary qualities—which cannot be proved to be "the same for all" by the use of language. "Pas de discours, pas d'objectivité"[73] If, then, perception gives us no reality and the hypotheses of Science are only conventions, what is there that remains? We find that while hypothesis may succeed hypothesis—as, for example, Maxwell's electro-magnetic theory of light succeeded Fresnel's undulatory theory—the differential equations remain the same, the expression of veritable relations between real terms which Nature hides from us eternally, though Fresnel may think of them as *movements* and Maxwell as *electric currents*.[74] It is through its knowledge of these Objective relations that Science has so much theoretical hold over the inscrutable reals, that it is able to predict the future; but that same knowledge has clearly a certain "intellectual" value quite apart from its value as a collection of *recettes pratiques*.

Even this amount of intellectual value seems to disappear in the view of Science advocated by M. Le Roy.[75] For this writer the laws of Science, when they are not conventional definitions, are simply *recettes pratiques*, "not *true* but *efficacious*," "not concerning our *knowledge* so much as our *actions*," "rather enabling us to *capture* the order of Nature, than *revealing* it to us."[76] Moreover, these laws have reference to artificial facts—*faits scientifiques*—created by the scientist out of the *faits bruts* of perception.

M. Le Roy's scientific fact seems to correspond to a large extent with our "secondary construction" by which the "primary fact" is apperceived. An "atom" and an "eclipse" are examples given. Poincaré adds an "electric current" as the scientific fact constructed from the brute fact of a galvanometer deflection; also the "corrected reading" obtained by treatment of a number of direct readings. We may add ourselves the "rigid bar" by which the actual elastic lever is replaced in theory. But there is this important difference between Le Roy's conception and our own: the laws of science as conceived by him seem hardly to touch the brute facts, which,

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[71] See, e.g., *La Science et l'Hypothèse*, Ch. X.

[72] *Op. cit.*, p. 187.

[73] *La Valeur de la Science*, p. 262.

[74] *La Science et l'Hypothèse*, p. 190.

[75] See the discussion reported at length in the *Bulletin de la Société française de Philosophie*, Mai, 1901. Le Roy's views are criticised by Poincaré in the essay reprinted in *La Valeur de la Science*, Ch. X.

[76] *Bulletin*, p. 5.

not being scientific, are outside Science.[77] This is why the law is in so many cases merely a rule of action. In our view, on the other hand, the whole object of the secondary construction is to render the primary facts intelligible, to bring out real relations between the brute facts which constitute the scientific fact, and to lead to the discovery of new brute facts related to those already recognised within the system.

The same kind of inversion of the relations of primary fact and scientific construction is shown by the illustrations given of the *dictum* that laws are frequently definitions. Such a one is the law that "phosphorus melts at 44°," which is asserted by M. Le Roy to be merely a definition of phosphorus. One feels here in a peculiarly tantalising form the want of security of the relations between ideas and the reality beyond which some of us find in other presentments of Pragmatism. The definition "works," substances melting at 44° are actually encountered, but one has about their identity much the same kind of doubt as pursued the school-boy who feared that Shakespeare's plays were not written by Shakespeare but by another man of the same name.

Mach's splendid labours in this field are too well-known to need characterisation. For the founder and chief apostle of the new doctrine the concepts of Science are, as with us, means to an end, an end which is conceived as "the economic exposition of actual facts."[78] It is clear that this principle of "economy" pushes analysis further than the principle of intelligibility which we have been considering. It suggests, as Mach[79] applies it, a value for the race as well as for the individual in what we have thought of simply as a psychological phenomenon. This suggestion is of the highest interest and importance, and as such may be gladly accepted. But when the same circumstance is made the ground upon which Mach is claimed by Professor James (in the article already quoted) as a Humanist, it seems necessary to determine what are the exact admissions implied by one's applause. I am prepared to admit that the results of Science *have* this economical value; prepared to admit that by Natural Selection or in some other way Nature may have arranged that Science shall be pursued so that this value shall be secured to the race; but, as before, I hesitate when asked to grant that this relevance to purpose constitutes the *essence* of the results in question. And Humanism is nothing more than an interesting genetic psychology if we do not take it as telling us not merely the circumstances under which we come to *recognise* such things as thinghood, or the conservation of energy, but what they are prior to our recognition. My own view of the principle of the conservation of energy I have endeavoured to

[77] Poincaré, *La Valeur de la Science*, p. 221. Cf. *Bulletin*, p. 21, where M. Le Roy says, "C'est ce qu'on ajoute au fait brut pour constituer le fait scientifique qui est le plus important."

[78] Mach, *Science of Mechanics*, 1902 ed., p. 555.

[79] See *op. cit.*, pp. 481 *et seq.*

explain. It is a concept by means of which a definite range of given facts is made intelligible to an individual thinker. In consequence of this circumstance it has an economical value. Further, it is the property of "secondary constructions," into which such concepts and the corresponding primary facts enter, that they lead to the "apperception" of new primary facts—reals or relations between reals—this being the external characteristic which distinguishes the scientific from other attempts to render the primary facts intelligible. Finally, the conception is a convention in that another could conceivably have been found to render the same facts intelligible, and, if "scientific," would have led to the recognition of the same real relations between the real things. The conception, in fact, plays the part which Lotze attributes to all ideas—the part of a tool which fits the mind and also fits reality.

If pressed to consider also the case of thinghood, I should have first to remark that I find between concepts of this order and the concepts of Science a distinct break. In this I differ from Mach, who does not appear to distinguish the process by which we supply a core to a mass of sensations, and so create a "thing" from the process by which we make a secondary construction out of certain *data* by means of the concept of a transference of something ("energy") that remains constant in amount. We seem to have here the thought which Professor James expresses in his article on *Humanism and Truth*[80] and the writers of the essay on *The Nature of the Hypothesis*.[81] According to this thought Reality is not the same after our judgment as before; it is "increased and elevated" by the act of judgment. The implication seems to be that scientific judgments simply continue a process which "common-sense" judgments begin. There are aspects of the two processes of judgment of which this notion of continuity holds good; we may grant to Messrs. Ashley and Dewey that the hypothesis is a predicate, and to Mach and Professor James that the concepts, both of "thing" and "energy," are economical. But, as I have already pointed out, "the secondary constructions" of Science which correspond to the "reality qualified by an ideal content" of the ordinary judgment contain no element that is not drawn from the common-sense stratum of consciousness. For example, if one body is cooling while another is simultaneously growing warmer, the secondary construction in which these primary facts are synthesised contains besides these facts merely the thought of another *thing* being transferred from one body to the other. On the other hand, the synthesis by which we bind the various qualities into the "thing" does not present us with anything analogous to this. The secondary construction is of a totally different character from the elements; the process does not reach its end by the ideal addition of a new element of the same type. Further, the hypothesis has, we have shown, merely a transient function.

[80] P. 468.

[81] In *Studies in Logical Theory*, ed. Dewey, 1903.

Setting aside purposes of exposition and convenience in conceptual handling, its function is to point the way to the discovery of new facts, including relations, and then to efface itself. Finally, at any moment it is at least ideally possible by criticism of the whole construction to separate the primary facts from the interpretative "embroidery," and to realise that the synthesis was not strictly inevitable. Whewell's *dictum* that "fact and theory have no essential difference except in the degree of their certainty and familiarity. Theory, when it becomes firmly established and steadily lodged in the mind, becomes fact"[82]—which is approved by Professor Dewey[83]—ignores this power of critical analysis.

Before quitting my argument it seems necessary to anticipate a cross-examination on what is my precise distinction between a common-sense judgment and a scientific judgment. A trivial example may make the distinction clear. If I say, "that man has a rolling gait," the synthesis has the inevitable character that is the mark of the primary fact, the common-sense judgment. If, on the other hand, I assert (on the ground of his rolling gait) "that man is a sailor," my synthesis has the secondary character which is not inevitable. If then you ask me if such a judgment is "scientific," I do not think I ought to hesitate to say "Yes" simply because the instance is trivial. The secondary construction is undoubtedly a reaction upon certain primary facts, and it has the property of leading to the observation of other primary "substantive" facts, and yet other facts, relations between these. In these respects it seems precisely like such a judgment as "this substance is copper sulphate," based upon an experiment in chemical analysis—a judgment which would generally be admitted as scientific. The former judgment, in fact, is related to the "unconditional universal," "All men with such and such a rolling gait are sailors," in the same way as the latter is, to "all things that have such and such properties are copper sulphate." Both these assert a "permanent connection of qualities in the Real"—that is, are the final products of a process in which primary facts have been unified, systematised, or made intelligible by a concept which has not failed to lead to discoveries of fresh primary facts without limit in its province.

I need hardly disclaim the pretence that I have done more than bring out a few of the salient features of the scientific process. I have regarded it as a conative process, with certain primary facts as *data*, and the making of those facts intelligible the *quaesitum*. I should say that I had derived my conception of the primary facts from Mr. Moore and Mr. Russell, did I not fear to do those philosophers an injustice. I have conceived the Objective world of primary facts as containing physical and psychical existents, and, in addition, subsistents—such as relations—which share with the former

[82] Whewell, *The Philosophy of the Inductive Sciences*, 1840, p. 45.

[83] *Op. cit.*, p. 164.

the characteristics of being regarded as "the same for all," and of having a certain relevance to human purpose, expressed by saying that "they have to be reckoned with." In the case of physical existents I have not hesitated to attribute to them secondary as well as primary qualities, regarding our perceptions as at least *aiming* at expressing some Objective determination of the thing which is independent of perception. While it is not possible to conceive what those Objective determinations are apart from our perceptions, it is possible to assert that each such determination (as, for example, as of "temperature") implies a definite set of relations between our changing perceptions of "hotness" and other simultaneously changing relations.

The aim of the scientific process as it occurs in the individual is to render the Objective in its actual determinations intelligible. This happens when primary facts enter into an "apperceptive system." They may be apperceived by means of any concept drawn from any other context of experience, and if by means of this concept the actual particulars of experience are systematised, the "end" of the process will have been reached. But if the process has been of the kind intended by the term scientific, it will have the further property of leading to other determinations of the Objective, and these further determinations are the actual achievements of Science, and its "end," therefore, from the universal point of view. Since primary facts present themselves for the most part in series, the most useful method of determining the Objective consists in correlating terms of these series with the members of the number series—the property of this series being that single members of it can be substituted for combinations of other members in accordance with definite laws easily applied. By means of such combinations it is often possible to characterise simply the relations between things, and to ascertain what changes in terms of relations can be regarded as complete expressions of those relations. Such cases typify the ideal of the scientific process which is actually exhibited in a large number of grades, which nevertheless are sharply distinguished from the processes by which the Objective itself is recognised—a fact which is claimed in support of the view of the unique character of the latter.

Finally, it may be claimed that the concept here defended avoids the error contained in the theories of Science given by Jevons and other writers, which have been between hypothesis and fact. My concept allows the hypothesis to determine largely what primary facts shall be apperceived, and admits that the fact before the individual, *i.e.*, the secondary construction, is constituted by the apperception. At the same time the implication that the Objective in this construction is an ideal upon which we can never actually set the finger, is rejected; and it is maintained that to a critical scrutiny the Objective reveals itself in ordinary cases, though in some cases it may not be easy to determine it without reference to the "confirmatory tests" of sameness for all and relevance to purpose.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

The Nature of Mental Activity: A Symposium

S. ALEXANDER, JAMES WARD,
CARVETH READ & G. F. STOUT

VOLUME VIII

1908

EDITORIAL NOTE

Samuel Alexander (1859-1938) was an Australian-born Bristish philosopher and prominent figure in early twentieth-century British philosophy. He is best known as one of the leading figures of British Emergentism, a movement that claimed that mind "emerges" from matter. After obtaining a first class degree in Greats at Balliol College, Oxford, Alexander was made a fellow of Lincoln College, where he developed an interest in psychology. He obtained a professorship at Owens College, Manchester in 1893 where he became a leading figure in the University. He was made a fellow of the British Academy in 1913 and appointed Gifford Lecturer at Glasgow in 1915. He later developed the Gifford Lectures into his best-known work, *Space, Time and Deity*, which was published in two volumes in 1920.

Samuel Alexander was President of the Aristotelian Society from 1936 to 1937.

James Ward (1843-1925) was an English psychologist and philosopher who exerted a major influence on the development of psychology in Great Britain. After completing his theological studies at Spring Hill College (later Mansfield College), Oxford in 1869, he obtained a one-year scholarship at the university of Göttingen and began studying under Rudolf Hermann Lotze, champion of the emerging science of physiological psychology. On his return to England he became minister at Emmanuel Congregational Church in Cambridge, where his theological liberalism made him unpopular. He subsequently resigned as minister to continue studies at Trinity College, Cambridge, where he became a fellow in 1875. He was elected to the new Chair of Mental Philosophy and Logic at Cambridge in 1897, where G. E. Moore and Bertrand Russell were among his students. Ward was opposed to associationism, and together with G.F. Stout introduced a functionalistic approach in psychology.

Carveth Read (1848-1931) was a British philosopher and logician. Having obtained a Moral Sciences Tripos First Class B.A. and an M.A. from Christ's College Cambridge, he spent three years between 1874-1877 as the Hilbert travelling scholar at the Universities of Leipzig and Heidelberg. He lectured at Wren's 'Coaching' establishment in London from 1878, and was Grote professor of philosophy of mind and logic at University College London from 1903 to 1911, after which he became Lecturer

in Comparative Psychology at UCL until 1921. His most influential work, *Logic, Deductive and Inductive*, was published in 1898, which followed in the tradition of Mill and Bain, and drew from the contemporary Empirical Logic of Venn and the Formal Logic of Keynes.

For the biography of G. F. Stout, please scroll up to page 33.

The following symposium - "The Nature of Mental Activty" - was published in *Proceedings of the Aristotelian Society*, New Series, Volume VIII (1907-1908), pp. 215-257.

VI. THE NATURE OF MENTAL ACTIVITY

A Symposium by
S. ALEXANDER, JAMES WARD,
CARVETH READ & G. F. STOUT

I. S. ALEXANDER

THERE are two questions which may be intended when we are asked what is the consciousness of activity. We may mean what is it to be conscious of activity as distinguished from passivity. Or we may mean simply and generally what is the consciousness of performing any mental process whatever, supposing we have such a consciousness of activity. The second interpretation of the question is not, perhaps, the more natural or usual one. We speak rather of mental *process* in this sense than of mental activity. On the other hand, we commonly do speak of acts of hearing, perceiving, inference, and it is not strained to speak of a sensory action or an act of sensation. Activity in this sense is mental function in general. Both the narrower and the wider question are psychological. But the distinction of activity and passivity is in a great degree one of detail. The question of the consciousness of mental activity in general is more fundamental, though it is difficult or even impossible to keep this question altogether separate from metaphysics or theory of knowledge. But it is the more interesting to me, and I shall devote the larger part of my remarks to it. In part of what I say I do not know how far I am or am not merely painfully trying to realise for myself what my teachers have said already. Two of them follow me in this discussion. But I prefer not to divert the discussion from the subject itself by any direct examination of their published statements.

Let me begin with the narrower question, which prepares the way for the other. You may seek to explain activity, in its distinction from passivity, in two different ways, both of which I have entertained in turns and have come to regard as erroneous. You may describe it in terms of the muscular movements and strains, and other bodily actions in which mental activity like that of active attention, or inference, or desire, finds expression. In my own case, mental activity, especially in thinking, is accompanied by marked movements of the eyes, which are apt to change their position with each change of the thought, and whose movements, in fact, I use as a means of directing thought in different directions and controlling it. Now, these and the like movements appear to me highly significant, because when you try to describe mental activity in words you inevitably, as I shall point out later, tend to be aware also of its connection with certain portions of the organism. But they are not mental activity

itself, but only physical movements belonging to a specially privileged external thing. This is one error I have learned to avoid. The second is this. You may describe activity in terms of your ideas—you may say that it is the consciousness of the expansion of an idea against a limit and the like. Here again I acknowledge the significance of the analysis. But it must be understood that ideas in this account of the matter must be regarded as themselves "psychical events" or processes. In other words, the expansion in question is not a mere development of the contents of my mind. If this were so, you could not distinguish the consciousness of your own activity from that of an external physical activity, say, of a shot tearing a lion's shoulder. I used at one time, naively perhaps, to consider that whenever you had ideas ABC replaced continuously by ABCD that that was also the only experience of activity that you could have. But I see now that this is impossible, and that the activity lies not in the changing presentations, but in the process of transition itself from ABC to ABCD. I should not, indeed, myself speak of a psychical event ABC developing into another ABCD, because that seems to imply that you do have psychical events which psychically are different in quality according to the character of their content, as if the perception of a tree were different in quality from that of a rose, and I shall give reasons hereafter for repudiating any such notion altogether. But quite apart from the propriety of speaking of psychical events as described in terms of their contents, what I have said is enough to show that the consciousness of activity must be found in some change of direction of the mental process itself. As mental process always has reference to certain objects (or, if you like to call them so, presentations) you may study the mental process indirectly by studying the object, and so may delude yourself into the belief that the mental process is itself a presentation, something you can reflect on as if it were distinguished from yourself.

Various attempts have been made to describe in detail the precise character of the difference between active and passive mental process. Activity has been called the self-realisation of an idea, as an idea—or it has been said that you have activity when one mental process is the outcome of previous mental process. The first statement applies very clearly to cases like desire or the effort of recollection. It does not apply so clearly to a simple case like that of the sight of bright sunshine which drives me out to enjoy it; there is an "idea" present here of something to bask in, but though I am conscious of bodily activity I feel myself mentally passive rather than mentally active. The second description applies directly to the active working out of an interest, and it makes clear the reason for the passivity of such experiences as an interesting sensation or a sudden flash of inspiration, but it does not apply equally well to the passivity of reverie, where process is the outcome of previous process, and yet no activity is felt. Perhaps I shall do best to describe shortly what, as helped by these analyses, I think I discover in my own feeling of activity—*e.g.*, in desire,

or trying to remember, or in inference. My mind begins to move in certain directions, *e.g.*, towards the forgotten name, but is not able to reach its end. It needs for success to be reinforced by connected processes in the mind, in virtue of which the resistance is overcome. The initial indeterminateness of movement is followed by a victorious and definite movement. There appears thus to be present in my consciousness of activity not merely an incipient or nascent movement (and an "idea" as such appears to me on its mental side nothing but such a nascent movement), which becomes fulfilled, but a complexity of other tendencies. When an incipient movement of itself passes into definite action, I do not feel activity. But the more I call in the help of reinforcing tendencies, the more I do feel active. Hence the feeling of activity, which tends to go with the working out of an interest, which has not become purely spontaneous. At the same time there is another feature present, which is perhaps the most important and is itself related to the complexity of the experience. The more complex the group of tendencies, the more are alternative actions possible, and hence in the higher kinds of activity the consciousness that the action pursued is selected. On the other hand, the more self-contained a mental process is, the more it can be taken by itself, as in surrendering oneself to the pleasure of a warm bath, or indulging in a train of consecutive ideas, or taking in a sensation, the more passive I feel. Passivity seems to go with determinate direction, or, to use a convenient technical word, with univocal direction of my mind, and activity with a mental determination which admits more or less clearly apprehended alternatives, it goes with equivocal direction. Hence it is that activity and passivity are so curiously mingled in our experiences: as they are in desire which is eminently purposive, fixed upon its end to the exclusion of other and distracting suggestions, and at the same time blind and enforced; or, in the kind of inference in which, as we say, the conclusion is forced upon us, where we feel passive in so far as we are constrained by the object which admits no alternative course, and yet intensely active so far as it is we ourselves who, in virtue of the sum of various tendencies which make up our interest, arrive at the result. Hence, too, we can readily understand why there is no clear demarcation in our experience between passive and active processes.

Whether this account of the distinction between activity and passivity is accurate or not, in both conditions there is activity in the wider sense, and I have been constantly using phrases which anticipate what I have to say about the nature of this process-consciousness, to which I now pass on. I can only describe mental activity in general in metaphorical terms, because of its extreme simplicity and its uniqueness. But the best term seems to me to be movement. In all my mental conditions, whether will, desire, inference, perception, sensation, I am aware of these movements, and these movements have what I must call direction and differ in direction. What happens in desire I have already indicated. When a whole in-

terest is at work, my mind moves by several converging lines of tendency. As I pass from stage to stage of a train of ideas, I feel the change of direction from one thought to another. The simpler the condition the more difficult is the process to describe, but the process is there and verifiable. Sometimes I can only detect it through helping myself out by reference to my external movements. Thus I can verify that in enjoying a hot bath my mind goes on moving in the initial direction, and this direction is different from that of taking in a prolonged sound. Or I may be conscious in a sensation of the mental activity which is a suggestion of the name, as blue or yellow. Or, again, in perceptual process my activity is mental preparation for handling the object perceived, for responding to it in appropriate ways, anticipating the next stage in the action. Always I am conscious of moving from one point to another, which either may or may not be in the same direction.

In speaking thus of movement and change of direction, and I may add of rate of movement, I am of course obliged to use anticipatory terms derived from physical objects, describing not merely the mental activity as I am aware of it, but as it is connected with bodily processes which occur in the organism and more particularly in the brain. I make it clearer to myself by locating it in time or space in a picture of my brain. Tennyson says "as when a great thought strikes along the brain and flushes all the cheek." The second phrase describes only a consequence, but in all my thoughts, little or great and of all kinds, I verify the description that they strike along the brain. Now that I know what my brain is, I feel my thought occurring there, or, if not there, in some other part of my body. It is only as thus understood in connection with the bodily organism that I can say my mental activity is a movement with direction. But in this sense it is a movement, and does occur in time and space. In other words, my mental activity is always qualified by what, on the analogy of local signs, I must call signs of direction. When I change my thoughts from one topic to another, I have an experience which I can only compare to the shifting of the pieces of glass in a kaleidoscope when it is turned, and this experience is not the same as the movements of the eyes in which, with me, it is habitually expressed. Movements like these or like catching the breath, or the flushing of the cheek of which the poet speaks, may be present in various degrees, but these movements I can distinguish perfectly well from the movements, simple or complex, which I have described as mental, changing their direction with the subject matter, but always when made definite and explicit referred to the brain.

Now what makes one thought-process different from another is, I find, nothing but this difference of mental direction. It is not the object or content of the thought. When the object is different the direction of my activity is different, but the object has nothing to do with my mind. Moreover, I must go on to add that when I say I am conscious of this activity, I mean

that the activity so described is consciousness, and that I can find nothing else in consciousness except these activities. I sympathise very much with the spirit of certain recent inquiries which result in the declaration that consciousness does not exist, but I think the doctrine erroneous. I have no doubt that the thing called my consciousness exists, and that it is mental activity. But it is not different in quality according as I am conscious of blue or green, or the sun or the Pythagorean theorem. These things are not consciousness, but things to which consciousness refers, upon which it is a kind of reaction. All these things are different according as they are colour, or figure, or the like, but my consciousness is one and the same thing working only in different directions.

The most difficult and interesting thing to determine upon this psychological borderland is the place of sensation. That sensation belongs to the objective side of what is called (I take the phrase as I find it) the subject-object relation, would be readily admitted. But my language conflicts with a view widely entertained that a sensation itself is still psychical, and not as I am maintaining by examples, physical. I cannot in my examination of experience separate the sensation of green from the perception of a green leaf, except in respect of complexity. If I resolutely divest my mind of the last traces of the figment of an inner sense, which represents the objects of experience in some supposed subjective condition, then I find in a sensation nothing but mental activity directed upon what is called the content of the sensation, which content is nowhere found except in the external object. It seemed to me at one time that we might describe consciousness as a sort of thrill, and sensations as qualitatively distinct thrills of consciousness. But this now seems to me an erroneous description. It is not the quality of consciousness that differs, but its coefficient of direction. Accordingly green, red, smell, hunger, and the like are but objects, doubtless of an exceedingly simple sort, which it is the business of metaphysics to describe. But these sensations, as we know them, I mean as sensations of red, green, have no psychical character, red, green. There correspond to them of course on the side of the organism various specialised mental processes. But the mental process has no character in it of colour, or smell, or sound. It has only a direction which varies with the object that excites the conscious activity. Sensations then are, so far as they can be called psychical, nothing but the simplest signs of direction. But it is only their simplicity which gives them any special claim for consideration. To every object perceived, imagined, desired, and the like, there correspond more or less complicated signs of direction.

I will add two corollaries which will put the thesis I am explaining in a different way:

(1) What I have called mental activity is, in the usual language of psychology, conation, and what I am saying is tantamount to the assertion

that the conative side of "experience" is the only thing which is mental. As for pleasure and pain, I am content as at present advised to regard them as modalities of the conative process. My thesis then, founded as I think on self-description, is that consciousness is conation and nothing else.

It may be as well to add one or two verifications of this summary description. The first is the law of association, which merely means that when the mind starts moving along one of a set of connected directions it goes on to move along the others. The second is the influence of feeling upon the course of thoughts, as, for example, in the selective influence of prejudice, where the effect of the presence of the feeling is not to call up certain thoughts but to begin the appropriate movements. In constructive creation the common phrase that a man's mind has struck into a new line is more than metaphorical. The passion or interest with which the worker is inspired seems to direct him into a new mental path, and it is mainly when the antecedent motions are concealed from him that he attributes his new thoughts to outside influences to which he is passive. My last instance shall be that of split-off consciousness. Where an organism for some reason or other ceases to work completely as a whole, certain stimuli may fail to produce the nervous changes which are the condition of mental activity and yet at the same time may very well excite activity or consciousness in connection with other portions of the same system.

(2) It follows, secondly, that all consciousness is self-consciousness. There is no difference between these two things as if besides consciousness there were also a consciousness of consciousness. That way madness lies, for there is no reason why you should stop at consciousness of consciousness and not go on to a consciousness of that. On the other hand, we certainly have a consciousness of self when we take self to be the whole thing, body and mind, taken together, a composite thing. The self as described contains not only my mental activity but the body in which that mental activity is located, and which it comes to be aware of in the same way as it is aware of all external things, and it may go on to include all the things about which we occupy our minds. But all this embodiment of the self is but the privileged thing with which our mental activity is connected. Other things through their intimacy of relation with this body may seem at times to enlarge the bounds of our personality; and the habitual objects of our thoughts and desires enter in the same way into our personality. But whether it is our body, or psychology, or politics, which we regard as the chief constituent of our personality, what makes the personality mental is never these things but the mental activities which have them for their objects. The conscious self is always the reaction of consciousness upon its objects. We never have a superadded consciousness of this conscious part of the self.

So far I have been following, as I think, observation. It is a matter of

observation that consciousness is mental activity, and it is a matter of observation that such consciousness is located, however vaguely, in the body. What I now add goes beyond observation. I have been considering consciousness as a property of a certain highly developed organism. It consists of reaction, of course unique in kind, of this organism upon objects which affect it. It is strictly comparable to life, also a unique phenomenon. Life is a set of reactions, running, pouncing, digestion, breathing, and the rest, upon certain stimuli. It varies in its direction according to the stimulus and the part of the organism which is employed. But in so far as these functions are vital, we have to say that the body exhibits a new quality not found in lower material systems, and the new quality is life. Suppose, now, your living being is also a conscious one (I do not know where, if at all, the difference in organic structure between a conscious and a living organism is to be found, but suppose that it has a brain), such an organism exhibits not only life but a fresh form of reaction, which is consciousness, conditioned, of course, by the lower forms of reaction, just as life is conditioned by physical and chemical processes. Conscious process is thus simply a phenomenon found in certain organisms, a new quality of such structures, but as distinctive as life.

As I conceive the matter there are in the world among physical objects certain physical objects whose structure is so developed that certain of their functions are not purely physiological but are consciousness. These functions, which constitute consciousness, are situated in the brain or other part of the neural system. These conscious reactions upon other objects than consciousness itself are what we call the consciousness of these objects, which is the stirring into life of consciousness in connection with those objects. How much consciousness shall know of them depends on the organism of which it is a function or—to vary the language—which uses it[1] as an instrument. There is nothing in the nature of the case why a still higher organism should not exhibit an order of existence higher than mere consciousness and conditioned by it. The existence of consciousness as part of the life of the body is a fact revealed to consciousness through its more intimate relations with the body. I can thus find in consciousness nothing but a phenomenon, a part of the whole world of phenomena. There are psychical things in the world as well as physical. A psychical thing is mental activity. But I can find in it no mysterious indescribable activity such as Berkeley and some of his successors have found, but something definitely describable.

I have got on to the edge of metaphysics, just where what is called the theory of knowledge begins. But to go further would be to raise difficulties outside the psychological problem. I draw back, therefore, to psychology, in order to explain why in this discussion I made no difference

[1] This should have read "which it uses," but I leave the text unaltered because of Mr. Ward's subsequent reference.

between three things which are sometimes sharply distinguished, namely, activity itself, activity-consciousness and the consciousness of activity. As to the first of these phrases, it may be thought that consciousness may be an activity and yet there need not be a consciousness of it. This is really impossible. If consciousness is itself an activity and not merely dependent on some other activity (*e.g.*, physiological) that activity is conscious. The other distinction between activity-consciousness and consciousness of activity does not seem to me to possess the importance sometimes attached to it. It is convenient to distinguish an explicit from an undeveloped experience and you may designate the explicit consciousness by *of*. You may speak of change-consciousness and the consciousness of change, the latter being definite change. Consciousness of activity is nothing but the dim activity-consciousness standing out clear and distinct. On the other hand (and I suppose this is what is intended), if it is implied that I can yet be conscious of my mental activity in the same way as I am conscious of a bee, I believe the foregoing to have shown this to be erroneous. External things are related to consciousness which reacts upon them, but they *are* not consciousness. On the other hand, consciousness is not related to consciousness. I cannot attend to my attention as I attend to what I write. I can only when possessed by psychological interest contrive to make the different features in attention distinct. When I appear to turn a consciousness like desire or attention into an object like a bee it is only because I am considering it by help of the expression of it or the object (or content) of it. This might be expressed by saying that consciousness or mental activity can never be a presentation. I agree with this, but I think that the fact is improperly described. I should say simply that consciousness is not a physical thing.

II. JAMES WARD

I FIND in Professor Alexander's opening paper passages which embody all the main features of mental activity as I understand it, and yet his position and mine are, I fear, radically different. I agree that, though we distinguish between activity and passivity, activity in a certain wider sense pertains to all experience,—that activity, namely, which is implied in consciousness. I agree further that the conscious or mental activity is in itself one and the same, working only in different 'directions.' By this I mean that it is what we call attention widely understood, attention now to sensory presentations, now to motor, now to presentations, now to representations and so on. When this 'direction' is determined for me, I am said to be passive, when it is determined by me, I am said to be active. I admit that the two are so far inseparable, in that I can never wholly determine the objects to which I attend; we have no experience of creative activity. But I should still hesitate to say that there is no clear demarcation between the two. I admit

also that activity in the narrower sense is always conative, but I do not find that "consciousness is conative and nothing else." Nor can I see how Professor Alexander's previous exposition has led up to such a thesis. It is true that when attention is non-voluntarily determined the subject is never wholly indifferent and so the situation as either pleasurable or painful entails at once a conative attitude. But the receptive, affective, and reactive constituents of such a total *psychosis* are still distinct, and Professor Alexander has himself distinguished them.[2] Finally I fully recognise "the extreme simplicity and uniqueness" of mental activity on which Professor Alexander also insists. But there we part.

"Because of this extreme simplicity and uniqueness," Professor Alexander continues, "I can only describe mental activity in general in metaphorical terms." I hold, on the contrary, that what is simple and unique can neither be described nor defined in *any* terms. We may indicate it and designate it; and since in any case it cannot be absolutely isolated, we may succeed in analysing more or less completely the complex in which it occurs, or the conditions on which it depends. And when, nevertheless, Professor Alexander tells us that mental activity is best described as "movement" it does not take long to see that the fitness of the simile is really due to the fact that he has in view precisely that kind of literal movement to which we have already metaphorically transferred the idea of activity. Movement pure and simple, mere change of position, is a kinematical concept and suggests neither activity nor passivity. Movement, in Newton's sense again, or momentum, implies complete inactivity or inertia, just as truly as does rest: only when there is some acceleration, some change, that is to say, either in rate or direction, do we talk of physical action. The history of this concept of physical causation, from the cruder anthropomorphism of pre-scientific thinking down to its dynamical interpretation in the present day, shows plainly that the notion of action was first imported into it from the sphere of conscious life and that it has been gradually but at length completely eliminated. I take it that nobody nowadays attributes activity to colliding bodies or to an electric discharge. We might as well say that the moon lights the sun as suppose that physical action throws any new light on mental activity.

It is true, however, that we talk freely of movements in connexion with mental activity and that in two senses, which Professor Alexander very properly distinguishes. There are certain literal movements connected with circulation, respiration and the like—determined probably through the sympathetic system of nerves—of which we are more or less dimly aware. But these we recognise as but the collateral consequences of men-

[2] The distinctness of the second, however, it must be allowed, Professor Alexander recognises in a very halting fashion, as "modalities of the conative process." But till Professor Alexander has explained himself further I can only take this to mean that affection and conation, though distinguishable, are not actually separable: this I admit.

tal activity. There are also other literal movements due to the so-called voluntary muscles, which are the direct outcome of mental activity, intentional movements. Still they are not themselves instances of mental activity but rather its effects, objects or end: in the language of Professor Alexander, they are the content upon which mental activity is directed. And this brings us to the second and metaphorical sense of movement, as when, for instance, we talk of movements of attention. The source of this figure is doubtless to be found partly in the pre-eminence as regards cognition which the sense of sight has attained for us: so we talk of the mind's eye, of the field and focus of consciousness. Partly it is to be found in the pre-eminence, as regards action, which belongs to the hand: so we talk of mental grasp, apprehending, comprehending, perceiving, conceiving, etc. But mental activity, whether collateral or intended, is at any rate correlated to actual motions "in the organism and more particularly in the brain." And this fact seems to play hide and seek with us in a strange way throughout Professor Alexander's exposition: at any rate the transitions are so "kaleidoscopic" that I fail to see their logical connexion. If, nevertheless, I venture on a few remarks, I do so mainly in the hope of eliciting further explanations.

To begin them, in one place we find Professor Alexander saying: "always I am conscious of moving from one point to another." This seems to suggest the activity of attention as I should understand it, "my consciousness as one and the same thing working only in different directions," to use his own words. But alas! it seems there is here a double sense that keeps the promise to our ear and breaks it to our hope. For presently we find Professor Alexander saying: "Now that I know what my brain is, I feel my thought occurring there . . . It is only as thus understood that I can say my mental activity is a movement . . . But in this sense it *is* a movement and does occur in time and space." Why should what is felt as occurring in the body yield the experience of mental activity: what is it that singles out one kind of bodily occurrence as unique in this respect from the rest? The metaphorical sense of movement seems to have vanished and we have an objective physical movement, somehow apprehended as activity, in its stead. And yet this language would perhaps not seem so decisive[3] if we did not interpret it in the light of what is said later of consciousness as "a property of the organism," as "a reaction of this organism upon objects which affect it," as "simply a phenomenon *found* in certain organisms," which use it " as an instrument," etc. There is much beside in the details of Professor Alexander's exposition which to me is hopelessly bewildering, but it would take far more time than I can claim to dwell upon these. I trust I have said enough to indicate my main difficulty. Professor Alexander tells us he has got "to the edge of metaphysics, just where what is

[3] For in his second paragraph Professor Alexander has expressly rejected William James's view of activity as "an error he has learned to avoid."

called the theory of knowledge begins," and there he decides to stop. In other words, he has led us into a bog and there he proposes to leave us.

Thus in Professor Alexander's world there are physical things and there are psychical things and there are "composite things"—"body and mind taken together." Apparently they are all phenomena, though in what sense this most ambiguous term is understood is not clear. It would seem that the Pythagorean theorem along with blue and green is a phenomenon, though whether like the latter it is to be handed over to metaphysics for description does not appear. On the whole, if 'phenomenon' implies degrees of reality—the superiority lies on the physical side. For not only does Professor Alexander sympathise—and I take it the sympathy is entirely intellectual—with the "spirit" that has recently got so far as to declare that the psychical things do not exist:[4] he regards them as in any case but properties of certain physical objects whose structure is sufficiently developed. But how, if two things are "taken together," does one become the property or quality of the other? Well, of course they are only phenomena. And yet though phenomena and properties of objects, psychical things, *i.e.*, consciousnesses or mental activities, are not presentations. Naturally then we should expect to be told that they do not strictly admit of description, and Professor Alexander, as we have seen at the outset, practically said as much.

But yet he ends by saying that they are "definitely describable."[5] Or, rather, he says this just as he reaches "the edge of metaphysics," but immediately he has drawn back into psychology he unsays it again. "When I *appear* to turn a (moment of) consciousness, like desire or attention, into an object, like a bee, it is only because I am considering it by help of the expression of it or the object (or content) of it." But the former is not "mental activity itself," and the latter "has nothing to do with the mind." So after all "I cannot attend to my attention as I attend to what I write." Perhaps I am reading my own meaning into this when I say that I agree with it entirely; for I certainly cannot reconcile it with other statements that Professor Alexander has made, least of all with his saying that "consciousness is nothing but a phenomenon."

Finally, I think that the advance from activity-consciousness—which, I

[4] A parallel case, I suppose, would be found in those physicists who sympathise with the hypothesis recently advanced that ions are only electric charges and that mass does not exist.

[5] At the same time, Professor Alexander animadverts on the mysterious indescribable activity which Berkeley and some of his successors are supposed to have found. Unfortunately, no references are given to Berkeley's works, and his deluded successes are not named. So far as I know, Berkeley never attempted to describe activity at all: he only insists that volition is the only activity of which we have any experience. Cf. *Works*, Fraser's edition, 1871, vol. i, pp. 170, 310.

suppose, is what Professor Alexander means by "mere consciousness"—to the consciousness of activity is much more than a convenient distinction.[6] In fact, the demand for a psychological account of this advance is precisely what Mr. Bradley has been urging these many years. And the very thorough and masterly exposition of his own view of it, in my opinion more than anything else, now requires and deserves examination. Professor Alexander refers to it somewhat incidentally, and so far as I follow his criticisms I agree entirely. To put it in my own way—in psychology, Mr. Bradley appears to be what I have called a presentationist. In his articles on the "Definition of Will," for example, he starts from ideo-motor action, and talks of the self-realisation of an idea in a thoroughly Herbartian fashion, oblivious of the fact that if an idea verily is a self and shows its activity by expanding, invading, and what not, we have the whole problem of activity again on our hands. But presentation as a process implies the subject-object relation to which apparently Mr. Bradley confines the term consciousness. But he holds that there is a pre-relational stage of experience as feeling. What he has written on this topic strikes me, I confess, as obscure; but at the same time I feel strongly that obscurity must beset every attempt to penetrate beyond a consciousness in which relations are recognised, and ascertain how such a consciousness begins.[7] But our only hope of success in such adventures lies, I think, in the principle of continuity. Experience in which there is neither subject nor object seems to me unmeaning; so likewise a feeling which no one feels. There can, of course, at first be no reflexion: the subject we must suppose, feels and acts, acts and feels, and there is, we must also suppose, a changing something that affects it when it feels and changes when it acts.[8]

But we cannot suppose that the subject at the outset has any so-called "internal perception" of itself or of its states; for that, it is abundantly evident, implies a long course of intellectual construction. Surely, however, the absence of self-consciousness is no proof of the absence of a self. Let us now turn to an account which Mr. Bradley has given of feeling as he understands the term. "I take feeling," he says, "in the sense of the immediate unity of a finite psychical centre. It means for me, first, the general condition before distinctions and relations have been developed, and

[6] Don't talk of a consciousness of consciousness, says Professor Alexander, for that way madness lies, but he is prepared to entertain the idea of a higher organism that should "exhibit an order of existence higher than mere consciousness and conditioned by it." "Consciousness of consciousness" is not a very exact expression, but otherwise why is one position more sane than the other ?

[7] *Cf*. the discussion, "Consciousness and Experience," *Mind*, N.S., vol. ii, pp. 211 *ff*.

[8] It seems useless for the psychologist to debate the question as to which was first, the active or the passive phase: in fact, a sharp separation of the two is unwarranted, for we know nothing of either pure passivity or pure activity. Metaphysically we may say, *Am anfang war die That*, and that may incline us speculatively to insist on the logical priority of activity.

where as yet neither any subject nor object exists. And it means, in the second place, anything which is present at any stage of mental life, in so far as that is only present and simply is."[9] But we have a right to ask: What gives a "mass of feeling" unity and a centre in the absence of a subject, and what exactly does "mental life" imply? Relations and distinctions do not constitute their terms or *fundamenta*, how, then, could they be developed in the absence of these? Elsewhere, in discussing unity, Mr. Bradley asks: "Why and how can we call it a relation, when it is not a relation actually for us?" He continues: "It would never do for us simply and without any explanation to fall back on the 'potential,' for that, if unexplained, is a mere attempt at compromise between 'is' and 'is not.' But if the 'potential' is used for that which actually is, and which under certain circumstances is not manifest, the 'potential' may cease to be a phrase and may become the solution of the problem." Two and two simply are not four, but they are the ground of putting two and two together. So mental activity that is "only present and simply is" is not the apprehension of an agent acting, but it is the ground that makes such apprehension possible and is besides its necessary presupposition.

Like Professor Alexander, Mr. Bradley regards mental activity as a phenomenon. Herein lies the radical difference between us. He asks: "What is the content of activity as it appears to the soul at first in distinction from what it is as it is . . . for the soul later on," and complains that he has "failed throughout to get an intelligible reply." It never occurs to him that he has possibly asked an unintelligible question in assuming that all experience consists of appearances. I do not suppose that Mr. Bradley intended to lay any stress on the different language that he has employed in speaking of activity as it *appears* to the soul at first and activity as it is for the soul later on. But at any rate I think it would be more correct to transpose the terms. Later on, the subject of experience may have what we loosely call an internal perception of itself acting and feeling, but in this perception and distinct from its object the subject immediately acts and feels; and that it was true of its experience as long as that experience was entitled to the name. This percept we may call presentational, the immediate act of feeling we cannot. The phrase a "feeling of" is not, it is admitted, very exact. We may talk of an "apprehension of" with perfect propriety, but in immediate experience the subject, it seems to me, can only be said to feel and act. Later on, largely through intersubjective intercourse and reflexion, it may come not simply to be a self, not simply to act and feel, but to know itself as having acted and felt. "Wherever you meet a psychologist," says Mr. Bradley, who takes this experience as elementary, "you will find a man who has never made a serious attempt to decompose it or ever resolutely faced the question as to what it contains."[10] "Whereever

[9] *Appearance and Reality*, p. 459.

[10] *Appearance and Reality*, p. 116.

you meet a psychologist," I have replied, "who essays to resolve himself and his experiences wholly into content or phenomena, there you find a man who, because he can't see his own eyes, seems to think he hasn't any. Out of 'psychical machinery' he tries to develope its own presuppositions, and smuggles into it what is really distinct from it and is its own motive-power." The psychology I am trying to defend, Mr. Bradley calls a "preposterous psychology." That epithet, I reply, is more appropriate to a psychology that can only help itself along by means of metaphors that imply and presuppose the very fact it is trying to explain.

III. CARVETH READ

IT is a paradox that consciousness and activity are the commonest things in the world, and the most familiar to all of us, and yet we cannot agree in describing them. It is another paradox that the commonest cause of misunderstanding has long been recognised to lie in the ambiguity of terms, and yet we make very little progress in agreeing upon definitions. Even if we sometimes seem to be agreed upon the use of an important word, presently a new interest awakens, or an old interest acquires new life; and then, if its adherents think it would be strengthened by using that word in another sense, they make no scruple about altering it: like that sort of Economist who hopes to add dignity to labour by calling it "capital." Something of this kind is at present the matter with "consciousness." For a good while this term, when used without qualification, has stood with many writers for the whole of noetic experience: here and there the more venturesome may have extended it to cover the supposed anoetic experience of man, or animals, or what-not; but for our present discussion we may leave them out. "Consciousness," as denoting all noetic experience, content, or matter, as well as form, has been a term in common use; but now Realism or, more particularly, perceptive Realism has come into favour; and it seems to be thought that the doctrines of perceptive Realism require for their effective statement such a limitation of the term "consciousness" as to exclude from it the content of experience altogether, or to admit as little as possible; so that it shall mean not much more than the form or process of experience. Strict limitation of it to form or process is difficult.

For my own part, whilst strongly sympathising with the new Realism, so far as it asserts the objectivity, stability, substantiality of the world as it is known to us, I see nothing in this doctrine incompatible with the use of the term "consciousness" as equivalent to noetic experience, content and form. There is, in fact, no opposition between empirical Realism and Berkleyan Idealism. It seems to be supposed that consciousness must be the same thing as subjectivity; but it has been explained over and over again that Object and Subject stand for a distinction within conscious-

ness; and this seems to me to be true. To say that the sky is consciousness is a paradox; but to say that the sky as known is not consciousness is a contradiction. Now, what is the sky except as it is known? Any object directly known, or that can be brought into the focus of attention, I call either a phenomenon or a representation. If it is perceived in space it is an object in the full sense of the term, or a phenomenon; if it is an image of such an object, and not in space (that is, not definitely modified by my own movements) it is a subjective object, or a representation. But all that region of experience which is never an object of direct attention, always a matter of marginal awareness, is not a phenomenon nor yet a representation; and this comprises all feeling and conation. There is also a kind of experience, namely, meaning, that clings to all objects and is normally marginal, but may usually, in some measure, be brought into focus if we have an interest in doing so; it can be brought into focus so far as it can be resolved into images. Phenomena, then, are objects in consciousness; but consciousness is not a phenomenon, for it is not in space; nor a representation, for it is not even in time. It has no ascertainable limits of any kind, and both space and time are constructions within it. The subjectivity of experience is equally profound and inexhaustible. There lie all the meaning and all the value of direct cognition. It responds to every modification of cognition. It is the commentary upon everything that is seen or thought of. And if we pause upon any object and call the meaning of it into the light of attention, our subjectivity is in no way impoverished, for this new object has its own meaning and its own value. To treat the known object or phenomenon as something independent is a gratuitous surrender to common-sense and to the less intelligent students of physical science, who have never advanced a single argument to justify their naive assumption on epistemological grounds. It is true that the world or the sky is not merely my consciousness; but everyone's who will look. It belongs to generic consciousness; and it may be asked what becomes of it if we do not look, or if we all fall asleep. Heaven knows. For me, as a matter of belief, it then has its own being, as it is not known to man. But so far from gaining objectivity under that condition, it is reduced to a bare idea. There certainly is no science of it. Where is the chemistry or the physics of any world but the waking world?

Prepositions are most confusing vocables: they are always trying to put asunder what God has joined together. We often hear that the world is present *to* consciousness, that it exists *for* consciousness. A sense of the inadequacy of merely human speech leads others to add the prepositions together, and to declare that it is present *to* and *for* consciousness. But all these phrases have the fault of separating consciousness as an abstraction from the actuality of experience. There are not two things, one of which can be *to* or *for* the other. There is only one thing, the known world. The least pernicious prepositions in this connection are *in* and *of*. One is

tempted to speak of the content *of* consciousness; but consciousness is not a bag. I feel inclined, for this reason, to object to the word "content" in this use of it, and to urge that the phrase "matter of consciousness" is better. But, waiving that, I shall urge that what is sometimes called the "content of consciousness" is consciousness itself, and so are all the changes that occur in that content, the processes, and the laws or forms of them.

It is, I think, peculiarly difficult to reconcile any other view with physiological psychology, which treats conscious processes as functions of the neural system, more particularly of the brain. For the best ascertained doctrine of that study is that there are localised areas in the brain, the excitement of which gives rise to the various kinds of sensations, that is, to "content." The simpler lines of communication between these areas, corresponding with the complication of sensations, may also be said to be known. But what it is in the brain that corresponds to the perception of objects in space, and to other important processes, such as reasoning and volition, may still be described as "clotted hypothesis." However, it is an indisputable deduction from this theory, so far as it goes, that the body itself is a phenomenon in consciousness—if consciousness is a phenomenon, the body is an epiphenomenon—; and that space is a consciousness-construction, so as to abolish any difficulty that may be raised to the conceiving of the sky as consciousness. Coleridge commented on the danger (in the direction of heresy) of saying that "God is everywhere": rather, he urged, we must declare that "all things are *present to* God." Now cut out the prepositional phrase with its illusory separativeness, and that is true of the world of every mind according to its capacity.

That sensations and sense-qualities are consciousness may be seen from this, that they are inseparable from feeling. Objective themselves, they are never known without this subjective reaction: which may be different, or similar, for different sensations, or for the same sensation at different times; but is never wanting. This variability of our feelings enables us to distinguish the sensation from them, but not to separate it from them. A similar connection holds between sensations and conation. And in this way we may interpret the "subject-object relation." It is not a relation between independent things, but corresponds with one of the contrasts of focal and marginal knowledge. In perception things are focal and ideas are marginal; in reflection ideas are focal and things are marginal; so that percepts and ideas may both be considered as objects; but both in the attitude of perception and of reflection, feeling and conation are marginal, and are always subjective. We cannot separate these elements of experience and call some of them consciousness and others not: consciousness and experience are identical.

Now, as to Activity, it seems to me to be, in its most general sense, the same thing as change of experience. All change of experience is activity of

consciousness; and we may say that activity of consciousness is measured by the number of distinguishable changes that occur in an unit of time. These changes are both objective and subjective. If I watch the traffic in Oxford Street, there is the procession of vehicles and of animals of various species, with their noises and odours; the ideas they excite of how—

> every man hath business and desires,
> Such as they are,

and the purposelessness of all their purposes; and back of all this (as they say in America) there is a subjective crowd of feelings and impulses. The physical factors of this scene impress me with a sense of force, which makes me keep out of their way; and at the same time I attribute them to causes. The causes lie beyond my present experience; but can only be thought of as if I witnessed them. Under that condition they can be conceived very definitely as previous changes amongst similar objects; but the force of them cannot be definitely conceived, except by identifying it with the causes of what is happening and to happen next. Hence the whole physical activity is reduced to changes, preceded by changes, and to be followed by others in a definite order.

Do the changes that meanwhile go on amongst my ideas and in the subjective crowd of feelings and conations require any other analysis? They all seem to have their antecedents, though their relation to those antecedents is much less easily reducible to order under definite concepts than are events in the physical world. Some of them give an impression of force, such as the occasional conations involved in walking under conditions that do not permit of an easy rhythm being established, turnings of the eyes or head, various impulses and inhibitions, and perhaps an effort to think of something else and far away. But in all this I find nothing but changes, antecedent changes, consequent changes, and the sensations of conation, which, some of them, obviously, are strain and pressure sensations easily localisable, whilst others have the same general character, though not so definitely localised. Throughout, the subjective activity is, like the physical, nothing but change of experience.

The consciousness of activity is, then, in the first place, a consciousness of this activity of consciousness in its totality. This is, for the most part, identical with the activity of consciousness, the content in all its processes. It is possible, indeed, to have an occasional awareness of such activity in a peculiar way, a momentary reflection of it, highly symbolic in presentation but rich in meaning, an epitome of experience, which I take to be one of the things that are sometimes indicated by the term "self-consciousness." But this momentary reflection enters, of course, as one change into the stream of changes; and its natural position is marginal; for if it reaches the centre of the stream the whole direction and character of the activity

is diverted.

But "consciousness of activity" is naturally a narrower notion than "consciousness of the activity of consciousness": it means consciousness of self-activity—of the psycho-physical organism in thinking, observing, running; for, as a matter of experience, when I am running my mind runs; and when I am thinking my body thinks. It is true that when a man is running his mind may do a good deal besides running; and that when thinking he may sometimes almost forget that he has a body. But the attitude and behaviour of his body, its health or discomfort, influence all his thoughts, and it is the psycho-physical whole that constitutes himself, his individuality in relation to other individuals.

It may be said: "But, surely, all activity of consciousness is an activity of the psycho-physical organism, and, therefore, self-activity"; and there is a sense in which that is true. Still, metaphysics is an affair of distinctions; and good metaphysics draws the right distinctions. In this case we must distinguish within the activity of consciousness that region in which the self is relatively active from that in which it is relatively passive. The expanse of the sky or the traffic of the street are passive experiences, as near to the abstract physical as anything can be; but when I save myself at a crossing from the thunder of a brewer's wain, or reflect with scorn how all such trumpery is doomed to fly over the back side of the world, these are experiences of self-activity, or activities of the psychophysical organism; and the poetical reflection on trumpery comes as near as anything can to the abstract mental. But no abstraction has real existence.

Consciousness of activity usually involves some effort and choice, as Professor Alexander has said; and although unable to identify it with conation, which seems to me to be a factor of the marginal content, I agree that conation is a character of it. Conation is not a presentation in the same sense that feeling is not, namely, in as much as it is marginal. But to separate conation from the matter of consciousness is possible only on condition of limiting such matter to objects (things and images); and excluding the meaning of them and the feelings and reactions they excite. Objects and presentations thus segregated, however, are entirely unknown; they have no significance and (strictly) no existence. Consciousness of activity is that portion of the activity of consciousness which is determined by interest in an end. This implies conation, and the liability of having to make an effort; but the activity bears no proportion to effort; for it includes cognition, which may be extensive and varied, in happy hours, with very little effort; and at other times (alas!), in spite of the utmost exertion, activity may be small.

Thus far I had written before receiving Professor Ward's paper. Having very few leisure hours in the week, I foresaw that if I should wait to

begin my own paper until his came to hand, it would be impossible to get through my own task quickly enough to leave the next man a reasonable time for reflecting on the course of the discussion. It was fortunate that I did so: for otherwise I might have felt embarassed to find much to say beyond the assenting to Professor Ward's criticisms. There is, however, one point at which he has agreed with Professor Alexander, which to me seems questionable, namely, whether conation is resolvable into strain sensations. He has not enlarged upon this; but it may not be erroneous to assume that he agrees with the views of Professor Stout in the *British Journal of Psychology* (July, 1906). Professor Stout there argues that if conation were identical with motor sensations, "the intensity of conation would be simply identical with the amount of motor sensation connected with it. But this is not so. Conation may be as strong in giving the finishing touch to a house of cards as in lifting a heavy weight." In every bodily action, however, there is a great deal more than conation, namely, the special adjustments required by it, which may call forth very different degrees of effort. Conation is distinguished from particular voluntary actions as being something common to them all. To abstract this common character is difficult: but so far as it can be done it appears to me to be probably true that the intensity of conation is proportionate to the motor sensations involved; or, more correctly, to the motor sensations and images; for, to the best of my judgment, "felt tendency" consists of the images or memory of former conations by which we anticipate the action now proposed. The difficulty of forming an opinion upon this point is due to the marginal position of the experience to be analysed; you can only watch it out of the corner of your eye. It is the same kind of difficulty as one finds in trying to discriminate qualities of pleasure.

The consciousness of activity, then, I take to be the consciousness of changes of experience so far as they are brought about by the interest of the psychophysical subject, or empirical self. In Psychology and Epistemology this is as far as I can get; but I had supposed that the Aristotelian Society was concerned in some measure with Ontology; and I should have been glad to hear its opinions upon the good old-fashioned doctrine that all activity is activity of the soul: a belief which, for my own part, I can neither verify nor relinquish.

IV. G. F. STOUT

I AGREE substantially with Dr. Ward in his criticism of Professor Alexander's paper and Mr. Bradley's views, and the points which he urges seem to me sufficient as a basis of discussion without my attempting to add much new matter. I shall therefore only make one comment on Professor Alexander's general position. I fail to see the logical connexion between his statement that "consciousness," or mental activity, is nothing

but a phenomenon and his positive account of the nature of consciousness. He seems to me first to concede everything that is meant in asserting that consciousness is not a phenomenon and then to make a complete change of front by affirming that it is nothing but a phenomenon. The term phenomenon may be taken in two senses. It may be taken to mean an appearance in distinction from that to which the appearance appears. Now, from this point of view, Professor Alexander clearly recognises that activity or consciousness is not phenomenal. It is, according to him, directed to objects, but is not itself an object; for there is "no consciousness of consciousness." In the second sense, a phenomenon is so called, inasmuch as it is regarded as the appearance of something other than itself. It comes before the mind as something to be interpreted by developing its implications and connexions within a systematic order of inter-related elements. From this side, also, Professor Alexander virtually admits that consciousness is not phenomenal, as sensations and material things are. Sensations, he tells us, are known only as elements of these spatial and temporal complexes which we call physical objects. And, I presume, he would admit that physical objects are known only as belonging to the spatial and temporal context of the material world. But mental activity, he seems to say, is not an element in this systematic order of relations. It is not an object nor an element of objects, but quite disparate in nature from anything objective. Even though it is only found in connexion with living organisms at certain stages of organic development, yet it cannot, in Professor Alexander's view, be itself a constituent element of these organised bodies. For, if he said this, he would be regarding consciousness as one special item among others distinguished from the and related to red or as green or as red or green may be distinguished from and related to each other, or to the physical conditions on which they depend. But this is irreconcilable with his whole position and, in particular, with his statement that "*all* consciousness is self-consciousness." For this implies that consciousness is not a special objective item co-ordinate with others, but rather an inseparable aspect of all knowledge, whatever may be its special object. It cannot, then, be in this sense that consciousness is phenomenal. What then does Professor Alexander mean by a phenomenon?

Professor Bead introduces what he has to say on activity by a discussion of the nature of consciousness. This part of his paper I find it difficult to follow. In the first place, it contains what looks like an explicit inconsistency. We are told that "what is sometimes called the 'content of consciousness' is consciousness itself"; and it is plain from the context that under "content of consciousness" Professor Bead includes whatever is in any way known or thought of, so that he must regard "phenomena and representation" as contents of consciousness, and therefore as identical with the consciousness of them. But in seemingly point blank contradiction to this position, we are also told that "consciousness is not a phenom-

enon, for it is not in space; nor a representation, for it is not even in time." I do not find the difficulty removed or even mitigated by the statement that there are other contents of consciousness besides phenomena and representations in space or time. For, if we adhere strictly to the identification of consciousness and its content, this only means that, besides these, there are other kinds of consciousness. Nor am I helped by the further statement that space and time are themselves contents of consciousness. For, abiding by the identification of consciousness and its content, all that can be logically deduced from this is that some consciousness forms part of other consciousness. It would seem that further explanation is required here.

Again, if I seek for Professor Read's positive reason for this identification, I find that he contents himself with alleging an inherent self-contradiction in any other view. "To say that the sky as known is not consciousness," he urges, is "a contradiction." But it is so only if we already assume that "being known" and being consciousness are indistinguishable. Everyone admits that *knowing* is consciousness. The real question is whether what is known is simply identical with the knowing of it. This seems to me no more self-evident than it is self-evident that bread as digested is simply identical with the digesting of it. Doubtless, there is essential correlation, but every relation must have two terms, and the fact that one term *a* enters into the relation is not distinguishable from the fact that the other term *b* enters into it.

Again, I do not find Professor Read's appeal to physiological psychology at all helpful. The psychological doctrine which he regards as especially important and relevant is that the body itself is a "phenomenon in consciousness." But, according to his own account of what a phenomenon is, this ought to mean merely that the body is something known and known as existing in space. We scarcely need physiological psychology to inform us of this. And how can it strengthen Professor Read's argument? Apparently he is here resting his case on the assumption that what physiological psychology teaches is, not only that the body is known, but that it is known as being merely a complex of sensations, and the further assumption that sensations are mental existences inasmuch as they exist only in being experienced by an undivided mind, and again on the additional assumption that there is no possible distinction between sensations, so regarded, and the knowing of them. But all these suppositions are disputable, and two of them, the first and the last, appear to me to be false. Neither our own body nor any other body is known to us merely as a complex of sensations. The knowledge of material things includes, throughout its whole development, the thought-reference of a content derived from sensuous presentation to what Kant calls a "transcendental object." And even if we confine ourselves to mere sensations, yet the knowing of these sensations, involving, as it does, recognition, discrimination, identification, comparison, etc., seems to me distinguishable from the existence and

qualities of the sensations which are recognised, discriminated, identified, or compared. I cannot, of course, discuss these large questions further in the present paper. What I wish to bring out is merely that Professor Read is making, consciously or unconsciously, highly disputable assumptions.

There is one view put forward by Professor Read in his preparatory remarks which has a specially obvious and direct bearing on the topic of our present discussion. I refer to his distinction between phenomena on the one hand, and feeling and conation on the other. According to Professor Read the difference is that phenomena are objects of direct attention, whereas we have only a marginal awareness of feeling and conation. I am not at all sure that our awareness of feeling and conation always is marginal. Certainly this hardly seems to apply to my dissatisfaction with a toothache. But I waive this point in order to deal with another which seems more essentially relevant. The question I wish to raise is this. Supposing that feeling and conation were as definitely and directly objects of attention as "phenomena" are, would they cease to be subjective and themselves become phenomena? To me it seems clear that they would not. For there would still remain the ultimate distinction founded on the relation of Subject and Object. Being dissatisfied, attending, desiring, hoping, and fearing, all imply something with which we are dissatisfied, to which we attend, or which we desire, hope, or fear. This something is what we call the object of these processes, and the processes are contrasted with their objects as subjective. The distinction, as we know it, is quite independent of the special manner in which we may be supposed to know it.

Professor Read is comparatively brief in his direct treatment of Activity. I select for comment three points—his distinction between activity in general and self-activity; his view of the relation between activity and effort; and his view of the relation of activity to motor sensation. As regards the first point, he proposes to call all "change of experience" activity of consciousness. My objection to this is very simple. Whatever licence we may allow ourselves in the use of terms, we ought, at least, to refrain from applying them in such a way as to obliterate the very distinctions they are intended to express But Professor Read's general activity would also include all that we mean by passivity. It is like proposing to include under the same term, *husband*—both husbands and wives. Unless we deliberately intend to confuse ourselves, we must confine the term *mental activity* to what Professor Read calls self-activity. When the "mind runs," it is *pro tanto* active; but when it is tossed in a blanket, it is *pro tanto* passive. Yet there may be the same amount of change in both cases.

As regards effort, Professor Read holds that "in spite of the utmost exertion, activity may be small." This can only mean that what we call unsuccessful activity is *pro tanto* not activity at all. I submit that this is a very inconvenient restriction of the use of the word, and not at all consonant

with ordinary usage. Surely it is better to say that we are active in making an attempt, whether the attempt is successful or not,—that we are active in seeking, whether or not we succeed in finding. Activity is to be regarded as the presupposition of the distinction between success and failure.

Professor Read's view of the relation of motor sensation to conative consciousness seems to be as follows. By no means all motor sensation is felt as conation; but some of it is,—a vague residuum, difficult to isolate by abstract analysis. Now, I simply put one question. How are the muscle, joint, and tendon-sensations which are identical with or proportionate to conative consciousness distinguished from other muscle, joint, and tendon-sensations? The difference in their nature is far more marked than that between those connected with movements of the arm, leg, or scalp.

On what physiological conditions can the distinction be surmised to depend?

V. *Reply by* S. ALEXANDER

MR. WARD'S fundamental difference from me on questions of theory of knowledge has led him to certain misapprehensions of my meaning. These I desire to correct, gratefully acknowledging criticisms which compel me to speak more accurately, though not to change my mind.

First of all, he objects, I declare mental activity to be simple and unique, and yet afterwards to be definitely describable. In calling mental activity, or consciousness, unique, I mean, that it possesses a character which we must accept as a new fact in the universe, like redness or life. But as I may describe red as a colour, I may justifiably connect mental activity or process with process in general. And I may go on to describe other properties which I find out about it, and this I have attempted to do. The mere fact that we can say that mental activity has direction and has rate is enough to show it to be describable. Again, and this I lay stress on, though mental activity as such, as having the peculiar character of consciousness, can only be indicated, we have it occurring in various complexities: it is simple in sensation, more complex in perception, extremely complex in volition. And I take the object of Psychology to be to describe and distinguish these various grades of complexity.

Next, and this is my answer to his second charge, one of the properties I discover in mental process as such is that it has a definite place in space. Mr. Ward says that I first say it is only metaphorically movement, and then go on to say that it is literally a movement, and a movement to which I have transferred the idea of activity; and he then points to the history of physical activity as having got rid of this idea of activity. This is really quite a misapprehension. When I speak of physical movement I mean physical

process as it occurs in the physical world without imputing to it activity, without any theory about it at all, and when I say that I feel mental activity occurring in connection with movement in my brain, I mean only that it occurs in that portion of space, and is experienced by me as occurring in my brain. I see no more difficulty in this than in a well-known proposition, that mind is situated at the synapses of the neurones; only of course I cannot discover this last by inspection, whereas I do discover by inspection that mental process is connected with some portion, however vaguely felt, of my brain. Mr. Ward asks, why should what is felt as occurring in the body yield the experience of mental activity? I venture to plead that we should never ask why should or should not things be so, we should only ask if they are so, and if we find this is the case, make our account accordingly. To me the matter is one of fact, and I can find no mistake in my own description. I need not again allude to what I have already said: that in locating my mental activity in my brain I am using my acquired knowledge of brain, and not direct inspection. But apart from this, when I say that mental process is located in movements of the brain, I am saying no more than I say when I say that the tree under which I am writing is planted at the edge of the lawn. When, therefore, Mr. Ward accuses me of kaleidoscopic transitions (I forgive him this indulgence of his wit), he has not quite seen that I am trying to describe whatever I can find to say about my consciousness of activity without making any presuppositions of any sort. It is a further step, not of inspection but of theory founded upon it, when I go on to simplify by declaring not only that mental activity is found in the movements in the brain, but that it is essentially a movement in the brain with a new property of consciousness. There is no greater difficulty in this than in saying that a body has life. Life is not merely mechanical, and yet it is a property of something which is mechanical.

At every point that I come into conflict with Mr. Ward it is not upon psychological but upon epistemological ground. He complains of me that I have led the discussion to the edge of the bog and stopped there. Well, I had to stop somewhere, and I thought, and think, it all important to be so prepared by description of experience as to be able to find a path through the bog. This path I think I dimly see; I also think I see Mr. Ward out of the path. I wish that the hand I can offer him were not so weak, or that I had any hope of his accepting it. But I can hope to remove misapprehensions. In the first place I have used the unfortunate word phenomenon. I have made up my mind that I shall never use the word phenomenon again without carefully defining its meaning. How Mr. Stout can say that I describe the mind as if it were not a phenomenon passes my comprehension. I have said that consciousness is a property of a certain sort of brain. How, then, can it be other than one thing among a number of other things? To suppose that mind to be a phenomenon must be an appearance to something else is to suppose that the only phenomena are physical things.

But, in fact, I meant by the word almost nothing at all. When I speak of phenomena I only mean things which are or claim to be definitely verifiable or inferable facts, as opposed to something that is merely symbolical. Again, when I say that it is the business of Metaphysics to describe what sensations are, I mean only that it is its business to explain the difference between an object so far as it is sensed, or perceived, or imagined, or conceived. All these things—sensations, perceptions, conceptions—are for me objects and part of the real world. I was under the impression that many thinkers (and I thought Mr. Ward was one of them, probably mistakenly) do not regard mental activity as merely a natural fact, but as something on which in some way natural facts depend. In the next place, when I somewhat incautiously speak of mind as a thing, and also of the thing made up of body and mind, I do not mean that mind may exist apart from body; on the contrary, mind is the property of a certain kind of body. Next, Mr. Ward refuses to assent to my proposition, that the only things mental are conation and feeling. There is, he urges, a receptive constituent in the psychosis. Now, here I venture to repeat my description. I take green. There is, of course, a receptive attitude, but it is a conation, though a passive one. There is nothing in green, as green, which is mental. When I have the sensation green, my consciousness works in a particular direction, and that is all. As to feeling, I admit, of course, the incompleteness of my position. But feeling and willing stand on quite a different footing from presentation, and what I mean is, that if you want to know of what stuff the mind is made, you must look to conation; and at present it seems to me that pleasure and pain belong to the stuff of mind, and that they are properties of conation like its direction.

But now, this being so, my epistemology at present is only this; that the cognition of the external world is a reaction upon the external world in which mental activity, varying in direction and complexity, is evoked. Of course, you cannot have mental action without things to evoke it. Neither can an animal have life without air to breathe. But the relation of cognition is, I think, precisely of the class of organic reactions; the only difference is in the terms of the relation. The reagent, which is conscious of the physical world, is the one which has the property of consciousness. I admit and insist that things are related to the mind, and the mind to things. But the relation is one of reaction. You cannot, therefore, say the physical things in any sense depend upon the mind. But now, when I have recognised that mind is one sort of thing among things, then I am prepared to see that its activity is of the same genus as physical activity. The naive mind thinks physical process is one of conscious volition. We have got rid of that. But have we got rid of the fundamental fact of continuity in change? This I find in its simplest form in mental activity. I find it also in physical process. And I believe that the same thing is true of all the so-called categories: they are found both in physical things and in mind,

and are most easily recognisable in mind. At any rate, as regards the particular category of causality, I reject the teaching of Hume and accept that of Locke, and I may observe by the way that according to the description which I have given of mind, mind is nothing but that part of things which Locke calls Ideas of Reflection.

Of course, I know that in supporting the beliefs of the common mind I am guilty of the philosophical paradox of declaring that the mind which knows things is only one among the things which it knows (and the other things which possibly it never can know, but which other existences might know). This is the paradox to which Lady Welby, with her usual penetration, has referred in the appended note.[11] That it is no paradox at all is with me, at present, an intuition, and I am trying continually, without satisfying myself, to express it in terms which shall be convincing to others: I mean, which shall enable them to put themselves at my point of view and see with my eyes. All I can say at present is this. Here are two things, A and B; B is physical, A is also physical, but has mind. When B calls forth a mental reaction in A, A is conscious of B, and at the same time aware of itself. Let A be myself. I know things and am aware of myself. But myself is my awareness, the thing of which I am aware is not myself. To use a phrase which I have learned from Mr. Stout in conversation, the "of" in the phrase "I am aware of myself," is the "of" of apposition, as in Locke's phrase, "the idea of a sensation"; when I am aware of the tree, the "of" is the "of" of reference to something upon which I react. But just because there is awareness in A, B is said to be presented to A. Now A, the feeling,

[11] Lady Welby sends to the meeting the following note:-
"On the occasion of the symposium on 'the Nature of Mental Activity,' I venture to suggest the need of a previous question, which I cannot discover to have been definitely asked with reference to modern knowledge, still less satisfactorily answered. The question is, Who or What is to consider and pronounce upon the subject? I few answer, Man, what *in this context*, do we mean by 'Man'? Do we mean Someone able, for the purpose in hand, to dissociate himself entirely from the matter under consideration, so as to arrive at a trustworthy, because an impartial, judgment,–that of a third party? That is, assuming an attitude apart from mental activity, do we propose, as beings infra- or supra-mental, to discuss the nature of what, for present purposes, is other than ours? I imagine tha various theories are to be criticized, and others formulated or adumbrated. Does this involve mental activity or no?
"There are, of course, many cases when what belongs to us, and can only in a secondary sense be identified with us, is and must be discussed by us. But how do we propose to discuss and decide on the *nature* of that which alone discusses and decides? Is there not something 'circular' in this process?
"It may be objected that, from this point of view, the psyche cannot discuss psychology. Well, everywhere there is surely needed some kind of ultimate reference or arbiter, some relatively independent critic? If so, this ought to be clearly defined, and named as distinct from, while including, 'mind.'
"For, as we are, does not our use of 'mind' throw us back into the same perplexity which the discussion is to remove? Do we not need a yet anonymous third factor: a speaker, in fact, who can detach himself from 'mind' in discussing its 'nature?'"

perceiving, thinking thing, talks; and it feels itself, and it knows B, and describes B by words. Afterwards, it applies to itself the words which it has first used about B, and then it is said to describe itself. It just puts into words the two parts of the world of which it is aware. But the things in the world are there independently of B's awareness of them, and for all I know there may be things in the world of which A never can be aware, for want of the means to respond to them. Mr. Ward thinks this notion as insane as the consciousness of consciousness. But the difference is this, that I cannot stop at two terms of the last series, and when I go on to three terms my head begins to spin. Carry me along to four or five terms and I am in Colney Hatch. I apprehend no such danger in forecasting another kind of being to whom my consciousness might lie open as a book, in the same way as life lies open to me, to my consciousness. I admit the strangeness of the conception, that things in the world should exist in their own right, and that yet there is one among them, my mind, which knows the others. But the strangeness disappears with familiarity. It is the business of mind to know itself and other things.

Of course, I am well aware of all the questions which are thus left over, to be settled by Metaphysics, or theory of knowledge. The problems of memory, of the existence of the past, of error, of imagination; how I can by dint of my mental activity call up in imagination objects which yet are not myself; how my memory brings before me things which have no present existence. I have no brief answer to these problems. If I had been required to answer them, I should not have undertaken the discussion. But I see no reason why in Philosophy, any more than in any other science, we should refrain from dealing with one portion of what we know to be true, just because we have not complete comprehension of the whole. I recognise no difference of method between Philosophy and the other sciences. I see that we have scientific knowledge when we use the utmost effort to depersonalise ourselves so as accurately to reflect the things about us. We depersonalise ourselves in Philosophy by describing the facts we find in the whole of our experience, and not asking what must be, nor seeking for logical connection where we only find juxtaposition, try to confine ourselves to what we see.

VI. *Reply by* CARVETH READ

FIGURE to yourselves my astonishment at finding that a series of propositions that seemed to me self-evident may be regarded as altogether obscure by another mind that I had been accustomed to trust.

Phenomena and representations, I say, are contents of consciousness, and, therefore, identical with the consciousness of them. They all occur in space or time, or in both; and therefore consciousness is not a phenom-

enon, for it is not in space or time. On the contrary, space and time are constructions or arrangements of phenomena or representations in consciousness. This is intuitively clear. If it be objected that, at any rate, consciousness is the totality of related phenomena, together with the marginal commentary upon them, I reply that this what I have said: all things are present in consciousness, for I certainly assume that there is no consciousness of nothing.

Whether the sky as known is consciousness? Again, the affirmative is self-evident to me. What is known is identical with the knowing of it so far as we can know it. It is quite useless to seek amongst phenomena for any simile for what is called the relation of consciousness to its object, because there is no such relation; there are not two terms. I see no analogy between the digesting of bread and the elaboration of cognitions.

My appeal to physiological Psychology was made in reply to Professor Alexander's position, that consciousness is "simply a phenomenon found in certain organisms": on the contrary, I say, on the physiological theory the body is a phenomenon in consciousness. But I did not refer to Professor Alexander directly: knowing well what was in store for him. Professor Stout says my deduction is not good, because "the knowledge of material things includes, throughout its whole development, the thought-reference of a content derived from sensuous presentation, to what Kant calls 'a transcendental object.'" But we must distinguish the knowledge of a thing as such from our knowledge of it in analysis. Physiological Psychology knows nothing of material things; and I am justified in saying that it resolves the body as known into the rawest material of consciousness. A material thing as known is, in my opinion, referred to a transcendental object, but only by what I have called an "indicative or orectic judgment," because the transcendental object is never a knowable term. I agree, of course, that the raw materials of sensation are very different from an elaborated phenomenon.

I also admit that the line between focal and marginal consciousness is far from clearly marked, and that in this connection toothache has often given me trouble. In fact, all pains give trouble to psychologists, as appears from their differences of opinion as to whether pain is feeling or sensation. I incline to regard it as sensation and as capable of being directly attended to. But whether feeling and conation would become phenomena if they were direct objects of attention, I do not know. The case reminds me of Poincaré's frequent assurances of what experience would be like if the world were entirely different from what it is. I have no courage for such excursions. But I may observe that, if we try to bring forward a conation so as to study it, it ceases to be the present conation; for that is now the effort to bring it forward; and this effort is marginal.

All change of experience is activity of consciousness, because there is no such thing as passivity, just as there is physically no such thing as rest. But the couple—active, passive—is not thereby made useless: it has a relative application. I have shown this; and have concluded that consciousness of activity is that portion of the activity of consciousness which is determined by interest in an end. That is what we mean by *our* activity. Interest in an end often excites great efforts (for example) to think; yet the resulting activity, measured by changes in the ideational and sensuous content, may be small. I congratulate every Aristotelian who has not had this experience when trying to think of something to say.

Probably the intensity of conation is proportionate to the muscle sensations involved. In finishing a house of cards these sensations (I say "muscle" for brevity) are such as the fixing of the eyes, holding the breath, scalp-strain, circulation, etc.; and there is not very much else; for the limbs employed are small and their contractions slight. In a football scrimmage all these sensations are present, but they are completely masked by massive sensations from the whole of the trunk and limbs. That is to say, to the common footballer they are masked, but they cannot entirely escape the eye of the psychologist.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Mental Activity in Willing and in Ideas

S. ALEXANDER

VOLUME IX

1909

EDITORIAL NOTE

The following paper by S. Alexander - "Mental Activity in Willing and in Ideas" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume IX (1908-1909), pp. 1-40.

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VII. MENTAL ACTIVITY IN WILLING AND IN IDEAS

S. ALEXANDER

LOCKE, as it will be remembered, divides the objects of thought or ideas, so far as concerns their origin, into ideas of sensation and ideas of reflection, as well as a third class of ideas which are common both to sensation and reflection. The ideas of sensation come to us ultimately from sensible experience. The ideas of reflection are those which we have from reflecting upon the operations of our own minds. Now, I take it that we may conveniently say that while ideas of sensation are the subject matter of the physical sciences, the ideas of reflection are the subject matter of psychology. Locke's simple enumeration, though so well known, is well worth recalling, because it makes a clear theoretical distinction between objects open to external inspection and objects open to internal inspection. It requires, of course, qualification to make it correspond with psychology as at present understood. In the first place, though these processes are described as being such as are open to reflection, it does not follow that simple inspection will teach us everything that there is in them or that can be known about them—we may have to have recourse to indirect methods as well. I do not mean merely that we may need to use experiment, which by itself offers no theoretical difficulties, but that we may need in order to discover the nature of our mental processes to direct our attention, in the first instance, to the contents or subject matter, the ideas of sensation, upon which those processes are employed. We may need to get at our mental processes from a study, as Mr. Stout says, of the presented objects. In other words, the operations of our mind may call for all manner of other helps than simple introspection in order to reveal them to introspection, and much may be learned about their conditions which is not open to introspection at all. But it remains true that the study of mind is, in Locke's language, a study of the processes which the mind performs as distinct from the ideas of sensation which evoke these mental processes.

There is a second and far more important qualification of Locke's conception which must be insisted on. Locke distinguished his ideas from the real things of which they were copies. His ideas of sensation and of reflection are mental objects only, dependent in some obscure way on the mind. This was part of his philosophy and Locke wrote as a philosopher and not as a psychologist. But it need be no burden to our psychology. Let us substitute for Locke's ideas of reflection and of sensation mental processes and physical objects and we have the result that psychology is the study of

mind as consisting of mental processes, and physical science is the study of physical objects. We may, if we choose, call physical objects ideas in order to indicate that they are related to mind so far as we know them. But let us not substitute fictions for facts by supposing that a physical object, because it is related to a mental process, gives rise to an idea of itself which is not physical but mental.

This simple, perhaps over-simple, statement that the world which we know consists of two kinds of things, one, our minds or mental processes, and the other, physical objects, is only what is yielded by an unbiassed description of facts and therefore to question it would be left for philosophy and is not a presupposition of psychology. Take an act of will. I will to catch a train. The train is a physical object and so is catching the train. But there is a process of willing to catch it and that is mental. Take an act of thought. I think about the movements of the planets in ellipses. Those movements are physical. Thinking about them is mental. Take an attentive act of perception, say, of a house. I can distinguish here two separate things, the house, which is physical, the attentive perceiving of it, which is mental. There is no doubt in these cases that there are two things present, one mental and the other physical, which are related to each other. But then, on the other hand, there is imagination which may turn out to be mere imagination, and there is error which is not real. And straightway we say that in these cases, consequently, besides the mental process of imaging, there is not a physical imagined object but only a mental idea of it, and therewith we have the doctrine that besides mental processes such as we are familiar with in attention and willing and inference and desiring, there are also presentations which are essentially mental and different from physical things. And in accordance with this, our simple sensations, green, hot and the like, are described as psychical states and sometimes even those who say that psychology describes mental processes declare sensations to be a particular kind of mental process, that there is a mental process green, and another mental process blue, and the like.

Now there is a theory familiarly connected with the name of Avenarius of how this so-called introjection comes into existence. Whether that theory is correct or not I do not inquire. For I believe it to be the case that many who admit to the full the fallacious character of introjection, continue to speak of presentations as if they were elements of the mind's fabric, instead of being merely particular ways under which non-mental objects exist in relation to the apprehending mind. And therefore it does not seem superfluous to disregard the theory of the origin of introjection and to urge that the whole method of supposing that besides mental processes of conation and affection there are also presentations, depends on what I respectfully plead is a hasty interpretation of facts. Locke himself is a sinner. For under the head of ideas of reflection he includes our memories or our imaginations. Now a remembered event or a remembered per-

son or an imagined event or person is as much physical as the perceived event or person. The object apprehended is presented in a different form, but in itself, so far as we can tell from immediate experience, the imaged tree is as much a physical object as the perceived tree. True, the object may be vitiated by elements introduced into it by the mind. But why not take the facts at their face value, and, difficult as it may be, explain afterwards how they come to be vitiated? The stick bent in water is a physical object as much as the straight stick out of water. It is only subsequently that we learn why it appears bent, being itself straight. That does not make the bent stick mental. With one eye slightly displaced by pressing on it, I see two candles. The two candles are two physical objects. Afterwards I can see why they are only two appearances of the one real candle. That does not show that the two candles are mental, but only that the apprehending organ has distorted the real object. When what is thought to be pure water turns out to be full of bacteria, we do not say that the pure water was mental, but only that the water was not really pure. Sensation offers more difficulty, artificial as it in some degree is. But it, too, submits to the same natural method of description. Blue and green and sweet are not in any sense mental processes. No mental process is blue or sweet. But when we experience blue or sweet we can distinguish the physical object blue or sweet from the act of mind which we describe as having those particular sensations. We cannot even say that there is a special qualitative modification of consciousness through which, as through a veil, the blue or sweet is apprehended. The consciousness is one thing, the blue is another, and it is physical. Try to think of your consciousness as being affected bluely, in the same way as you think of how you pass from step to step of a difficult demonstration; or as you think of carrying out an impulsive process. You cannot do it. And you cannot do it because there is no such affection there. The blue is outside your mind. Let me not be told that I am confusing the sensation blue with the physical property of blueness. Of course, the object of the sensation blue is not the same as, or, to say the least, less complex than, the permanent quality of blueness apprehended by perception. And let me not be told that the facts of adaptation, or contrast, or colour-blindness all show that sensations, the objects sensed, are purely mental affections. This is to break the recognised canon of those who copy manuscripts, that in case of doubt the more difficult reading is to be preferred. The reading I defend is, perhaps, the more difficult, but yours, though perhaps easier in these special cases, is contrary to the obvious reading of the vast mass of psychological facts. The variations of sensible appearances, such as those mentioned, merely mean that objects reveal themselves differently to organs which are variously constructed or variously disposed. But in describing our direct experiences, we are not inquiring into what the object really is, or in what sense we attribute reality to the object. When a colour-blind person confuses green and red they are the same to him, but they are different to the normal eye and really differ-

ent. Nor let me be told finally, that to call a sensation like blue physical is to exclude the study of it from psychology and to disturb the traditional boundaries of our science. I do not think so. Psychology is still the most convenient place for the study of these sensations, unless that place be disputed by physiology. What is true is, that physical science confines itself to the study of the primary qualities of matter and treats of the secondary qualities only so far as they are conditioned by the primary qualities. Does this amount to a denial that the secondary qualities in their secondary form are physical ? You might as well say that life is not a physical property because it cannot be completely identified with mechanical and chemical changes expressible in terms of extension, motion, and number. And if you insist in denying blue, as such, to be physical, I reply that it was shown ages ago, for equally good reasons, that the primary qualities must be denied to be physical. But this belongs to metaphysics, and in defining the subject matter of psychology we do not start with metaphysics, but with the simplest statement of the facts we are to study. Metaphysics has its say afterwards, and I do not doubt that it does not disturb what is contained in the simple statement of facts, though it may put those facts into clearer relation with one another.

The conception which results from these considerations is that instead of the triple analysis of mind into cognitions, affections, and conations, we are left with the proposition that consciousness consists of conations with feeling. If we take the more perfect analysis of mind into presentations, attention, and feeling, the element of presentation drops out of the account. It is no part of the psychosis itself. It is only included in so far as conations contain a reference to objects which are not mental. The stuff of which mind is made consists of conations and feeling. In a previous communication made to the Society, I stated roundly that mind consisted of conations, affection being treated as a modality of conation. I still prefer this form of statement, according to which pleasure and pain are features of conation and indicate the furtherance or hindrance of it. But I believe it is true that next to nothing is known about feeling. Only quite recently the doctrine has been revived that pleasure and pain (but not emotions) are mere sensations. If that doctrine were to be established there would be nothing left for mind to contain, except conations. But if not, and I am not convinced that it is so, and if it is still true that affections are a special form of mental experience not expressible as conations, I am still content. Consciousness would then consist of conations and affections. But I do not feel assurance that this is the case, and I prefer to abide, for the present, by the view which I have indicated; which, vague as it is, is a well accredited view and has the merit of insisting that feeling is at any rate closely dependent upon conation. Conation I take to be not merely a fact which is true about consciousness, but something which is experienced as consciousness. If we use the word activity as equivalent to mental process without distin-

guishing between passive and active process, consciousness is, in its main tissue, mental activity. The idea of reflection which we discover by simple inspection is this activity which is what we call consciousness. Attention, impulsive action, volition, active thought, passive association, are some of the familiar forms of this activity. Examining further the peculiar fact called consciousness, we discover that it occupies time and occurs in time, and moreover that it has direction, its direction varying with the physical object to which the activity is related, so that the activity works in a different direction in desire and in aversion, in willing to lift the arm or to lift the head, in perceiving a tree and in perceiving a table, in seeing green and in tasting sweet, and in seeing green and in seeing blue. The word direction may appear to be used metaphorically, but a little further examination shows that mental process occurs in space however vaguely located in it. By saying that it is in space I mean that simple inspection, partly of myself, that is introspection, and partly of nature, that is extrospection, shows that my mind when it works, works in a direction of space; in the same sense as a railway runs along lines, or as a tree is planted on the edge of a garden. The consciousness exists in space just as greenness is spread over a leaf. What the precise spatial direction is, is something as to which we only become clear when later knowledge shows that the locality of the mind is the brain itself. Anyone who carefully analyses a complex mental activity will verify for himself this experience, which whether he takes it literally, as I plead that we should, or only metaphorically, can best be described as a complex and highly differentiated system of directions, here beginning, there inhibited, here pressing on and changing to a different topic, there taking on thoughts that have emerged from another direction. The mind is thus a continuum of such awareness. According to the direction of the awareness the object or presentation changes, or to say the same thing, as the object changes the awareness alters its direction. But the object is never mental; it is never even the contents of the awareness. It is something else on which the awareness is directed. There is another thing also from which the awareness itself must be distinguished, namely, the motor reactions in which consciousness perpetually finds expression: movements, gestures, words, and the like. These motor presentations are new physical objects, and the kinaesthetic or verbal consciousness is but the awareness of these objects. But very often the outward expression is the best or the only guide to the discovery of the inward process, for example, the fixating processes of perception enable us to become aware of the actual perceptive process so far as we can be aware of it.

This leads me on to say in the next place that in like manner we can often most easily, or sometimes only, detect the mental process by investigating the object upon which it is directed. We can study the process of presentation by studying the actual object presented. And this is why it is often pedantic to speak in terms of the activity when it is most natural for

us with our outwardly directed gaze to speak of the object. But it remains true that it is only for the sake of the activity that the presentations are interesting. Accordingly the phrase presentation-continuum, so valuable and fertile in the second portion of the phrase, covers two different things. There is a continuum of processes of presentation awarenesses, or consciousnesses as I call them, and there is a continuum of the physical world of objects presented. Psychology is concerned with the continuum of the acts of presentation.

Consciousness or awareness is a new fact in the world which makes it the topic of a new study. But unique as it is in its character it admits of scientific description, for it varies in complexity. Psychology has to trace these varying grades of complexity. I propose in the remainder of this address to test the value of the description I have given of mind by two inquiries, one into the process of willing, the other into the meaning of ideas in the sense which Mr. Bradley has made familiar.

The characteristic features of willing are best observed in its contrast to impulsive action. In the familiar language of psychology, the impulse is awakened by a perception and tends to an end, but it is not excited by the idea of the end, is purposive without being purposed, and yet is not merely reflex action. Volition is directed towards an end, entertained as an idea. There is another feature in volition which may be deferred, its connection with the self as contrasted with the relative isolation of impulse. In the previous description free use was made of the idea of the end, which was declared to be merely implicit in impulse and explicit in volition. It is not denied that in an impulsive action we may have an image as such of the end, but it is maintained that the impulse is not discharged by the image. The end, if present in idea, is merely a qualification of the provoking object. The breast is qualified as a thing to be sucked, but there is no explicit idea of sucking it which is afterwards realised. But it is just this which characterises volition as a conative action. Now if we are to understand impulse we must put aside the reference to the idea and look to the impulsive activities themselves. It is this which Mr. Stout has done with such conspicuous success in his chapter in the *Manual,* and his account of perceptual process as founded upon the analysis of impulse has, if I may be allowed to say so, seemed to me one of the finest and most enlightening chapters in psychology that I have read, and has, indeed, been the source of such thinking as I have been able to give to the subject. It is so enlightening because he uses the analysis of impulse to explain the two distinguishing features of perception, its unitary character or wholeness as distinct from a mere train of ideas, and, secondly, the presence of ideas in the form not of images but of "tied" or "complicated" ideas. Turn to what we can easily observe, the activity of impulse, and we see at once what is the activity of this part sensory, part ideal, and all the while unitary, process which perception is. In an impulse we have the felt series of activities

running down their prearranged course to a single result, and at the same time, corresponding to the tied idea in perception, in each step in the process there is the preparation for the next. The activity of a tied idea is thus the preparation of the mind, while presently occupied in one activity, to proceed in some connected direction. Now volition is a stage in advance of this. What is it that mentally corresponds to entertaining the end in idea? Self-observation showed and experiments confirmed that the idea of the willed object need not be present in the form of an actual image.[1] Still no one would call it a volition where in some form the object willed was not distinguished from the present condition of the agent. Take the will to lift the arm. It is safe to say that in nine cases out of ten there is no image of the arm being lifted. But as I understand it, the activity to which corresponds the idea of lifting the arm is present, felt as a direction, but inchoate and disconnected with the system of mental movements which is the consciousness of present reality. Now the will to lift the arm takes place when this disconnected mental movement coalesces with and forms part of that dominant system. I take the consciousness of willing an end to be this felt coalescence or continuity of a hitherto disconnected mental activity, and the consciousness of this effective coalescence is the sense of decision or of consenting to the act. The *fiat* of the will, which some writers love to regard as mysterious, is nothing but the snapping together of the temporarily imperfect and disconnected system with the general trend of the mind's activity. By calling the idea of the end an inchoate activity or a direction not completely realised, I mean to indicate the ideal character which volition shares with perception or impulse as contrasted with reflex action. By calling it disconnected I mean to indicate the special features of volition in contrast with impulse itself. Now it is plain that the process thus described may manifest itself in different ways. I may look at an object in a shop window, and the inchoate mental activity of possessing it may be set going and so work itself out as to coalesce with my perception and make me will to buy it and go into the shop. Or the inchoate activity may be suggested in my mind by anticipation in the form of an expectation. I may think of how happy it would be to have money, heigh-ho! and then an offer of employment being given me I accept it as the realisation of my expectation. Or I may have a third case. The ideal activity may remain ideal. It may take the form of an image and yet the will take place as in the case of resolve where the future action is willed, and though necessarily only an image it is realised so far as the future can be realised.

I am happy to refer for support of this analysis to an important experimental investigation by Dr. Ach.[2] Dr. Ach's work belongs to a class of experimental studies whose distinctive feature is the elaborate and systemat-

[1] *See,* in particular, the recent study of E. S. Woodworth in the volume of studies dedicated to Charles Garman.

[2] *Ueber die Willensthütigkeit und das Denken,* Göttingen, 1905.

ic self-observation which is made by the patient. Of this group of writings, besides Dr. Ach's work, the others with which I am acquainted are Dr. H. J. Watt's "Experimental Contributions to a Theory of Thinking,"[3] and Dr. Buehler's recent work, to be mentioned later. Here I refer more particularly to Dr. Ach's experiments. They are experiments in reaction time, some of them of the usual type and others of a different sort. In each case the patient was asked to say what happened in his mind. Three periods are distinguished in each experiment, the preparatory period between the usual signal and the stimulus, the main period that of the experiment proper, in which the patient reacts to the stimulus, and the subsequent period in which he describes what his state of mind was in the two previous periods. The experiment was preceded by instructions as to what the patient had to do. Now it appeared from the patient's testimony that in the preparatory period the patient took up a certain mental attitude and entertained in his mind a certain intention corresponding with the instruction given. This attitude produces in his mind "a certain determining tendency" which in fact anticipates the solution of the problem offered by the experiment. Probably many who have thought about the difference between sensorial and muscular reaction time have represented the case to themselves in this same way. The difference in the attitude produced by setting the different problems determines the character of the response. With regard to the details of the patient's state of mind in the preparatory period, these are very various: he may entertain a picture of the end to be aimed at or more often the end is present merely as some imageless object, an "awareness," Dr. Ach calls it. But the sensible accompaniments may be very different. I had best quote the passage in full. (Page 211) "Normally in the condition of expectation (in these experiments) where the effect of practice is not too marked the following complex content is present simultaneously as awareness: (1) the coming stimulus (a white card) which has a definite place in so far as the patient knows that where he is looking the definite change, that is, the appearance of the white card, will take place. (2) The patient is aware that thereupon a specific known change is to take place on his side, that is, the movement of reaction has to follow. (3) Besides this there is a relation between these two specific changes (the appearance of the stimulus and the movement of reaction) in the consciousness that as soon as the stimulus appears the reaction has to follow. (4) There is a time component of the awareness consisting in the knowledge that the stimulus will appear in a certain time, *e.g.*, between a second and a minute. Besides the immediate content of expectation there are also the concomitants of sensuous attention, such as strain sensations in the upper part of the body and in the organ of vision, over and above the visual perception of the apparatus. Occasionally special components of the awareness complex may appear in the form of images, especially at the beginning of the preparatory period or in the first experiments on any particular day" *(e.g.*, images

[3] *Experimentelle Beitrage zu einer Theorie der Denkens,* Leipzig, 1904.

of the movements to be performed or what Dr. Ach calls "intentional sensations" in the limb, or words in which the object of the experiment is repeated). "But there is an extraordinary number of experiments in which, apart from the concomitants aforementioned, the whole content of the expectation is present only unimaginatively as a knowledge, and this presence of the content of knowledge is what I call awareness."

The details of the main period itself need not be stated at such great length. They show how the determining tendencies work, settling the character of the reaction, the effect being most evident in the more complicated cases where, for instance, a patient is asked to add or subtract two numbers shown to him, or, of two syllables read in a series before, to name the preceding or the succeeding. Sometimes, but exceptionally, we have the instruction persisting and reinstated as an idea. Sometimes the intention declares itself by blending apperceptively with the stimulus, as when a plus sign corresponding to addition was represented and the two numbers shown placed on the sides of it. Or the two numbers might be seen closer together for addition, or separated for subtraction. Or the determining tendency may strengthen certain reproductions suggested by the stimulus, namely, those which are appropriate to the intention. Or it might be that there was no awareness of the end at all and the determined object appears in consciousness immediately in connection with the stimulus without any intermediary.

Now I have quoted these reaction experiences for this reason. The patient's mind being directed to the problem, he has the experience of willing in so far as the reaction which he performs is felt to be continuous with the attitude with which he approached the performance of it. Though I have not described at length the details of the main period, they show sufficiently that in consequence of the instruction the solution is half made beforehand, and when the stimulus comes the response is often of quite an immediate character. This was true even in simple reaction times *(e.g.*, p. 46, one of the patients always thought the action was willed). And it is still truer in cases of so-called "choice reaction" where a different movement is assigned to each of a certain number of stimuli, and in the more complicated problems to which I referred above. Dr. Ach sums up in these words: "The individual knows whether a psychical event takes place in the direction of a previous determination or not. If so, the process is characterised for the individual by its content as being willed. Such course of mental processes thus referred to the efficiency of determining tendencies we described as a willed action, or as one which takes place with the consent of the individual. The conscious experience of such an event is specific in quality, and the individual can in a special case say at once whether the action were willed or not (p. 230)."

One can see at once what likeness there is between this and Mr. Brad-

ley's account of willing as the self realisation of an idea. But it appears to me preferable because it explains the operation in terms of the process itself and not in terms of its contents or object. The account which I have given of willing is substantially one with Dr. Ach's, but it differs in certain respects. I have all along spoken of the consciousness in willing as belonging to the processes or mental tendencies themselves, not properly to the object which we are conscious of, whether imaged or imageless. Now Dr. Ach, speaking of certain extreme cases mentioned at the end of the last paragraph but one, describes the determining tendencies which make the determined idea, that is, the solution of the problem, appear spontaneously, as working in the unconscious, meaning by the unconscious merely that of which we are not conscious. The awareness is of the mental content, and this awareness he speaks of as a function of the determining tendencies. Now I find a considerable difficulty in this attempt to separate awareness from determining tendency. To say that awareness is a function of the tendency looks to me very like the notion that awareness belongs to a sort of mental content (an imageless one), whereas I have been trying to indicate that the contents we are aware of are not mental. Consequently I suggest that the determining tendencies in themselves, so far as they operate mentally at all (for of course there may be physical determinants which are not in the strict sense mental), are always in consciousness. When I have an intention the determining tendency is the consciousness of what we intend, though what we intend may be purely imageless. They represent the conscious side of the experience, the other side of it is not mental at all. When, in the extreme cases mentioned, the result follows immediately, the determining tendency is still felt in the felt transition from the stimulus to the result. The intention does not appear separately. But it works in consequence of the previous mental attitude whereby the problem is already half solved before it is put. It is present in the transition to the particular result, so far as the result is felt to be an answer to the instructions. In other words, the very awareness of the intention is the direction in which the mind is working. In desire, and the like, this direction is very definitely present in consciousness. It appears to me that the stinging consciousness of direction which we have in desire is only an extreme form of the general case, not merely the case in which you happen to be aware of the tendency as such. In fact, if you want to realise that the so-called content of a mental process is not itself mental, go to desire and watch that.

There is one other point on which I do not feel satisfied. The feeling of consent, the fiat of the will, is not I think exhausted by describing it as a sense of identity with a previous determination. It involves that, of course, but you may have that sense of continuity in the stages of an impulse. You need, in addition, that the tendency shall consciously be present as a tendency, *i.e.,* as different from the present general character of your mental direction, and then when that tendency coalesces with your general men-

tal direction, that is yourself as a whole, it is felt to be the act of consent, the stress is laid upon the snapping to of this determining tendency, *i.e.,* the intention, or awareness of what is to be done, with the pervading self. And in speaking of the self I do not think we need to think of the self as being present in the form of the impression or image of the self as part mind and part body, the so-called self which is object, but only as the consistent and systematised complex of directions of consciousness. In many cases, doubtless, we are apt to call up these special contents of the self. In fact, in all difficult and critical cases of willing we may compare the proposed action with all our normal objects of desire, the expectations made and the like, but the really mental side in the self-experience is never our body or the various objects upon which our actions are directed, but only the conscious direction of ourselves upon them. And consequently it is more or less a matter of varying circumstances whether in contemplating a future course of action these contents are present to our consciousness or not. What is present is the more or less consistent and systematised system of directions.

I pass on now to the topic of ideas, in the sense of universals, or of the ideal content so familiar to us from Mr. Bradley's writings. There is urgent need, I think, for an accurate statement of what goes on in the mind when it has an idea of this sort. I dare say that many persons besides myself have felt puzzled in their study of Mr. Bradley in dealing with these ideas, because at times they seem to be mere qualifications of reality, and yet are spoken of as working, or even as realising themselves, that is to say, as being psychical existences. Mr. Bradley himself has taken all precautions against misunderstanding. He has explicitly denied that ideas can ever be floating ideas cut off from reality. "Every idea has its own existence as a fact."[4] And again, in speaking of the will.[5] "In the course of the act itself [*e.g.,* of acting on the idea of avoidance or injury] the idea's content will in its process further particularise itself [the idea, that is, will become an image or a perception], but before the act the genuine content of the idea may be general." What difficulty I feel after these statements turns, I suspect, upon the implication that a universal idea must necessarily have a psychical existence, that it cannot exist except as being also an act of mind, whereas I should distinguish the act of mind directed towards a universal idea from the universal idea itself. This difficulty is not so much psychological as metaphysical, it seems to depend on the doctrine that all reality is necessarily psychical, which I do not accept. But at any rate, for psychology, it seems to me, it would clear up our minds to insist that when we speak of ideas there is some definite mental process corresponding to them which ought to be described, and that it is not enough to speak of the idea as working without explaining its mechanism. It is not enough to

[4] *Mind,* N.S., No. 60, p. 445.

[5] *Mind,* N.S., xi, p 461.

insist that an idea is different from an image which is particularised. The idea as universal is just as particular a system of mental directions as the image with which it is contrasted. The what always is a that, but it is a that of a different sort. The same difficulty seems to me to arise in regard to the very helpful distinction drawn by Mr. Stout between the content of an assertion and its intent. The intent is after all only another sort of content. It is the content not of what I presently have in my mind, but of what I am tending towards or willing. And obviously the same thing is true of Locke's contrast between idea and reality. When he speaks of an idea as conforming or not to reality, the reality is itself an idea, and the question is not of the difference between an idea and something disparate, but of one idea and a different and fuller one.

Thus the idea as a universal, as a meaning, is not an image, but it is apprehended in a particular mental process. What then, in the language of mental process, is the universal? Here, again, it is easier to describe the process by referring to its object than to describe it itself. Any such description must be hypothetical. But I do not think the answer in this case is very remote. Contrast a conceptual process with an imaginative process. In the imaging as compared with the perception the activity is dim, it is indistinct, fragmentary, and unstable. But as contrasted with the conceiving act it is relatively full and complete. But conception, though partial and unrealised, may be definite and distinct, and it has the property of working itself out into examples which supply it with fulness. Moreover, the processes in conception are common to many perceptions or images. It consists, then, of the directions, or to use Dr. Ach's word, tendencies, which represent the prevailing determinant structure of an indefinite number of individuals. I thus take it to be a conscious disposition, so far as that conscious disposition can exist by itself, that is, be apprehended as such, as a body of general mental directions, or since disposition is a word which suggests other meanings, it would be better to speak of the idea as a scheme of mental directions. With this account we can understand how conceptions keep passing over with their examples; the mind not only works in the scheme, but the scheme is amplified or modified by special elements of mental direction, which, combined with the scheme, make up the fulness of mental action corresponding to a concrete individual perception or image. We can see also how one such mental scheme may be so connected with another as to complete one another and make a more definite and precise system, though one which is still an object of thought and not of perception. Finally, we can understand what goes on psychologically in the act of judgment: how in the complex activity present in perception, the scheme or form corresponding to the predicate is, by an act of attention prompted by the interest of the moment, made to stand out separately in consciousness while retaining its connection with the whole.

I take the rediscovery of ideas, in the sense of universals, to be one

of the most important results of recent philosophical and psychological work. One can only wish, parenthetically, that the word idea could be used with some more definite uniformity. It began with Locke as the name of any object we can occupy our minds about, and a psychological process is as much an idea as a tree or a triangle. It became with Hume an image. And now in the revolt against the tyranny of images idea has come to mean, through Mr. Bradley's influence, a notion or meaning. But I turn from this complaint to refer to another set of valuable experimental inquiries by Dr. Karl Buehler,[6] who has by a set of ingenious questions got his patients to go through real operations of thinking and to record their own observation of the processes they went through. These experiments have been subjected to some severe criticism. But it can hardly be denied that they are of great value as a systematic beginning of inquiry into the higher mental processes. Dr. Buehler does, indeed, seem to me to overlook the extent to which others before him, like, for instance, Mr. Stout or Mr. Bradley, have recognised the existence of imageless thinking. But here we have, in the first place, a great deal of careful self observation, and we have in the second place not only the demonstration on a large scale that thoughts are a specific kind of mental objects, and thinking a specific sort of mental process, but the results show the extraordinary variation which may exist in the thought according to circumstances. Thoughts may, in the first place, exist without corresponding images, though it is not shown that they may exist except in conjunction with other individual mental contents, for example, the words of the answer, or at least the words of the question. But the thought may be of the vaguest description: a mere awareness of something or other, or reference in a certain undefined direction, or again, it is shown that in remembering we may, without calling up an image, have a thought of an object once experienced or the thought of having once experienced it; there may be thoughts of relations between objects or the thought of my own relation to some object, and the like. For all this I must refer to the work itself. But in all forms they vividly confirm what has been suggested above, that a thought is a kind of schema or rule upon which an individual presentation can be constructed. And, indeed, Dr. Buehler refers aptly enough to Kant's account of a schema in contrast with an image as being a rule of construction. One result appears to me of particular interest. In certain experiments of memory the patients had the thought of an object experienced before; in others they had the thought merely of having experienced before something or other bearing on the question. And in some of these cases the object reference appeared so slight that the remembrance of the process of experiencing it was all that was present and active. Now it may be said that, as a general rule, whenever the mind is active it is active upon some object, and that in general while we are always conscious of ourselves as a mental process

[6] *Thatsachen und Problems zu einer Psychologie der Denkvorgänge (Archiv für die ges. Psych.,* ix and xii, 1907-8).

the practical interest makes the object the more important of the pair of terms self and object. In some cases we forget ourselves in the object, but these experiments seem to indicate that we may also have what amounts to a complete absorption in the self in the mental process itself, while the correlative object seems almost to vanish or to be replaced by a shadow.

If the above description is correct, an idea, or notion, or concept, or thought, is a very definite form of mental process, a kind of scheme of mental direction. The physical object upon which it is directed is the universal. I do not see that there need be any difficulty in describing the universal as physical. Dr. Buehler, indeed, uses the language of presentation and protests that the universal can be nothing but a mental object. But unless Plato has lived and written in vain, why should not ideas be realities? And even more important though not more real realities than sensible things? The very fluidity of our mental conceptual directions, their perpetual extension and amplification so as to take on the clothing of circumstance, what is it in the mind but the response of our minds to that real existence of the universal in the real particulars which it connects, and connects them much as the diverse mental conations are unified in the one continuum which is the mind.

I have been trying to exemplify in two important cases the truth of the proposition which seems to me a bare statement of fact, that what is mental in the world is conation (feeling being for the present barred), and that our conations are the operation of one and the same thing, consciousness, in different directions; and that such conations are relative to certain non-mental or physical things *of* which they are said to be consciousness, to which they refer but which are incorrectly described as their contents. A few words may be added, though they must be incomplete, as to the position of sensations, and also all other mental processes, *e.g.,* images, so far as they involve sensory elements. The safe rule is to interpret the obscure by what is patent, and I have urged that the so-called and miscalled contents of sensation are really physical. But the mental process of sensation is like all other mental process, conation, recipient and passive, but a passive form of activity. Of course, the mental activity of sensation is different in direction according to the character of the sensation, and the difference betrays itself, like all psychical difference, in difference of outward or internal physical movement or in words. It shows itself according as the conation is pleasant or painful in mental continuance along the direction of the sensation or in flying from it. I ventured on a previous occasion to suggest that we might describe them as signs of direction, meaning that as the mind moved in one direction rather than in another, the direction-consciousness varied. This would not be making consciousness green or sweet, but would only be doing justice to the fact that the movement was not a mere physical movement in time and space, but had a mental character as well. It is best, however, to describe sensations as merely the sim-

plest mental movements, and not run the risk of suggesting, as the phrase signs of direction is apt to do, that there are differences of quality in the consciousness according to the character of the sensation. It is, indeed, unthinkable that consciousness itself is green or sweet, and when it is urged that green and sweet not only are mental, but are actually localised in the body, the answer is that the so-called localisation of sensations actually furnishes the disproof that the sensational object is mental. For when green is felt in the eye it is the seeing of green that is localised there, but the green itself (except, of course, in entoptic phenomena) is in the green leaf. The sensations which are localised in the body are mainly the organic sensations where the object sensed is a physical object; or sensations like heat which can belong to both body and external things, or like touch, where the two objects, body and external things, are in contact.

I set out with a proposition that the proper object of psychology is the various conations or mental movements which, in their continuity, constitute the mind. To every such movement there corresponds an object, and while, in many cases, it is easier to describe the mental operation by its object, and, in some cases, it is difficult to do otherwise, it is always the operation at which we aim. That object which is commonly called a presentation I have insisted upon regarding as physical. Now it may be said that this is a presumption and is introducing epistemology into psychology. It may be said that, in psychology, we know nothing of the real physical object, but only of presentations, that in the perception of a tree it is not the real tree with which we are concerned, but only the presented tree. Now, I should be quite content if the psychologist never spoke of anything but presentations, but he is constantly and inevitably speaking of physical objects in distinction from them. He distinguishes the blue thing from the blue sensation, the things in nature from our thoughts about them, and the like. If he goes on to deny that the sensation or image or thought is a physical object, he introduces into the foundation of the science a distinction between a mental content or object and a physical object, and it is really he, so far as any given psychologist is open to the imputation, who makes an epistemological assumption, and then, having made it, hands over to epistemology the solution of the difficulty which he has himself arbitrarily created. Every science, indeed, makes a certain postulate for convenience, but these postulates must not be mistaken, or be likely to be mistaken, from the start, but only such as can be modified by suitable qualification. Now, for psychology, it is sufficient to take what is obvious *prima facie* fact, that the experience called the perception of a tree contains two elements, one mental and the other physical, and that psychology studies the mental element, and the physical only so far as it presents features with which an operation stands in relation, so far that is, as it is sensed, or perceived, or imaged, or conceived. Making this presupposition, which is a bare unembarrassed statement of facts without any

theory, he leaves over for metaphysics or theory of knowledge to inquire into the relation of these separate aspects of physical reality to reality itself. Suppose that philosophy discovers that these objects you talk of, percepts, sensations, images, concepts, are not the same physical reality which physical science investigates with another purpose, well and good. Metaphysics will then have afterwards to make a separation between psychological objects and physical objects. I do not myself suppose that any such result would happen, but we have no right to start by pre-judging a case. Except for metaphysics, no one would ever think of saying that the objects psychology is concerned with are only mental and not real objects.

There is a difficulty which I admit remains. If your mental object is physical, how can you know yourself? In psychology at any rate you make your own mind an object and your own mind, you will say to me, is confessedly mental and not physical. I must ask to defer the answer to this question. Self knowledge is a very real thing, but you may know other things than physical objects.

I know that in suggesting a certain difference of psychological view, so far as I am really doing so, for I do not feel at all sure that I am, I incur a certain danger. Sweeping assertions produce upon the expert in any science the impression that the speaker is just beginning to think about the subject. And in my case this is probably true. In reality, I am only trying to clear up my own mind and suggesting a solution of my own difficulties. I should feel very uneasy if what I had said implied that any single part of psychology, as now understood, had not all the value which it has at present. Nothing upon my view is lost, only in certain cases a difference of interpretation, or perhaps only of emphasis, is suggested. At any rate, the best way in which I can repay the Society for the honour which they have done me in electing me as President is to say what I am myself thinking about. If what I say is mistaken or superfluous, someone will, I hope, be found to correct me.

APPENDIX ON SELF-KNOWLEDGE

In the foregoing paper I have spoken of mental activities as directed upon objects which are not mental, or, to use other words, are external or physical. The question at once arises if this is knowledge how can there be self-knowledge? For the object before me when I know myself is not external but is mental. It would follow then that either there is no such thing as self-knowledge, or else that in knowing myself I so far turn myself into an object, into something which occupies the same relation to me as physical objects do.

Both positions seem impossible. I certainly do know myself. But, secondly, it is clear that if I treat myself as an object this is altogether incon-

sistent with the account which I have given of the process of knowing an external object. For there the essence of the process is that knowing is a particular kind of reaction upon the external object. The object evokes in me those conations which I call sensational processes, perceiving, thinking, and the like. But there can be no such reaction of the self upon itself. The mind does not stimulate itself to reaction.

The answer to these difficulties is complex. In the first place we must distinguish between the self or mind and the self as we ordinarily speak of it, as a compound of mind and body. I have knowledge of my body in the same way as I have knowledge of external bodies, and the same thing applies to the knowledge which is supplied to me by the organic sensations: for example, hunger and thirst belong to the bodily self and are located in it. But we commonly think of ourselves as including not merely our bodies, but our thoughts about certain objects, especially objects of interest to us, and our desires and volitions as directed towards these objects. Our moral selves, to take the most obvious instance, include as elements the objects to which we devote ourselves, for example, politics or mathematics, which are as much external to us as the tree. Thus the self as an ordinary object of experience is a number of objects which are habitually and intimately connected with our minds and form with them a single whole. So far the knowledge of the self presents no difficulty and a very real addition was made to psychology when this particular object of experience was singled out and the growth of our knowledge of it was described.

But in the self so described it is the element of mind, of consistent and organised conation, which constitutes the more important element in the complex, and it is this mental element which is in question when we are considering how and whether self-knowledge is possible. In other words, it is not my capacity for friendship in so far as the direction of my interests towards friends is concerned that offers any difficulty of description, or that constitutes the real core of myself. It is the directions of these interests themselves. Human beings excite my capacities for friendship. I can largely describe these capacities by reference to their objects; precisely as is the case with my ordinary knowledge or volitions directed upon external objects. But it is not my immediate environment of my own body and the things and human beings which lie next to me, which constitute the. selfhood of myself, it is the purely mental element which the self involves.

In order to remove the difficulty of the original question, we have in the next place to recognise that knowledge is a very ambiguous term. It is used loosely to cover all kinds of apprehension and sometimes it is used to denote that kind of knowledge in which we have the objects set over against ourselves. Now the mind has knowledge of itself, but not in the same sense as it has knowledge of external things. When the mind knows an external thing it is itself knowledge, itself consists in that moment in the

act of knowing. We have to distinguish two senses in the phrase knowledge of something. The "of" may be the "of" of reference. Knowledge of a tree is an act of mind of a certain sort directed upon the tree. Or the "of" may be (I have the phrase from Mr. Stout) the "of" of apposition. The knowledge may consist of what it is said to be knowledge of. The difference may be illustrated by Locke's phrases, idea of sensation or of reflection, meaning an idea coming from sensation, or consisting in a sensation, or a reflection, as the case may be, as contrasted with his phrase the idea of heat, in which heat is the object referred to. Now my self-knowledge is knowledge consisting in myself. Myself is only those acts which are otherwise described as self-knowledge.

This is evident from considering that in any case of knowledge of the external object we can distinguish the external object or cognitum, from the act of knowing which is conational, the cognitio, and which is a special form of conation that does not aim at alteration of an object. In every such act the self is present in the form of a certain more or less complicated direction or system of directions of consciousness. I cannot know something not-myself without that object's moving myself into activity. In thus having knowledge *of* an object I also have the knowledge which consists *in* my action and is therefore self-knowledge. To me, therefore, I myself cannot be a *cognitum*. I can only be a *cognitum* to a being who stood outside both me and physical things, in the same way as I myself stand outside physical things and life. Life is an individual thing to the liver. But I can contemplate another being's life though I cannot live it. Now it is as impossible for me to contemplate my own mind as for an animal to live another animal's life. There is no reason, however, in the nature of things why a race of beings should not arise or be now in existence who can contemplate minds. Such beings would be of a higher order of mind and for them minds would be objects of knowledge.

It might be supposed that if I never am an object to myself, but only am myself, there can therefore be no science of the mind. In fact, consideration of the difference between self and external objects has led to remarkable views as to the nature of psychology. One party has declared in the face of all the acquisitions of psychology, of its constant and uninterrupted development, that there is no such science. Another answer is the following. Reality, it is urged, is experience, something in which you cannot separate mind and things. You have physical science in so far as you attend only to the physical aspect of experience and consider it by itself. You have psychology in so far as you attend only to the psychical aspect of experience by itself. Both the physical and the psychological sciences deal with abstractions and they are in the strict sense untrue. The only real truth is given in metaphysics, which considers the two elements unified. There is a third modification of this way of thinking. It is maintained that psychology never describes the mind as it actually exists, but creates an

artificial object which it pretends to find given in the same way as it finds physical phenomena given, and such descriptive psychology is little more than a substitute for the physiological description of the bodily processes which underlie mental action. Psychology studies not mind itself, but an artificial symbol of it.

A thorough treatment of these propositions would require a theory of knowledge and of metaphysics. They all arise from the unexamined postulate that reality is experience. They imply that physical science and psychology are only true till they are connected and then they are seen to be untrue; instead of maintaining as might reasonably be done that they are both true and that their connection is a further truth. But we need not go into the whole question. For the distinction between the two kinds of knowledge drawn above is enough to convince us that psychology does describe the mind itself and is a science. The objection arises from an apparent prejudice, that in order to be the subject of scientific treatment an object must be like an external object, capable of standing outside the mind which observes it. This is plainly an assumption.

In fact, science is only the orderly description and classification and explanation of things. Amongst things there are two classes, physical things and ourselves. In so far as we describe physical things we are making physical science. In so far as we describe ourselves we are making psychology. Self-knowledge is that knowledge which constitutes the science of psychology. Knowledge of external things is that knowledge which constitutes physical science. In this way instead of raising questions as to the legitimacy of science because of difficulties about the nature of knowledge, we may with convenience describe the different kinds of knowledge as the respective subject-matter of the different sciences. Or perhaps the gist of the matter may be stated thus. Let the subject matter of knowledge mean that which exists in reality and can be described. Then knowledge includes two things, the first is physical objects, the second is knowing, knowing being used as a general term for all mental life.

When, therefore, in pursuit of psychology we describe ourselves, we do not erect ourselves into presentations. We only formulate our condition in words, *with a psychological interest*. Psychology is in fact the extension of one of the commonest incidents. When I say I feel cold, or I do not want to fight, I am describing my mind. Does anyone maintain that in these expressions I am making my mind into a presentation? The description takes the place of an interjection. Instead of shivering, or crying out with the pain of cold, I may say cold. And afterwards when I have an apparatus of language which corresponds to the analysis or dissection of things into their components I say I feel cold. Nor would anyone say that in saying I feel cold, or I do not want to fight, I am describing not my mind itself but a mere appearance of it. I am describing it as it really is in a particular

phase of its existence. Now psychology is nothing but an extension and systematisation of such statements as this. Just as physics is nothing but an extension of such propositions as the stone is heavy, so psychology is an extension of such propositions as I feel cold, or I do not want to fight. The difference between the science of psychology and the mere exclamation which expresses my mental state consists in two things: first, in the organisation and analysis of these descriptions, with the consequent attempts at explanation; secondly, in the difference of interest. In general in describing our mental reactions upon things we are concerned with the things rather than with our reactions; our interest is practical not introspective, but the material of introspection is always present. It is not so markedly present in the experience I see a tree, it is present more markedly in I am cold, it is present very markedly in, I do not *want* to fight. But whereas we are content in daily life to describe these introspective experiences merely in such a way as to affect other people's actions, in psychology pure and simple our interest in them is theoretical.

Psychology, then, describes mental process with a psychological interest. What this means is that the problem is now different from the mere description of how we feel. The influence of the problems set before the mind in determining the character of the mental response has been illustrated already from reaction time, and is abundantly illustrated in Mr. Watt's paper. Now the scientific interest is an interest in careful minute description, in classification, analysis, and explanation. When we describe our mental states with that interest their details stand out, their likenesses, their connections, their antecedents, their causes. The psychological habit has its germ in any mere description of self, but it is powerfully aided by the experience of scientific description of physical things. When we have learned to treat external things scientifically we go on to treat minds scientifically, and we not only apply to our mind the methods learned in respect of things, but we use of them the words and concepts we have been accustomed to use of things. This is but saying once more how knowledge of minds and things are reciprocally affected by one another. It is a familiar truth that while the most important categories we employ in respect of the external world, such as causality, substance, and the like, are experienced by us most easily in our own mental life, we repay the debt by describing our mental life in terms of the external world, apprehension, comprehension, mental process, direction, and we raise with regard to mind the same problems as meet us in physics, what is mental causality, what is continuity, and the like.

Thus, when in psychology I pretend to describe my feelings and conations, I am not substituting for the reality an artificial abstraction, I am describing the actual mental reality. I am, of course, leaving out the physical realities with which those mental activities are related, but it is a pure assumption to suppose that I have no right to do so. Psychology is a faith-

ful description of certain real events in the world.

But this statement is met by certain obstinate objections. One is the ancient one connected with the method of psychology, the objection based on the difficulties of introspection. The other is the difficulty, a far less ancient and far more serious one, arising from the fact that we can remember and think of the self.

In both cases the same objection appears, but in different forms, that in studying the mind you make it an object. Hence, it is said in the first place, that introspection, in the strict sense, is never possible; for if we introspected our actual condition we should be dividing ourselves into two, making one part of the self an object to the other part. To avoid this difficulty we have recourse to retrospection, in which it is urged, not indeed by cautious psychologists, we palpably do take the immediately past moment and make it an object to ourselves at the present. In the next place it is said, and said rightly, that not only do we enjoy a present experience, and not only do we actually remember something we met before, but we remember that we did have this experience. Is not such remembered self an object to us like a physical event?

Now, as to the difficulty of introspection, this is real enough. But I cannot think that the reason for this difficulty is rightly given. Our introspection is indeed apt to be distorted by the presence of the psychological interest. We are practically interested in feeling cold, or disliking to fight, and not generally interested in the nuances of the process. But there is no further difficulty. It is because the event when just remembered is freer from these distortions that it is advisable to turn to retrospection; and also because when the heat of practical interest is over details may appear in our calmer mind which escaped us before. But our reason for retrospection is not that it enables us to make the mental state an object. A moment's consideration, indeed, shows us that our mental state in retrospection is no more an object to us than it was in actual experience. It is only a part of a larger whole. The remembered state is a present state, just as much as the actually enjoyed state. You do not turn your remembered state into a presentation merely by combining with it the attentive attitude. It is still a present state of your own mind. The alleged reason, then, for the use of retrospection cannot be the right one. In fact, the term introspection has raised around itself so many prejudices that it would seem to be high time to state explicitly that it is but a name for mental inspection. You may inspect external things or you may inspect mind. In order to inspect external things you have to let them play upon you, and you have to adopt the attitude of attention best adapted to receive the revelation of their characters. This is extrospection. In order to inspect your mind carefully you throw yourself into a certain state of mind by stimulating yourself by an appropriate object, and then record in words the immediately apprehended de-

tails of the mental process. This is introspection. We introspect ourselves when we say I feel cold. For psychological purposes we only do it more carefully and under special conditions. And to complete the parallel with the observation of external things, just as in self-inspection, or introspection, we use retrospection, so also in the inspection of external things, or extrospection, we use also the memory of the extrospected object.

I come now to the more important question of memory, ideas, imaginations, thoughts of myself. These things exist. I project myself into the past or the future. I can perceive myself as a whole, I can think of myself as a personality. I can distinguish my real self from my transitory or unreal self. Now, when we speak of knowledge we think naturally of external things. But we get to know of these by perception, memory, thought, and the like. And so when perception, thought, imagination of anything occur we say we have knowledge of the thing remembered, that it is an object to us. Therefore, because we can remember, and imagine, and think ourselves, it is said we also have knowledge *of* ourselves, we can be objects to ourselves. In other words, we take these varying processes, perception, memory, imagination, and so forth, that is to say, the possibility that we may be in these varying conditions in respect of anything, as the criteria of knowledge of objects, as indicating that what is present in these forms is an object. But they are not such criteria. It is true that about both external things and ourselves we may be in these varying conditions. But that does not make me and the tree alike objects of knowledge. On the contrary, as I have already said, the difference between the object of knowledge and the object which consists in knowing is not that you have memory or imagination of the one and not of the other, but simply that the one is physical and the other is mental.

What, then, we must inquire, is the nature of our ideas of ourselves; whether that idea be one of memory or expectation? That is the real question, whether we have an image of ourselves which is comparable to the image of a tree, and not the question whether we have one at all; and I suspect that the inquiry into the question, what our images of ourselves are, may throw a considerable light on what goes on when we have an image of things not ourselves. I may remember, then, that upon a certain occasion I felt pain, or that I made up my mind; or I may look forward to feeling pain, or I may contemplate the possibility of making up my mind on some future date. Now, there are certain ways of remembering myself, or rather certain elements in the memory of myself that I may exclude from consideration. I may be simply recalling a form of words stating that I felt so and so. Or, again, what I may be recalling may be the objects remembered, the circumstances in which I was, the condition of my body at the time. All this is but the memory of external objects. But over and above this I have also the personal element in the form of memory. From common experience and front the experiments recorded by Dr. Buehler

it would appear that in certain cases my memory may be of nothing but the fact that I did on a past occasion have an experience, without even any more indication of what the experience was about. Thus one of the subjects says, "I knew at once that I had understood the answer to the question before, and that it struck me as comic, but still I could not find it" *(Archiv,* Bd. xii, p. 64). Or, "I knew first that I said 'yes' before when I should have said 'no,' and then I arrived at the thought itself" (p. 65). Or, "I had at once the consciousness that I had heard something about it. Then came the thought itself" (p. 63). This is what Dr. Buehler calls knowledge of the experience, but not of the subject-matter of the experience. It might be taken, and erroneously taken, to mean that we have ourselves before us in the form of an object.

It has been said that we may have an idea of pleasure, or an idea of an emotion. M. Ribot has gone so far as to say that just as there are visual and auditory types of memory, so there is an affective type. It cannot be said that his proofs are convincing. Some of the instances recorded by him, apparently by way of support, seem to point in the opposite direction; like the case of M. Sully Prudhomme, who describes his emotional memory as tending to the hallucinatory, that is, as being a new emotion, evoked and vividly evoked at the suggestion of a past memory. Before it can be established that we have emotional or feeling memory we must show that we are not merely remembering the bodily accompaniments, or the attendant circumstances, or the provoking object, of a past emotion, and so reviving that emotion. Thus I can recall slightly the feeling of shame I felt at a foolish mistake which I made in my early school days. I can just say that it is not a present shame that I am feeling again, but all that I can say is not present in it is, so far as I can judge, the remembrance of the flushed face and uneasiness and other organic accompaniments. And even here I do not feel quite sure.[7]

Now in the case of the alleged ideas of emotions, or ideas of pleasures, the common account appears to me to be true, that we have a revived emotional excitement, or a revived pleasure or pain, called up by memory of all the physical circumstances. It seems to me that this ideal pleasure is what we mean by the idea of a pleasure. We feel our present self extending backwards to the remembered event, and the pleasurable tinge in this experience is the ideal pleasure. It is quite distinguishable from the pleasure that we feel in the same object when actually present. Ourself has a past colouring. It extends backwards to an experienced past, and that is why we call the pleasure the memory of a past pleasure. It is a pleasure

[7] The following extract from *The Life of Helen Faucit,* by Sir Theodore Martin, Chapter I, describes her memory of a terrifying interview she had as a girl with Edmund Kean, the actor, in his old age: "How vividly some things remain with us. I can shut my eyes and recall the whole scene, see and hear all that passed, and thrill again with my own fright and pleasure."

ideally present, referred to the past of myself, which past is called up by the memory of the external conditions under which it occurred. There is no particular difficulty in this, for any experience of ourself at any moment contains the past and the future of the self felt as one continuous consciousness with the signs of past and future. I should say, therefore, that pleasures may be present in memory, but not as objects of memory. They attach to objects of memory and are themselves qualified by a past reference.[8]

When we turn from this more obscure case to the case of remembered acts of knowledge, we come upon a confirmatory topic of great importance. In the first place, let me observe that Dr. Buehler's case of remembering that we experience, without remembering what, represents an extreme case. We may, of course, remember what we learned in the past without recalling the act of learning it at all. That is not, strictly speaking, memory, but mere reproduction; the self element has disappeared from the remembrance. But if we put aside this case then in general in remembering a past event in our lives, our interest may be mainly in the external event itself, as it generally is; or it may be in our own reaction upon it. Now just as in perception we may be, and generally are, absorbed in the object, but at times we may be absorbed in ourselves, the perceiving subject; so in remembering a past event we recall mainly that it happened without special reference to ourselves, or we may, in a few rare cases, remember only that we underwent the experience. This does not prove that we can remember our past condition utterly without reference to its content. It only means that the content is so vague and indefinite as not to be recallable. The same thing occurs in our apprehension of a present object—for example, a sentence where the object may sometimes be present as sensuous images, or only in the form of a thought, that is, in the form of a mere scheme.

But what is this memory of oneself? Contrast it with the memory of the past event. Here I have before my mind a certain object as past. The act of mind by which I apprehend it is present and is not felt as past; difficult though it may be to describe what the difference is between the act of mind in apprehending an image of a past object and in apprehending the same object present. In other words, what is past in this experience is not the act of mind, but the object. Suppose, now, I am remembering an event as happening to myself. The event is past, as I have said, and it is quite distinguishable from the objects which are actually present. The past object is before my mind, but it is *not* present. But my past self *is* present. It is an extension backwards of myself, so far as myself is occupied with present objects. And that extension has got the note which enables us to say that it is an extension backwards in time and not forwards. In

[8] I need hardly say that this bears upon the hedonistic controversy in Ethics. It is said against the hedonists that we must distinguish a prospective pleasure from the present pleasure of an imagined object. The distinction is, I think, unreal in this form.

other words, we find just what we should expect to find if we understand mental events to be mere directions of consciousness. A past direction is a present consciousness. My past consciousness is ideal as compared with the real moment of present consciousness. But it is not an idea of that past consciousness. On the other hand, to repeat what was said above, the past external object of which we have an idea is not present, but is past.

What are we to understand by the actual present existence of the self's past, by the fact that its memory of itself is present in itself, whereas the past external object is not present to the self, but past to the self? The best way to answer the question is to refer to actual experience. The fact so described is actually given in any broad tract of momentary consciousness. But if we are to understand the phenomenon by exhibiting the relation of this fact to cognate facts, the fact to which we must appeal is, I think, that of inheritance. As the skin becomes horny through toil, or as the germinal qualities of the father are inherited by the son (I speak in broad terms, for I do not raise biological issues which do not concern me), so the past of the self is actually present in the present self, and at the call of the object may rise up into distinct consciousness. I find myself here at one with M. Bergson, who thinks of its whole past as gathered up into the present moment of the soul's life.

This is, however, a difficult and debatable matter on which I do not pretend to feel assurance, but whatever account we are to give of the fact, the fact itself remains. And the result at which we arrive is that the remembered or imagined self is not a memory or imagination *of* the self, and yet the self is truly described as remembered or imagined. Can we go on to say that we have also thought about the self? If this means that special features may be distinguished in the self and thrown up analytically into prominence, undoubtedly we have thought about ourself. I have not, however, a conception of myself in the same sense as I have a conception of dog. I do not compare myself with other selves, unless it be indirectly by taking into account along with myself my body and the objects upon which I am directed. But I do have a direct experience of a continuous self, in which I can distinguish phases, all of them given as a continuous whole. I have thus a perception of myself. If I choose to call this an individual concept I may do so, but I do so not in order to imply that it is more than a percept, but only to indicate that it is a percept in which features have been isolated out of the combination in which they are given. This is, in fact, only to say that the self is individual and not universal. At the same time, I may observe in passing that this individual concept of the self enables us to understand what possibly the universal Platonic idea may be.

I have tried to show, then, that the notion that the self can be an object *of* knowledge breaks down, so far as the difficulties of introspection are concerned, and so far as it is supposed that everything which can be given

in memory or thought must be an object of knowledge. There remains for consideration the supposed fission in the self, according to which one part becomes foreign to another and is regarded as a not-self. Mr. Bradley has said that any part of the self may become an object to the rest, and be discarded from the self. I have here to join issue on the fact. It is true that I may say that such and such an act of mind is not myself. But my attitude to it is quite different from my attitude to an external object. For, separated though it is from my true self, it is still felt to be continuous with it. In fact, it must be felt to be a part of oneself with the true self in order to be degraded to the rank of an unreal self. But this is precisely what we do not mean when in respect of any external thing we call it the object and ourselves the subject. There is no continuity between myself and an external thing in the sense in which there is continuity between my different mental actions. We are getting back again to the elementary facts where psychology joins metaphysics. It is because subject and object are supposed to constitute an experience, to make that unity within duality which alone is real, that we are disposed to accept the proposition that a part of the self may become a not-self and be turned into an object to the self from which it is cut off. As a matter of fact, there is always an external element present in such a state of affairs which may properly be described as the object, namely, the bodily condition. But directly we recognise that the relation of subject to object, or of consciousness to object is a relation of reaction, we recognise that they are independent of each other and related to one another because continuous within one universe. But they are not continuous with one another in the sense that we cannot justly conceive the external object existing without a self to apprehend it at all. These considerations are, however, metaphysical and I am content to rely upon the fact that however much one part of the self is cast off from the main body of the self it is still retained within the self. When there does happen an absolute fission, as in disease, then the second self may be an object to the self, but the reason is that it has then become a different and discontinuous consciousness with a partly different body.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Natural Realism and Present Tendencies in Philosophy

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VOLUME IX

1909

EDITORIAL NOTE

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The following paper - "Natural Realism and Present Tendencies in Philosophy" - was published in *Proceedings of the Aristotelian Society*, New Series, Volume IX (1908-1909), pp. 141-182.

VIII. NATURAL REALISM AND PRESENT TENDENCIES IN PHILOSOPHY

ABRAHAM WOLF

I. THE PRESENT DISCONTENT

WE are witnessing something like a ferment in the philosophic world. In various directions there are unmistakable signs of discontent with the old order. Such discontent is, no doubt, chronic in philosophy. Still it is more acute at some periods than at others. And it appears to be especially acute at the present time. The main causes of this discontent are not far to seek. One result of Kant's Idealism and Comte's Positivism has been an increasing distrust in human knowledge, a growing suspicion of the foundations of science. In a sense, this was the very opposite of what these philosophers really intended. But then results sometimes have this disagreeable way of showing no respect even for the best intentions. The trouble was not with the professed philosophers. They shed no idle tears over Matter, Space, or Time. On the whole they found it rather edifying to contemplate a purely spiritual world *sub specie acternitatis*. The trouble arose chiefly with the physicists. Physicists, it is true, have a way of despising metaphysics. But it is only other people's metaphysics for which they profess contempt. For themselves, they rather indulge their weakness for metaphysics, and call it by another name. At all events, in the hands of physicists the philosophy of Kant and of Comte seems to have developed into an exaggerated phenomenalism. In one respect this exercised a good influence on physicists: it made them uncommonly modest. Compared with the boastfulness of Laplace and the confidence of the classical physicists generally, latter-day physicists are extraordinarily modest. Many of them have abandoned the attempt to penetrate the secret of Nature's mechanism, they seem rather doubtful even about the validity of far less ambitious theories. The theoretical constructions of science, we have been told, are largely factitious, they give us no image of reality, they are little more than a mirage. The so-called Laws of Nature are only conventional shorthand summaries of past experience, and carry with them no warranty with reference to the future. To rely on them as regards future events is simply to draw cheques on Nature in the uncertain and unfounded hope that they may be honoured.[1] This vein of modesty, itself the outcome of various philosophic influences, has in its turn called forth a similar tendency in philosophy. Pragmatism—or at least one of the rather numerous and perplexing tendencies for which

[1] See, for instance, Professor Lamb's Address at the Cambridge Meeting of the British Association (*Report* 1904).

this name now stands—is, I take it, an attempt to furnish a more academic philosophic basis for this scientific tendency. "Truth," science laments, "absolute truth is beyond us, our theories are at best but shadows, though, strangely enough, they work somehow." "Why!" Pragmatism answers, "your working theories are the very truths you want —the eternal, immaculate truths which you lament, they are mere shadows that disquiet you all in vain."

I described the scientific attitude just referred to as one of modesty. I am not disinclined to describe Pragmatism similarly. Some people will probably disagree. Perhaps the way in which the claims of Pragmatism are pushed may have something to do with this. Some people prefer to describe this attitude as one of Scepticism. I will not decide between these designations. It is certainly difficult to draw the line between modesty and diffidence.

Unfortunately for this modest estimate of human knowledge, scientific results have been accumulating rapidly, and their practical effects have been of the greatest service. Needless to say, the modest epistemologists themselves have rendered most valuable services in this advance—though as scientists, not as epistemologists. Now the natural man—even in scientists and philosophers—finds it somewhat tantalising to suppose that "laws" so uncertain in their nature should nevertheless prove so reliable. Certainly, in our practical everyday life, cheques drawn at random are not honoured at our pleasure. There must be something definite and substantial corresponding to our cheques. The low estimate of human knowledge seems, therefore, excessively modest, not to say unduly sceptical. Our theories would not work if they were not true. They may not be the whole truth, but they must be true as far as they go. Perhaps, after all, we do know the Realities, and not merely their .shadows. Hence the present ferment and discontent. *Hinc illæ lacrimæ*. The natural man has no misgivings about the validity of his knowledge. May not his confidence, after all, be better founded than the philosopher's diffidence? Such are the heart searchings of philosophy at the present day.

II. THE NATURALNESS OF NATURAL REALISM.

Schiller's gibe at philosophy (in *Die Weltweisen)* is, well known. It may be regarded as a compliment to jesting Pilate, who would not wait for an answer. Philosophy moves at such a leisurely pace, and its course is so irregular and uncertain, that it would be cruel to leave mankind to its mercy for their knowledge of the world, and the conduct of their lives. Hence, so Schiller tells us, Nature exercised her motherly care and endowed men—even unreflective men—with an instinctive knowledge of things, and an instinctive social morality, lest the cosmic and social order should fall to pieces for want of a comprehensive philosophy to keep it together. Now

the cognitive attitude of the so-called plain man is commonly described as one of naive Realism. Schiller would, no doubt, have preferred to describe it as Natural Realism, for the reason already suggested. And so long as it is remembered that we are dealing, not with a philosophic system, but with a pre-philosophic attitude, that is to say, not with an explicit but only with an implicit philosophy, there can be no harm in calling it Natural Realism, although the name is generally reserved for a deliberate philosophic view which seeks to justify the unconscious assumptions of the naive realism of the unreflective or unsophisticated man. At all events, it is commonly admitted that, though more or less unconscious, the cognitive attitude of the unsophisticated man, or of Common Sense, is that of Natural Realism. Moreover, even as regards professed philosophers, whatever their philosophy may be during hours of secluded meditation, no sooner do they pass from the privacy of their study into the fresh air of the world outside than they inevitably relapse into the realistic attitude of the plain man. It is in vain, says Thomas Reid, that even the greatest sceptic "strains every nerve, and wrestles with nature, and with every object that strikes upon his senses. For, after all, when his strength is spent in the fruitless attempt, he will be carried down the torrent with the common herd of believers."[2] Hume admitted as much, and more. "Nature (he said) will always maintain her rights, and prevail in the end over any abstract reasoning whatsoever."[3] In fact, Hume went further than that. There were times when "the privilege of a sceptic" weighed rather heavily on him. In one such moment, at least, he made a remarkable and interesting confession, which almost reminds one of Schiller's reference to Nature's motherly care. "Most fortunately it happens (Hume wrote) that since reason is incapable of dispelling these clouds, Nature herself suffices to that purpose, and cures me of this philosophical melancholy and delirium, either by relaxing this bent of mind or by some avocation and lively impression of my senses, which obliterate all these chimeras. I dine, I play a game of backgammon, I converse with my friends; and when after three or four hours' amusement I would return to these speculations, they appear so cold, and strained, and ridiculous, that I cannot find it in my heart to enter into them any further."[4] These lapses into Natural Realism are to be met with occasionally even in the actual systems of philosophers who are opposed to it in every way. And Sir William Hamilton, as is well known, has compiled more than thirty closely printed pages of references in evidence of "the Universality of the Philosophy of Common Sense, or its general recognition in Reality and in Name, . . . from the dawn of speculation to the present day."[5]

Such lapses into Natural Realism, on the part of philosophers who

[2] *Works,* p. 184.

[3] *Inquiry,* Sect. V, Part I.

[4] *Treatise,* Part IV, Sect. vii.

[5] *The Works of Thomas Reid,* pp. 776-803.

are otherwise opposed to it, seem to illustrate the old truth expressed by Horace, in the familiar line—

> Naturam expellas furea, tamen usque recurret.

In any case it cannot be gainsaid that they are, *pro tanto,* so much evidence in favour of Natural Realism. Every philosophy which does not assimilate and cover the everyday attitude of its professors stands self-condemned. Its shortcomings have to be supplemented by Natural Realism as a working philosophy for the workaday world. Any considerable deviation from the Philosophy of Common Sense, any attempt to supplant instead of merely supplementing it, seems destined to fail. Hence the repeated efforts to come to terms with Natural Realism.

The present discontent with the older order in so far as it has a constructive side is marked by its unmistakable realistic tendency. Some openly avow a new Realism even more realistic than Natural Realism, others would repudiate the name of Natural Realists, and are tending more towards a new Monadism or a new Pragmatism, but the realistic tendency is clearly present in all. The recent writings of Professor Alexander, Professor Bergson, Professor James, Professor Hicks, Dr. Moore, Professor Read, Mr. Russell, Dr. Schiller and others, may be cited in proof of this tendency. The present writer is of opinion that the case of Natural Realism has generally been abandoned much too readily, that its position is more defensible than is commonly supposed. And the object of this paper is to take a general survey of the position, to defend Natural Realism as far as possible, and to compare it with some of the present deviations from it.

III. METHOD IN PHILOSOPHY

Before proceeding any further, however, it is necessary to come to some preliminary understanding as to what is required for a philosophic defence of the attitude of Common Sense.

In some ways Descartes has exercised a bad influence on modern philosophy. His *de omnibus dubitandum*—the method with which he thought that he set out on his philosophic mission—seems to have exercised a fatal fascination over many modern thinkers. It looks sometimes as though the main purpose of philosophy were to doubt wherever doubt is at all possible, as though its main object were, not to explain, but to explain away. Descartes' own philosophy, of course, did not really begin with universal doubt. A philosophy which really begins with universal doubt also ends there. To make any progress at all you must have something firm to stand upon. Descartes, it will be remembered, compared himself to Archimedes looking for a fixed point in order to raise a world. He thought that he had found such a fixed point in himself—*cogito ergo sum*. But he was mistak-

en. With such a merely thinking self for starting-point, he might perhaps turn a somersault, but he could make no real advance. In philosophy, as in science and in life, you must begin by accepting the validity of normal perception. That is what Descartes really did after some parleying, and a show of the most exacting cautiousness. He declined to give recognition to the world of perception, but rather eagerly admitted the existence of God, and then graciously admitted the world of perception on the strength of a divine recommendation. Such a *de omnibus dubitandum* looks rather farcical. First he strained at a gnat, then swallowed a camel in order to get at the gnat.

Descartes (though, of course, not he alone) also set an unfortunate example in yet another way, though it is intimately connected with the foregoing. His excessive rationalism —his disdain for perception—tended to encourage an excessively conceptual and deductive procedure, as though *everything* could be accounted for deductively from general principles. This betrays itself to some extent in the form, at least, even of his *cogito ergo sum,* which, after all, was intended to be the fixed starting-point of his philosophy. It is owing to this excessive rationalism—or Conceptualism, as I should prefer to call it in this connexion—that such undue stress is sometimes laid on Consistency (or the Law of Contradiction) as the sole test of reality and truth. Descartes, we are told by Cousin, asserted his own existence even, not on the ground of the direct testimony of immediate consciousness, but only because his non-existence would involve a contradiction! Now, great as is the Law of Contradiction, it really is not sufficient to build a solid world upon, and although perceptual data are, as a matter of fact, often smuggled into such conceptual systems, yet we need not be surprised that these ideal worlds do seem rather thin and eery, unlike anything in heaven or on earth. The Law of Contradiction, even if you will give it a positive appearance by calling it the Law of Consistency, is after all only a negative principle, and not a positive basis of knowledge. The real root of the tree of knowledge is perception. The Law of Contradiction is but the pruning knife. Perception carries its own justification with it, and must not be doubted simply because doubt is, in a vague way, possible. Doubt everything, and you may as well doubt whether you are really doubting. Perception is not always true, nor does it give us the whole truth. But from it we start, and by it we are guided; and unless we rely on the guidance of normal perception, the very ground of knowledge is removed from under our feet.

IV. THE EPISTEMOLOGICAL IMPLICATION OF NATURAL REALISM

"Naive Consciousness (as Lotze remarks[6]) always takes sensation to be the perception of a complete, externally existing, real thing. It believes

[6] *Microcosmus,* Book III, Ch. IV, § 1.

that the world lies around us illuminated by its own radiance, and that outside of us tones and odours cross and meet one another in the immeasurable space that plays in the colours belonging to things. Our senses sometimes close themselves against this continual abundance, and confine us to the course of our inner life; sometimes they open like doors to the arriving stimulus, to receive it as it is in all its grace or ugliness. No doubt disturbs the assurance of this belief, and even the illusions of the senses, insignificant in comparison with the preponderance of consentient experience, do not shake the assurance that we here everywhere look into an actual world that does not cease to be as it appears to us, even when our attention is not turned to it. The brightness of the stars seen by the night watcher will, he hopes, continue to shine over him in slumber; tones and perfumes, unheard and unsmelt, will be fragrant and harmonious afterwards as before; nothing of the sensible world will perish save the accidental perception of it which consciousness formerly possessed." This account of the attitude of common sense is somewhat exaggerated. Of course, the plain man would not, and could not, describe his outlook in just such terms. But it is sufficiently accurate for our purposes.

Now the fundamental assumption underlying this realistic attitude of common sense is that normally the things which we apprehend are really there, and that we apprehend them just as they are. The plain man would not describe his cognitive attitude that way, but that is simply because he does not even suspect that all his experiences might be purely subjective, or that it is conceivable for a real thing to be perceived in a mediate or indirect way. And even the more reflective man, who has made acquaintance with rival philosophic theories, if he does not simply quote theories, or if he does not deliberately reinterpret his experience, will describe his apprehension of things as being of the same realistic and immediate or direct character as in the case of the unsophisticated plain man. Professor Alexander has done good service by insisting on the importance of beginning with first-hand descriptions of facts and experiences, instead of second-hand technical accounts with their implicit interpretations and misinterpretations.[7] An unsophisticated description of our experience in apprehending things would certainly not be in terms of mediate or representative perception, but in terms of direct or immediate perception. Usually when we say that we touch the ground, or see the stars, or smell wallflowers, we literally mean what we say. We mean that the ground, stars, and wallflowers are really there, and that we perceive *them* themselves, and not some sort of representations of them.

If all human experiences had been normal this assumption would never have been questioned; in fact, it would probably never come to be explicitly realised, but would have remained implicit. But there are such things as illusions and hallucinations and other forms of error. And the need of

[7] See *The Journal of Education* for March and April, 1909.

a theory of error has inevitably led to a theory of knowledge, an examination of the implicit assumptions of the cognitive attitude of common sense. The result, as we know, has been almost fatal to the philosophy of Natural Realism. Idealistic theories of knowledge have had it almost all their own way, and the predominance of idealistic metaphysics seems to be the logical result of the predominance of idealistic epistemology. The metaphysics of Natural Realism or Natural Dualism can only rest on a realistic epistemology, that is, on a theory of knowledge which shall embody the essentials of the implicit assumptions of common sense. What the fundamental assumption is we have already seen. It is this, that in normal perception real things are presented to us, and we apprehend them just as they are. This is what Sir William Hamilton called Real Presentationism. The question, therefore, is, how far can such a theory of knowledge be philosophically defended?

V. REAL PRESENTATIONISM

Although the ontology of Natural Realism requires the epistemology of Real Presentationism to justify it, this theory of knowledge is also maintained by others who are not natural realists. Professor Alexander, for instance, has been insisting recently that mind is simply a system of processes or reactions directed to various objects which are presented to it immediately without the intervention of any *tertium quid*. Dr. Moore has likewise maintained that cognition is essentially diaphanous or transparent, and does not in any way colour or modify the things known. If I understand them rightly neither Professor Alexander nor Dr. Moore can be described as natural realists, but their epistemology has much in common with Real Presentationism. If I may be allowed to restrict the name Real Presentationism to denote a theory of normal perception only, then we might say that the epistemology of Professor Alexander and Dr. Moore includes Real Presentationism and a good deal besides. What the additional elements are, and how far they are philosophically justifiable, we shall consider afterwards. For the present I am glad to note that there is this strong tendency towards Real Presentationism, as is evidenced by the various papers read before the Aristotelian Society by Professor Alexander, Professor Hicks, Dr. Moore, and others.

VI. REAL PRESENTATIONISM AND NORMAL PERCEPTION

As a theory of normal perception Real Presentationism is undoubtedly most plausible, because it is so natural. Try to give a bare description of what happens in any instance of normal perception, and you can describe it no otherwise than as the direct presentation of the perceived thing to the perceiver. Introduce any *tertium quid* into your account of the transaction, and its *role* seems to be as thankless as that of any meddling busybody. It

seems so unnatural to suppose that when seeing a tree it is not really the tree we apprehend mentally, but only some kind of a shadow introjected into us by the tree, or that the tree is not really there at all, or at all events is not really a tree, and what we are dealing with is either wholly or partly our own creation. This prejudice against the intervention of a *tertium quid* in normal perception is not only natural but seems to be fully justified by the scientific rule not to multiply entities unnecessarily. It seems reasonable enough, therefore, to abandon all such supposed mediating images, shadows, and percepts to the tender mercies of Occam's razor. For, after all, even if we admit such images we still assume that something is apprehended immediately, namely, these supposed images, otherwise we shall be committed to an infinite regression of such mediating shadows—the story of the elephant and the tortoise over again. Why not, therefore, assume at once that it is the things themselves which are apprehended?

And if we are asked for any independent evidence in confirmation of such a theory of Real Presentationism, we are not altogether at a loss. For there certainly are cognitive processes which are devoid of all imagery, except perhaps the most fragmentary verbal imagery. The experiments of Buehler and others leave no doubt on this point. Similar experiments, which I conducted with a number of very reliable subjects, confirm this general result. The fact itself was, of course, known long ago—long before these experiments were even dreamed of. What is called a general idea need not be an image, or involve any imagery; it is essentially a scheme of imageless mental processes. And if it is possible for the higher cognitive processes to take place without imagery, it seems reasonable enough to assume, on the direct evidence of naive consciousness, that in perception also we have such imageless mental activity operating immediately on external things.

VII. OBJECTIONS AGAINST REAL PRESENTATIONISM

So long as we confine ourselves to normal perception the case for Real Presentationism appears to be very strong, as I have tried to show. But already at this stage certain objections may be, and have been, urged against the theory: (i) Perception is a mode of cognition or knowledge. As such it involves relativity. The object perceived is not known as it is in itself, but only in its relation to the perceiver. So that, after all, supposing even that no imagery, no "sensible species" intervene between the perceived object and the perceiving mind, still the object is only known as perceived, not as it is by itself and apart from this relationship of being apprehended, (ii) In the second place, we know as a matter of fact that perception is mediated by physiological factors (the nervous system) and physical factors (air-waves, ether-waves, and odoriferous particles). Must we not therefore suppose that these media really make it impossible for us to apprehend

things directly, and as they actually are?

VIII. THE RELATIVITY OF KNOWLEDGE

The first of the above objections is one of a multitude of things described by the ambiguous expression "relativity of knowledge." But it has the best claim to this title. Now it is true that we are, at present, only concerned with it in so far as it may affect the validity of Real Presentationism as a theory of normal perception. Our remarks, however, are intended to apply to it quite generally.

The objection simply takes for granted the very point at issue. To be known is undoubtedly a kind of relationship. But then there are relationships and relationships. Even in our everyday life we discriminate between relationships which are comparatively external and make no appreciable difference to the things or persons related, and relationships which are more intimate and do affect the related objects or persons. My relationship, say, to my parents is no doubt an integral part of myself. But this can scarcely be said of my relationship to my next-door neighbour or to my hat. My hat is certainly related to me in a different way according as it is on my head, or in my hand, or on the peg outside. But, these actual relationships apart, it can scarcely be maintained that it makes any real difference to me or to my hat whichever of these relations happens to hold good. The question, therefore, whether an object which is related to another is in any way altered by this relationship, depends, not on the mere *fact* of relationship, but on the *character* of that relationship. And to allege that the object known becomes altered by the very fact that it stands in this relationship of being known, is an unwarranted assumption. As regards, more particularly, normal perception, the suggestion seems to be unnatural to a degree. Even normal perception, it is true, is fragmentary, incomplete. But to know a thing incompletely, is a very different thing from having a distorted, or illusory apprehension of it. Our experience in normal perception carries with it the highest degree of certainty, and may not be called in question until there are positive reasons for suspecting it to be abnormal. To question its validity simply on the ground of the relationship which all knowledge involves is sheer paradox: to know anything is to stand to it in the relation of knowing it; but just because you stand in the relation of knowing it therefore you cannot know it. The relationship between the knower and the known certainly appears to be a transparent relation, which does not affect the object known, nor the person knowing, except in so far as his knowledge is thereby increased. The burden of the proof lies on those who would maintain the contrary.

IX. THE PHYSIOLOGY OF NORMAL PERCEPTION AND ITS VALIDITY

The fact that in all perception there is physiological mediation, that perception only follows on the stimulation of sense-organs and the transmission of these stimuli to the brain along complex nerve-paths, has been constantly used as an argument to prove that we do not know what things are, but only how they affect us. The physical world as it really is is quite different from what we perceive it to be. Not that nature as it is in itself is necessarily richer than it appears to us. The contrary may be nearer to the truth. Lotze, it will be remembered, speaks of the external world as moving and gesticulating in vain until the sentient mind comes to its rescue and voices its mute strivings. All the music of the spheres is hushed in the profoundest silence for want of a willing ear. All the rich profusion of colour and comeliness in heaven and on earth is lost in darkness and gloom for want of a friendly eye. Except for us, or the like of us, all, or nearly all, the wonders and glories of nature would cease to be, and the external world would resume its colourless, soundless, and scentless revelry of restless atoms. All the same, it may be urged, infinitely richer and more interesting though this world of appearances may be, it is but appearance and not reality. How, then, can it be said that things are known as they are?

The objection has been stated in its more sober form, in which it is more or less compatible with Hypothetical Realism. It is sometimes urged in a more extravagant form, in support of the contention that "the whole choir of heaven and furniture of earth" are only sense-impressions on our brains. In this form the objection rather over-reaches itself. For, on the same grounds, we should have to admit that the brain itself is only such a complex of sense-impressions on—what? Not on the brain surely, but at the most only on an unknown something. At best this is explaining *ignotum per aeque ignotum;* it may even be suspected of trying to explain the known by the unknown. For, from this standpoint it is too much of an assumption to speak of "impressions" at all. On the other hand, if you admit the reality of the brain on the strength of your perception (of *other people's* brains), why reject the validity of your other perceptions ?

Natural consciousness certainly seems to bear witness that in perception it is the things which we perceive and not the physiological media. We seem to know the things perceived long before we learn of the physiological factors involved in perception. In fact, we only come to know of these physiological factors when we apprehend them (that is, in others, of course), in the same way that we apprehend other material objects. Unless we assume that our normal apprehension of material objects is valid, then we have really no case, because we are not entitled to speak of the nervous system. And if we do admit our knowledge of the physiological factors, then we are equally entitled to admit the validity of our apprehension of all objects of normal perception. In short, the burden of the proof

falls on those who would discredit perception, and their arguments are not conclusive. The physiological factors, after all, may only constitute (as they appear to constitute) the mechanism of apprehension, and need not, as such, modify the objects apprehended. We are familiar with processes of transmission which leave unaffected the objects transmitted. And if it is urged that the case is not quite analogous, we are quite content to admit that cognition is not like anything else, and beg opponents also to bear that in mind.[8] The fact that even naive consciousness would admit that, say, a coloured surface is not like nerve-processes, and that nerve-processes have no likeness to the perceptions of colour, is no valid objection to our natural assumption that in the end it is the coloured surface that we apprehend, and that we apprehend it just as it is. And we might even invoke the aid of something analogous in mathematics; for the fact that x is not equal to y and y is not equal to z does not prove that x is not equal to z. The knowledge, therefore, that normal perception is mediated in these ways may well supplement, but need not invalidate ordinary perceptual cognition.

Lastly, to anticipate the position which I shall endeavour to defend in a subsequent section, the above objection to Natural Realism—the objection based on the physiology of perception—implicitly rests, it appears to me, on an unwarranted assumption, namely, that the body is something quite distinct from the mind, though the mind may somehow utilise the body as its instrument. This kind of vivisection of the whole man is not suggested by natural consciousness, it is the result of philosophic reflection, and has permeated popular thought simply as the result of religious teaching. To natural consciousness man is a concrete unity, and not a dualism, except by way of abstraction. And so long as we do not adopt a dualistic attitude the nervous processes in perception form no kind of "external" medium on which objections to the validity of normal perception might be based.

X. THE PHYSICS OF NORMAL PERCEPTION AND ITS VALIDITY

We turn next to the objection against Real Presentationism, based on the physical mediation of perception. So far we have endeavoured to vindicate Real Presentationism against objections based on what may be called the relatively inner nature and mechanism of perception. We tried to maintain that there is nothing in the character of this inner apparatus to necessitate the assumption that there is anything of the nature of a veil, any *tertium*

[8] The uniqueness of the cognitive relationship is also apt to be obscured somewhat by extreme upholders of Real Presentationism. When A is known to B, A is simply present to B. Therefore, it is argued, when A is present to D we should, in consistency, say that D knows A. But, unless D is a conscious being, this is an inaccurate form of expression, because "knowledge" not only implies the "presence" of A to B (of the known to the knower), but also that unique cognitive attitude of B to A (of the knower to the known), which is only possible when B is a conscious being.

quid interposed between the knower and the known in the case of normal perception. So far as the constitution of the knower is concerned, we endeavoured to show that there is no cause for suspecting the validity of normal perception, no reason for supposing that we only see things as "through a glass darkly." But now we are confronted with something which does seem to be of the nature of an external medium. Our normal perceptions, it is admitted, are mostly mediated by such physical media as air-waves, ether-waves, and odoriferous particles. Except in the case of touch, we do not come into immediate contact with the things apprehended; are we then justified in supposing that things are apprehended as they really are, or must we allow that we only know them as modified by these physical media?

So far as the scent of things is concerned, there is no real mediation. The odoriferous particles emanate from the thing, are parts of the thing itself, and their contact with the sense-organ is, to all intents and purposes, therefore, direct. As regards sound, the most that can be maintained is that sound belongs not to the sounding body by itself, but to it in conjunction with the air-waves. This, however, in no way undermines the validity of the perception. To perceive a sounding body in conjunction with air-waves is to perceive it in its actual setting. And although it is desirable to discover the separate character of each of the co-operating factors, still even if we fail in this it is no support for any argument to prove the relativity of knowledge. For, to know things in their actual relations is to know them as they really are. Similarly with visual perception. The objects seen are seen only through the co-operation of ether-waves. But in so far as this co-operation or relation is actual, they are seen as they actually are, whether or not we can discover the separate character of each of the co-operating factors.

The most, then, that need be allowed on the score of the physical mediation of perception is this, that things are not apprehended as they are in isolation, or independently of one another, but only in their mutual relations. This may sound rather like the familiar view, that we do not know things themselves, but only their phenomena or appearances. In reality, however, there is no logical connexion between these two views. Since things are mutually interrelated, and not disconnected, to know them in their mutual relations is to know them as they really are, and not simply as they appear to be. In short, the knowledge of things in their relations is a very different thing from the relativity of knowledge.

The same argument might also be used against those who attack the validity of normal perception on the ground that we only know things in relation to ourselves. For, even so, we still know them in relation to something real, to which they are actually related, and therefore we know them as they really are.

Whilst insisting on the interrelation of things, it may be necessary to guard against the misconception that things consist only of relations. This is not at all what I mean. All relations require terms. Things must severally have their own separate characters before they can enter into mutual relations. And it is certainly desirable to discover the separate or independent character of the terms related. Nor is this task altogether an impossible one. It is true that we only apprehend things in their mutual relations in more or less complex contexts. But this does not prevent us from conceiving their several independent characters. Consciously or unconsciously we apply the familiar scientific rule of varying the circumstances. Properties which are always present under the most diverse conditions are regarded as the essential properties of those things, while those which are sometimes present and sometimes absent, according to circumstances, are considered to be the joint products of properties possessed by (or rather constituting) that thing, and certain other conditions, whose presence or absence thus results in the appearance or disappearance of such secondary qualities. This brings us to the distinction between primary and secondary qualities, which we must now consider briefly.

XI. PRIMARY AND SECONDARY QUALITIES

The difference between primary and secondary qualities is not always admitted; and even those who admit the distinction are not agreed as to the grounds of the distinction. But we are not concerned here with the history of the subject; we are only concerned to indicate how the foregoing views affect this problem. It might appear at first that on the view of real presentationism the distinction between primary and secondary qualities is untenable. To some extent this is true. If the distinction is made to correspond with that of objective qualities and subjective sensations, then, just as from the standpoint of idealist epistemology, there is no room for the distinction, inasmuch as both the so-called primary and secondary qualities are in a sense subjective, that is, dependent on mind, so, on the contrary, from the point of view of real presentationism, there is no room for this distinction, because they are both of them objective. Nevertheless the two sets of qualities may be usefully distinguished even from the standpoint of realist epistemology, though on different and perhaps truer grounds.

Reference has already been made, in the preceding section, to the fact that in the case of touch the sense-organ is in immediate contact with its object, so that there is no external physical mediation such as in the case of sound, for instance. We have also pointed out above that, while some properties of things are observed in them amid the most varying circumstances, others are only apprehended under special conditions. Now, those properties of things which are apprehended immediately and under the

most diverse external conditions constitute the primary qualities, while those which are either not apprehended immediately (but only through the mediation of, say, air-waves or ether-waves), or are not always apprehended, are secondary. The primary qualities are complete in the separate character of the separate things, and that is why they are apprehended under the most diverse external conditions. The so-called secondary qualities are really complexes produced partly by conditions found in the separate character of the things in question, and partly by other conditions found in other things (say, ether-waves or air-waves), and are consequently not always present. The importance commonly attached to the sense of touch is really due, I think, to the fact that in touch, as already explained, there is no external mediation, the contact with the object being immediate. Visual perception, on the other hand, is mediated by ether-waves, and that is why we like to confirm or correct visual perception by reference to touch when possible.

Secondary qualities as well as primary qualities are, therefore, strictly objective on this view. The fact that they are conditioned by conditions which are not always found together in any one thing is no argument against their objectivity. No doubt it would in some respects be wiser to indicate the precise permanent or primary qualities of the things concerned instead of attributing to them the secondary qualities of which they are only partial conditions. That is, of course, what physical science always tries to do—with what success does not concern us at present. On the whole, however, the attitude of naive consciousness is justifiable. The secondary qualities are objective, and even if all the constituent factors or conditions are not usually stated or recognised explicitly, neither are they explicitly denied.

What we have said of secondary qualities is equally true of, and much more obvious in the cases of, such qualities as "fragile," "brittle," "inflammable," and the like, which might almost be included among secondary qualities. Here what is held in view is a certain result, only some of the conditions of which are present in the things so described. The main difference between these and secondary qualities is that there is an explicit consciousness of the requirement of other conditions than those already present in the bodies concerned. It is the presence of some of the requisite conditions and the absence of the others that really constitutes the "permanent possibilities" of such things. Mere possibilities are nothing; these possibilities, however, are realities, only considered with reference to certain results of which they form only a part, and not the totality of conditions.

XII. REAL PRESENTATIONISM AND IMAGINATION AND MEMORY

Assuming for the present that Real Presentationism has been vindicated as

a theory of normal perception, it remains to be seen whether it is also applicable to other modes of normal cognition—imagination and memory. Several attempts have been made to justify such an extension of the theory of Real Presentationism. But, though the case has been made to appear plausible, the arguments do not appear to me to be convincing. It has been urged that in memory and imagination, as in perception, what we have is still merely an apprehension of physical things—though the process of apprehension is, of course, peculiar. An imagined tree or a remembered tree is as much a physical object as a perceived tree is; only the apprehension in the former case is of a different kind from that in the latter case. The real point at issue, however, is not whether a remembered tree or an imagined one is physical or quasi-physical, but whether in remembering or imagining a tree all that belongs to the mental side of the relationship is a transparent process, such as we supposed in the case of perception. Now I do not for a moment deny that normal memory and imagination are modes of cognition whereby we are in touch with the real world. But, all the same, all imagery is essentially *representative*. A remembered tree, even an imagined tree, may be physical, no doubt. But an imagined tree or a remembered tree is not the same as an image or a memory-image of a tree. And the image is not physical, but mental. In all imagery (though it may represent something physical and may in that sense be regarded as quasi-physical) we have essentially mediate presentation, not direct presentation—and the medium is mental. In a sense it is, of course, possible to distinguish the image from our having it, and then the image might be regarded as apprehended in the same direct way as physical things are apprehended (on the theory of Real Presentationism). But the cases are not really similar. The physical things exist in space, whether we know them or not; but where, in what limbo of footless fancies, shall we suppose these images and memories to spend their fleeting unsubstantial existence in times of neglect, when we do not apprehend them, and even at the moment when we do apprehend them? If they are not a part of the mind, nor a part of physical nature, what then are they?

The conclusion seems, therefore, unavoidable, that all forms of imagination differ very materially from normal perception. In normal perception the mental process is transparent, while the content consists of the presented physical object; in imagination both process and content are mental, though the content is also representative of something physical (actual or supposed).

XIII. MENTAL ACTIVITY

I fail to see any valid objection to the above conclusion. Why should we not accept the testimony of natural consciousness that the mind, on its cognitive side, consists partly of transparent activities such as we seem to

have in normal perception and abstract thought, and partly of content-activities such as we find in imagination and memory. Nor can I see any objection to the further assumption that the two kinds of activities constantly co-operate, so that perception and thought contain fragments of imagery.

Certainly, if you will insist on reducing all mental activity to one type, then there are only two courses open for you. You either reduce them all to the type of imagination, and say that even in perception we apprehend images, and not the things directly; or else you reduce it all to the type of transparent process, and explain or explain away images as best you can. The first of these alternatives is exposed to the fatal objection that it makes knowledge impossible, since (on such a theory) we are for ever debarred from ascertaining how far, if at all, our images represent real things. And as there is nothing in our normal perceptual experience to compel us to adopt any such view, it would certainly be folly to adopt such a suicidal epistemology. The second alternative is not open to such fatal objection, but it is, to say the least, very difficult to conceive. It resembles to some extent the attempt to reduce all matter to some mode of mere motion—motion of a something which is neither solid, nor liquid, nor gas. You know what this theory of matter suggested to Professor James Ward. Well, the conception of mind as a system of transparent activities reminds me of the same story, and I hope that I shall be forgiven for adverting to it. It is the story of Alice's adventure in *Wonderland,* when she saw the gradual disappearance of the Cheshire cat, beginning with the tip of the tail and ending with the grin, which remained some time after the rest of the cat had vanished. "Well! I've often seen a cat without a grin," thought Alice, "but a grin without a cat! It's the most curious thing I ever saw in all my life."

Professor Alexander, it is true, not only admits, but insists that "self" and "self-knowledge" are very real things, although the self, as he conceives it, merely consists in transparent acts of consciousness, and although consciousness, according to him, is always conation, and has no qualitative differences. Such a soul, however, is pure with a vengeance—almost too pure for this world! And this "self-knowledge" is simply synonymous with consciousness—the knowledge or consciousness *of* self being merely the knowledge or consciousness which *is* the self. Hence he can maintain that consciousness is always self-consciousness. But this only helps to confirm the suspicion that self-consciousness, in the usual sense of the expression, is being degraded to the level of mere consciousness, rather than that all consciousness is being levelled up to self-consciousness. Moreover, though it is with great diffidence that I venture to differ from Professor Alexander, it does not seem to me that his view, if I understand him rightly, allows sufficient scope for Psychology. If the content of mental activity is always physical, and the activity is always of the same quality, the distinc-

tion between Physics and Psychology seems to be reduced to this: that in Physics the objects are described with a minimum of reference to mental activity (that is to say, only just to allow for the personal equation in observation and measurement), while in Psychology the same things are described over again with explicit reference to the process of apprehension. But if the process is always the same in kind, this seems to be a distinction without a difference.

The conception of mind as a system of transparent activities is, I think, also untenable because of its failure to account for the very possibility of dreams and hallucinations. It seems impossible to realise how a bare, transparent activity can be directed to what is not there, to apprehend what is not given. But this is what actually happens in all such abnormal experiences. What we have here is something of the nature of production, creation, and, at the very least, distortion. But is not this rather more than can be legitimately credited to the powers of merely transparent processes or activities, or to any system of such activities? A bare activity may, for various reasons, fail to operate even when an object is present; it can scarcely produce an object not given, or even produce a positive modification in a presented object.

Again, though the subject does not fall within the scope of this paper, it may be pointed out that feelings and volitions, as distinguished from cognitions, cannot by any means be treated as bare, transparent processes.

XIV. THE WHOLE MAN

The difficulty to which reference was made in the preceding section, the difficulty, namely, of conceiving mind as merely a system of processes or activities, though it is considerably increased when these processes are supposed to be transparent, is not altogether peculiar to this specially attenuated view of mind. In some form or other it lurks more or less in the whole of current psychology. And one cannot help sympathising with Professor Ward's plea for the admission of the Pure Ego into psychology. There is, no doubt, something to be said also on behalf of the almost religious anxiety to keep psychology "scientific" and free from all metaphysical taint. If one could only be quite sure that this does not result merely in the clandestine admission of bad metaphysics! For the present, the doctrine of psycho-physical parallelism is the favourite fence for psychologists to sit on. This implicit dualism—another Cartesian legacy!—is, of course, not metaphysics! It is only a temporising, halting metaphysics. It has also something of a theological bias. I am a soul dragging about a body, or rather am somehow shadowed by it: together we wander through this vale of tears and the shadow of death; but we are silent companions, and hold no converse; we are ever so near, yet ever so far!

To natural consciousness man, the whole man, appears as a unity, as a concrete whole, of which mind alone and body alone are only abstractions. There may be minds without bodies, certainly—at all events we know nothing to the contrary. It seems also obvious that there are bodies without minds. But, in any case, what we find in man is a conscious body, or an embodied mind. Science, it is true, is necessarily abstract. And up to a certain point it is possible, it is necessary, and it is legitimate to treat of the mental aspect only, or of the physiological aspect only. But that is no reason why we should commit ourselves to the "parallelistic" or to any other metaphysical theory. A mere description of the relationship between body and mind as it appears to natural consciousness would, I venture to hold, form a more legitimate and more helpful starting point. And, after all, is not this apparent unity more or less assumed in various parts of psychology? Does not the psychologist repeatedly fall back upon physiological explanations and suggestions? There is a well-known passage in Goethe's *Faust* where Mephistopheles extols the helpfulness of words in Theology and Metaphysics, because they readily fill gaps in thought. Something similar is true of neuroses in Psychology, and I must beg forgiveness for parodying Mephistopheles:

> Yet need we not with too great scruples rack us;
> For just where all *psychoses* lack us,
> An apt *neurosis* will serve our turn.

Now I have no objections to this method. On the contrary, I think it is proper and just. What I would urge is a fuller recognition of its implications. It implies a more intimate relationship than mere parallelism between psychoses and neuroses. It implies something more like what appears to natural consciousness.

What we seem to have in a human being is a very complex organism exercising mechanical, chemical, vital, and mental activities. These activities are not simply collateral or parallel activities: they are most intimately interrelated, each higher activity in the scale presupposes the lower, without which it does not appear to function. It was this fact which gave plausibility to thoroughgoing mechanical theories. But this extravagant attempt to explain the higher activities by reference to the lowest has deservedly ceased to count as a theory to be reckoned with. On the other hand, the extremely opposite attempt to level up the lowest to the highest, and to spiritualise matter appears to be equally extravagant. In the human organism, no doubt, the material processes are subservient to higher ends—the mechanical, chemical, and vital activities, in a sense, prepare the way for the mental activities. Still, systematic interconnection or organic unity is one thing, perfect simplicity or homogeneity is quite another thing. And while insisting on the advisability never to lose sight of the unity of the human organism, we must also beware against the specious plausibility

of simplifying the complex whole by making it homogeneous with one of its constituents, whether mechanical or spiritual. Now whatever the ultimate explanation of the interconnection may be, the interconnection itself remains a fact. And, as already remarked, the higher grade activities of man requisition the lower, while the lower appear to take place without the higher. This apparent priority of the lower and its apparently greater independence in no way affects the reality or the worth of the higher. The human organism, in short, exhibits a hierarchy of reactions to, or interactions with, its environment. The lower ones may all be summed up as physiological responses, the highest as mental responses. There may be, there probably are, higher beings than man and higher activities than his. But this does not render dubious any part of the whole being of man.

XV. KNOWLEDGE AND ERROR

The reason why we have been insisting on the organic unity of the whole man is twofold. In the first place, it helps to confirm the validity of normal perception. In the second place, it helps us to some extent to surmount the difficulties presented by memory, imagination, dreams, and hallucinations.

As to the first of these topics, namely, the validity of normal perception, we may say with Empedocles that "like knows like." Whatever we are that also we can know. It is because we are bodies exercising physical, vital, and mental activities that we can also know beings and modes of being of all grades represented in ourselves. It is absurd even to pretend to regard our own bodies and activities on the analogy of those outside us, instead of treating other bodies and activities on the analogy of ours (as we actually do normally). We do not merely *know* our own bodies and activities, we *feel* them, we *are* our bodies and activities. And it is because we *are* these that we *know* the like of them—like, that is to say, either in part or in whole. This is the root of all anthropomorphism. Indeed, in the wider sense just explained, all human knowledge is essentially anthropomorphic. Of beings and modes of being other than ours we can at best only suppose or believe *that* they are ; we cannot conceive *what* they are—except by some kind of anthropomorphism. On these grounds the higher anthropomorphism may, I think, be legitimately defended in matters of religion—but this is beyond the scope of the present paper.

As regards the second group of topics referred to at the end of the last paragraph but one, some of the difficulties presented by memory, imagination, dreams, and hallucinations have already been alluded to in the two preceding sections. The subject now requires further consideration.

In §12 we indicated the difficulty of bringing the processes of imagination and memory into line with real presentationism. Thus far, in fact, we

endeavoured to defend real presentationism only as a theory of normal perception. We have not yet dealt even with abnormal perceptions or hallucinations (including dreams). These present considerable difficulties to real presentationism even as a theory of perception. The difficulty, however, is of the same kind as that presented by imagination and memory. For, so far as we are concerned with these subjects, memory, imagination, dreams, and hallucinations have the same feature in common, and present the same problem to real presentationism, namely, how to account for quasi-perceptions when things are not presented to us.

As already suggested in an earlier part of this paper, the theory of representative perception really had its origin in an attempt to account for error, not for knowledge—for hallucinations and dreams, not for accurate perceptions. The natural explanation was that in these experiences we simply have images in our heads without any corresponding realities outside them. This explanation of common sense is, I think, quite right as far as it goes. The trouble arises when it is extended also to normal perception so as to interpose images between us and the things perceived. As regards imagination, memory, and abnormal perception it is, I think, no mere fanciful introjection to say that there are images in our head. And one reason why we insisted on the intimate unity of mind and body, of psychoses and neuroses, was to defend this common view of common sense.

What we have in all such experiences is not a bare transparent mental process, but a content-process, that is to say, an activity in which both process and content are mental. Whereas in normal perception there is a mental process directed to an external content, in all these cases there is an ideal content generated by inner physiological conditions. How this happens is certainly a mystery; but I can see no valid reason for denying the fact. At all events, this appears to me to be an unsophisticated version of the facts. The retina normally plays its impartial *role* in the apprehension of light when stimulated by an appropriate stimulus; but it also somehow generates such a quasi-apprehension of light when abnormally stimulated by internal conditions. And such, I take it, is the case with other physiological processes. After-sensations, primary memory-images, dreams, hallucinations, and constructive imagination are increasingly complex facts of the same general character. If it should be objected: is that all, are they *simply* the results of internally started nervous processes? I can only plead that they are not nearly so *simple* as you appear to think. And after all, is not this, in effect, the real assumption of Psychology? Is not this really implied in the custom, already referred to, of advancing neuroses to fill the gaps in psychoses?—witness the physiological "traces" by which memory is explained, and similar devices. The specific energy of nerves, and numerous pathological facts may, I think, be cited in support of my contention.

This may sound dangerously like materialism, but it would be a great mistake to consider it such. Mental processes, we maintain, are totally unlike physiological processes, and they are of a higher order—they are the end which the physiological processes subserve. And if it is objected that, in that case, physiological processes cannot evolve or generate psychical processes, because this would infringe on the principle of the conservation of energy and what not, the answer is that "physiological processes," in the abstract, and "psychical processes," in the abstract, certainly appear to be hopelessly divorced; but whatever may be the case with such bloodless abstractions, they are nevertheless intimately united in concrete reality, and if certain theories will not fit the facts, so much the worse for the theories. Living man forms a concrete unity, and we only have ourselves to blame if we break him up into detached aspects which we cannot put together again. Such abstraction is necessary and legitimate up to a point, only we must not mistake a convenient convention for an immutable reality.

Now, the above view of "the whole man" enables us to keep fairly close to the views of common sense. We can accept real presentationism as a theory of normal perception, and we can account for memory, imagination, dreams, and hallucinations. On the view of representational perception, knowledge seems impossible; on the view that the mind is a system of bare activities or transparent processes of apprehension, error seems impossible. On the above view, both knowledge and error are accountable, and certainly in normal life no one seriously doubts the existence of either.

All human knowledge rests ultimately on normal perception. The sciences form a complex credit system, of which normal perceptions constitute the gold reserve. In normal perception we apprehend things immediately and as they are, though they may be more than we directly apprehend. Normal tactual apprehension is the least exposed to suspicion, because there is no external medium intervening between us and the things apprehended. Where such an external medium intervenes, our apprehension may be affected, as happens, for instance, through the refraction of light, when, say, a stick is partly immersed in water. In such cases a "misapprehension" may be corrected by more direct forms of apprehension where the mediation is more or less eliminated—as by touching the stick, or obtaining a nearer view of a distant object. In the case of dreams and hallucinations we have quasi-perceptions generated abnormally by internal stimulations of the neuroses (or parts of them) actually involved in the corresponding normal perceptions. In normal memory and imagination the processes are similar in kind, only in their case we realise that there is no external object present at the moment to account for these experiences, at least in their entirety. But we need not pursue the subject any farther, as our scheme requires no changes in the details of the accepted psychological doctrines relating to the mental processes with which we are here

concerned. Some brief remarks may, however, be added on the general cosmology of natural realism, and its relation to monistic and pluralistic philosophies.

XVI. THE COSMOLOGY OF NATURAL REALISM

On the view of Natural Realism as defended in this paper, the world of reality is what it appears to be to normal perception. It is also a great deal more than that. How much more it is we certainly do not know; but by the aid of inferences based upon the data furnished by normal perception mankind is steadily encroaching upon the vast domain of the unperceived. The limits of human progress towards fuller and completer knowledge need not trouble us. The precise delimitation of the realms of the Unknowable is a task which may safely be left to the care of those who are engaged in compiling almanacs for the millenium. It seems a gratuitous and unnecessary slur on the future of our race to measure its hopes by a modest estimate of our achievements. But, be that as it may, the possibility or impossibility of a fuller knowledge need not invalidate a knowledge that is less complete, and which can indeed be supplemented without being supplanted. The reality of other modes of being that we know not of can only enrich, and need in no wise undermine the world of reality as it is apprehended by natural consciousness. And the world as thus apprehended consists of a vast variety of things existing in space and in time, and standing in the most varied relations to one another. Some of these realities are conscious beings, and one of these relations is that of knowledge. Conscious beings cannot, of course, exist as conscious beings independently of (their own) consciousness, nor can the relationship of known to knower exist independently of (the knower's) consciousness. But these obvious exceptions apart, there is no reason to suppose that the existence of things and their mutual relations is in any way dependent on consciousness. Things are therefore independent of consciousness as regards their *existence*. They are also independent of consciousness as regards their *character,* for we have seen no reason for relinquishing the assumption of natural consciousness that the objects known are in no way modified by being known. Though all things are interrelated, if only because of the *continua* of space and time in which they exist, yet their relations exhibit the most diverse degrees of intimacy—varying as they do from the most intimate relationship of absolute dependence to that of extreme repugnance. The fact of interrelationship suggests a monistic interpretation of reality; while the looseness of many of these relations, and the impossibility of having relationships without more or less independent terms to be related, support a pluralistic view. The view that the world consists of a plurality of more or less independent things which are variously interrelated in one continuous space and one continuous time, seems to be all that is warranted on the basis of natural realism or natural

consciousness. That this is no complete or perfectly satisfying explanation of the universe must be granted. This is attested by the almost universal tendency to seek such a further ground of explanation in a Deity variously conceived. The monistic tendency to explain away diversity is incompatible with natural realism. Even the pluralistic view which spiritualises all things and regards all things as psychical in character is at best a gratuitous hypothesis, and becomes untenable if it in any way attempts to explain away the world of material things. It will never do to explain away the physical world as merely symbolical in some way of an inner spiritual life. After all, even symbols have a character of their own independently of what they symbolise, represent, or suggest. Lilies are lilies whatever else they may symbolise. And words are strokes or sounds even though what they represent or suggest may be neither strokes nor sounds. That there are material things we know. That there are animate and conscious beings we also know. That material things may have other properties besides those known to us is quite possible, in fact, highly probable. That there may be conscious beings altogether superior to, and very unlike human beings is also highly probable. To make man the measure of all things may commend itself to his vanity, but scarcely to his reason. Still, probabilities are matters of Faith. And although it is necessary to exercise faith, if we are to have any satisfactory explanation of the world at all, and although, from the nature of the case, such a faith cannot be a matter of indifference to us, but must profoundly interest, and influence us in various ways, yet it is inadmissible to subordinate knowledge to faith, to explain away the known in the supposed (and erroneously supposed) interests of what is only believed on faith. On the other hand, it may also be noted that, although to profess a belief in God is often only to give a name to an as yet undiscovered solution of the great riddle of the universe, still that is not the only way of leaving the riddle, or evading it.

XVII. THE INDEPENDENCE OF TRUTH

At the commencement of this paper reference was made to the diffidence (not to say agnosticism or scepticism) of science as to the possible attainment of Truth. It was suggested that this diffidence was largely due to the influence of philosophy, and that, in a sense, therefore, science was only repaying philosophy in its own coin when, in its turn, it helped to give birth to Pragmatism. The object of this essay was to vindicate the confidence of common sense against these sceptical or quasi-sceptical tendencies. It may therefore be advisable to conclude this paper with a brief vindication of the common sense view of Truth as opposed to the pragmatist view.

According to the common view Truth is something objective, and independent of our wishes or hopes, independent even of its own practical consequences. It is assumed as a matter of course that truths can be

known or discovered. But although our beliefs may be, and often are, true, it is not our believing that makes them true. It is also supposed that truths are eternal—once true always true. In apparent opposition to this view of Truth, Pragmatism maintains that the true is the "expedient in the long run," that "truth *happens* to an idea," that " it *becomes* true, is *made* true by events."[9] Such, in brief, is the gist of the opposition.

There is no need to enter into all the details of the controversy, it will be sufficient to indicate the general lines of our defence of the view of common sense from the standpoint of natural realism. In justice to Pragmatism it should be stated at once that the pragmatist view of truth seems to have been directed primarily against Absolute Idealism. One extreme, however, does not necessarily warrant another. And, in any case, while assaulting Absolute Idealism, Pragmatism has also ridden rough-shod over Natural Realism. In intention, it is true, Pragmatism pursues its knight-errantry out of chivalrous regard for the feelings of spoiled humanity. It seeks to restore to the plain man those pleasant things which a too exacting philosophy has snatched away from him. In effect, however, what Pragmatism has really restored to the plain man is, not the solid fare which he had fondly believed was his, but a mere baby-comforter. Hence the discontent with Pragmatist Truth.

The position, it is here maintained, is as follows. If we use the word "belief " in the usual psychological sense, that is to say, not as equivalent to "*mere* belief," but as denoting all degrees of assertiveness from "mere belief" to absolute knowledge, then we may say that a truth is a true belief (or, when expressed in language, a true proposition). If so, there can be no truth without belief. And since there can be no belief without a believer, there can be no truth without a believer. To this extent, therefore, truth may be said to depend on man, or (to use a familiar pragmatist adjective) to be "man-made." This admission, however, must not be misinterpreted. All that it really involves is that the *existence* of the belief depends on man, but, granting the *existence* of the belief, the *truth* of the belief does *not* depend on the believer, but is independent of him. This is what is meant by the "independence " of truth. The truth of a belief depends on the things to which it refers, and the reality and character of the things is independent of their being known, and is not affected by their becoming known. For example, it depends on me whether I look at the sky or not; it depends on me, therefore, whether or not I think "the sky is clouded." But as soon as I have formed this thought or belief, the *truth* of it does *not* depend on me, but on the facts or realities called sky and clouds. Similarly, it depends on me whether or not I believe that "Mars is inhabited," But once I do believe it, the *truth* of the belief does not depend on me in any way, but solely upon the facts referred to, namely, the existence of Mars and its inhabitants (if any), and this does not depend on my belief. The indepen-

[9] W. James, *Pragmatism,* p. 201.

dence of Reality, in short, gives independence to Truth, notwithstanding the dependence of Belief. Even when we *realise* our beliefs, we do not, strictly speaking, *make* our beliefs true, we only *prove* them to be true. Let us consider the most plausible illustration given on behalf of Pragmatism. "How many women's hearts (exclaims Professor James[10]) are vanquished by the mere sanguine insistence of some man that they must love him! He will not consent to the hypothesis that they cannot. The desire for a certain kind of truth here brings about that special truth's existence, and so it is in innumerable cases of other sorts." It is barbarous to submit the poetry of love to the cold scrutiny of logic; but what must not one do in the cause of Truth! Now what are the bare facts, stated in bare prose? Romeo loves Juliet. Let us suppose that he believes that Juliet reciprocates his affection, that he thereupon proposes and is accepted. Taking the rosiest view of the case, let us suppose that she accepted him because she loved him. Romeo's belief, then, was true, and it was true simply because as a matter of fact Juliet did love him, and not because he *believed* that she loved him; she might have loved him just as much (perhaps more so) even if from sheer modesty he believed that she did not love him, and he never discovered the fact. The proposal and the consequent acceptance, then, at most only *proved* the truth of his belief, it did not *make* it true. But perhaps this is not the kind of case contemplated by Professor James. Let us suppose a case where the course of love did not run quite so smooth. Our Romeo believing that Juliet loves him woos her, but is rejected at first. This, of course, would simply prove that his belief was hasty and false. He thereupon modifies his belief. He cannot believe that she does love him (unless he has reason to suspect concealment); but he can still believe that she may come to love him provided certain conditions are fulfilled, which it is in his power to realise. And after sufficient wooing, we'll say, he wins his Juliet. Here again his perseverance with its actual happy result only *proved* the truth of his belief, and did not *make* it true. Juliet might have been just as capable of loving him if he persisted, he might have believed this to be the case, but fortune might not have favoured him to put his belief to the test, and his belief would have been just as true, though not proven. That the truth of his belief depended on the nature of Juliet, and not simply on his belief, would, of course, have been shown even more decisively if Juliet flatly refused him till the end of the chapter. But Professor James seems to have no sympathy with rejected suitors. What happens in all such cases of beliefs *made* true is this: X believes, or rather hopes, that Y_1 may, under certain conditions, become Y_2, which is just what he wants it to be. He thereupon sets about realising the requisite conditions, and then his hope or belief is realised. This, however, only *proves* that his belief was true, and does not *make* it true; if, in spite of realising the conditions which he had supposed to be adequate, the desired effect did not follow, that would have *proved* that his belief was false, it would not have

[10] *The Will to Believe,* p. 24.

made it false. But in any case a man's action is, of course, a part of reality, and it is not for a moment denied that a man's *action* may work changes in the world. What is denied is that his mere *belief* can affect reality. Belief is indeed necessary to direct human energy to the accomplishing of any task; but it is not the mere belief that realises the task, or which makes it realisable if, as a matter of fact, it happens to be beyond the power of the believer. In fact, the pragmatist view might almost be inverted. It is not the realisation of our wishes that makes our beliefs true, but, on the contrary, it is the truth of our beliefs (as to what can be done, and how) that enables us to realise our wishes. And by the independence of truth what is meant is that the truth of a belief is independent of mere belief, just because it depends on the world of reality (including human agents), which *is* independent of our mere belief.

Again, such support as these examples of beliefs followed by changes wrought by the believer seem to lend to the supposed "mutability" of Truth, results entirely from the failure to discriminate between the time *in* predication and the time *of* predication. When a belief having reference to a definite time is expressed at that very time, then there is no need to state this explicitly in the predicate. We therefore say "S is P" when we mean "S is P at such and such a time." When the time has elapsed it is no longer true to say, "S is P." But this is not because the old truth has become false, only because this proposition has ceased to express that truth adequately. The time *in* predication, having ceased to coincide with the time *of* predication, must now be stated explicitly in the predicate, thus: "S was P at such and such a time." And this will always be true, if the assertion "S is P" was true at the time when it was asserted.

The pragmatist conception of Truth, as is suggested by the above examples, seems to derive its chief plausibility from a confusion between the *truth* of a belief and the *proof* of a belief. This confusion, or rather the deliberate identification of the two, is shown by the pragmatist use of the word "*verification.*" Usually, of course, "verification" means the *testing* of a belief, the attempt to *prove* it, but the pragmatist employs the expression in the sense of *making* a belief true. That is why he can speak of truth as an event or a process. The *testing* or *proving* of a belief is a process, its *truth* is not. Now there are two main kinds of proof, according as the belief to be proved refers to things which can be adequately apprehended in perception, or not. At the present moment, for instance, I believe that the children are in the nursery. The truth of this belief depends entirely on whether they really are there or not. If I want to prove my belief I can go there and look. If I see them there then I have proved my belief to be true, but I have not made it true. What makes it true, is the children's being there, and my seeing them there does not put them there. In fact, it is only their being there that enables me to see them there. And so with the innumerable variety of similar beliefs. It is ridiculous to say that such beliefs

are true simply because they "work," or "lead rightly." They are true because, and in so far as, the facts are as they are believed to be. Our apprehension of the facts, though it proves the beliefs to be true, does not make them true. On the contrary, it is only in so far as such beliefs *are* true, that they can be *proved* to be true by such apprehension. And it is idle to object that our apprehension is not conclusive, that it may be illusion or dream. For, as Spinoza has pertinently remarked, a man who is dreaming may well suppose that he is awake, but a man who is awake can never suppose that he is dreaming. Some of our beliefs, however, cannot be proved in this simple manner. Take, for example, beliefs which are universal (not merely enumerative) in character. Some of these can be proved absolutely on rational grounds—the propositions of geometry, for instance. Others, such as most of the hypotheses of science, cannot be proved absolutely, they can only be confirmed more and more, in so far as they account for, or seem to represent accurately, all the relevant observations made, and even help us to anticipate future observations. In such cases we are dealing with an inverse problem, and it is of the nature of an inverse problem, that one cannot as a rule be absolutely sure that any one solution represents the actual way in which the result in question has come about. All one can say in such cases is that if the operative conditions were such as those suggested, then this result would necessarily follow; but it is just possible that some other conditions might have produced this result. Strictly speaking, therefore, many of the so-called "verified" hypotheses are beliefs that "work" or "lead rightly," rather than fully established truths.[11] But even these are either true or false. And their truth or falsity depends not on our beliefs, nor on their "right leading," but on the independently existing facts to which they refer. Only we cannot prove their truth by such simple inspection as sufficed in the above illustration. If they are true, it is not because they "work," but rather they "work" only in so far as they are true, either altogether or in part. Again, what has just been remarked of scientific hypotheses applies also to beliefs which are not capable (or are not supposed to be capable) of verification in the scientific sense. Religious beliefs, as already suggested, cannot be, and as a rule are not, called Truths in the scientific sense. They are popularly called Beliefs or Articles of Faith, because, although they are believed to be true, they are not regarded as *proved* true—and that is just why it is considered to be a merit to believe them. Now, all that can be done in such cases is to observe what effects these beliefs appear to have on their professors. But our attitude changes to that extent from the intellectual to the moral standpoint. Beliefs which appear to exercise a good influence on conduct may be judged to be *good*.

[11] The pragmatist, it is true, denies the existence of unverifiable truths—but scarcely with a good conscience. Why is it insisted on that it is not always enough for a belief to be expedient for a while, in order to be true, but that it must be expedient "*in the long run*"? Is it not because the pragmatist realises that some beliefs are only verifiable at the millennium or thereabouts? If so, of course, there is no need to quarrel as to whether these should be described as "unverified" or as "unverifiable."

And however much various beliefs or faiths may differ from one another, so long as they appear to exercise an equally good influence over their votaries they may be considered equally good. But the *goodness* of a belief is no proof of its *truth,* much less is it identical with it, and conflicting beliefs, though they may be equally *good,* cannot be equally *true*. Each belief is either true or false, and this depends neither on our choice nor on its effects, but on the reality to which it refers, and which is independent of our mere beliefs. If it should be objected that, after all, Pragmatism is only insisting on what has actually been urged in this very paper, namely, that we should consider "the whole man," and not merely aspects of him divorced from one another, our answer is, so far so good, but you do not get the whole by *confusing* the parts.

The motive underlying the pragmatist view of Truth is certainly praiseworthy. If people could be brought to believe that their religious views, however diverse, may yet be equally true provided they make them equally good, it would certainly make for tolerance. And tolerance is a fine thing. But the method is a mistaken one. People of a sympathetic character will realise the primacy of their moral duties, and will agree to differ on matters of belief, recognising that coercion and bribery are not logical arguments, and that it is folly to commit a sure wrong in the supposed interests of a possible truth, however strongly they may believe it. The zealots, on the other hand, who set themselves up as the only and supreme models of humanity, will scarcely be persuaded by the logic of Pragmatism. And on most people the effect can scarcely be salutary. The suggestion that different beliefs may be equally true rather conveys the idea that they are really equally doubtful, and that at best we only make-believe. On the whole, surely it is a more inspiring conception, even from a pragmatist standpoint, that Truth is neither mutable nor man-made, and that though we may all approach it along different roads, and fall into various pitfalls on the way, yet we are all seeking the same fuller and completer knowledge of the same real world, which we can also make better as we get to know it better. But, be that as it may, Reality is in the main independent of us, and the truth of our beliefs depending, as it does, on Reality, is to that extent independent of us.

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VOLUME IX

1909

EDITORIAL NOTE

The following paper by G. F. Stout - "Are Presentations Mental or Physical? A Reply to Professor Alexander" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume IX (1908-1909), pp. 226-247.

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IX. ARE PRESENTATIONS MENTAL OR PHYSICAL?

A reply to Professor Alexander

G. F. STOUT

IN proceeding to inquire whether anything is physical or mental, the very first step which we ought to take is to give such an indication of what we mean by the terms *physical* and *mental* as will suffice to guard against ambiguity in the question itself. Mr. Alexander has made no attempt to fulfil this initial requirement. I must therefore attempt to supply the deficiency myself, and this I shall endeavour to do in a manner which is likely to meet his approval, *i.e.*, by a plain unbiassed description of fact. What, then, as a matter of fact, do we ordinarily mean when we say that something is physical or that something is mental? I think that there is general agreement that a physical thing occupies space of three dimensions, and also that no two things can at the same moment occupy the same portion of space. Further, the spaces occupied severally by distinct material things are all parts of one space, each being continuously connected with every other by intervening tracts of space. Whatever has no place within this common space is not a physical thing. Again, physical things partly change, partly endure unchanged in time, and both their persistent states and their changes are constantly being determined by an immensely complex system of interactions, direct and indirect, with other members of the spatial system. The moon, for instance, is at this moment attracting and being attracted by my copy of the *Critique of Pure Reason*, and both are attracting and being attracted by Mr. Alexander's hat. Such interactions are interactions of things in space as such, and they are therefore always spatially conditioned. Even action at a distance, according to the law of gravitation, takes place subject to the formula of the inverse square.

A physical thing, then, is a thing occupying space and entering as a factor into the spatially conditioned system of interactions—the executive order of the material world. The conception of physical existence, in general, is wider than that of a physical thing. Under physical existence I include whatever so belongs to the constitution of a physical thing, that change in it is *eo ipso* change in the physical thing, and that the annihilation of the thing would *eo ipso* include its annihilation. Whatever does not conform to this condition is, at any rate, not a physical existent, whether or not it can properly be regarded as psychical.

As regards the meaning of the term *Mind,* I am content to accept,

for the purposes of the present discussion, the account offered us by Mr. Alexander. A mind is the subject of activity in the way of conation and attention, and also of feeling in the way of pleasure and pain. Psychical or mental existence will, then, consist in whatever so belongs to the constitution of a mind, that change in it is *eo ipso* change in the mind, and that if the mind ceased to exist it would *eo ipso* cease to exist. Whatever does not conform to this condition is not a psychical existent, whether or not it can properly be regarded as physical.

THE QUESTION AT ISSUE

After these preliminary definitions, we may proceed to fix exactly what the question is which we have to discuss. The question concerns the nature of certain existents; we have to decide whether these are physical or psychical, or both or neither. But what are the existents to be considered? I answer that we are concerned exclusively with those existents which are existentially present to the mind in perceiving material things by way of sense. By existential presence, I mean the way in which my toothache, for instance, is present to me in the moment in which I am actually experiencing it—the way in which it is not present to my dentist. My dentist may know or believe that my toothache exists, but my existent toothache itself is not actually present to him as it is to me, inasmuch as I am in the act of feeling it.

It is above all things necessary to recognise at the outset that what is thus existentially present in sense-perception is very far indeed from being identical with what common-sense and science ordinarily regard as directly observed or perceived. All our ordinary sense-perceptions—all that we ordinarily call "observations"—are saturated with inferences and interpretations and suggestions which are not recognised as such and may therefore be called unconscious. So far as these inferences, interpretations, and suggestions are not recognised as such, the perception which includes them is naturally taken to be direct apprehension of given fact. For instance, on looking at a man, I say that I directly see or observe that he is pale. But the colour of a man's face as existentially present to a percipient mind "varies," to quote Dr. Venn, "vastly more according as we see it by daylight or candle light, or even according as he stands somewhat more or less in the shade, than it can possibly vary according to the extremest conditions of health or sickness, whilst the light remains the same. Thus our subjective estimate of such a simple and apparently ultimate datum as that of mere colour is in great part a judgment or inference." It involves thought which transcends what is existentially present. Similarly our perception of the size, shape, and distance of bodies continually depends on a highly complex system of what Helmholtz called unconscious inferences, based on a vast and varied system of existentially present elements which

can only be disentangled from what belongs to their interpretation by the patient work of reflective analysis—not by any plain description of facts as they stand out before us only waiting to be described.

The apparent relevancy of any such plain description depends entirely on a wrong assumption as to the nature of the question which has to be answered. It is assumed that the question is a familiar one with a familiar answer which can at once be recognised by common-sense as obvious. But, in fact, the question is quite unfamiliar to ordinary thinking. The plain man makes no attempt, and has no motive for making any attempt to disengage what is existentially present or immediately experienced in sense-perception from the objects which he is ordinarily said to perceive or observe. He is convinced, and rightly convinced, that these objects are physical, not mental. But on this point there is no dispute, and it is quite futile for Mr. Alexander to press it home on us with emphatic reiteration. It is, no doubt, a plain unbiassed statement of facts. But the facts are utterly irrelevant. The real question concerns the nature of what is existentially present to the mind in perceiving physical things. To this question common-sense can give no ready-made answer. By the time the plain man has understood it accurately he has ceased to be a plain man and become a philosopher or psychologist; and it is only as a philosopher or psychologist that he can proceed to discuss it. If Mr. Alexander replies that he is not relying on common-sense, but on his own introspection, I answer that he appeals to common-sense to confirm his findings, and that both in his own analysis and in this appeal to common-sense he fails to keep in view the question which is really at issue, substituting for it one on which there is no dispute.

What we have to investigate, then, is the nature of what is existentially present to consciousness in sense-perception, as a toothache is immediately present to me in the moment in which I am actually feeling it, and not merely remembering or anticipating it.

What is thus existentially present I shall sometimes call, for the sake of brevity, a presentation; I shall also sometimes refer to it as immediately experienced, or given in immediate experience, and in order to distinguish it from what are ordinarily regarded as data by common-sense and science. I shall sometimes describe it as a *datum datissimum*.

There is also another limitation of our problem which is tacitly implied in Mr. Alexander's argument. What he maintains is not only that what is existentially present in sense-perception is a physical existent, but also that it forms part of the existence of the thing perceived, and not of any other physical object, such, for example, as the body of the percipient. He is bound to assume this, because it is essential to his position that perception is direct and not in any way representative. But if presentations as

physical facts form part, not of the thing perceived but of the body of the percipient, perception becomes a highly indirect and representative mode of knowing whatever is external to the body. Moreover, his doctrine, in that case, would obviously become a very difficult and speculative hypothesis, and could not be plausibly offered as a plain description of facts.

PROOF THAT PRESENTATIONS ARE NOT PHYSICAL EXISTENTS

I now proceed to give a proof that presentations do not form part of the physical things which we perceive in experiencing them.

Such modes of consciousness as conation and attention and emotion are not only psychical but subjective. Just as the word "above" has no meaning apart from its correlative "below," so "desiring" has no meaning apart from the correlative object which is desired, and "attending" has no meaning apart from the correlative object which is attended to. Such processes, then, as desiring and attending belong to the subjective side of the subject-object relation and are meaningless apart from some reference to the corresponding objective side.

It is plain that subjective processes are all mental. They exist only as someone's experiences. If my existence as a conscious being were annihilated, all that I call my attending, hoping, fearing, willing, etc., would *eo ipso* be annihilated. The earth would continue to move round the sun, and corn to grow in the fields after I had ceased to exist. But it is nonsense to suggest that my thinking and desiring might, in like manner, endure and change after the withdrawal of the mind which thinks and desires.

Subjective processes, then, are mental. But is there anything else which can properly be called mental? Is there anything else which only actually exists in being actually experienced so that the withdrawal of the mind which experiences it would *ipso facto* involve its annihilation. On examination, we find that this is so. We are bound to recognise existents which exist only in being experienced and yet belong to the objective rather than the subjective side of the subject-object relation.

Such objective experiences may all be brought under the general head "presentations." I shall here refer only to the two classes of presentations which are most easily and obviously recognisable—to distinct sensations or sense-presentations and distinct mental images. Besides these, I hold that there are subconscious or undiscriminated presentations, and that these play an immensely important part in our mental life. But I need not deal with these at present.

Under the head "sensations" are included a vast variety of presentations which fall, roughly speaking, into two groups—organic sensations and those of special sense. Among organic sensations are included nausea,

neuralgia, toothache, tickling, itching, fatigue, hunger, thirst, and so forth. A plain description of facts as they appear to common-sense would not, I think, class these as physical facts. They are, indeed, generally connected with the thought of that physical thing we call our body, and of its varying states. None the less the pang of a toothache as it is immediately felt is plainly distinguishable from the bodily affection which conditions it. The toothache sensation, itself, is something which exists only in being experienced. If our existence as conscious beings were annihilated it would *eo ipso* disappear, whatever might happen to our body. So, too, a tickly feeling is not ordinarily supposed to be physically inherent either in the feather which tickles us or in the body as a perceived object.

The case is not so clear, at first sight, when we turn to presentations of special sense, including what are called sound sensations, smell sensations, colour sensations, touch sensations, and temperature sensations. It may be plausibly suggested that in the case of these sensations all that we are aware of consists merely in qualities of bodies existing and persisting independently of our awareness of them. On this view, when I look at a green field sprinkled with buttercups, the qualitative difference between green and yellow as existentially present to my mind is simply a difference between colour qualities inherent respectively in the buttercups and the grass, as these might have existed independently of my awareness of them and independently of any relation to sentient minds. Now, it must be admitted that, in some sense, we do perceive grass as green and buttercups as yellow. It must further be admitted that in strict propriety of language these adjectives can be applied only to external objects as such, and not to any qualities of our own experience,—not to psychical qualities. It does violence to ordinary usage to speak of a green sensation or a coloured sensation,—still more so to speak of a green or a coloured experience. But all that this shows is that if there are qualities existentially present to consciousness which do not belong to the external object, these are not what we name when we call the grass green or the buttercups yellow. In any case, it is easy to show that what we call the colour of the external thing cannot be simply identified with any quality which is existentially present to consciousness when someone looks at it. If a buttercup is seen by the margin, instead of the centre of the retina, or if it is seen by a colour-blind instead of by a normal person, or if it is seen by twilight instead of by daylight, or if contrast effects come into play, the quality immediately presented in viewing it is changed; but, none the less, the buttercup remains a yellow buttercup.

What we mean in calling it yellow is that a person with normal eyes under certain normal conditions would, in viewing it, have a visual presentation of a certain quality, and also that persons with abnormal eyes or viewing it under abnormal conditions would have immediate visual presentations of correspondingly different qualities. If, under certain ex-

ceptional conditions, a buttercup yielded the same sensation as it does under normal conditions, it would not be yellow, but some other colour. In general we may say that the greenness of grass and the yellowness of buttercups are not existentially present to the percipient consciousness. They are judged or believed or supposed or unconsciously inferred to exist, but they are not existentially present in immediate experience, as my toothache is when I am actually feeling it.

But it follows from this analysis that, in the visual perception of grass as green in distinction from buttercups as yellow, there must be correspondingly diverse qualities which are immediately experienced, and not merely judged to exist. It is these qualities which I deny to the buttercups and grass as forming part of their physical existence. And I have already incidentally given a proof of this thesis in pointing out that the immediately experienced quality may vary when things seen remain unaltered. If the quality were really inherent in the body seen, a change in the one would be a change in the other.

I may elucidate my general position by a comparison of actual seeing with dream-visions. Whether we actually see or only dream that we see a green meadow sprinkled with yellow buttercups, in both cases we think of the existence of particular grass and particular buttercups, and believe that these exist. In actual seeing these physical things do exist as we believe them to exist; in mere dreaming they do not. But this consideration is, by itself, entirely irrelevant to the question at issue. For whether we believe rightly or wrongly, what we believe to exist is in both cases, equally, a physical thing. The point which is vitally relevant is this. Besides the belief in the existence of external objects which are real in the one case and unreal in the other, there is present both in dreaming and in actual seeing something which actually exists, in the same sense, in both. In actual seeing, we may call this the visual appearance or visual presentation of the thing seen. In dreams we may call it the dream-picture, or image, or apparition. The dream apparition is not merely believed to exist or supposed to exist, it does actually exist and is existentially present to consciousness in the same way as a felt toothache while we are feeling it. We cannot say that it merely appears to exist; for its appearance and its existence are not separable. The appearance of an apparition is not separable from the reality of the apparition.

The dream apparition then actually exists. But it is certainly not a physical existent. If it is physical, it must either be a physical thing or a state or quality of a physical thing. That it is not itself a physical thing is, I think, self-evident. It does not occupy any portion of the common space in which bodies exist. The impenetrability of matter forbids us to suppose that it exists in a place already preoccupied by any other body. Are we then to suppose that it occupies some vacant space intervening between

other bodies? But such occupancy either means nothing or it means that the dream apparition is capable of excluding other bodies from the space in which itself exists and of otherwise acting on them, and being acted on by them in the executive order of the material world. Now, it is plain that this is not so. The dream apparition does not set other things in motion and it is not set in motion by them. It does not attract the earth and it is not attracted by the earth. Further, if it were a physical thing, it would occupy space in three dimensions; there would actually exist another side to it opposite to that which is pictured, and between the two sides there would be either empty space or filled volume. I need not dwell on the absurdity of such suggestions. But if the dream apparition is not itself a physical thing, its physical existence must consist in its being a state or property of a material thing. And an actual and particular property or state can only have being as belonging to a correspondingly actual and particular thing. Now, in the case of the dream apparition, there is no such actual thing. We interpret the presentation as indicating the existence of a particular meadow with buttercups. But this particular meadow is not actually present to our senses.

The dream apparition is not then a physical fact. But it is perhaps precipitate to infer that it must therefore be a mental fact. This is a point which I shall consider later from another side. At present it is enough to say that if we follow the plan of merely describing facts recognised as obvious by common-sense, dream apparitions must be regarded as existing only in so far as they are existentially present to the dreamer. Their beginning to appear to him and ceasing to appear to him are the beginning and cessation of their existence. If he were annihilated they would *eo ipso* be annihilated. A change in them is a change in his experience and in nothing else. If, then, we appeal to facts as generally recognised, we must regard dream apparitions as psychical or mental existents.

But, in this respect, we can draw no essential distinction between dream presentations, visual, tactual, auditory, motor or olfactory, and the presentations connected with the perception of actually existing physical things. In seeing green grass we have an immediate experience which is essentially of the same nature as in merely dreaming that we see it. The visual apparition is often less distinct and vivid in the dream. But this is only a difference in degree, and even this difference is perhaps absent where dreams are very lively. The same conclusion is forced upon us when we consider that dreams are derivative occurrences. The material, so to speak, of which the dream apparition is composed, is a modified repetition, revival, or copy of the sense-presentations which we have previously experienced in perceiving external objects. The two kinds of existence cannot therefore be radically disparate in their nature.

Everything which I have said about dream apparitions applies equally

to those which occur in hallucinations. It also applies equally to what, in plainly describing facts, we call mental images. The existence of such images is plainly distinct and separate from that of bodies interacting in space. Their waxing and waning in distinctness and vividness, their coming and going, their subtle and peculiar changes of quality, etc., are events that cannot be identified with events happening in the external world. But images are continuous in their existence and history with sense-presentations. They are revivals, reproductions, or continuations of sense-apparitions. This is especially evident in the case of what are called afterimages. If we look at a window for a few seconds and then close our eyes, the visual presentation continues to exist. It would continue to exist—actually to exist not merely to appear to exist—even if the window were annihilated when we ceased to look at it. Plainly, therefore, its existence is distinct from that of the window or of any part or property of the window.

Before proceeding further, I shall here turn aside to say a word about terminology. In general, the distinction between sensible qualities of things presupposes correspondingly differentiated qualities of sensation. Ordinary language, being framed with almost exclusive reference to things perceived, has not provided us with ready-made terms for naming these modifications of our sensibility. Hence we have to make good the deficiency, as best we may, by circuitous description or by technical terms. Thus, though we cannot properly speak of a sense-presentation as green or yellow, we may distinguish between sensations *of* green and sensations *of* yellow. Similarly, though we may not call a sensation coloured, we may say that it is a sensation of colour, or a colour-sensation—not a coloured sensation, but a colour-sensation. Further, we are at liberty to speak of sense-presentation as having colour-quality, *e.g.,* the colour-quality green or the colour-quality yellow.

SPECIAL REASONS FOR DENYING THAT PRESENTATIONS ARE PHYSICAL

The general argument against the physical existence of presentations may be reinforced and driven home by a multitude of special considerations. I have only time to mention a few chief points. The first of these is the law of specific energies, according to which the general nature of a sense-presentation depends not on the nature of the stimulus, but on the structure of the sense-organ and its nervous connexions. Light and colour sensations arise from pressure on the eye, from severance of the optic nerve, or from a narcotic in the blood as well as from vibrations of the ether. The points of the skin peculiarly sensitive to cold yield this sensation and no other, however they may be stimulated. A heat stimulus, applied to such a point, will not occasion a heat sensation, though it may give rise to one of intense cold. Such facts seem irreconcilable with the view that sense-presentations have.an independent physical existence which is, so to

speak, merely revealed or uncovered, as if by removal of a screen, when the sense-organ is affected. Indeed, there seems little distinctness between Mr. Alexander's position and that of the prosecutor in an action for assault who swore that he saw his assailant by the light produced by a blow which he received in the eye.

In the second place, the sense-presentations involved in the perception of physical things are incessantly varying, while the things remain unaltered. This holds especially for the extensiveness of sensations. The feel due to the application of a pencil point to the skin is bigger or smaller according as this or that part of the skin is touched by it. It is bigger when the pencil point is applied to the tip of the tongue or the drum of the ear than when it is applied to the back of the neck. Now such differences cannot be identified with any difference in the size of the surface in contact with the skin or in the extent of skin which it touches. For these may remain the same throughout. I might, of course, give abundant further illustration from visual experience. But there is, I hope, no need to do so. The general argument is this: If anything *x* exhibits variations which are not shared by *y, x* and *y* must be distinct existences. But sense-presentations are incessantly undergoing variations which are not shared by the physical things that we perceive by means of them. Hence the sensations must have an existence distinct from that of the perceived things.

Finally, I would refer to the point, first made by Protagoras and accepted by Plato, that, when several individuals perceive the same external object, each has his own sense-presentations, which, as such, are incommunicable to the others. This is peculiarly evident where the sensation-qualities are contrary, so that it would involve a contradiction to regard them as inhering in the same thing. The wind, which makes one man who is in health feel warm, makes another, who is feverish, feel cold. There would be a contradiction if these contrary qualities were supposed to inhere simultaneously in the same thing. But A's feeling cold is in no way incompatible with B's feeling warm, just because the qualitative opposition is between qualities belonging to distinct existences, to A's sense-presentation on the one hand and to B's on the other. If we suppose the sense-presentations to be like instead of contrary in quality, it is plain that this can make no essential difference to their mode of existence. They still remain the private and incommunicable experiences of distinct individuals. A experiences his own sensations and not B's, however similar the sensations of A may be to those of B.

HOW MR. ALEXANDER DEALS WITH THE DIFFICULTIES OF HIS POSITION

Mr. Alexander to some extent recognises the difficulty of treating presentations as physical. But I cannot discover that he ever shows any sign of appreciating the precise drift of the objections which he has to meet. Thus,

against those who urge that mental imagery must really be mental and not physical, he seems to have nothing to say except that a "remembered person or an imagined event or person is just as physical as the perceived event or person." This is certainly true; but it is totally irrelevant. The real question relates to the image which is imaged, not to the object or event which is remembered. The event has ceased to exist and the object may have ceased to exist at the time when it is remembered. But at that moment the memory-image is actually existing and is existentially present to consciousness. It cannot, therefore, be identical with the remembered object or event. Similarly, if I imagine a castle built of diamonds, what I think of is a possible physical object. But, in thinking of it, I may use an image; and this image is not something merely possible, but something actually existing. I do not make the castle which I think of as a possible existence and I do not make the possibility of it, so far as it is possible; the image, on the contrary, is something produced by me. Finally, the possible castle, if it actually existed, would be built of actual diamonds; but my actual image is not formed of diamonds or of any other assignable physical material. Similarly in the case of error: if anyone believes that a stick seen in water is bent, then, if the stick is really straight, he commits an error concerning a physical object: he believes that a certain physical object is physically bent whereas in reality it is straight. He treats one physical possibility as actual whereas it is another physical possibility which is actual. But, after this error is corrected, the difference between the visual apparitions, as presented when the stick is seen in water and out of water, still remains unaffected. This is not an error capable of correction, but an ultimate matter of fact, a matter of fact not concerning any physical object, but sense-presentations.

Mr. Alexander says that in such cases the apprehending organ has distorted the real object. I submit that this is not a plain unbiassed description of facts, but a palpable falsehood. When I have double vision of a candle flame, the candle flame itself is not thereby doubled or, in any way, physically altered. What happens is, to use Mr. Alexander's own language, that there are "two appearances of the one real candle." If he urges that the appearances are themselves physical objects, I refer again to my previous argument.

I must also point out that this distortion hypothesis inevitably places him in the very position which he is most vitally interested in avoiding. His central aim is to show that perception is a direct revelation of the thing perceived as it is in itself. But the view to which he is driven by the logic of facts is that perception directly reveals only what he calls "the particular ways in which non-mental objects exist in relation to the apprehending mind." He has been driven into representationism in the very attempt to escape it. This is most obvious when he says that "the object may be vitiated by elements introduced into it by the mind." What can these elements be and whence can the mind derive them? The mind, according

to Mr. Alexander, merely consists in the activity of conation and attention and in feelings of pleasure and pain. But the vitiating elements introduced into the physical object by the mind are not activities of conation and attention or feelings of pleasure and pain.

MR. ALEXANDER'S REASON FOR DENYING PRESENTATIONS TO BE PSYCHICAL

So far I have only considered Mr. Alexander's treatment of objections to his theory that presentations are physical. I have yet to consider his positive ground for denying that they are mental.

So far as I can discover, there is only one reason assigned by him throughout his paper. Sensations cannot, he maintains, be psychical because they are always *objects* of consciousness and not modes of being conscious in relation to objects. "Try," he says, "to think of your consciousness as being affected bluely, in the same way as you think of how you pass from step to step of a difficult demonstration. You cannot do it. And you cannot do it because there is no such affection there. The blue is outside your mind." This argument would no doubt be conclusive, if it were admitted, at the outset, that being mental or "inside the mind" is identical with being a mode of consciousness in the strict sense in which Mr. Alexander, very properly, uses that term. Presentations certainly are not specific qualities of conation or attention; neither are they modes of cognition, if by this is meant the mental act or state of our being aware of something in distinction from the something of which we are aware. But the real question is whether mental existence is confined merely to consciousness in this sense. Mr. Alexander, in assuming that an individual mind consists merely in conation and attention, assumes precisely the very point at issue. His argument is, therefore, a mere *petitio principii.* There is nothing in it which has any bearing on my contention that there are certain existents so connected with conation and feeling as to form with these part of the single system which we call an individual mind.

Further, even if we admitted the validity of the argument, it would not prove that presentations are physical. It would only prove that they are not mental. The third alternative of their being neither would still remain open. And in view of the difficulties of regarding them as physical, I should myself hold this to be far the most natural conclusion.

POSITIVE REASONS FOR REGARDING PRESENTATIONS AS PSYCHICAL

Perhaps it may be thought that I have not myself sufficiently considered this third alternative. I shall, therefore, now attempt to supply this lacuna by offering positive reasons for asserting the psychical nature of presentations, independent of those which I have adduced for denying that they are physical.

In the first place, I have to point out that the existential presence of presentations does not merely consist in their being objects of conation or attention or any other subjective state or process. It does not merely consist in our being aware of them in any sense in which we can distinguish between the awareness, on the one hand, and that of which we are aware on the other. For example, we ordinarily localise sounds, as coming from this or that direction, through the peculiar nature of the auditory sensation as determined by differences in the intensity and tone-phase of vibrations which affect the two ears. But we do not attend to the peculiar presentation which fulfils this function. In order to fulfil its function it must be existentially present, but it does not exist for consciousness as an object. Similarly, though we are constantly aware of the position and motion of our limbs by means of muscle, joint, and tendon sensations, yet we rarely attend to or in any way objectify them. Again, the blind man with his stick is incessantly forming precise and definite judgments on the objects with which the stick comes in contact. The judgments are determined by the varying pressure sensations due to the contact of the other end of the stick with his hand. But the blind man need not attend to these sensations so as to discern their subtle variations. He need not be aware of them in any sense in which we can distinguish awareness and its object. Similarly, to quote Lotze, in sewing "we seem to be immediately percipient at the point of the needle, and we feel how it raises the texture to an elevated point before making its way through with a sudden dart." Again, our ordinary perception of the size, shape, distance, and direction of physical things is constantly determined and specified by a multitude of sense-experiences which themselves escape notice and are not in any way objects of mental activity.

These sense-experiences can often be discerned, and not only their present but also their previous existence can be recognised when attention is directed to them. But, ordinarily, attention is not directed to them except by the artist and psychologist. In like manner, it sometimes happens that we are quite inattentive to words as articulate sounds or as visible characters. We then attend only to the meaning they convey. To quote James Mill:—"A friend arrives from a distant country, and brings me the first intelligence of the last illness, the last words, the last acts, and the death of my son. The sound of the voice, the articulation of every word, makes its sensation in my ear; but it is to the ideas that my attention flies. It is my son that is before me, suffering, acting, speaking, dying. The words which have introduced the ideas, and kindled the affections, have been as little heeded as the respiration which has been accelerated while the ideas were received."

It would seem, then, that the existential presence of presentations to or in the mind does not essentially consist in their being objects to a subject. I can discover no possible alternative except the simple identification of

their existential presence with their present existence. And this can only be made intelligible if we ascribe psychical existence to them in the same sense as we ascribe it to conation and feeling. Conation and feeling are not merely known through experience as a tree may be. They are themselves experiences. The difference is comparable to the difference between jumping a jump and jumping a ditch. We may have experience of a tree; but we cannot experience the tree as we experience a painful emotion. Similarly, though we are, as Locke says, conversant with external objects through sensation, yet we cannot *sense* the external object as we sense the sensations. A heat-sensation is an experience which we experience; the heat of the fire is not an experience, but only something which we know by experience.

To clench this point, we may refer to a class of case, of the utmost importance, which is entirely neglected by Mr. Alexander, the cases in which we have sympathetic insight into the experience of others through our own analogous or related experiences. For this, it is by no means necessary that we should take note of or know anything about the workings of our own mind which gives us the key to the minds of others. For example, the spectator of a football match may feel a sympathetic excitement which he reveals by imitative movements. Now neither the movements nor the mental excitement which they express need be noticed by the man himself. His attention may be wholly absorbed on watching the game, so that he is entirely heedless of his own mental states and processes as such. Yet his sympathetic excitement supplies him with a means of entering into the experience of the players. Itself unnoted, it yet specifies and determines his apprehension of the objects in which he is interested. Now what I have called his sympathetic excitement is very complex. It contains conation and feeling; but it also contains, as part of the same continuous whole, pressure sensations, together with muscle, joint, and tendon sensations. All these elements seem to be existentially present in the same way, and it seems quite arbitrary and indefensible to affirm that in this respect some of them are fundamentally disparate from the others, conation and attention existing *in* the mind, the sensations merely as *objects for* the mind.[1]

Sensations cannot be merely objects if they are capable of being mentally presented without being objects at all. *A fortiori* they cannot be merely objects if they are capable of entering into the constitution of properly subjective states. Now, if there is any truth whatever in James' theory of emotion, sensations do enter, at least as contributory factors, into such states as anger and fear. If, then, we admit such sensations to be primarily

[1] I have not time to follow Mr. Alexander in the discussion of self-knowledge given in his appendix. I would here remark, however, that his treatment of this topic is marred by his isolation of the problem of self-knowledge from that of the knowledge which one mind has of others. This obscures for him not only the knowledge of self, but also the knowledge of external objects.

subjective modes of consciousness, we must admit that sensations may be subjective also. Doubtless all emotion involves conation and feelings of pleasure and pain, and it is ultimately to these elements that its subjective character is due. But these elements are so blended in a continuous unity with organic sensations in the total emotional state that it seems quite arbitrary to contrast them as subjective with the organic sensations as objective. *A fortiori* it seems arbitrary and indefensible to rank the organic sensations as physical in contrast with pleasure-pain and conation as mental.

Sensations, then, may be, in the proper sense, *subjective*. On the other hand, there seems to be good ground for asserting that pleasure and pain, at least, if not conation, may be objective. Ferdinand delighted in the pain of carrying logs in the service of Miranda. His delight was a subjective attitude: it was a being pleased with something. But the painfulness of the muscular effort and fatigue were rather part of the object which he was pleased with than of the subjective state of being pleased with it. Similarly, in psychological experiments in pain-sensations, the person experimented on, in his anxiety for the success of the experiments, may feel pleased when a stimulus causes pain and displeased when it does not. His being pleased with the pain is then a subjective attitude; but the pain at which he is pleased seems to be primarily an object of the subjective state, and not part of it. In general, I submit that the painfulness of wounds, scalds and burns, of neuralgia, headache, and cramp would, in a plain unbiassed description of facts, be ranked as presentations, and not as modes of being conscious in relation to presentations. But no one, I presume, will maintain that pain is ever a physical fact or that it is ever anything but a mental fact. Hence it would seem that presentations may be mental and not physical facts. Further, it seems arbitrary to make a fundamental distinction, in this respect, between other characters of a pain-sensation and its painfulness. The two are so blended that if the pain is admitted to be mental, we can scarcely avoid admitting that the whole sensation is mental.

CAN RETENTIVENESS BE EXPLAINED IF PRESENTATIONS ARE PHYSICAL?

In conclusion, I would draw attention to a difficulty in Mr. Alexander's doctrine which I am inclined to regard as more serious than any other. How, on his hypothesis, can he give any intelligible account of the admitted facts of retentiveness, association, and reproduction. If the immediate experiences involved in the perception of physical objects are mental in their nature, they may have a subsequent mental history separate from that of the physical objects. Hence, they may persist or be reproduced by association or otherwise. And if we also assume, as I do, that it is the essential function of immediate experience to specify and determine the direction of thought to objects transcending immediate experience, we have a fairly satisfactory theory of psychical retentiveness. But if the immediate

experience in perception is part and parcel of the physical existence of perceived things, I fail to see how retentiveness is possible at all. The mind on this view is merely an activity which skips or hops from one external object to another, but its own nature remains unmodified by the external things to which it is successively directed. When it leaves one thing A and passes to another B, its previous connexion with A is entirely cut off. How, then, can it renew this connexion with A independently of actual perception by means of the senses?

Perhaps Mr. Alexander might fall back on his peculiar theory that subjective activity is localised in the brain, and might say that its various directions correspond to the various directions of revivable brain-processes. But this does not help me; it only adds to my bewilderment when I try to work out the details. If, for example, the brain motion is forward in the direction of the face, it would follow that I cannot ideally recall the corresponding object when I have my back turned to it instead of my face. Spatial direction, taken literally, as Mr. Alexander proposes to take it, is of no use. If it be taken metaphorically, Mr. Alexander ought to tell us plainly what the literal fact is which the metaphor is meant to illustrate.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

On Sensations and Images

S. ALEXANDER

VOLUME X

1910

EDITORIAL NOTE

The following paper by S. Alexander - "On Sensations and Images" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume X (1909-1910), pp. 1-35.

For Alexander's biography, please scroll up to page 190.

X. ON SENSATIONS AND IMAGES

S. ALEXANDER

PRELIMINARY AND EXPLANATORY

I BEGIN with certain preliminary remarks, designed to prevent misunderstanding. They are suggested by Mr. Stout's paper,[1] which I do not propose to answer directly, but by what I consider the more satisfactory method of carrying my inquiry a stage further in view of acknowledged difficulties.

(1) The method of description which I use is apt to be misunderstood. It consists simply in the attempt to exclude philosophical presuppositions, and to state what is actually present in a given experience, so far, of course, as that experience has characters of metaphysical significance. The "object" or "thing" described will have different characters according to circumstances. Thus, if there is a green leaf before my eyes, the object may be merely the sensation green, or it may be the quality greenness, or, to go a stage further in description, it may be the permanent thing called a green leaf with all its characters of extension, colour, and the like. The description now includes thinghood in the proper sense. But nothing enters into the description which is not present in the experience as its contents. Hence, while it may be very important to discriminate in a given case between what has been called the content and the intent, the intent is for description another and special part of the content. Such a method is open to the difficulty that it proceeds slowly and begins with very simple and general description. But it will not overlook in its proper place any genuine element of what can be observed. For instance, it is plain that the object of sense-perception is saturated with interpretation. This raises no difficulty for the method, but it raises a serious problem, if, as I maintain, the first result of the method is to declare that the object of sense-perception is never mental but external. How, in that case, can the interpretation which is supplied by the mind be, as it is, a constituent of the object? This is one of the questions upon which I hope to throw light.

(2) As analysed by this descriptive method, a perception, say the perception of a tree, is resolved into the fact that there are two things, the act of perceiving, which is consciousness, and the external or physical thing, tree. This analysis is misunderstood to be an appeal to common-sense, and the same thing is, I suppose, intended when it is described as naive real-

[1] "Are Presentations Mental or Physical?" *Proc. Arist. Soc,* 1908-9, pp. 226 *foll.* I shall refer to this for shortness by the writer's name alone.

ism.[2] By naive realism is meant the bare assertion without evidence, or the assumption that there is an external thing of which we are conscious. But the descriptive method makes no assumption, and is therefore not naive realism. Nor does it appeal to common-sense, which, as Mr. Stout rightly says.[3] has never entertained the question at issue, and cannot therefore furnish an answer. The doctrine is, indeed, as remote as possible from common-sense, and it demands some effort of thought and imagination, at least on my part, stoutly as I uphold its truth, to keep the truth in question from slipping away from me. The appeal cannot be to introspection, for introspection informs me only of myself as the act of human mind, but is conveyed to it from some mind outside and superior to it. There is no implication in my use of the word of any mind as the source of external objects. But I speak of these objects as revealed, in order to indicate their externality or non-mentality. I can find, at present, no better word.

(3) To every object of which there is consciousness there corresponds some mode or affection of consciousness. What I have asserted, proceeding as I think on the basis of description and not on the basis of theory or argument, but of simple observation, is that these modes of consciousness have no quality-differences. I treat them as modifications of mental activity varying subtly with each object. At one time, if I may be allowed the apparent egotism of relapsing into the history of my own mind, I entertained the hypothesis that there might be qualitative thrills of consciousness; that we might feel a blue thrill or a green thrill, or a sweet or a fragrant thrill, much as we feel a thrill of pleasure or pain; but I abandoned this hypothesis because it left no way open to the understanding of objects. But needing now, with better reflection, to describe these non-qualitative differences of consciousness, I describe them as differences of direction. This terminology is connected with certain statements which I do not withdraw, but the fuller treatment of which I must reserve for some later occasion, when I can again discuss the relation of consciousness to the body, and what I should now speak of as the two meanings of the self, as subject and as person. Meantime I am content with the statement that the varieties of cognitive conation are non-qualitative.

In reducing mind to conation and feeling, I denied the existence of presentations. In doing so, I had in mind presentations of an objective character, such as commonly go with a doctrine of representative perception. I had not in mind presentations in the sense in which Mr. Stout uses that word. In this sense, presentations are not modes of cognition, if by this is meant the mental act or state of our being aware of something in distinction from the something of which we are aware; in which case they would be equivalent to or covered by my non-qualitative modes of con-

[2] F. C. S. Schiller, "Solipsism," *Mind*, No. 70, pp. 178, 179.

[3] Stout, p. 229.

sciousness. Nor are they specific qualities of conation or attention, those supposed thrills of conation to which I have alluded. They are a class of psychical existents, experienced as conations and feelings are experienced; and they, being immediate experience, "specify and determine the direction of thought to objects transcending immediate experience."[4] "They form with conation and feeling part of the single system which we call an individual mind."[5] It is an uncommon advantage to me to have the issue as between myself and Mr. Stout raised thus explicitly. But I find insuperable difficulty in realising these mental existents to myself, and I cannot regard the arguments for them as cogent. I have suggested an alternative. And the best way of procedure is for me to make clear that the difficulties which he believes make my account unworkable are capable of another interpretation. The two alternatives are these:—On one view there are besides physical things and mental conations, also mental existents called presentations as defined; on the other view there are only mental activities and external objects, and on this view it is held that there is nothing to correspond to presentations, but on the one hand modes of conation, or on the other modes of external objects.

(4) In maintaining that all objects of our cognition were physical, I went beyond my record. I was engaged with the cognition of physical objects and omitted such objects as numbers, for instance, which it would be dogmatic at present to call physical. My purpose was to indicate that the objects of cognition were non-mental, and that would have been enough for clearness. The vital question is whether they are independent of mind; and to indicate this I shall use the term non-mental or else external. At the same time it will, I hope, become clear that (in the case of physical things) sensations, images, etc., that is not seeing or imaging, but *sensa* and images, are physical. I do not think there is ground for complaint[6] that no definition was given in advance of the physical or the mental; the very object of the inquiry being from one point of view to determine precisely how much is included under either designation. It helps little to say that physical is whatever is or essentially belongs to physical things as understood by common-sense. For instance, are we to say that no two physical objects can occupy the same space, which would immediately exclude colour and taste, which may occupy the same space, from being physical, or only that two physical bodies cannot?

(5) Mind has been described on the strength of the method as consisting of acts of consciousness. This might be misunderstood to mean that consciousness was a pure activity floated off by itself in disconnection from matter.[7] The acts of consciousness in question are of course thought

[4] Stout, p. 246.

[5] Stout, p. 241.

[6] Stout, p. 226.

[7] Mr. Wolf's article on "Natural Realism" in *Proc. Arist. Soc.*, 1908-9, § 13, pp. 163-5.

of as functions of the body. It was even explained that the consciousness was, by its own witness, located in the body.

In pursuing the method, I have done little more than sketch an outline, and many topics have been left over which seem, at first sight, inexplicable. I propose to address myself to the most obvious of these difficulties:—

> (*a*) The familar facts, known sometimes under the name of the relativity of sensations, which are commonly taken to imply that sensations are mental.
>
> (*b*) The nature of images and the assertion that they are non-mental.
>
> (*c*) The problem of how the mind can interfere so as to interpret or distort things (*supra,* p. 1).

It will be found that these three topics cannot be kept entirely apart from one another.

SENSATIONS

The proposition maintained is that sensations are non-mental. It will be convenient to repeat one distinction and to add two others. The repeated distinction is that between the sentience and the *sensum*. The sentience is mental, but it is held not to vary in quality. The *sensum,* which I shall commonly call sensation, is non-mental. The other distinctions are (1) that between the appearance and reality, and (2) that between illusion and reality. These two distinctions do not coincide. Appearance is contrasted with reality as part or aspect with whole. An appearance is a reality though not the whole of the reality of which it is said to be an appearance. An illusion is not a reality, or, in order to anticipate a little, it is not the reality which it purports to be. With these preliminaries I may proceed.

The general principle of interpreting the varying and perplexing information of the senses follows easily from the method employed: *i.e.* from considering the relation of mind to its object as merely a particular case of any two objects related to each other. Take the effects which a physical body produces on another physical body. The first body remaining the same, its effects will vary: first, according to the conditions which surround it, and, secondly, according to the constitution of the affected body. A body will affect a photographic plate in the sunlight but not in the dark. A squirt of water will drench a body, or barely touch it, or not affect it at all, according as the squirt is one, or two, or three yards distant from the body. In these cases the first body actually undergoes a difference in relation to the second. But there is a second class of cases. A steel point will scratch lead but make no impression on a diamond. A ball will bury

itself in sand but rebound from a wall. The pressure is the same but its effect is different, because of the response of the patient. Now, suppose the patient to be a conscious body. The external appearance revealed to the patient will be different, either if the stimulus acts under conditions which alter the stimulus, or it will be different according to the character of the organisation. In the first kind of cases, the different appearances are all actually present, and there is no error. In the second case, some of the appearances, while remaining external, may be illusory. Which appearance is true and which is false will depend on whether the instrument which receives the revelation is fitted to receive it or not. In many cases there is no error but only defect, either want of apprehension, as in stimuli below the threshold, or inability to apprehend difference of stimuli, as in the case of the colour-blind.

Let us begin with the latter class of cases, taking in particular the cases of perfectly normal variations, which are therefore ordinarily, with much plausibility, treated as meaning that the sensed appearance must be mental. On the periphery of the eye, colours disappear and are replaced by shades of grey. The periphery is a defective instrument in respect of colour. The colours exist in the object, but are not revealed to the eye at the periphery. The only visual revelations are those of brightness. If our eyes were all periphery, as they are in the exceptional cases of totally colour-blind persons, we should never know of the existence of colour. Similarly, what is red at the centre of the eye changes to a yellow at the intermediate zone of the retina. This zone of the retina does not distinguish colours with sufficient fineness. We know this to be a defect, because we have in the centre of the eye a more perfect instrument. Here, as in the former case, some real appearance is revealed, but, so far as red is confused with yellow, the full "subtlety" of nature is not revealed. What normal persons are in respect of this region of the eye colour-blind persons are habitually. Whatever colour it is that such persons see, their defect is that they do not apprehend two colours as distinct which are distinct to the more perfectly and appropriately endowed individual.[8]

Considerations partly the same and partly different are introduced by the familiar case of the water which appears at the same time hot and cold

[8] Whether we are to regard failure to appreciate difference of stimuli as being erroneous from defect or as total error raises problems which I do not wish to discuss at present. When two degrees of loudness are heard as identical, it seems most natural to say that part of the louder degree is heard but not the remainder or the whole. Colour-blindness is more difficult. Luckily, the difference of colour theories does not concern us. Whether there is missing the red-green substance and the patient sees a yellow or blue, or only the green substance, say, is missing and he sees red and green as red, there still remains the theoretical question: is the colour which he sees, whatever it is, actually a part of the physical stimulus, or is it wholly illusory? I the first case, there is complete error, the patient's organization falsifies the revelation. But neither interpretation affects the general interpretation given above, but only the interpretation of this special case.

to the two hands respectively. In respect of the two hands, the sense organ is different, for the physiological zero has been raised or lowered in the two cases by dipping the hands in hot and cold water respectively. If we treat the two sensations as differing only in degree, we must remember that degree can only have reference to some point from which the scale is reckoned. This being so, the water not only is *felt* but *is* hotter to one hand and colder to the other; and this is the only meaning of the supposed contradiction, which is no contradiction. If we consider the difference of hot and cold as a difference of quality, the case is the same as the varying quality of the sensations which the same object may produce in different individuals. The meaning of this familiar fact is that individuals with different senses apprehend differently. The sensum revealed is still non -mental, but it is only to the appropriate sense-organisation that it is revealed without defect or error. It is, of course, the variation of the sense-apperances to different persons, or to the same person at different times, which leads us to set up, more particularly in respect of scales of degree, but also in respect of qualities, artificial scales like that of the thermometer, which are relatively independent of the interference of the sensuous organisations of persons.

The specific energy of the senses means that the sensation is the same, however disparate the stimulus. Consequently, when the eye is struck we see light, though there is actually no excitement by light and when a cold point on the skin is stimulated by a piece of hot metal we feel it cold. The meaning of this fact is that to each kind of external object there corresponds a particular reaction on the part of the instrument, by which the revelation is received. When the mind is set going in that manner, is set to work in that direction, the corresponding non-mental object is present. When the stimulus is disparate, the object presented is illusory, but it does not cease to be external. The illusory character of the appearance is the defect of our quality. With an organ adapted to see red we can see only red, no matter how the organ is set a-working. How it is possible that under such conditions there should be an external and illusory object present, raises a metaphysical question which I defer till I speak of images and their external character. It will then be clearer that the paradoxes connected with the specific energy of the senses are but the price we pay of a little error for the sake of a great deal of truth; and that, instead of disproving the general interpretation which is here advanced, they confirm it.

I pass to the cases where difference in the appearance arises from change in the situation of the stimulus without necessarily carrying with it error. Such are the cases of the stick bent in water, the intersection of parallel lines at a distance, the diminution of the visual magnitude and in some cases the alteration of its colour as it recedes. Here the visual characters of the object are altered by the conditions which surround it. There is no disturbing affection of the perceiving organ. The visual instru-

ment is not altered, as it might be if provided with spectacles. Look at a stick through a transparent tank of water, and it still looks straight. The stick itself must be partially immersed in water. Nor is it enough to say that what we see is not the stick itself, but the stick and the water. We need not notice the water. The fact observed is simply that the same stick looks straight in air and bent when half in air and half in water. The bending is the appearance of the stick, and it is not even an illusory one. The stick's *visual* character changes. The stick under these circumstances has the same visual character as a bent stick in air, and for a well-understood optical reason. There is illusion only if we deny that the bent and the straight appearance in the two different sets of conditions belong to the same stick; or if we were to say that the stick which is bent to the eye is bent to the touch. But it is true that the occasional discrepancy of vision and touch and the varying deliverances of vision confirm us in the belief in the more primary character of the appearances as revealed to touch. Similarly, there is no illusion in seeing the mountain blue in the haze, but only in thinking that it is also blue without the haze. Again, the *visual* magnitude of objects is really affected by distance. This only seems paradoxical if it is forgotten that magnitude is a matter of comparison, that there is more or less of it in reference to the standard which is the zero. A line a yard long looks half a yard at a certain distance; but the yard measure by which we measure it would at the same distance shrink to half its apparent length and still cover the given line. Two rails with a 4 foot 6 gauge meet to the eye. At the same distance a 4 foot 6 rule would also vanish to a point. The distance being constant, magnitudes retain their proportions. Under the microscope, a blood-corpuscle looks a quarter millimetre broad, but the millimetre scale is enlarged to sight in the same proportion. What these facts do teach us is that, taking touch extension as primary, we come by experience to correlate the varying visual characters under their circumstances of distance and surroundings with the tactual extension. But it is always the same real occupation of space which reveals itself in these various ways to touch and sight.

By way of throwing light on these problems, I will make two ridiculous suppositions and ask what would happen if they were true. Suppose, first, that all ordinary objects had first to be half immersed in water before we could see them, carried about with themselves transparent bags filled with water which extended half-way up their length. And suppose next that we could only see things when they were removed at least a hundred yards. The laws of optics are supposed unaltered. In the first case, straight sticks would look bent, and sticks bent to a proper angle straight. In the second case we should look microscopic to each other, and feel between five and six feet high. In the first case there would be an embarrassing discrepancy between the language of touch and sight. In the second case we should learn to co-ordinate our minute visual pictures with tactual ones

as we do now, and should say we saw a man five feet or six feet high. But our eyes would be useless except for moderately large objects. I imagine that the result of natural selection in such a world would be to furnish us in the first case with eyes which would twist the visual appearance, and in the second case with eyes of a proper magnifying power.

Where the surrounding conditions affect not the object itself but the organ, there is inevitable distortion and illusion. Such is the case of the candle-flame seen double by pressing aside one eye or arming it with a prism. The distortion of the object consists here not in any mistake in its own features but in its dislocation in space. With both eyes open the candle is seen by the abnormal eye in a different place from the same candle as seen by the normal eye. That there is only one real candle is shown by closing each eye alternately, when each appearance can be touched in turn. It is in reference to the place as seen by the normal eye that the other percept is displaced, and regarded as illusory so far. The illusory percept is seen in its place for the same reason as a disparate stimulus is sensed as the appropriate sensation. But the further treatment of the external character of both this and the percept of the normal eye is better deferred to the next section.

For the same reason, I do not deal here with such normal illusions as the familiar illusions of geometrical figures. In all these there seems to be an element of interpretation whatever the source of the suggestion may be.

It is therefore necessary to make clear that images are external.

IMAGES

Imagination, whether reproductive or constructive, has certain features which distinguish it from the corresponding process of perception, which features it is the business of psychology to expound. In particular, memory differs from perception in its relative incompleteness and inaccuracy, and in the possible introduction of new features not present in the original. This character I omit for the moment, because it is the subjective element in images, and I do not wish to complicate the question. It is the subject of the next section.

The imaging of an external or physical thing is of course mental. What is here maintained is that the image itself is non-mental, or external, or I am prepared to say physical. The truism or paradox which I advance is here at its acutest, because an image is entertained in the absence of the object perceived. In calling it external, or physical, I mean that it has the characteristics of physical objects. The village of Headington, where I once lived, is present to me in all the form and colouring of the original. It is in three dimensions, and I imagine myself walking down its street, and

hear the greetings of the children. In dreams the object which I see I can also touch in dream and experience the same resistance as I should were I touching it sensibly with my hand. But this statement provokes at once an objection and a question. The objection is that while I can think of the *physical* street I imagine only its *image*. In other words, the content of the image is only mental, but it may direct me to the physical object which is thought of. I have already alluded to this matter.[9] The contents of the image are here characterised by thingbood. It is true that not everything enters into an image which requires the action of thought. When thought enters, the content of the thought is present as well, and in the same sense as the content of the image is present. That thought, as distinguished from the mental act of thinking it, is also non-mental, but it is different from the mere image as such. I suppose that it is this which is really at the root of the controversy between Mr. Stout and myself, and makes us seem to be at cross-purposes. I think of a thing in its absence. There then arises the question referred to, how can I image, or think, (or perhaps I may add in view of what was said above with respect to disparate stimuli) sense, objects in their absence? This is the metaphysical problem to which I must address myself.

If we start from imagination, and especially if we start from constructive imagination, it is impossible not to be impressed with the spectacle of our mental or personal activity, and we naturally think of images as mental products: and proceeding to perceptions, we go on to treat sensations and percepts, and I should add thoughts, as mental too. But if we begin as I do with perception, we analyse it into the togetherness of the mind and some non-mental thing or object which is revealed to the mind. When I face a table and it stimulates my body in a certain way or evokes a certain form of mental action, the table is revealed to me in perception. When I turn my back, the table no longer evokes that form of mental action and I no longer have the percept of the table. Suppose now that, for some reason or other, it may be by a process of association, it may be by some chemical stimulus, the brain and the mind with it are set going in the same or a similar fashion, and I image the table, that experience is an experience of the table in precisely the same sense as in perception. While before the experience meant the togetherness of the mind as perceiving and the percept table, so now the experience means the togetherness of the mind as imagining and the image table, equally non-mental. And in both cases the fact is avouched by the experience itself. Fully realise that perceiving a thing means that mind and the thing are together in the same sense, as the table and the floor are together, and you understand that the imagination of the table means that the mind and the table are together; but the table in its imagined form, with imperfections and added elements. The mental action has been evoked in the two cases by different means: in

[9] See p. 1.

the one case by the direct action of the object, in the other indirectly. I put aside the question whether the brain processes in perception and imagination are the same in kind and different only in intensity, or are separate processes of which imagination is the outgrowth of perception. It is at any rate continuous with it. There is identity enough to account for the identity of the objects, and difference enough to account for their differences. By togetherness I mean copartnership in one universe. I am ready to substitute the more elegant and convenient word compresence, provided that it is understood without reference to time. It must not be taken to mean coexistence in time with the act of apprehension. Clearly the object remembered is prior to the memory of it, and it may have ceased to exist before we remember it. But equally, a sensation, that is a sensum, is prior, on my showing, to the sentience of it, and by a measurable interval. In this sense all sensation is of the past, is, to use an inaccurate expression, memory. But I do not pursue these topics, partly because it is not necessary for my present purpose, partly because I have no present clear answer to the difficulties as to the nature of time which they suggest; I mention them only to show that I am not unconscious of the problem.

The difference between perception and memory may be illustrated by a comparison. In perception we are in face of an object. Memory or imagination is like turning us round when we have our backs turned. When we are thus turned round we cannot but see, and what we see is the same object as before. This is only a simile. In imagining we are not turned round. But we become aware of the object with which we are together, or compresent, in the one universe, in the form in which it can be presented in imagination. It is convenient, especially for a visualiser like myself, to take advantage of this comparison with the action of turning round so as to see. I can say, therefore, that in all our experiences there are on the one side the various acts of experiencing, differing with each appearance of objects, and on the other side objects appearing of which we have vision, a vision which is limited or comprehensive according to the mental action which is engaged. But always the vision is of something not ourselves, non-mental. Absence in time or distance in space is no bar to this vision of things.

But it will now also be clear why images of physical things are not only non-mental but also are themselves physical. The memory of my friend is a physical appearance of a larger and completely physical thing, my friend: blurred indeed by time, like all memories, and falsified perhaps by my personal interpretations and interests. He may no longer exist. Does he cease to have been physical because he has ceased to exist? Remembering him is not physical. Neither is dreaming physical. But the dream-apparition is physical. Physical is what has physical properties. Mental is what has mental properties. One physical property is to be in space. The dream appearance is in the dream space and that space is the space

which we live in, but seen in a dream. Dreams are full of illusion, and so far they are not true and are not verifiable. But in the dream space bodies do move and attract inversely as the square of the distance, so far as they are dreamt of as doing so, just as in waking life they are thought of or present themselves to thought as doing so, and doing so independently of the thinker or the dreamer. Whether Mr. Stout sees this statement, or only "pleases to dream" that he sees it, the statement is the same and equally physical. This is, indeed, not the language of common-sense, to which it would be unmeaning, and it may even seem to some to be the language of madness. But it does not appeal to common-sense but to fact.

Imagination is continuous with perception and grows out of it. The image and the percept are the same contents or, as I prefer to say, the same objects appearing in different forms. The one is physical in the same sense as the other. Hence the image of memory or imagination is tested or verified by reference to the percept. There is good reason for the pre-eminent use of sensory objects as standards. For in sensation the object acts directly upon our bodies. But if it is true that images are continuous with sensation it is no less true that sensation is continuous with images. For sensory experience is enlarged by imagination and anticipated by it. It is in this-interplay between sensation and idea that the distinction of images and perceptions becomes established. Both to sensation and to imagination, objects are revealed as objects with certain characters. But when images fail to be verified they are distinguished as being only images. And it is in this way that we come to correct one part of our experience by another; and to acquire a body of truth, by the use, on the one hand, of successful dealing with sensible objects, and, on the other hand, of the thwarting of personal or preconceived expectations by contact with sensory fact. Practical necessity and disappointment are thus the two means by which the spirit leads us; into truth. But this process implies, or can at least be explained, if we hold that in our various mental actions it is physical things which form the contents of our minds, or the objects of those mental actions, differently presented according to the circumstances of our minds, but the same things continuously brought within the ken of our vision.

SUBJECTIVE ELEMENTS IN EXPERIENCE

Imagination is thus as much a vision of physical things as perception or sensation. In both cases the mind declares the togetherness of itself and the object. Only in the case of images, the central action is provoked not by the object itself but internally by some other mental, that is cerebral, excitement. No difficulty is now offered by the association of ideas, which might otherwise be unintelligible.[10] The principle of association is, shortly,

10 Stout, p. 246.

this. The mind on some occasion has been set going in a complex of activities, which are also brain activities. When, on some later occasion, one part of the complex is re-excited, say by some sensed object, the remainder of the complex is re-excited, and its corresponding object is revealed, in image. From this point of view, the question whether it is mental events or objects which are associated becomes indifferent. Both are associated, but if a choice must be made it is the events, *i.e.* the mental actions, which are more strictly so described. The value of the famous saying that association marries universals is that it is the type or scheme of mental action, forming thus with another type or scheme a total scheme of action, which is the fundamental feature in the process. In other words, for association it is indifferent whether the suggesting object is precisely the same as before or not.

In getting to know the world of which we are a part we depend on two factors, the direct action of things outside us upon our bodies, and our own mental actions which bring us face to face with things not-ourselves. The object is always impersonal, but by our own personal action we are continually receiving impersonal revelations. Association of ideas comes suitably under this head because it is by personal expectations so produced that we anticipate sensible experience. But it is but one case of the all-pervasive principle of interpretation. Things are saturated with our suggestions and inferences, varying from fully conscious suggestions to sub-conscious ones. These interpretations come from us, but they form part of the object itself. The meanings of things are not merely something which we entertain, but apart from the question whether they are correct or not, they are part of the constitution of the things and we act on that understanding. How they can be, as we loosely say, supplied by the mind requires no further explanation. The difference between what is revealed in sense and what is added in interpretation is solely a matter of the method of the revelation. We are always by one method or other seeing things themselves, or, to vary the metaphor, handling or manipulating them. This is true even when the suggestion is unconscious. We treat the object as possessing certain added characters corresponding to the unconscious mode, whatever that may be, of the mental activity, which characters are fully revealed if the activity passes into clear consciousness. Nay, the suggestion may be a totally unconscious one, a mere state of our body, and affect our reaction upon the object.

The best illustration is to be found in the difficult and subtle facts of un-understood nascent desires which impel us to the pursuit of their appropriate object. At first the desire is felt for something or other, we know not what, and we are aware of a certain class of objects as surrounded by a dreamy halo of possibilities. When the object which is suited to gratify the desire comes within our sensible vision, the real and proper object of the desire becomes, from vague, definite and filled with detail.

It is but a step from this to constructive imagination or hard thinking of a hypothesis, the most obviously subjective of all our mental processes, and where it might seem most paradoxical to assert the revelation of an external reality given as the contents of the experience, though not necessarily exhausted by them. The creative impulse, backed in imaginative production by passion, and in scientific invention by more or less warmth of curiosity, squeezes out the result from our minds; working in complex wholes of mental activities, in view of the materials which correspond to those activities, modifying these complexes by here a touch added and there a touch removed, till by a sort of intra-mental natural selection that complex is arrived at which satisfies the creative impulse. In all this labour of expression the mind is still handling outside objects, using the materials of its experience and building them into a new structure of art or science. Whether some totally new feature of things may thus be discovered is a question which I need not raise for fear of accumulating difficulties. But it is always external materials that are being handled, and the new product is itself, whether it is a statue, or a poem, or a thought, also external and presented from without. It is well known that discoverers or creators themselves describe their works as coming to them from without, which we are in the habit of ascribing to their personal powers. This humility of great men is prompted by their sense of what is literally true. Scientific discoverers, to take their case more specially, who proceed by the invention of hypotheses, are minds so gifted as in response to the world to body forth from their own minds imagined or conceived combinations which are afterwards attested by sensible things.

I have taken extreme cases, but I need not pursue these difficult, and perhaps dithyrambic, flights in order further to elucidate the commonest feature of our mental life: that in the learning of the world there is this constant interplay of mind and things, that we discover in things such wealth of properties as our minds are fitted by nature or previous experience or happy particular endowment to appreciate. What to the empty mind is a bare colour or taste is to another full of meaning, is symptomatic or significant. The mobile intellect of one apprehends what the dull wits of another can only perceive after demonstration by the discoverer or not at all. But the stores of experience which the mind brings with it to the apprehension of things are themselves non-mental and physical, and the mental actions themselves are but instrumental. And I repeat that, in seeing or manipulating things, the mind is but declaring that these things exist together with itself or are copartners or compresent with itself in the universe to which both mind and things belong.

It is, we have seen, because in our various mental actions we are handling or are in view of the same physical object that we are able to connect sensory and ideational appearances of things, experiences which are themselves physical, though all partial, into one connected and continuous

whole which we call the thing whose appearances are thus revealed. We may now add that it is just because it is physical, non-mental appearances that we handle or see that different individuals can collate their different experiences of the same thing. They can do so because the appearances which they apprehend are in all cases external to all the minds alike. Each mind may see different appearances. We see things from a different angle, partly because we are literally in a different spatial position with respect to them, partly because the different history and aptitudes of our mind dispose us to see things differently, so that a different selection from the fulness of the object is revealed to us. Each of us has his own special interpretation of things. But since our perceptions, images, ideas, notions are physical appearances of the same physical thing, I can control my ideas and sensations and the rest by yours. In this way we arrive at true or scientific knowledge. The result of intercourse of different persons with one another is to depersonalise the world of individual experience and give us truth.

PERSONAL ELEMENTS IN EXPERIENCE: ILLUSION AND ERROR

We must distinguish, next, between the mental or subjective and the personal elements in knowledge. All knowledge that goes beyond the purely sensational stage depends in the manner explained upon the character of the instrument. But we need a word to describe the special ways in which the special features of the instrument, and consequently the objects which it indirectly brings to view, determine the appearance which is revealed. These special features of the instrument I may call personal, in distinction from mental or subjective. I call them personal because in the end they rest on congenital or acquired dispositions of the body or in particular of the brain. But they are of two kinds. The first kind are helps to knowledge, and indeed the necessary means of acquiring it; the second kind are hindrances, and are the source of illusion and error.

The first kind are those which arise from our different situations, in virtue of which things present to us their different sides. The table presents one corner to you, another to me. Both corners are actual, and if I put myself at your place I shall see your corner. There are the merely individual differences which are collated to form fuller knowledge of the object. It is particularly the work of thought to take the scattered appearances of things, whether in my own experience or in the experiences of several individuals, and use them so as to connect them into a whole, or, better, so as to gain the vision of the whole. The particular appearances remain true, but thought discovers their unifying and explaining law. Science depersonalises in this sense by reducing the desultory and disconnected into continuity and coherence. Each appearance, though personal so far as it is vouchsafed to a certain individual, contributes to the common knowledge,

and at the same time is intelligible to other individuals. This familiar state of things may be compared to the use of language. Each person uses his own turn of phrase and his own intonation. But each is intelligible to all the rest, provided he speaks within the limits set by the genius and the usage of the language. The language exists as the common body of ordered expression, which passes between such persons who speak it correctly. It is impersonal only in the sense of being more than the work of any one person. Thought is in this sense impersonal.

But if the speaker uses words or phrases incorrectly, or introduces falsetto into his speech, he is an eccentric, and the correct use of language rids persons of this mistaken habit, which renders them unintelligible, and their speech incommunicable. The personal features in acquiring knowledge, which correspondingly are excluded and not used, are ignorance or defect, and illusion and error. Strictly speaking, ignorance and mere defect, whether the defect is the absence of a sense, as in deafness, or the inability to appreciate difference, as in colour-blindness, are on a different footing from illusion. For the absence of certain appearances need not falsify the rest, and what a person knows (say about the moon) may be true, though he has not the whole of lunar theory. (This may at least be accepted provisionally.[11]) Illusion arises in such cases, and it generally does so arise, so far as a person takes his defective knowledge for complete, and believes that green and red things have the same colour. So far as this is the case, science and education seek to remove the disability, if they can. Strictly speaking, illusion and error arise when there is not merely defect, but incongruity between the object actually present or intended, or supposed to be present, and its appearance, so that the appearance is not a true appearance. Illusion may perhaps again be distinguished from error by its unconsciousness. The picture seen in the stereoscope seems solid; this is only an illusion, for we do not suppose we are looking at an actual solid thing. If we do we are in error. There is something of pretence about error in the strict sense, the person in error is self-deceived.

These minuter distinctions do not, however, concern us here. Let us use error generally. Wherever it occurs it is due to the intervention of the personal factor between the mind and the object. It occurs wherever some objective appearance is presented to the mind which does not belong in fact to the object intended. The question then is how, if all objects are non-mental, physical, is illusion possible?

The answer is that everything which is illusory in the illusion does actually exist in correspondence with the mental activity through which it is revealed, but that the personal character of that activity dislocates the real object from its place in things, and refers it to a context to which it does not belong. When I fancy a horse's body and complete it with a man's

[11] See later, last section.

head, the head exists in reality, but not upon a horse's body. When hot metal touches a cold point of my skin, and I feel it cold, it is the coldness of a cold thing which I feel; there is illusion, so far as I refer the coldness to the metal touching me which I see, or, if we prefer, supplement the cold sensation which I really feel by the touch and other properties of the metal which is touching me. When my eye is struck and I see sparks, I see physical and sensory light, but displaced to the points of space in which I see the sparks. There is further misinterpretation in supposing them to be sparks. When I see the plane figures solid in the stereoscope, it is not the solidity which is illusory, but again the supplementing of it by the other physical properties of the scene depicted. In the same way, the painter produces the illusion of a man actually present by suggesting the properties of his subject which he does not paint, but which really belong to the subject. To multiply examples would only be to repeat the pages of works of psychology which describe illusions. Intellectual error exhibits the same features of taking up or seeing real and actual parts of the world, and repiecing them together into combinations determined by the inappropriate character of the total complex of mental activity. An erroneous proposition always deals with actual realities, but it pretends that one actual reality has a property which is also real, but belongs to some other actual object. In other words, error arises not from unreality, but from misdescription.

Let it not be supposed that, in speaking thus of real sensations wrongly connected with other objects, I am treating a sensation or other appearance as something that may be floated off, and can exist in independence of its substantial basis. On the contrary, the cold sensation which is felt by the cold point of the skin when excited by a hot body is a sensational object precisely of the same sort as we experience in a cold body that acts upon the skin. That body itself is a more or less complete continuity of its own appearances, and the cold felt is in both cases cold belonging to a body. What is meant is that, owing to a visual obliquity of the mind, two sets of physical appearances are wrongly correlated, much as in actual bodily vision when you look with the two eyes at an ink-spot on the window you may see a chimney-stack and a church-spire in the same place.

Error therefore involves the same metaphysical difficulty, and is explained in the same way as constructive imagination, and for that matter memory also, so far as it involves, as it does, construction as well. In imagination we take pieces of our world and put them together into new combinations. Sometimes these combinations are verified as having actual existence. When they have not, but are believed to have it, there is illusion. It is experience which decides. Exactly at what point in error the dislocation of things is found is very various. Sometimes we have two very complex realities dislocated, as when I fancy a snow mountain to be made of diamonds, where the wrongly allocated diamonds are themselves complex wholes. In the end, and with the highest-degree of incoherence,

such as we may get in certain dreams, or in simple cases like that of the hot metal felt as cold, we may have dislocation of simple sensational objects. And what imagination and illusion imply is that corresponding to each act of sentience set going in the mind there is an actual sensum; that the last elements of the world we bring before us in imagining whether correctly or in illusion are real and actual. To each sentient act in any of its intensities there corresponds a sensation or sensum with its appropriate degree.

But the forms of combination of the parts of the world are not necessarily entirely false in illusion. On the contrary, imagination and error always follow, up to a certain point, the combinations found in reality. We all of us know some man to whom, like Titania, we attach by illusion a donkey's head. But we obey nature so far as to complete the trunk by some head or other. Laws of combination of parts are, in fact, as much actual realities as the parts themselves, and they are more important. Why, then, it may be asked, if you maintain that to every elementary image there corresponds an actual object somewhere, why do you not maintain that to every illusory form of combination there corresponds somewhere an actual form of combination? You would then suppose with Empedocles that hippogryphs and centaurs, and all the monsters which the imagination of man has invented, did actually exist at some anterior epoch in the world's history, though, as they have failed to survive, no traces of them remain. It is not necessary to make so violent an assumption for which there is no sufficient evidence in fact, because we have evidence that we do physically handle things and recombine material things into fresh wholes, partly respecting and partly disregarding the combinations which we find in nature, but treating wood as wood and not as clay or water. We alter the arrangement of things to suit our purposes. What we do in imagination and error is analogous. But instead of acting on the world we so act upon ourselves as to place ourselves where we see things in an order and combination different in the case of illusion from the actual. Error is the mental distortion which presents us things awry. It is the mental mismanipulation of things, or, to use our usual language, the wrong mental vision of them. And the cause of error is the personal tendency of the mind which it owes not to individuality, but to abnormality. It may be perverseness of the senses, or of intellect, or it may have its origin in feeling, the impulsion of prejudice or affection, or any of the faults of will or passion which interfere with the undisturbed contemplation of what is outside us. Every inappropriateness in the action of the mind distorts its vision of things. The man who is in error is wry-necked so that he cannot see normally. To borrow a word from the title of one of R. L. Stevenson's stories, he is thrawn; and the object of science and philosophy, as Plato said long ago, is to twist him round so that he can see.

To have truth is to have your mind working so as to be in presence of objects in the order and arrangement in which they exist. It is therefore

impersonal. The mind makes itself receptive of things and passive with regard to them. It does so by depersonalising itself in the two ways indicated above. It uses the personality which sees correctly the partial aspects of things, depersonalising it by thought so as to remove its partial character. But it excludes the personal factors which induce error. Science supplements defects of mind by instruments which extend and make precise the vision. In order to adjust the varying deliverances of the senses, which are affected by the merely personal differences of individuals, it invents standards and methods of precision. For the more glaring causes of error it seeks to remove all passion but that which makes us strain all our powers to be passive to the influence of things. Error is the want of impersonality. It is, therefore, if we call by the general name of will those dispositions of our mind which keep us in tune or out of tune with the world, an intrusion of a defective will so as to blur the recognition of the things presented to us and thereby declared to be together with us. At the same time to exclude the defects of will is the highest exercise of will. The impersonality which is the condition of knowledge is the extreme cultivation and refinement of personality.

By excluding the personal elements which are introduced into the appearances of things, science and education continue the work which has been already accomplished by the course of evolution. Our mental instruments have been fashioned in conformity with our surroundings through the pressure of practical needs and the sanction of failure and extinction. The normal eye sees the colours which are in nature, because a long history has selected the eyes which act so as to make the distinctions of colour which are useful for practice. Error represents the deviation from the normal method of mental action, for which normal action the appearances of things are not discoloured by personal interference. The cautions of scientific method, the training in scientific impersonality, remove the deviation contained in error and make the mind a mirror of actual things.

SENSATIONS, PERCEPTIONS, IMAGES AND THOUGHTS

My object has been to develop in the face of certain difficulties the truth that the objects of apprehension are non-mental, and, by doing so, to endeavour to put the reader into the point of view from which the original analysis of perception into the togetherness of two things, of which one is a mind and receives the revelation of the other, becomes convincing. The appearance of the object, always except in simple cases, contains elements introduced into it by the mind, and these elements may, and if they are personal do, vitiate it. But these elements are still non-mental, and the inquiry has shown how this is metaphysically possible. There is no room here for the charge of representationism, as has been supposed[12] But over

[12] Stout, p. 240.

and above the metaphysical consequences or implications of the method adopted, which do not fall within the scope of this paper, there are two questions raised by this inquiry upon which some remarks seem called for, though they must be tentative and provisional. There is, I hope, no shame in confessing that when I venture out into what Locke calls "the vast ocean of being," I soon get out of my depth.

Sensations, percepts, and the rest are different partial appearances of non-mental objects. Objects present differences of character, like those of colour, or chemical valency, or organisation for breathing, which are the interest of particular sciences. But the differences we have been considering are differences revealed to our minds in virtue of or in response to the various general attitudes which the mind assumes; and they may thus justly be described as the "particular ways in which non-mental objects exist in relation to the apprehending mind."[13] They are metaphysical distinctions, to which correspond the psychological differences of the activities by which we know them. It is for metaphysics to say what is the relation of the sensum to the perceptum or the cogitatum, all these being appearances of the object to which they belong. In particular, we want to know how sensation can be a character of things, and in the next place how thought can be another character. That there is something contrary to our common habits in treating sensation as an element of things must be admitted. But the difficulty arises from assuming that the simplest elements in the constitution of things must be qualities. Now qualities are permanent, and it would seem therefore that sensations, being less than qualities (for no one doubts that the sensation green is less than the quality greenness), sensations must belong not to the thing but to the apprehending mind But if sensations are declared, as by me, to be real appearances of things, what kind of appearances are they?

Let us recall the surface distinctions between these various grades of reality. Sensations have a pungency which images miss, but they are relatively momentary, and transitory, and isolated. Percepts are pungent and intrusive, like sensations, but they exhibit relative coherence and complexity, and especially they exhibit permanence, and carry us by the use of prior experience into the past. This difference must not, however, be exaggerated into disparity. A persistent sensation from a permanent object gives us a sensation of identity, so far as identity, that is numerical identity, can be sensed. And it can be sensed just as change can be sensed; and Hume, however much he may have failed to justify his statement, was surely right, when in his famous chapter on the continued existence of things, he referred the broken perception of things to the measure of direct experience of identity. We can therefore have sensation of identity, but it merely means persistence of sensation. When we come to perception, we have revealed to us, even in the simple perceiving of sense qualities, like

[13] Quoted by Mr. Stout, p. 240, from my previous paper.

green or sweet, something which belongs to the past as well as to the present. The intermediate stage between the mere persistence of an identical sensation and the perception of a quality which has permanence is found in the after-sensation, which gives us sensational persistence (identity) combined, it may be, with diversity, though in the absence of the stimulus, and with corresponding changes in the intensity of the sensation. They are metaphysically, as well as psychologically, a link between sensed qualities or percepts and sensed sensa, which are less than qualities.

The contrasts of images and percepts need not be repeated here. On the other hand, thoughts have a distinctive character, which has made many separate them completely from the lower appearances. The thought (not, of course, the thinking) shares with the image its want of pungency, but differs from it in being relatively precise as compared with the shadowy haziness of the image, while, as compared with the sensation or perception, it is highly permanent, and coherent, or organised. It is, in fact, the law of construction of the object, to which the percepts and images conform.

What, then, does sensation mean as a character, not a quality, of an object? and, secondly, how can it be one character of an object along with percepts and thoughts? It is a safe rule of method to turn for guidance in difficulty to what we know best; and the thing we know best is our own mind, which we know not by observing it from without but by living through its life from within, and describing it in words. Now in ourselves we become aware of the difference between the isolated or relatively isolated act, the complex and permanent disposition or habit, and, finally, the still more permanent and organised character, which runs like a thread through all our conations and gives them unity and coherence in all the complexity and diversity of their direction. Our activities are felt by us and known in the only way in which they can be known, as a continuum of activities, within which these, distinctions of relative fixity and complexity and, it may be added, of pungency as well, are felt. The difference so much brought into prominence of late of the pungent emotional act and the persistent disposition or sentiment is an illustration, from the region of feeling proper. And it would not be difficult to refine upon the differences in the conative life which correspond to those established in the objects of cognition. What, then, prevents us from following the clue given into our hands by our own minds in order to guess the real nature of sensations and thoughts? If mind is the outcome of a higher physical organisation, and minds are, as they declare themselves to be, things in a world of things, we may take our experience of mind and, discounting what mind owes to its special prerogatives, apply our self-knowledge to make physical things clear. We shall not attribute to physical things mind, nor life, if the things are not alive; not even a lower grade of life or mind. But with this reservation, we can understand how the simplest elements in the

process by which things mark their place in time are sensations, which are the isolated acts in which the permanent qualities express themselves, as a habit expresses itself on occasion in an act. They are, to use a Leibnizian metaphor, fulgurations of the quality. To such a conception we oppose our habitual notion of qualities of material things as being somehow arrangements and notions of whatever constituents we regard as ultimate. But it cannot be too often repeated for those who are likely to forget the lesson, that extension and motion or material substance are in themselves on the same immediate footing as colours and smells; that they, too, are made up of sensa and percepta and thoughts, and exhibit the same problem of presenting these features in their combination. If sensations are thus the elementary activities in the "life" of a physical thing, percepts represent their more permanent habits in action upon a body to which or to whose mind they are revealed, images are these same habits as acting in the past or projected in anticipation into the future, or revealed with or without distortion by foreign elements; while thought is the law of combination of qualities and of their action.

If we ask how sensations and thoughts are alike appearances of things, the answer is found or hinted by following the same guidance. As habit grows out of act and expresses itself in act, so thought lies at the basis of sensation, is revealed after a process of sensational experience, and is continuous with sensation. The sensum may be revealed separately, but it is a sensational appearance of a thing which has as its law of construction and action that which is revealed to thinking. The sensation and the thought are equally aspects or appearance. Without law sensations or perceptual qualities would be isolated and incoherent. Without sensation law would be without pungency, it would not sting, it would not be realised in the direct action of thing on thing. We should have a world of things which would be entirely cut off from each other and owe the whole of their "life" to impulsion from within. Sense and thought are thus equally real, though thought, taking in as it does the whole range of a thing's existence, and comprehending, let me add, the existence of many things of the same species (which obey the same law of construction or action), possesses in the constitution of things a far greater significance than sense. If I am right in assuming that for Plato the "ideas" are such laws of construction and of action, the error we may be compelled to put down to the account, even of Plato, is not that he assigned to "ideas" a real existence in fact (whereas as some think they have only validity and not being); for they have an undoubted existence in fact, and are the most important of all facts that we know. His error consisted in denying sense existence to be also real, and confusing their insignificance with want of reality; or to say the same thing in other words, in declaring "ideas" to be the one reality because they were the most significant features of it.

APPEARANCES AND REALITY

It remains to add such remarks as are possible here upon the reality of appearances, as that distinction has been understood in this paper. The reality is the continuous totality of its partial appearances, which appearances are themselves real in turn. How, it may be asked, is, in the first place, such a totality possible at all? and, secondly, how can a partial appearance be regarded as real, if it is only partial? Both questions are answered by making use of the clue which has been used already. In ourselves we live through a connected and continuous whole of life. And in ourselves the single activity does not cease to be actual because it is partial. The first fact indicates how there may be a whole which has varying appearances. And the appearances so spoken of are, it will be observed, actual features of themselves which things present to other things because of the angle from which they are seen. A column of soldiers has really a different appearance on the front and on the flank, and that difference shows itself in the different action of the front and the flank upon the enemy. A sewing needle used to sew up a dog's wound pierces with the point and tears at the sides, and it is therefore humanely replaced by the surgical needle, which cuts at the side as well as piercing. The table not only is seen differently according to the position of the observer, but it is different and, as language puts it so expressively, it looks different. There is no further need to labour the point. When it is urged that a partial appearance cannot be real, what is meant is that it cannot be true. Its partial character falsifies it. The answer is that an appearance is not falsified by being partial unless it is illusory. An illusory appearance is, we have seen, actual but dislocated, and it betrays its illusory character by failing to cohere with the whole to which it belongs. Its falsity is not due to its partial character but to its intruded element of personality. A partial appearance remains real and true, though incomplete. A woman does not cease to be a woman because she is a mother. A king is not less a man because he is king. Connection with a larger whole does not necessarily remove the characters which a thing possesses before entrance into the whole. Accordingly a partial appearance can only be regarded as false if it is taken by itself as being what it is as in the whole, as if, for instance, the king were treated as being a king apart from society, or as if we treated the triangularity of a pediment as involving a base of thirty-two feet, because a particular pediment happens to have a base of thirty-two feet; or contrariwise, if it is regarded as possessing a property incompatible with the extra qualities which it acquires in the whole, as if a person's youth were apprehended as fixing a limit to his growth. Any appearance to be an appearance of a thing and not an illusion or error must be precisely what it pretends to be. But so understood it remains in the whole, just what it is when taken by itself; but it may in its connection with the whole receive new determinations which He outside the appearance as it was taken when it appeared.

But these remarks are perhaps either too few or too many for a difficult subject. They are intended merely to indicate-further in what manner appearance as I have used the term is understood.[14] Nor, to revert for a moment to the idea of a continuous totality, do I suppose that that idea can be fortified against attack by a simple reference to the fact that in ourselves we live through such a totality. The answer can be made satisfying only when the alleged contradictions involved in the notion of a continuous whole can be removed, or accounted for, as I do not doubt they will. It seemed impossible in a paper of this kind to avoid some treatment of these topics, however imperfect. But I hope they will not serve to divert the attention of readers from what is the main purpose of the paper, to expound the metaphysical truth of the non-mental character of the objects of cognition, and in particular of images.

[14] This interpretation does not, of course, originate with me.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Are Secondary Qualities Independent of Perception?

T. PERCY NUNN
&
F. C. S. SCHILLER

VOLUME X

1910

EDITORIAL NOTE

Ferdinand Canning Scott Schiller (1864-1937) was a German-British philosopher. His philosophy is often aligned with the pragmatism of William James, though Schiller himself referred to it as "humanism." He argued against both logical positivism and absolute idealism (most notably against Bertrand Russell and F.H. Bradley, respectively). Schiller gained a first class degree in Literae Humaniores from Balliol College, Oxford. From 1893-1897 he was an instructor in philosophy at Cornell University, and in 1897 returned to Oxford to become fellow and tutor of Corpus, where he stayed for more than thirty years. He was treasurer of the Mind Association for many years, and in 1926 was elected a fellow of the British Society. He was an early supporter of evolution and a founding member of the English Eugenics Society.

Schiller was president of the Aristotelian Society from 1921 to 1922.

For Nunn's biography, please scroll up to page 159.

The following paper - "Are Secondary Qualities Independent of Perception? A Discussion Opened by T. Percy Nunn and F.C.S. Schiller" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume X (1909-1910), pp. 191-231.

XI. ARE SECONDARY QUALITIES INDEPENDENT OF PERCEPTION?

A discussion opened by
T. PERCY NUNN & F. C. S. SCHILLER

I. T. PERCY NUNN

IT is important to make as clear as possible the sense in which I give an affirmative answer to this question. I will, therefore, begin by contrasting with certain well-known views the view which I wish to defend.

(*a*) The first of these is the Lockean view, which not only has great historical importance, but is still the creed of the average physicist and physiologist. It has its most condensed and vigorous expression in the following passage of the *Essay:* "The particular bulk, number, figure, and motion of the parts of fire or snow are really in them, whether any one's senses perceive them or no; and therefore they may be called *real* qualities, because they really exist in those bodies. But light, heat, whiteness, or coldness, are no more really in them than sickness or pain in manna. Take away the sensation of them; let not the eyes see light or colours, nor the ears hear sounds; let the palate not taste, nor the nose smell; and all colours, tastes, odours, and sounds, as they are such particular ideas, vanish and cease, and are reduced to their causes, *i.e.,* bulk, figure, and motion of parts." To which pronouncement it must be added that "the ideas of primary qualities of bodies are resemblance's of them, and their patterns do really exist in the bodies themselves; but the ideas produced in us by these secondary qualities have no resemblance of them at all."

(b) The next is the Berkeleyan view that "those arguments which are thought manifestly to prove that colours and tastes exist only in the mind . . . may with equal force be brought to prove the same thing of extension, figure, and motion"; and that "the absolute existence of unthinking things without any relation to their being perceived . . . is . . . perfectly unintelligible. Their *esse* is *percipi,* nor is it possible that they should have any existence out of the mind or thinking things which perceive them."

(c) The third is the view which may be collected from two valuable papers for which this Society is indebted to Professor Stout.[1] Mr. Stout accepts Berkeley's contention that our "simple ideas" of primary and secondary qualities are psychical existents and as such have exactly the same status; but he also agrees with Locke in holding that they have a relation

[1] *Proceedings of the Aristotelian Society,* 1903-4 and 1908-9. They will be quoted as "first paper" and "second paper" respectively.

to extra-mental realities. These extra-mental or "physical" existents include the secondary equally with the primary attributes of matter, which are in each case "correlated but not identical with intrinsic characters of sensation." "The correlation is essentially of the same kind for both. Sensation enters into the constitution of the ... attributes only in so far as certain features of sense-experience represent something other than themselves, and it is only because this representative function is logically independent of the actual occurrence and fluctuation of sense-affections that the primary qualities can be validly thought of as existing in the absence of percipients. We are justified in thinking of matter as extended and movable in space before the existence of sentient being. But we have exactly the same justification for thinking of it as hot or coloured. Finally, the positive and specific nature of the primary qualities no less than that of the secondary is derived from corresponding sensations."[2] There is, however, a real and important difference between the two kinds of attributes: "The executive order of the material world can be expressed only in terms of the primary and not in terms of the secondary qualities of matter. . . . The system of uniformities of co-existence and sequence and of quantitative equivalences and correspondences which constitutes the order of physical nature in its causal aspect can be formulated only in terms of extension, motion, and tension."[3]

As against these views I propose to maintain (1) that both primary and secondary qualities of material bodies "are really in them, whether any one's senses perceive them or no"; (2) that they exist as they are perceived; by which I mean that although (in Mr. Bradley's phrase) "the qualities impart themselves never except under conditions," yet these conditions do not affect the character of the qualities perceived; and (3) that sensations as mental entities exercising a "representative function" need not, therefore, be postulated.[4]

THE ARGUMENTS FOR THE PSYCHICAL NATURE OF SENSATIONS

The assumption of mental or psychical existents (as distinguished from the psychical processes whose occurrence constitutes a cognition) is the fundamentally important element in each of the doctrines which I have

[2] First paper, p. 147.

[3] First paper, p. 153.

[4] In two notable Presidential Addresses Professor Alexander has lent his great ability and prestige to the defence of these same positions. Some of the following arguments can hardly fail to recall those which he has used with so much effect. For this reason it may be advisable to point out that I have an independent right to use them. They will be found to be either abstracts or obvious extensions of arguments brought forward in papers which I read to this Society in 1906 and 1908, and in a book (now out of print) on the *Aims of Scientific Method* (1907), all written before I was aware that Mr. Alexander was a supporter of similar views.

quoted. It will be well, therefore, to examine briefly the chief grounds for this assumption. They are to be found expressed most clearly in Mr. Stout's papers.

The first and most inclusive ground is that there are (apart from conation, attention, etc.) elements in experience whose being consists "only in being experienced."[5] A toothache is regarded by Mr. Stout as so obviously a case of this kind that it is sufficient merely to call attention to it. "If our existence as conscious beings were annihilated it would *eo ipso* disappear, whatever might happen to our body." Dream apparitions and hallucinations are almost equally easily disposed of. "Their beginning to appear to [the subject] and ceasing to appear to him are the beginning and cessation of their existence. If he were annihilated they would *eo ipso* be annihilated." Such cases as the yellowness of buttercups or the greenness of grass are less obvious and demand argument. The proof that here also we are concerned with elements that exist only in being experienced is (in brief) that "the immediately experienced quality may vary when things seen remain unaltered." For example, I do not impute to the buttercup the changes produced by contrast of colours or by the oncoming of twilight.

In this first group of cases, the elements of experience under consideration "belong to the objective rather than the subjective side of the subject-object relation,"[6] and, as we have seen, the proof that they are psychical lies in the supposed fact that they "exist only in being experienced." In another group of cases Mr. Stout bids us observe that sensations "are capable of being mentally presented without being objects at all."[7] Thus I may be "quite inattentive to words as articulate sounds . . . [and] attend only to the meaning they convey." Or the "sympathetic excitement" involving a whole complex of sensations of which he is "entirely heedless" may yet be the means by which the spectator of a football match enters into the experience of the players. "Sensations, then, may be in the proper sense *subjective.*" On the other hand, pleasure and pain, which are normally subjective, may, on occasion, be objective. Thus Ferdinand experienced (subjectively) delight in the (objective) painfulness of carrying logs in the service of Miranda. Painfulness and sensations of sound, pressure, etc., may, then, alike appear either on the subjective or the objective side of the subject-object relation. We must assign them, therefore, to the same ontological status. "But no one . . . will maintain that pain is ever . . . anything but a mental fact." It follows that sensations are mental facts also.

A discussion of these arguments will be the best introduction to an alternative doctrine. They all appear to involve the same major premise: "Anything which exists only in being experienced must be psychical." It

[5] Second paper, p. 231-6.

[6] Second paper, pp. 231.

[7] Second paper, pp. 243-6.

is true that in the second argument we are not told why nobody would maintain pain to be anything but a mental fact, but there seems to be no reason available except that its existence is dependent upon its being experienced. For Mr. Stout admits that a thing need not be psychical simply because it is not physical, and the form of his argument shows that he cannot here mean to maintain that a thing must be psychical if it can once be found on the subjective side of the subject-object relation. If, then, for the sake of argument, we grant this major premise, everything turns upon the truth of the minor premise: "Pain, sensations of colour, etc., exist only in being experienced."

It has already been noted that Mr. Stout offers no evidence for this statement in the case of pain. Yet to me, at any rate, it is by no means self-evident, and there seem to be considerations to urge against it. In the first place the painfulness of a toothache may present itself as a thing *to be reckoned with* as much as St. Paul's Cathedral, although my experience of it, like my experience of St. Paul's, may be transferred to the subject side of the subject-object relation if (for example) my interest is engrossed by the utterances of an eloquent preacher in the pulpit. It seems as fair to deduce from this that the pain is, like St. Paul's, something outside my mind, with which my mind may come into various relations, as it is to deduce that the sensations due to the presence of St. Paul's have, like the pain, merely a fleeting psychical existence. Again, experience of the toothache and of the cathedral depend in each case upon the fulfilment of certain physical conditions, and I am no more bound to suppose that the pain is snuffed out of being when I cease to feel it than I am to suppose that St. Paul's is annihilated when I cease to see it. Indeed, there are occasions when the presence of the appropriate physical conditions gives me a positive reason for supposing that the toothache was "there all the time" though I did not feel it. When these physical conditions are, after an interval, restored, the "same pain" returns. On comparing notes with an acquaintance in whose body the same physical conditions exist, I find reason to believe that we both suffer the "same pain." It is conceivable that the pains in these cases are the "same" in a sense identical with the sense in which one person at two different times, or two different persons at the same time may be seeing the "same" cathedral. The pain may from time, to time be drawn into individual experience from the kind of "cosmic reservoir" that has been suggested[8] as a possible source of the abnormal knowledge present to the trance-consciousness of Mrs. Piper. Hallucinations of pain—that is, experiences of a certain pain in the absence of the lesion which normally conditions them—could, on such a hypothesis, be explained, like telepathy and the other forms of telaesthesia that are believed to occur, as direct experiences of the object unmediated by the ordinary physical machinery. This explanation is easier than one which assumes a pain to be a psychi-

[8] By Professor James, *Proc. S.P.R.,* LVIII, p. 4.

cal element normally called into existence only by the existence of certain physical conditions.

I can see only one positive argument against the continued being of a pain outside experience. It might be contended that the pain of a toothache and sensations of colour and extension are of the same order of existence; that the latter are psychical because they are merely fleeting "representatives" of abiding physical realities like St. Paul's Cathedral; and that the former must, therefore, be a fleeting psychical existent. It is obvious that this argument would have no cogency for one who did not accept Mr. Stout's view of the representative function of sensations. Moreover, it would from any point of view destroy the force of the contention that sensations of colour, extension, etc., must be psychical existents because they are on the same footing as pains which are undoubtedly psychical. The argument cannot be worked both ways at once.

It would be impertinent to suggest that Mr. Stout's thought has followed this circular course. But in the absence of any reasoned support of the statement that pains exist only in being experienced I feel that the case of the "presentations of special sense" is the keystone of the deductive bridge over which Mr. Stout would lead us to the recognition of these psychical existents. His argument here is, as we have already noted, a modification of the one used by Locke to prove that secondary qualities are psychical and by Berkeley to prove that both primary and secondary qualities are purely psychical. A hot body yields different sensations of hotness at different distances; a buttercup gives different colour sensations when viewed by the margin of the retina instead of by the centre, or by twilight instead of by full daylight. But these differences do not imply changes in the hot body or in the buttercup. The sensations must, therefore, be psychical entities which exist only in being experienced.

The validity of this conclusion obviously rests upon the truth of a definite assumption: that the hot body cannot at the same time own all the hotnesses that can be experienced around it, nor the buttercup at different times the various colour qualities that may be "existentially present to consciousness when some one observes it." Of this proposition, as of the proposition that pains exist only in being experienced, I venture to say that it is not self-evident, that certain considerations weigh against it, and that Mr. Stout has adduced no counterbalancing considerations in its favour. Upon Mr. Stout's theory there are extra-mental qualities of the buttercup "correlated but not identical with" the various sensations. These sensations, each under a specific set of conditions of perception, "represent, express, or stand for something other than themselves"[9] which is the actual extra-mental secondary quality of temperature or colour. Mr. Stout is emphatic that in exercising their representative function the sen-

[9] First paper, p. 144.

sations really mediate knowledge of the extra-mental realities. The plain man "is convinced and rightly convinced that these objects are physical not mental."[10] But when we inquire into the nature of the qualities which the sensations represent and the grounds for the conviction that they are physical Mr. Stout's reply is disappointing. It would seem that the reason why I say that I see a yellow buttercup when as a matter of fact the quality immediately presented is not yellow is that this quality represents to me the quality that would be presented under certain normal or standard conditions of perception. But, unless this normal presentation is identical with the physical secondary quality, how can it be said that the latter is "represented" by the actually occurring quality? For if one thing is to stand for or to represent another we must have direct knowledge both of the thing represented and of the symbol. But we are told that "what we call the colour of the external thing cannot be simply identified with any quality which is existentially present to consciousness when someone looks at it"[11] It is true that we are also told, both of primary and of secondary qualities, that they are "derived" from the corresponding sensations; but, in face of the statement quoted in the last sentence, this "derivation" cannot mean such a relation between the physical attribute and a sensation that to have the latter immediately present to consciousness is *ipso facto* to know the former. One is bound to conclude that the only representation which Mr. Stout has exhibited to us is the mutual representation of sensations. Any one of these may not only be itself experienced but in that experience may stand for, express or represent a definite series of others. But if at the same time we hold that a given sensation by this representation mediates knowledge of an extra-mental thing then it seems impossible to avoid identifying with this thing at least one member of the series for which the given sensation stands. That is, there is in each of these series at least one member that cannot be thought of as a fleeting psychical existent. Since there is no evidence to attach this prerogative to one rather than to another of the series it is safest to identify the physical attribute with the whole of them.

ORIGIN OF THE BELIEF IN PSYCHICAL SENSATIONS

It is not difficult to point to motives that have done much to secure for the belief in the psychical nature of sensations the position of an orthodoxy. The first is the motive of "economy of thought." For practical purposes it is necessary to simplify in thought the limitless complexity of actual phenomena. Thus we come to think of one of the innumerable hotnesses that can be perceived in and about it as the real "temperature" of a warm body; the sensation which a buttercup yields under certain standard conditions of perception becomes "the colour" of the flower. Other hotnesses

[10] Second paper, p. 229.

[11] Second paper, p. 232.

and other colours tend to lose their substantive character and are reduced to the status of signs of these. This process of simplification is not confined to common thought. The progress of science, while it reveals wider and deeper complexities in Nature at every stage, shews also that a conceptual simplification of its data is constantly becoming a more essential condition of theoretic success. The existence and importance of this tendency in physical science has no doubt had great influence in determining the philosopher's cultivation of the same tendency in his department. Allied to this inveterate pragmatic habit is a prejudice not unlike the prejudice that has led some people to reject the idea of immortality on account of the appalling number of souls that would share it! Under its influence we are concerned at the enormous number of qualities with which Realism would endow the commonest body. By supposing these qualities to enjoy only a temporary existence in the mind of an observer we seem to effect a great economy of material and to clear Nature of the suspicion of reckless prodigality.

In the next place there are certain experiences—my pains and pleasures, my memories and imaginations—which in some sense often belong to me alone and are not, like my perceptions of the physical environment, shared with other people. The objects of these experiences come, therefore, to be thought of as psychical, as part of my mind. But error and illusion in the province of sense offer other examples of experiences whose essence it is to belong to me alone. When reflexion begins to work upon these experiences it readily follows the same method as in the province of physical phenomena. Just as the physicist seeks to reduce the whole of his universe to matter in motion, and to carry out this purpose feigns "concealed masses" in movement where no movement is, in fact, verifiable; so the psychologist, starting with the belief that he has good reason to consider the objects of his errors as well as his feelings and images as parts of his "mind," comes eventually to think of all the facts of experience in terms of hypostatised "states of consciousness," even in cases where there is no pretence that these pieces of consciousness which have extra-mental objects are verifiable. In other words, the "mind" as we have it in orthodox psychology is largely a methodological postulate—an expression of the need which a special science feels to reduce all its data for theoretical purposes to a common denominator.

THE ALTERNATIVE VIEW

The upshot of the foregoing discussion is that the premises upon which the proof of the psychical nature of sensations rests are merely plausible assumptions or pragmatically useful postulates. They present, therefore, no insurmountable barrier to those who feel impelled to take another road than the one they mark out.

This road starts from the recognition that in perception the object announces itself as having a certain priority to and independence of our act and that this announcement is itself the sufficient certificate of the object's extra-mental status. It is important to observe that Mr. Stout also admits,[12] under the name "immediate inference," an element in sensational experience which guarantees that we are dealing with extra-mental realities. This element is, in fact, implied by the statement that sensational qualities are the data of perception. If our sensations "could be known in pure isolation from aught else they would not be data." "An isolated datum is a contradiction in terms." There is no difficulty in accepting this principle. Divergence appears only in its application. For Realism as here conceived, the further truth which the sensation "reveals" is its own extra-mental existence. For Mr. Stout the further truth is the existence of an extra-mental reality correlated but *not* identical with the sensational quality. No doubt sensational experience often guarantees the extra-mental existence of something more than the qualities which appeal to the special senses. Through sensational experience the subject may be brought into cognitive relations with the "thinghood" or real extra-mental nexus that unites the sensational qualities. But I can find no warrant for the statement that while the sensational experience gives adequate data for immediately inferring the extra-mental existence of "thinghood" it gives no reason for inferring also the extra-mental existence of the sensations themselves. It is apparently because Mr. Stout holds the opposite opinion that he feels entitled to object to Mr. Alexander's appeal to the facts as irrelevant to the problem under discussion.[13] To meet this objection I urge that the character of extra-mentality announces itself in and with reference to "that which is existentially present to my mind in perceiving physical things" as well as in the physical things which it is the means of my perceiving. It announces itself in the colour of the buttercup even when my eye has become so trained that the colour quality actually presented is no longer accepted as merely a symbol for a normal quality; it announces itself in all the hotnesses that I can feel at different distances from a fire, though in this case there is no normal quality of which they can be the symbols. In neither of these cases, nor in any comparable case, can I find in the experience itself any indication that I am dealing with temporary existents in my mind which "represent" the physical thing outside my mind.

The path which I propose to follow from this starting point is determined by a postulate offered as a substitute for the postulates of the orthodox view. That in the perception of a physical thing the subject is in relation with no psychical intermediary "on the object side" but with the thing or certain features of the thing itself—this seems not only to be a datum of the experience, but also to be part of the plain man's view.

[12] First paper, p. 159.

[13] Second paper, p. 229.

Mutatis mutandis, the same can be said when the object of the cognitive relation is an isolated quality—such as a smell or a colour—which is not a representation of a thing in the ordinary sense of the word at all. Careful introspection and the plain man agree in pronouncing the object to be extra-mental—to be an entity capable of entering into the subject-object relation, but to be in its own character unaffected by the presence or absence of that relation. The postulate in question lays down that in philosophising, though I may rectify and add to the plain man's view, I must not contradict or explain away any essential positive features of it. I venture to make it clear (repeating what I have said elsewhere) that by the plain man I do not mean any particular species or variety of the genus *Homo,* but a being included in the wider self of each of us. The plain man is the original stock upon which the psychologist, the physicist or the metaphysician is grafted; and it is he who, while he supports and nourishes this more or less desirable parasitic growth, still conducts those activities that form the common core of human life from China to Peru. To say that the positive features of his view of the world must be preserved is to express the belief that his vitality supplies everywhere the data upon which departmental activities—such as those of science and philosophy—operate, and that if those activities lead to results contradictory to the plain character of the data from which they start, they are pursuing a course which must end in futility if not unintelligibility.

The systematic application of the principle that what is existentially present to the mind in perception is something extra-mental—something that would be as it is in perception even if it were not perceived—soon leads to results which do not form part of the plain man's view, simply because they are matters of departmental interest. These may be approached by other results which probably do form part of his view. Thus every one holds that there are things which "have" one colour by day and another by artificial light. In such cases neither colour is taken as a symbol of the other; they are accepted as co-ordinate substantive features of the thing, each presented to perception in the appropriate circumstances. It is easy to see that the yellow buttercup is simply a pragmatically simplified case of the same kind. The buttercup actually owns all the colours that may be presented under different conditions, though in actual experience most of them are liable to be degraded to the position of symbols of those presented under normal conditions.

But more difficult cases soon present themselves. Imagine a number of persons spread along the circumference of a large semicircle while a motor car from which a whistle of constant pitch is sounded moves rapidly along the road which forms the diameter. Then, as is well known, not only will each person at a given moment hear a note different from the notes heard by his companions, but the note heard by each is different for different positions of the car. Moreover the occupants of the car will hear

all the time a steady note which, except momentarily, is heard by none of the bystanders. Are we to maintain that all these diverse notes are being simultaneously "emitted" by the whistle? With a proper interpretation of the word "emitted" I believe that we can and must answer, Yes. The experience of hearing a note seems to me to contain as part of itself the announcement that the note is extra-mental—that it is, so to speak, *there to be heard*. Since this is true of each of the notes—none of which presents itself with a certificate of superiority over the others—I accept the conclusion that the creation of this multiplicity of notes to be heard is part of the phenomenon which is called blowing the whistle. If, for example, the note happens to be so high in pitch that it lies outside the limits of A's audition, while B, who is standing beside him, continues to hear it, then it seems to me just as certain that the note is really there for A to hear if he could but hear it as it might be in another case that there was a pin on the floor for him to see if only (like the sharper-sighted B) he could distinguish it.

I have said that in connexion with this case the word "emitted" must receive a proper interpretation. It refers naturally to the pragmatically simplified view in which the whistle is thought of as yielding its note under certain standard conditions—namely when whistle and hearer are both stationary. This view must be rectified by the aid of the science of acoustics. The thing that is really sounding is the air, the whistle being concerned merely in setting up a definite type of aerial wave-motion. (If we substitute a bell for the whistle, bell and air together constitute the sounding thing.) If at any point a given number of "air waves" reach the ear in a second then there is correlated with that "frequency" a definite note to be heard. The air vibrations do not constitute the "reality" of which the note heard is merely an appearance or mental effect. The same thing can be said of the phenomena that occur along the line from the tympanum to the cortex of the brain. Both kinds of phenomena are undoubtedly events that happen, but they happen *as well as* the occurrence of the note, and are merely the ordinary accompaniments of its perception. I insert the word "ordinary" here because I hold that hallucinations can be interpreted quite as fairly as evidence of the independent status of sounds as of their psychical character. As in the case of hallucinations of pain auditory hallucinations may at least in some cases be due to the setting up of cognitive relations directly between the subject and a sound without the intervention of the usual physical and physiological machinery. If (as seems possible) auditory hallucinations are occasionally veridical this evidence would, I think, be a good deal strengthened. Moreover, as we shall see later, normal psychology has been thought to give evidence for the view that we may have sensations unmediated by material events of the ordinarily appropriate kind or by stimulus of the ordinarily appropriate organ.

The case of the hotnesses perceived round a body of high temperature is still more complicated, for here the condition of the part of the body

that acts as perceiving organ partly determines the object to be perceived. As the condition of this organ changes during the observation the hotnesses observed will change also. These facts are not to be interpreted as proving that the hotnesses existentially present to the mind are psychical, but they do show that the plain man's view of a hot thing requires rectifying and supplementing. Not only must the thing be thought of as owning an indefinite number of hotnesses disposed spatially about it; it must also be recognised that the disposition of these hotnesses depends in part upon the hotnesses belonging at every moment to neighbouring bodies. Both of these ideas are in principle familiar to physical science as well as to metaphysics. Physical bodies are not isolated reals, each wearing its own qualities without any regard to the condition of any other body. In certain cases, capable of empirical determination, bodies reciprocally "take note" (in Lotze's phrase) of one another's condition, and express this notice in their own states. Again a thing must not be thought of as limited by a precise spatial boundary. It may be necessary to think of it as filling an indefinite part of the material universe. The thing need not on that account cease to be a definite real complex of primary and secondary qualities which could be conceived to be withdrawn from the universe as a whole.

With this corrected view of the scope of the word «thing» we can attack the interpretation of other cases of perception. If I look at a distant ship through a telescope or at an insect through a microscope I "see" the objects by means of sensations that I could not acquire by the naked eye. No special question of the relation of the sensations is thought to be raised here, because the information given is congruent with information afforded to other senses or to the naked eye under other conditions. But if I look at a straight stick in water I obtain sensations which are not congruent with those given to another sense or to the visual sense in the absence of the water.

All these cases are really in equal need of the application of the wider concept of the "thing." There are relations between the ship or the insect and the lenses of the instrument which, on a sufficiently strict view, must be thought of as making a difference to the object observed. It just happens that the difference is perceptible only from the point of view of the observer at the eye-piece. In this respect the case differs from what would happen if we directed a rod of iron towards a coil conveying an electric current: for the difference here would be observable from many points of view. There is, nevertheless, in the cases considered, an equally genuine difference made in the thing; for the disposition of its visual characters is changed. The case of the stick in water is complicated by the fact that the change in the disposition of the visual characters produces effects which in normal cases would belong to a bent stick. There is, however, no reason on this account to doubt the pronouncement of the experience that the visual qualities characteristic of the modified thing before us have a real

extra-mental status.

ERROR AND ILLUSION

At this point it will be convenient to direct the discussion to the question of Error, which is generally supposed to offer peculiar difficulties to such a theory as the one here outlined. If in sensational experience you are merely reading off the facts about extra-mental realities, how (it is asked) can sensations ever lead you astray? Yet the existence of error and illusion is a fact that we constantly have occasion to acknowledge.

Without professing to have a completely satisfactory answer to this objection, we may do much, upon the view I am defending, to limit the field of its application. Many of the stock examples can be shown not to be cases of error or illusion in any sense that constitutes a stumbling block to a realist theory. Thus, if I identify the note of an engine whistle as upper C when the note "really" emitted is C sharp, my "error" may be due either to my ignorance that the engine was moving away from me at the rate of 44 miles per hour, or to my ignorance that this circumstance would make any difference to the sound heard. But although, owing to my having insufficient data before me, or to my lack of knowledge of their relevance, I may entertain a wrong belief about the whistle, my failure does not falsify the guarantee of extra-mental reality that my perception of the sound gives. We may deal similarly with the mistakes in matching colours made by a normal person in artificial light or by a colour-blind person in daylight. There is no error or illusion here, in the sense of an attribution to the things of colours that they do not really own. The full extent of the mistake consists in ignorance that the colours which agree when seen under the given conditions of perception would not agree under other conditions of perception. In the case of the colour-blind person there is the additional circumstance that physiological conditions may never permit perception of the colour which in the pragmatically simplified concept of the thing is thought of as its "true" colour. In the same way there is no difficulty in the case of the water which appears warm to A and cold to B. To me it seems true, not only that both the warmth and the coldness are really experienced, but also that, under the appropriate conditions, both are *there to be experienced*. Error need consist in no more than one observer's ignorance that the other observer is not necessarily in cognitive relations with the same extra-mental reality as himself. Unlike Mr. Stout, I can find no more "contradiction" in the simultaneous attribution of the warmth and coldness to the same water[14] than in the simultaneous attribution to it of warmth and acidity. Only empirical experience can decide what qualities it is possible, and what it is impossible, for a body to wear together, and we must admit that experience shows that warmth and coldness sim-

[14] Second paper, p. 238.

ply are not among the qualities which exclude one another. It is true that I may not think of the same part of the water as having more than one "temperature." But the temperature, thought of as the "real" state of hotness or coldness of the body, is a concept of merely pragmatic validity. It is a symbol for the totality of the experiences of hotness and coldness obtainable from the water at the moment in question, each under its proper conditions of perception. Obviously there would be a contradiction in supposing this totality to have simultaneously two different expressions, but there is no contradiction in supposing its single expression to consist in a variety of details. It may be added that the use of a thermometer to determine temperatures rests upon the fact that with some substances (though not with all) there is a one-one correlation between their volumes under a given pressure and the totalities which are properly to be thought of as the temperatures of the substance.

In the case of the "straight staff bent in a pool" there is, again, no illusion with regard to the visual appearance. It does not merely appear to be bent: it is bent. Error here can only take the form of inferring a correlation between visual and tactual and other experiences which does not exist. This error may spring either from ignorance that the staff is partly in water, or from ignorance of the visual aspects belonging to a straight staff in these circumstances. The staff in water is (as was said before) not really the same thing as it was out of the water. Certain characters of the new thing are identical with those of the old, but its visual characters are changed. They are not reduced to a chaos, but a fresh set of experiences would be necessary to give *a posteriori* knowledge of the correlation between them and the other characters. I can see only one serious objection to this account. It is that the visual characters of the staff under water are not in the same place as the tactual characters. At first sight this fact is undoubtedly a difficulty to a realist who believes—as a realist probably must do—that even if there are divers mutually exclusive spaces, yet the visual and tactual characters of a physical thing must be in one and the same space. It is, however, not insurmountable. There are many familiar instances in which different characters of a body occupy different parts of the same space. For example, the magnetic characters of a piece of iron are not all found in the same place as its chemical characters. We may thus legitimately suppose that in the case of another special form of physical thing—a straight staff in water—the visual characters and the tactual occupy different positions. This explanation covers also the important cases of the object seen through a magnifying glass or telescope, and the still more common case of an object seen by reflexion in an ordinary mirror. In all these we have visual characters which are undoubtedly correlated with tactual characters but occupy different parts of the same physical space.

It is pertinent to note in this connexion that it has been thought possible to explain some well-evidenced cases of apparitions only on the hy-

pothesis that the visual unaccompanied by the tactual and other characters of a dead or absent person were really occupying a definite position in space before the observer.[15] Whatever value such an explanation has in these cases it is instructive to find it proffered from the point of view of empirical science by a thinker whose aim is, not to construct a metaphysical system, but merely to understand a certain group of facts.

MORE DIFFICULT CASES OF ILLUSION

The foregoing cases of error and illusion offer, I think, no real difficulty to the theory of this paper, because, though they imply incomplete knowledge and (therefore) false inferences, they do not involve internal discrepancy in the content guaranteed by perception. There is no evidence to contradict the statement which the facts give us about themselves. Any such evidence consists merely in deductions from presumptions for which no proof has been offered—presumptions which may, like Euclid's last axiom, be denied without resulting inconsistency. Our theory has a harder task when it faces genuine cases of perceptual illusion—that is, cases where sensational experience seems to guarantee the existence of things that nevertheless can be proved not to exist. A realistic theory cannot live upon the principle that there is an element in sensational experience which pronounces authoritatively that we are dealing with extra-mental data, but that sometimes when this pronouncement is given the data are not extra-mental after all The demonstration of the occurrence of such cases would necessitate either the withdrawal or the radical modification of the theory.

Before examining instances which threaten the realist with these unpleasant alternatives I wish to draw attention to certain considerations of importance. The first is the consideration pressed by Mr. Bradley when he was entering upon the discussion of the same problem. Realism is not bound to explain the whole of the facts of error and illusion. "A general doctrine is not destroyed by what we fail to understand. It is destroyed only by what we actually do understand, and can show to be inconsistent with the theory adopted."[16] Why error and illusion are "permitted" (to use the old phrase) is a problem that no system of philosophy has solved. It must suffice if we can show that their phenomena can be described in terms that do not imply a contradiction of our main theory.

The second consideration is that although the full explanation of error and illusion is more interesting to Realism it is not actually more important than in other philosophies. No matter what form a system gives to the concept of Reality the specific quality of perceptual experience is an

[15] Myers, *Human Personality,* Chap. VI.

[16] *Appearance and Reality,* Chap. XVI.

element which it is illegitimate to disregard. We may minimise its value, but an explanation of its existence and distribution is an indispensable part of a theory of experience which promises to cover, even in outline, all the ground. But such an explanation of the distribution of the sensational quality demands a better account of error than is given (for example) by either of the prevailing philosophies. In Absolutism as represented by Mr. Bradley we learn that the existence of error and illusion causes no difficulty, because every affirmation made by a finite mind about a finite subject suffers from the need of supplementing and rearrangement in which error consists. But although in this way Absolutism avoids the necessity of treating error it has not explained it. The difference between the relations to reality of the judgment "It is raining" when in one case it *is* raining, and in another it is *not,* is the specific difference that calls for explanation. To show that the two judgments merely represent different degrees of untruth is to avoid, not to proffer an explanation of this difference.

Similarly with Pragmatism. The sensational quality has become attached (we may suppose) to certain types of presentations as the mark of a peculiar relevance to universal human purposes. I may act successfully upon the perception that a friend is approaching in a way and for purposes not possible if I merely called up a visual image of his approach. If my reaction to the perception does not lead to the normal satisfactory results the perception was erroneous. This idea, when expanded, leads to a very illuminating psychological description of error and illusion, but it leaves quite unexplained how a feature of such immense epistemological importance as the sensational quality can be misplaced, and attempts no estimate of the metaphysical significance of the misplacement. It is impossible to judge of the adequacy of a system of first principles before it has come to grips with this dangerous and treacherous problem. The special disadvantage from which Realism suffers is not that success here is more vital to it than to its rivals, but that it must be gained at an earlier moment in its career.

It may be added that perceptual error seems to offer in Mr. Stout's theory precisely the same difficulties that it offers to the theory proposed in this paper. The *differentia* of sensational experience is that it presents me with data from which I may infer immediately the presence of an extra-mental existent or physical body. But how can this account be true if sometimes (as in hallucination) when sensational data are given the inference is incorrect? It would be equivalent to an admission that although "Some Q's are P's" is an immediate inference from "All Fs are Q's," yet in certain cases the conclusion does not follow. Either the immediate inference must always hold good or else there is no inference at all, but merely such a "coefficient of correlation" between the presence of certain sensations in my mind and the spatial presence of certain physical things, that in most cases, when I have the sensations, it is a safe shot to guess that

the physical thing is at hand. But if there is merely this external relation between sensation and thing we are obviously brought back to the old puzzle of how we know anything about the thing at all.

It is clear, again, that Mr. Stout's theory does not escape the difficulties presented by illusion (as distinguished from hallucination). He does not maintain that my immediate inference from sensational data assures me merely that an extra-mental reality is present. He conceives it as going at least some way towards the specification of that reality. That is clear from the statement that we know *(i.e.,* immediately infer) the circular body to remain unchanged, though we may have a vast number of different views of it. If, then, Mr. Stout "recognises" a person as a friend, and subsequently finds that he has addressed an entire stranger, he is confronted with exactly the same difficulty as the realist who rejects intra-mental sensations. The very being of sensations is to yield immediate inferences of a certain class—a class which must be taken to include the recognition of different human forms when we meet them. Nevertheless, here is a case in which the immediate inference is wrong. How can this result be reconciled with the original view of the relation between sensation and extra-mental reality?

A large number of ordinary cases of perceptual error can be brought in part under the heading of *inadequate discrimination.* It is universally known that attention, and above all practice, may make an immense difference to the number of data which I can discriminate from one another in any sense-field. We must infer from this fact that, although the experience guarantees the extra-mentality of the data as far as discrimination goes, it always fails to discriminate, and so leaves unasserted, some features of the object which (we may believe) are yet there to be sensed. The difficulty of discrimination is greater as the intensity of the sense-qualities diminishes, until at length it may become impossible to recognise with certainty that the sense-quality is really present. It becomes impossible, for example, to discriminate between a very feeble illumination and a visual image. It is probably untrue to say here that the experience's pronouncement of its own character is illusory; it is the nature of the pronouncement itself which is in doubt. When in this case there is a strong external bias in favour of one pronouncement rather than the other a genuine illusion may occur. This was the case, for example, with M. Blondlot and the N-rays. In such cases the observer does not really ascertain the verdict of the experience at all; he substitutes for the actual data a construction more or less different from the data, but either wholly or in part suggested by them. He proceeds to *use* this substituted experience without further inquiry, just as if he had consulted its verdict upon the character of its contents. There are in normal psychology many instances of this tendency which approach illusion more or less closely. As is well known, a young child, in drawing a profile picture of a man on horseback, will not only give the animal credit

for all the limbs which he knows it to possess, but will treat the rider with equal generosity in respect of his eyes and his legs. Yet the intention of the artist was to picture man and beast as he actually saw them. It is by no means uncommon to find unsophisticated children of a considerably greater age who, if they have a tendency to left-handedness, will produce of an animal with his head towards the right a picture showing the head turned to the left. They mean to draw the animal as they see it, and, until the discrepancy is pointed out, are not aware of its existence. Doubtless they have constantly substituted for the sensational data an imaginary construction suggested by them, a construction better adapted than the original to guide the work of the pencil. Through the very fact that it is used as the guide to action it is temporarily believed in, though careful inspection at once shows that it is only a substitute for the real sensational data. Most of the common cases of perceptual misinterpretation receive a similar explanation. The sensational data actually guarantee the presence of certain extra-mental characters, but before these have been adequately discriminated the object is replaced by a mental construction whose elements are more or less congruent with the actual data, and whose connexion with our previous experience and our interests qualifies it to direct action effectively. The details of this construction are not examined from the point of view of their character, but it is assumed that they have the sensational character attached to the original data until the results that follow from this unconscious assumption cease to be compatible with it. A more careful examination of the data follows and at once dispels the illusion. It should be noticed that this tendency to replace original sense data by a mental construction (or "hypothesis") which forms a readier guide to practical or theoretical activity is in another form the characteristic of physical science. In the opinion of some critics of science the practical success of the mental construction here also leads to something very much like illusion.

Hallucinations form a more difficult subject of inquiry, but it is possible that the difficulty arises largely from our lack of reliable introspective knowledge of them. In some cases, for example, the sensational quality may be absent from the data, and we may have merely another case of a construction of intra-mental origin which comes to determine action as if it had been based upon sensational data. In other cases—such as many well-attested apparitions and hallucinations of sound *(e.g.,* the daemon of Socrates and the "voices" of Joan of Arc)—the evidence at least warrants the speculation that real sensational visual and auditory characters are directly cognised without the help of the ordinary mediating machinery. In yet other cases the theory of Dr. Boris Sidis[17] may prove a way of escape from the difficulties of the situation. Upon this theory we must distinguish in normal perception between the primary sensations which

[17] *Psychological Review,* Vol. 15, pp. 44 and 106.

result from the actual stimulus of a sense-organ, and form the core of the perceptual experience, and the fringe of secondary sensations, reminiscent of former experiences, which form the "complication" of the former. In an hallucination there is no primary sensation, but a fringe of secondary sensations is excited, and therefore gives the whole abnormal experience a character which is taken as sensational. If Dr. Sidis' distinction between primary and secondary sensations can be maintained, it would follow that only the former could be regarded as evidencing the physical presence of a quality. The latter, though nearer in quality to primary sensations than to images, must yet, no doubt, be distinguished from the former by careful discrimination. They may, for example, be somewhat analogous to after-images and the light seen on pressing the eyeball—phenomena which are quasi-sensational in character, and may by inadvertence be thought to give the guarantees of genuine sensation, yet can with attention be easily discriminated from such sensations.

There are other forms of illusion and error which in a complete review would demand treatment. Possibly, enough has been said to indicate ways in which in the most important cases the existence of error can be reconciled with the theory that sensational experience carries with it a guarantee of the extra-mentality of its content. A more detailed consideration would probably prejudice the case for this view by the importation of elements of weakness due not to the nature of the view itself but to the inadequacy of the apologist.

THE DIFFERENCE BETWEEN PRIMARY AND SECONDARY QUALITIES

In conclusion, I should like to speak very briefly about the view expressed by Mr. Stout that the important difference between primary and secondary qualities is that "the executive order of the material world can be expressed only in terms of the primary and not in terms of the secondary properties of matter." While, on the whole, this statement is no doubt true, and does correctly describe the difference between primary and secondary qualities, yet it is not true absolutely, and the recognition of exceptions should do much to rehabilitate the reputation of secondary qualities in the eyes of those who tend to regard them as merely subjective consequences of the causal action of the primary qualities. As I have tried elsewhere to show[18]—following the most competent critics—no attempt to present all physical phenomena as cases of matter in motion has been really successful, and the concept of temperature and the properties of temperature are still essential elements in the description which science gives of the executive order of the world. This consideration taken with others suggests that the real source of the supremacy of the primary qualities in physical science is the readiness with which their determinations submit to correla-

[18] *Aims of Scientific Method,* Chap. IV, esp. pp. 112-122.

tion with the number series, and to the peculiarity which makes it possible in their case to adopt the device called measurement. Only in the case of temperature has it hitherto been found possible to submit to numbering and measurement concepts based upon secondary qualities. Hence it follows that among these qualities temperature alone enters into the formulation of the executive order of the world.

II. F. C. S. SCHILLER

LITTLE did I anticipate a year ago that my incautious willingness to be second to Dr. Nunn would commit me to a discussion of all the fundamental issues which are raised in his most lucid and forcible paper, which impresses me as the most effective presentment of the case for Realism which I know. I feel keenly, therefore, that the proper respondent in this discussion was indubitably Professor Stout,[19] and not one to whom the terms idealism and realism have long ceased to convey any definite meaning, the first because it has become too ambiguous, and the second because its champions have not yet succeeded in expressing what it means, though it is clear that of late they have really been thinking furiously, in a way that contrasts most pleasingly with the intellectual paralysis of idealism. And I am the more reluctant to act as the antithesis to Dr. Nunn's thesis that I have really no quarrel with Realism as such. I am quite willing to believe it, if in any of its forms it will only tell me clearly what precisely it wants me to believe. Hitherto I have not been told; but Dr. Nunn is so clear-headed that a discussion with him may go far to clear up my perplexities as to what Realism really means.

I.

Let me begin therefore with a string of questions, and ask him to tell us what he means by his terms, especially those he has not defined.

(1) First of all, what does *independent* mean to a realist? Until its meaning is ascertained, the meaning of Dr. Nunn's thesis must remain conjectural. I hope, therefore, that the question is not as unanswerable as it has proved to be to the idealists, to whom I have now for some years addressed it in vain.[20] The question moreover is particularly pertinent to Realism and indeed even vital For unless an intelligible sense can be assigned to *independent,* it collapses on the threshold of its career.

[19] Who, however, may I hope be present to deal with that part of Dr. Nunn's paper which is addressed to him.

[20] *Cf. Studies in Humanism,* p. 95; *Arist. Soc. Proc,* 1909, p. 87 *f.* Mr. O. C. Quick *(Mind,* No. 74, p. 223) quite rightly notices the popular use of the term, and admits its ambiguity, but goes on using it. Surely as soon as an ambiguity has been detected, technical philosophy should insist on discrimination.

More particularly it would be instructive to elicit Dr. Nunn's answer to the question whether *independence* does, or does not, exclude *relation*. If *(a)* it does, does not the *independent* inevitably become unthinkable? If *(b)* it does not, how are relations which destroy *independence* to be distinguished from those that do not, and will Realism kindly publish a list of relations which are compatible with *independence?* I should venture to anticipate that the second alternative will have to be the one adopted, but that the distinction between the two sorts of relations may not be altogether easy to establish.

Still greater difficulties, however, seem to lurk in the question of the relation of *independence* to *cognitive activity*. Of course the crudest form of realism will at once answer that it denies all cognitive activity. Reality imposes itself on the mind (if there is a mind) *vi et armis*. But Dr. Nunn's realism is by no means crude, and his opinion is the more valuable to elicit. Let me ask him, therefore, whether he thinks it possible to hold that into what can properly be called *independent* "fact" there has entered any human contribution or construction, due *e.g.* to attention, habituation, discrimination, selection, etc. If *(a)* he answers *No,* he will have to give us an example of such an absolutely independent fact; and I fear that so skilled a psychologist may find it extremely difficult to find a fact wholly purged of every taint of "mental" activity. If *(b)* he answers *Yes,* he will have once more to indicate the point at which "facts" begin to depend on human activities.

(2) What does Dr. Nunn mean by *extra-mental?* And how is it related to *transcendent*? Does he mean to use it in a common-sense way or in a metaphysical? Is it something which transcends experience in general or only extends beyond the experience of the moment? Would he admit that in the latter case it only means "in space," and may comfortably remain immanent in experience and transcend only the limits of the "mental," as psychology has found it convenient to define it? In short, is he conceiving "extra-mentality" from the standpoint of the metaphysician, of the plain man, or of the psychologist?

I inquire chiefly because, in the past, realisms have been extremely confused on the subject. But I cannot say that Dr. Nunn's paper makes its standpoint entirely clear to me. I am puzzled, in particular, to understand why, if he holds (as it seems to me, rightly) that "mind in orthodox psychology is largely a methodological postulate" (p. 200), he should not conceive "extra-mentality" as an equally relative postulate. Surely if this *aperçu* pursued, the meaning of "extra-mentality" will be found to vary according as it is taken from the standpoint of the "plain man," of the psychologist, and of the metaphysician, so that what is quite properly taken to be "in space" by one, *e.g.,* a hallucinatory sound by its victim, is as properly labelled as subjective by the psychologist, without thereby fall-

ing out of the totality of reality, as the metaphysician loves to conceive it.

(3) I would next inquire whether Dr. Nunn's realism does not owe us a further account of "the subject-object relation." Does he, or does he not, hold that the existence of this relation suffices of itself to constitute the object's "reality" in a realistic sense?

If *(a)* he does, of what nameable thing can reality be denied? How can anything be too fantastic or illusory to be an object to some subject? Moreover, does not the "proof" of Realism become child's play, and conduct us to the humorous conclusion that *the same fact,* namely, the existence of a perceived world, is appealed to by Idealism to prove the "dependence" of all reality on a knower and by Realism to prove its "independence"?

(b) If, on the other hand, we recognise that this *formal objectivity* of every object of thought as such is *not* sufficient to constitute its reality in the realistic sense nor what common sense means by "reality," is not Realism confronted with a further problem of great complexity and enormous vital importance?

The various kinds of *formal objects* or *reality-claims* have still to be sorted out, and its proper index of reality has to be assigned to each. Discriminations must be made between the "reality" of a dream, of a hallucination, of a memory, of an image, of an after-image, of a "primary" quality, and of a "secondary," of a "thing," of a fiction, of conflicting experiences, of a physical, of a metaphysical, and of a religious hypothesis, etc. These discriminations are, in point of fact, made with considerable precision by the "plain man," and by the working methods of the sciences, though in certain directions both require further refinement. But the realist's undiscriminating haste to affirm the reality of the objects of thought seems as a rule to overlook all this. And can he suppose that all the distinctions which, with infinite pains, men have effected were made without good reason, out of sheer perversity) or for the mere fun of the thing? If not, where would be the gain, either to ordinary life or to science, or in the end even to philosophy, in obliterating all this work and simply replunging all discriminated objects into the rag-bag he labels "reality"?

It may be that some of the words used in these vital discriminations, such as "mental" and "psychical," are not the best available; but what does this matter so long as they are useful for classifying objects, and if they are, are their defects worth making such a fuss about?

(4) I have already indicated that I have some difficulty in ascertaining from what standpoint Dr. Nunn is speaking, and on what plane his discussion moves:—

(*a*) At times he is clearly speaking for the "plain man," whom he rightly

describes as a delightfully pragmatic creature (p. 203). But surely, on this plane, what is "outside " "me" is simply "in space." The plain man's mind harbours no antithesis of "mind" and "matter," but is glad when it can distinguish even "soul" and "body"; while, as for what "extra-mental" means, the plain man knows as little as I.

(b) Dr. Nunn accordingly soon involves him in perplexities, and subjects his plain humanity to psychological sophistication. The plain man is a thinker only in order to be a doer, his thought is full of "pragmatical simplifications" which ignore irrelevant differences. Dr. Nunn cannot stomach his rough and ready ways. Rather than let him say that the motor car's whistle sounds differently to different people, he insists that it may be said to "emit" the same sound, if only the word "emit" is "properly interpreted" (p. 204). And subsequently it appears also that the plain man's view of the scope of the word "thing" has to undergo serious "correction" (p. 206). Clearly Dr. Nunn's realism is not the pragmatic realism of the "plain man" which we all practise.

(*c*) Lastly, what about the metaphysical plane to which Realism usually aspires to soar? Dr. Nunn mercifully says little about it, but it is implied in calling his doctrine "realistic."

How many planes, therefore, are necessary to Dr. Nunn's flights? His vehicle does not seem to be a monoplane, but whether it is a biplane or a triplane one would like to know. This doubt would not have arisen if he had only told us whether his question concerned only the psychological distinction between "primary" qualities conceived as "independent" of the act of perception and "secondary" qualities conceived as (in various ways) dependent on it, or something simpler or profounder. As it is, the simplest answer to his question, and the one which seems to be strictly adequate, seems to be that, for some purposes, the distinction is valid because it is convenient, while for others it is not because it isn't.

II.

I fear that my initial questions have become more explicitly critical than I at first intended, and will therefore pass next to the point in which I found Dr. Nunn's realism most interesting and most manifestly superior to all the other realisms on record. He has found out what apparently realists have never before been able to apprehend, viz., why the plain man is not a metaphysical realist, but prefers to favour the idealist by declining to project *all* his experiences of objects into the objects themselves. It is *practically necessary* to distinguish, to simplify appearances, and to keep the number of "qualities" ascribed to objects within manageable limits. It is practically necessary to distinguish between experiences which may be treated as socially "common" and those which are non-transferable.

And it is vitally necessary to distinguish between truths and errors and to guard against the latter. These vital needs have indisputably contributed very extensively to fix the place where the line has been drawn between what philosophers call the "objective" and the "subjective" portions of experience Dr. Nunn, moreover, recognises also that Science shares to the full this pragmatic procedure of ordinary life (pp. 199 and 215).

A few steps further in the same direction and he would have seen that herein lay the solution of his whole problem and the conclusion of a tedious and unprofitable controversy which has distracted philosophic attention from more urgent matters. He need merely have added to the perception that our procedure is thoroughly pragmatic the declaration that it is thoroughly right, both because it is inevitable, and because it is successful.

This declaration, however, he does not make, and, instead, he seems at times to disparage our procedure as "of merely pragmatic validity" (p. 208), and as a "prejudice" (p. 199) indecisive of the question at issue.

Nevertheless, elsewhere he does not disdain to avail himself of this same method. He argues (p. 195) that a toothache, as a thing *to be reckoned with,* may be just as "real" as a cathedral; he prefers to believe in a cosmic reservoir and universal provider of toothaches rather than in their "subjectivity," because it is "*easier*" (p. 196);[21] he considers it "*safest*" not to risk the substitution of a standard perception for the whole series of sensations (p. 199). And above all, he thinks it possible to ascribe many errors to "*inadequate discrimination*" (p. 213).[22] This last pronouncement clearly implies both the relevance to purpose which humanism regards as the essence of all reasoning, and the need for attending, selecting, rejecting, and constructing, without which there do not arise any "objects" for thought to be concerned about.

But at present I cannot see how Dr. Nunn can reconcile these discrepant attitudes.

If all our activities of attending, discriminating, selecting, ignoring, and constructing are condemned as invalid, after the fashion of the cruder realisms, all thought and all science go by the board, and with them the procedures by which in fact we live and know. To such a realism, therefore, life, as actually conducted, becomes wholly irrational and incomprehensible. For the methods of "knowing" are essentially methods of vitiating

[21] One need not, of course, object either to the criterion of truth here implied, or doubt the correctness of Dr. Nunn's introspection; but he, for his part, should equally recognise that for other minds it may be "easier" to conceive toothaches as "subjective," and that in consequence the whole dispute reduces itself to a competition between relative conveniences of thought.

[22] I have italicised the terms which imply the humanist attitude towards objects.

"objects." If, on the other hand, these normal and indispensable procedures are recognised as valid, their validity cannot be based upon their form. It is vain to justify them as being self-evident in point of form, and infallible in point of fact. For it is too clear that they are not, and that they always involve a risk. It is always possible that we may attend to the irrelevant detail instead of to the essence of any problem. It is always possible that we may reject what is vital, and select what is unimportant. Nothing blinds men to the most obvious facts so surely as the preconceptions of a false theory, nor prepares them better for the observation of the most latent facts than the stimulus of a good hypothesis. But in neither case can our success or failure be ascribed to the logical form of our procedure. If, therefore, our procedure is admitted to be logically legitimate (and if it is not, logic must despair of comprehending any human reasoning whatever), it can only be legitimate because, in fact, it is successful. But if it is legitimate because it works, why should it be illegitimate to legitimate by their working the conceptions we have reached in this fashion?

The hesitation of so many philosophers frankly to admit this, although they dare not explicitly deny it, I can ascribe only to the fact that they have not yet fully realised what enormous amounts of pragmatic postulation have gone to the making of the assumptions on which the plain man acts, and how complete would be the downfall of the whole fabric of life if the use of these assumptions could really be prohibited. Probably also, in spite of their efforts to rise to the plane of a truly critical philosophy, they are constantly relapsing into the common-sense attitude, and taking for granted an ordered world of "things" and "persons" acting on each other. Yet, though for practical purposes we all assume this, no critical theory of knowledge can regard this world of discriminated realities as an original datum. Observation of our actual cognitive procedure clearly shows that there can be neither "things" nor "persons," neither "effects" nor "causes," until the chaotic flow of happenings has been set in order by successful discriminations. Every sort of distinct perceptual object, therefore, alike whether it be a "thing" or a "person," seems to be manifestly man-made, *i.e.,* relative to the human interests which singled it out, and preserve for it its status as a "reality" which it is expedient to take into account.

Either, therefore, "Realism" must recognise the reality of human activity, and content itself with the pragmatic preference of "realities" that work and acquiesce in the degradation of those that don't to an inferior order of reality (appearance, illusion, error, fancy, subjectivity, etc.), or it must set out on the quixotic attempt to resolve the cosmic order into chaos.

III.

The reason for the obscurity and confusion of Dr. Nunn's attitude towards the pragmatic procedures of our science is probably to be found in the fact that he has not fully grasped the all-important distinction which humanism makes between the *claim* and the *validity* of an experience, without which no critical theory of knowledge is possible.

(1) He allows himself to be imposed on by the formal claim to objectivity which all experience makes, and assures us that "sensational experience carries with it a *guarantee* of the extra-mentality of its content" (p. 217), and that "in perception the object *announces itself* as having a certain priority to and independence of our act and that this announcement is itself the *sufficient certificate* of the object's extra-mental status" (p. 201).[23]

But (2) he also admits that this "guarantee" seems to be often deceptive, in "cases where sensational experience seems to guarantee the existence[24] of things that nevertheless can be proved not to exist A realistic theory cannot live upon the principle that there is an element in sensational experience which pronounces authoritatively that we are dealing with extra-mental data, but that sometimes, when this pronouncement is given, the data are not extra-mental[25] after all" (pp. 210-11). After all then the "guarantee" seems to be worthless, and Realism is not viable. The heroic equanimity with which Dr. Nunn accepts this result is admirable.[26]

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[23] Italics mine. He also represents Professor Stout (p. 212) as having committed himself to a similar position. Professor Stout will doubtless speak for himself; but as I understand him his view is really more complicated, and does not assert the inerrancy of this self-advertising claim.

[24] As a *formal* or as a *physical* "object"?

[25] As physical objects.

[26] In the discussion Dr. Nunn assured me that this criticism rests on a misapprehension. I accept his correction of course, while regretting that my interpretation will not stand, both for my sake and for his. I had not grasped that on pp. 211-16 he had conceived himself to be *successfully* vindicating the value of the sensational "guarantee," and supposed him to be merely making *tu quoques* and pleading extenuating circumstances. It appears, however, that what Dr. Nunn really holds is not that the sensational guarantee should be retained though it may be deceptive, but that in cases of inadequate discrimination, hallucination, etc., *it is not given.* This, however, would seem to make matters distinctly worse. For (1) it does not appear how Dr. Nunn's realism is entitled to regard any objects which depend on human processes of discrimination as guaranteed to us or as otherwise than *vitiated* by this fact *(cf.* pp. 224-5). (2) It renders it all the more imperative that Dr. Nunn's realism should possess *some* trustworthy, or at least applicable, method of discriminating between the cases when the "guarantee" is given by "sensation," and cases when it is not, but *appears* to be, *i.e.,* between a real and an apparent guarantee. For the merely verbal device of saying that in cases of "hallucination" there *was* no *sensational* guarantee is *ex post facto,* and will not serve the purposes of actual knowing. We want to know whether what presents itself as a perception has, or has not, the sensational guarantee which is infallible. A guarantee which is technically infallible, but always capable

But I wish he felt more keenly *(a)* the logical monstrosity of this claim and the atrocity of its attempt to bluff him, *(b)* the extent of its *de facto* falsity, (c) its deadliness to all realism, *(d)* the vital need of finding a remedy for its ravages in practice.

(a) Surely a self-proving claim, which relies only on the vigour of its self-assertion, is the very acme of logical impudence. Whatever claims are made, and wherever they appear, they must be tested before they can legitimately be believed. A theory of knowledge that succumbs to such claims cannot but be utterly uncritical. For such a claim is intrinsically nothing but a psychical fact: its logical value remains to be determined. In no such cases, whether the claims are called intuitions or *a priori* principles, obsessions or delusions, sensations or hallucinations, can a reasonable and circumspect theory of knowledge accept assertion as a substitute for proof. Hence no pragmatic logician will for a moment tolerate such a claim: he will insist inexorably that untested "truths" are only "claims," that claims may be false, and that their real value will have to be established by their "consequences."

(b) In point of fact, false claims to physical reality are numerous. *In the moment of experience,* dreams, hallucinations, and illusions, nay, after-images and fancies, may put forward precisely the same claim to "objectivity" as "true perception," and it may be impossible to determine whether an experience is a true perception or not. Even after subsequent experience this may often be quite difficult. The controversies about ghost-seeing and revelation prove that, as to some of these cases, mankind has never come to an agreement, and possibly never will, especially as it is quite conceivable both parties may be right, and that some of the disputed cases may be genuine, while others are not. Hence it is not, strictly speaking, too much to say that *every perception, just because we perceive in the light of a past experience which may be inadequate, is to some extent fallible,* and needs further experience to confirm and guarantee the trust we place in it.

(*c*) Is it not, then, fanciful to imagine that any uncorroborated and untested process of perception can guarantee any absolute metaphysical "extra-mentality"? Why, it cannot even by itself guarantee its pragmatic veracity! We cannot tell whether it is a true perception or not. Perception

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of being superseded by a bogus imitation which guarantees nothing, is practically useless. (3) Whatever then enables us to decide whether or not we are truly perceiving what we seem to perceive will clearly go beyond perception and be the truly ultimate guarantee of truth. (4) I cannot see that Dr. Nunn's realism is entitled to make *any* distinction between reality and appearance at all. It has annihilated this distinction by calling all appearances undiscriminatingly "real," and indeed its insistence on the primary reality even of the "unreal" constitutes its essential originality *(cf.* p. 221). The truth is that Dr. Nunn ought not merely to refuse to offer even the lame explanations of error he attempts, but ought logically to deny the possibility of its occurrence.

is always built up by present interest out of past perceptions, and this is the condition alike of "true" and of "false" perception. A pure sensation is a mere figment of theory, which no one can remember to have experienced. What is the use, then, of foisting upon us a criterion of reality which is fallible and cannot be worked, and habitually deceives us, if we are not critical of its pretence to infallibility?

"Realism," apparently, can only assert that all objects *claim* to be real, and that *some* of them may really turn out to be so; but if this be all, is it not still worlds away from constituting a theory of knowledge and a knowledge of the world?

(d) As human beings who, in order to live, have to cope with an unceasing flow of appearances, it is our right and our duty to demand of philosophy some means whereby we can actually make distinctions between truth and error, some procedure whereby we can attain the one and avoid the other. If no philosophy can satisfy our demand, our verdict about philosophy must be that it is only a game of make-believe which it amuses a few cranks to play. If some philosophies fail to help us, we are entitled to account them wrong and to refuse to listen to them further. If any philosophy prides itself on its indifference towards this discrimination and glories in the assertion that everything is at once true and false, and that the purpose with which we judge it either does not matter, we must regard it as an insane aberration of the human spirit. If, lastly, any philosophy remains, which has not so far failed, it is surely worth examining.

It is not part of my function on this occasion to show that in point of fact the humanist philosophy does triumphantly solve all these puzzles, and give a meaning to the distinction of primary and secondary qualities which is consonant with common sense and common science. But I may point out that Dr. Nunn's criticism of the humanist treatment of the problem of error is too brief to be other than extremely misleading. It would hardly occur to a humanist to conceive the essence of error as a "misplacing" of a "sensational quality." The "misplacing" he would regard as a tautologous metaphor for an "error," and the "sensational quality" as a convenient (or inconvenient) abstraction. How a "sensational quality" may be "misplaced" in the absolute he would be content to leave an unprobed mystery; but how it could occur relatively to a human purpose he could easily explain by reference to the almost infinite ambiguity of an experience which is ever demanding further discriminations to effect more accurate adjustments of action. Nor would anything seem more obvious to him than that the more important a function was the more surely would it serve to sift the capable from the incapable, and, conversely, the better it sifted the more important it would be. From palaeolithic times ordinary men have known that the fisherman who did not learn to allow for the refraction of his harpoon missed his fish and that the hunter

whose arrow missed the heart of his lion lost his life, and that therefore "errors" of perception were vitally important: but apparently it has taken philosophers all this time to understand that it is precisely this vital import of sense-perception which has brought about the relatively considerable agreement which exists with regard to it among men.

In conclusion, let me say that the extent of my criticism is by no means the measure of my dissent from Dr. Nunn, but rather of my appreciation of his paper and of his attitude. I thoroughly agree with him that philosophy must face the concrete problems of cognition as it has never done before. And I hope eventually to convince him that the truest philosophy is that which deals with them most conveniently and fruitfully.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

The Subject-Matter of Psychology

G. E. MOORE

VOLUME X

1910

EDITORIAL NOTE

The following paper by G. E. Moore - "The Subject-Matter of Psychology" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume X (1909-1910), pp. 36-62.

For Moore's biography, please scroll up to page 64.

XII. THE SUBJECT-MATTER OF PSYCHOLOGY

G. E. MOORE

IT seems to me that Psychology has a special subject-matter of its own; and that this special subject-matter may be defined by saying that it consists of all those among the contents of the Universe, and those only, which are "mental" or "psychical" in their nature. And the chief thing which I wish to do in this paper is to consider which among the contents of the Universe *are* "mental" or "psychical" in their nature, and how these are distinguished from those which are not. It seems to me that the Universe contains an immense variety of different kinds of entities. For instance: My mind, any particular thought or perception of mine, the quality which distinguishes an act of volition from a mere act of perception, the Battle of Waterloo, the process of baking, the year 1908, the moon, the number 2, the distance between London and Paris, the relation of similarity—all these are contents of the Universe, all of them are or were contained in it. And I wish to ask with regard to them all, which of them are "mental" or "psychical" in their nature and which are not. For this purpose, I wish to have some common name, which I can apply to any one of them, without implying anything more, with regard to that to which I apply it, than simply that it is or was *something*, that it is or was a content of the Universe. And I propose to use the word I have already used—the word "entity"—in this extremely wide sense. When I speak of an "entity" I shall mean to imply absolutely nothing more with regard to that which I so call, than that it *is* or *was*—that it is or was contained in the Universe; and of anything whatever which *is* or *was*, I shall take the liberty to say that it is an "entity." It is by no means clear to me that all "entities"—all the contents of the Universe—can rightly be said to " exist" or to be "phenomena"; and though all of them are, no doubt (in certain senses of these words), "objects" and "realities" and "things," yet there are other senses of these words in which many of them are not "objects," not "real," not "things." It is for this reason that I prefer the word "entities" to any of these words which are, I think, sometimes used as its equivalents: the words "existents," "phenomena," "objects," "realities," "things." And I may, therefore, put the main question of my paper in the following form: What kinds of "entities" are "mental" or "psychical" entities? And how are those which *are* "mental" entities distinguished from those which are not?

I shall divide my treatment of this question into two parts. I shall, first of all, (1) try to classify those kinds of entities which seem to me to be undoubtedly "mental," and to consider what it is that distinguishes these from all the other contents of the Universe. And I shall then (2) consider

certain entities or supposed entities, with regard to which it seems to me doubtful whether they are "mental" entities or not, and shall inquire in what sense, if any, these could properly be said to be "mental."

I. ENTITIES WHICH ARE UNDOUBTEDLY MENTAL

I wish here to define as clearly as I can those kinds of entities which seem to me to be undoubtedly mental, and to consider how they differ from those which are not mental.

To begin with, then: I see, I hear, I smell, I taste, etc.; I sometimes feel pains; I sometimes observe my own mental acts; I sometimes remember entities which I have formerly seen or heard, etc.; I sometimes imagine and I sometimes dream; I think of all sorts of different entities; I believe some propositions, and think of others, without believing them; I take pleasure in certain events, and am displeased at others; and I sometimes resolve that certain actions shall be done. All these things I do; and there is nothing more certain to me than that I do them all. And because, in a wide sense, they Are all of them things which I do, I propose to call them all "mental *acts*." By calling them "acts" I do not wish to imply that I am always particularly active when I do them. No doubt, I must be active in a sense, whenever I do any of them. But certainly, when I do some of them, I am sometimes very passive.

Now I think we may say that, whenever I do any of these things, I am always "conscious of" something or other. Each of these mental acts consists, at least in part, in my being conscious of something. I do not mean to say that, in the case of each of them, I am conscious of something in one and the same sense. For instance, when I actually see a colour, I am certainly conscious of that colour in a very different sense from that in which I am conscious of it when I remember it half an hour afterwards and do not any longer see it. And I am not sure that there is anything whatever in common to these two senses of "consciousness." But still I think the name can certainly be rightly applied to what occurs in both these cases; and that similarly we are, in *some* proper sense of the word, (Conscious of something whenever we do any of the acts I have named. And I do not know how to explain what I mean by "consciousness" except by saying that each of these acts I have named is an act of consciousness. But still I hope that this is a sufficient indication of what I mean. And I think it is at least sufficient to enable us to say with certainty that certain other acts, which I have not named, resemble these in being acts of consciousness.

"Consciousness," then, for all I know, may be a name for several very different kinds of entities. But in all the cases I have named there is, I think, one thing clear about it: namely, that in every case there is always a distinction between that *of* which we are conscious and our consciousness

of it. I do not mean to say that the two are always "separable"; nor yet do I mean to say anything with regard to the relation in which they stand to one another; I only mean to say that they are always *distinct* entities: and that they are so seems to me to be certain for the following reason. Let us consider any one of the mental acts I have named—seeing, for example. There is nothing more certain to me than that I do constantly see one colour at one time, and a different colour at a different time, and that, though the colours are different, I am conscious of them both in exactly the same sense. It follows, then, that since the colours are different in the two cases, whereas what I mean by my consciousness of them is in both cases the same, my consciousness of a colour must be something different from any of the colours of which I am conscious. And the same result follows, whichever of the mental acts I have named be considered. I am quite certain that I do at different times remember different events, will different actions, etc., and though *what* I remember, *what* I will, etc., may be in each case different, yet what I mean by "remembering" or "willing" may be in each case exactly the same. There is, therefore, always a distinction between *what* I am conscious of and *my consciousness* of it. And the latter of these two distinct entities is the first kind of entity which seems to me to be undoubtedly mental. Whenever anybody is conscious of anything in the sense or senses which I have tried to indicate, then his consciousness, as distinguished from that *of* which he is conscious, is, I think, undoubtedly a mental entity.

"Consciousness," then, is undoubtedly a name for a mental entity or for several different kinds of mental entities. Every act of consciousness is a mental entity. But what exactly do we mean by saying that it is "mental"?

The first and most important thing we mean by this is, I think, just simply that it is an act of consciousness. "Mental," in one of its senses and its most fundamental sense, is, I think, merely another way of saying that the entity said to be mental *is* an act of consciousness. So that, in this sense of the word, that which distinguishes mental entities from those which are not mental would be simply the fact that the former are acts of consciousness, whereas the latter are not. And, in this sense, it is quite plain that many entities are not mental. A red colour, for example, is certainly not an act of consciousness in the sense in which my seeing of it is. It may, indeed (as some people seem to think), be an "appearance" of an act of consciousness; but, if so, then certainly the appearance is very different from the reality. This sense in which to be a mental entity is to be an act of consciousness is, I think, the most fundamental sense of the word "mental": it is the one from which all others are derived. Had we not noticed the difference between acts of consciousness and entities which either are not or do not seem to be such, no one would ever have thought of dividing entities into mental or non-mental, or of speaking of "mind" at all.

But though this is the most fundamental sense of the word "mental," there certainly are others derived from it, and important ones too, which might allow us to say that entities, which are not acts of consciousness, nevertheless are mental. And I must go on to speak of these.

The first of these is a property which might be thought to belong to *all* mental acts, and to be a further characteristic, in addition to the fact that all of them are acts of consciousness, which distinguishes them from entities which are not mental. And this characteristic is one which is, I think, certainly very often meant by the word "mental"; when it is said that an entity is "mental" or "in the mind," it is, I think, very often meant that it has this characteristic. The characteristic I mean is the one which we express by saying that a given mental act is an act *of the same person* or *of the same mind* as another mental act. All the mental acts, of the existence of which we are most certain, do seem to have this characteristic. Each of them is the act of some one mind, and is related to a certain number of other acts by the fact that they are all of them acts of the same mind. In fact, all the mental acts we know best seem to be divided into groups, each group having the characteristic that all its members are acts of the same mind. Thus, for example, a certain number of the mental acts in the Universe have been mental acts of mine, a certain number have been the mental acts of King Edward VII, and so on in millions of other instances. That many mental acts have this characteristic, and that it is a most important characteristic, seems to me as certain as anything can be. Thus, for example, I am quite certain that a certain number of mental acts really have been mental acts of "mine"; that what I mean by saying that they are all "mine" is a most important characteristic that they have; and that it is one which distinguishes them from the mental acts of other people. That this is so we all of us constantly assume, and no philosopher has, I think, ever succeeded in avoiding the implication that it is so. The language we use constantly implies that one respect in which two mental acts may differ from one another is by the fact that one of them is the mental act of one person and the other the mental act of another person; and that one respect in which two mental acts may resemble one another is by the fact that both of them are mental acts of the same person. And that something important is meant by this language seems to me to be quite certain. As to *what* exactly is meant I confess I cannot be sure; and I shall presently have to say what I can about the matter. For the present, I wish only to insist that *something* true is meant when it is said that two mental acts are mental acts of the same person; that, for instance, there is *some* sense in which *my* mental acts are all *mine*. And hence that, if it is said to be a characteristic of all mental acts that they are the mental acts of somebody or other—that they all belong to *some* mind, though different ones to different minds—these words would express a characteristic which *might* belong to all mental acts, and which, if it did, would be a characteristic

in addition to, and distinct from, that which is expressed by saying that they all *are* acts of consciousness. This characteristic, it seems to me, is one which is often meant when it is said that a given entity is "mental" or "in the mind": it is meant that the entity in question is related to some mind in the same way in which his mental acts are related to him—by that relation which is expressed by saying that they are all *his*. And if this be used as a *positive* criterion of what is mental, I can find no objection to it. That is to say, if it be said that any entity which *has* this relation to any person or to any mind is "mental," I should be prepared to admit it. It does seem to me, for example, that if any entity were related to me or to my mind in just that way in which my mental acts are related to me, we might quite properly say that such an entity was "mental," and was "in my mind" in the same sense in which my mental acts are "in my mind." Whether any entities, except mental acts, are or can be related to me in this way, is a question which I shall presently consider. But, *if* any are related to any mind in this manner, then I should say we might properly call them "mental." Here, therefore, we have a sense of the word "mental" which might possibly include other entities besides acts of consciousness. But if this characteristic be also proposed as a negative criterion of what is "mental"—if, beside saying that anything which *does* possess it is "mental," it be also said that nothing which does *not* possess it, is so—then, the assertion seems to me to be very doubtful For it seems to me possible that there may be acts of consciousness which are *not* the acts of any mind—which are not related to any other acts, in the peculiar way in which the mental acts of any one person are related to one another. That there might be acts of consciousness, isolated in this way, seems to me possible; and if there were, then certainly they would be "mental" entities, simply because they were acts of consciousness. That there are any such I don't feel at all sure; but the mere possibility that there should be seems to me a sufficient objection to saying that nothing can be "mental" except what belongs to some mind in the sense in which my mental acts belong to mine.

The second characteristic I wish to mention is one which cannot, I think, be said to be a "meaning" of the term "mental," but which may be and has been proposed as a *criterion* of what is "mental," and which is certainly a very important characteristic. It has been suggested, namely, that any entity which *can be directly known by one mind only* is a mental entity, and is "in the mind" of the person in question, and also, conversely, that all mental entities can be directly known only by a single mind. By "direct knowledge" is here meant the kind of relation which we have to a colour, when we actually see it, or to a sound when we actually hear it. And the suggestion that all mental entities have the characteristic that they can be directly known, in this sense, only by one single mind, is, I think, certainly plausible for the following reason. It certainly is a very remarkable difference between my own mental acts and those of other people,

that my own are the only ones that I ever know directly. I certainly never have been conscious of anybody else's thoughts or feelings or perceptions in that direct manner in which I am conscious of a colour when I actually see it; but of my own mental acts I am very often conscious in this direct manner. I am, of course, conscious, in a sense, of the mental acts of other people; I do know some of them, in a very real sense, and know a great deal about them; but certainly I am never *directly* conscious of them, I do not know them *directly,* in the sense in which I often know my own. This is, I think, certainly a very remarkable distinction between my mental acts and those of other people. And the rule seems to be a nearly universal one: it seems to be nearly universally true that each of us can only know directly *his own* mental acts—never those of any other person. No one, for instance, that I know of, except myself, has ever known directly any mental act of mine. There is, therefore, plausibility in the suggestion that this may be a universal characteristic of mental acts: it certainly belongs to all of those which we know best, and know most about. But yet I think it is doubtful whether it belongs to *all* mental acts. There seems to be no reason why it should: no reason why one person should not *ever* be able to know directly the mental acts of any other person; at best it seems only to be a fact that no one ever does. And, moreover, there seems to be a certain amount of evidence that it does actually occur in very rare cases. Dr. Morton Prince's "Sally" seems to have claimed that she knew directly some of the mental acts of B I; and if we admit her claim, and if also we admit (and for this also there is much to be said) that Sally was a different person from B I, this would be an instance of the direct knowledge by one person of the mental acts of another. I think, therefore, that it is doubtful whether it really is a characteristic of all mental acts, that they can be directly known by one mind only. And as for the converse proposition—the proposition that any entity which can be directly known by one person only must be mental, and must be "in" that person's "mind," it seems to me more doubtful still Even if it were true that all undoubtedly mental entities can only be known by one person, namely the person "in" whose "mind" they are, there would seem to be no reason whatever why some non-mental entities should not possess the same characteristic. And, supposing any entities, except mental acts, do possess it, we should, I think, certainly need other and independent evidence that they were "mental," in order to be entitled to call them so. On this ground alone, we certainly should not be so entitled.

So far, then, my conclusions have been as follows: I started with mental acts—acts of consciousness—as being undoubtedly mental entities. And I considered three characteristics, which might be held to distinguish them from entities which are not mental. The first was the mere fact that they *were* acts of consciousness; and this is a characteristic which, of course, does belong *ex hypothesi* to all of them; but also it is a characteristic

which can, *ex hypothesi,* belong to no entity except an act of consciousness. This, I said, seemed to me to be the most fundamental sense of the word "mental," but I admitted that there were others. The second characteristic was one which does seem to belong to most mental acts, namely, the characteristic that they are all of them acts of some person or other—all of them belong to some mind; and I admitted that any entity which did belong to a mind, in this peculiar sense in which my mental acts belong to mine, would be mental. I admitted this, then, as a second sense of "mental"; but I urged that possibly some mental acts were not mental in this sense—were not the acts of anybody: so that there might be entities which were undoubtedly "mental" in the first fundamental sense, and yet not "mental" in this second one. The third characteristic was also one which does seem to belong to most mental acts and does *perhaps* belong to all; namely, that they are entities which can be *directly known* by one person only. But in the case of this characteristic I urged that there seems no reason why it *should* belong to all mental acts—no reason why one person should not sometimes be able to know directly the mental acts of another; and also that there is a certain amount of evidence for believing that this actually does sometimes occur. And as for the contention that *every* entity which possesses this characteristic is "mental," I urged that, if this is true, we certainly must have some *other* reason for saying that all such entities are mental beside the mere fact that they possess this characteristic. This characteristic alone would not entitle us to call them so; for it certainly is not one of the characteristics which we *mean* by "mental," even if it should turn out to be a criterion of what is mental.

I have, therefore, so far recognised two different senses of "mental," and only one sort of entities—namely, acts of consciousness—which are undoubtedly mental. All acts of consciousness are mental in the first sense, and nothing else can be. Whereas in the second sense it is not quite certain that all acts of consciousness are; and also it is abstractly possible that some entities, which are not acts of consciousness, should be.

But I have now to recognise two other sorts of entities which seem to me to be undoubtedly mental; and two new meanings of "mental" corresponding to them.

The first sort of entity is as follows:—

Different acts of consciousness may differ from one another in various respects. And some of the differences which there are between them seem to me to he undoubtedly mental differences. These differences which I call mental differences are the second sort of entity which I recognise as undoubtedly mental. But in order to make plain what sort of entities these undoubtedly mental differences are, I must contrast them with two other kinds of differences which there are, or might be, between different men-

tal acts. The first kind is a kind of difference, which there undoubtedly is, between different mental acts; and far more mental acts differ from one another in this respect than in any other; but it does not seem to me to be a "mental" difference. The second kind is a kind which *might* be as universal as the first; but, in this case, I am not sure that any mental acts do differ in this possible respect at all There remains, as a third kind, the sort of difference which does seem to me to be an undoubtedly mental entity: some mental acts do undoubtedly differ from one another in this third way, and also the difference is undoubtedly a mental one.

The first kind of difference is the difference which merely consists in the fact that one act of consciousness is a consciousness *of* one entity, whereas another act of consciousness is a consciousness *of* a different entity. For instance, when I see a blue colour, I am conscious of a different entity from that of which I am conscious when I see a red one. And my seeing of the red certainly does differ from my seeing of the blue, in respect of the fact that whereas the one is a consciousness of the red, the other is a consciousness of the blue: the mere fact that one is of the red and the other of the blue is a difference between them. So, too, when I remember the Crystal Palace, and remember St. Paul's Cathedral, there is a similar difference between the two acts of memory: the one is a consciousness *of* the Crystal Palace and the other *of* St. Paul's Cathedral, and the two acts do certainly differ in respect of the fact that one is *of* the one entity and the other *of* the other, whether they also differ in other respects or not. There is no kind of difference between mental acts more universal than this. We are all of us, in the course of our lives, conscious of millions of different entities, and our consciousness of each differs from our consciousness of all the rest, in respect of the fact that it is a consciousness *of* the entity of which it is, and not of any other different entity. But this kind of difference does not seem to me to be *itself* a mental difference. I confess I cannot tell *why.* It certainly is a sort of difference, which can only obtain between mental acts: since nothing but a mental act can differ from anything else, in respect of the fact that the one is a consciousness of one entity whereas the other is a consciousness of a different entity. But, nevertheless, it does not seem to me to be a mental difference; and, though I cannot tell why, I can illustrate by analogous examples the sort of reason why I think so. For instance, one area in space may be occupied by one kind of object, and another area by another kind; and these two areas will then differ in respect of the fact that one is occupied by the one object and the other by the other. Yet we should not say that this difference between them was a *spatial* difference; although it is a difference between spatial entities, and a sort of difference which can *only* obtain between spatial entities, since nothing but a spatial entity can be "occupied by" anything, in the sense in which a spatial area is occupied by the object which is *in* that area. Or, again, one physical event—for instance, a particular arrangement of par-

ticles in one part of the brain—may differ from another physical object, in respect of the fact that the one is a necessary condition for a mental act of one kind and the other a necessary condition for a mental act of another kind; and yet we should not say that this difference was *itself* a *physical* difference between the two. It seems to me that there is, for similar reasons, an objection to saying that the difference between two mental acts, which merely consists in the fact that one is a consciousness of one entity and the other of another, is *itself* a mental difference.

But the second sort of difference, which there might be between mental acts, *would,* if there were such a difference, undoubtedly be a mental one; only I am not sure that there is any such difference, and therefore cannot reckon it among entities undoubtedly mental; I shall presently discuss it among cases of doubtful mental entities. It seems, namely, to be held by some philosophers that any mental act which differs from another in respect of the fact that whereas one is the consciousness *of* one entity, the other is a consciousness *of* a different entity, must or does always *also* differ from the other in some *other* respect—in some *internal* respect: that wherever there is that difference of relation, which consists in the fact that two mental acts have different *objects,* there must also be some other *qualitative* difference between the two—beside the difference of *objects, also* a difference of "*content.*" If there were such a difference as this between mental acts, I should say it would certainly be a mental one. But I am not sure that there is any such difference. I am not sure that, in any case whatever, two mental acts which differ in respect of the fact that one is a consciousness of one entity and the other a consciousness of a different entity, need, for that reason, differ internally or qualitatively in any respect at all.

But it seems to me quite certain that some mental acts do differ internally or qualitatively from others; and that differences of this third class are undoubtedly mental differences. I said, to begin with, that every mental act consists, at least *in part,* in the being conscious of something. But some of them, I think, plainly consist also in something else. I sometimes merely think of a given proposition, and then, I think, I am merely conscious of it; but I sometimes believe it, and then, besides being conscious of it, I am conscious of it in a particular way—my consciousness of it has a quality, which seems to me undoubtedly mental, which differentiates an act of belief from a mere act of consciousness. So, too, I sometimes merely think of a possible future action; but sometimes I *will* that action: and here again there seems to me to be a real mental difference between the two cases. I should say then that the quality which distinguishes an act of will from what is not an act of will, or an act of belief from what is not an act of belief, is undoubtedly a mental entity. And there are, I think, a limited (though still a large) number of other mental qualities of this kind: for instance, that which distinguishes the being pleased with an object from

the mere apprehension of the same object without being pleased with it; that which distinguishes the desiring of an object from the apprehension of it without, desire; that which distinguishes the disliking of an object from the apprehension of it without dislike, etc. Such differences between mental acts seem to me to be certainly different in their nature from my first sort of differences—those which merely consisted in the fact that, whereas one mental act was a consciousness of one sort of object, another was a consciousness of another. For one thing it seems to me that, even where there is no difference in the object, there may be a difference in the mode of consciousness: that, for instance, I may at one time apprehend one and the same proposition without believing it, and at another time believe it. And these differences, which I may call differences in the mode of consciousness, seem to me also to differ from the second sort of differences I mentioned, in respect of the fact that whereas the latter were supposed to be internal differences corresponding to a difference of object, these do not so correspond: I may be conscious of two different objects in the same way, and of the same object, at different times, in different ways. Moreover, whereas I cannot be certain that there are any internal differences corresponding to a difference of objects I am certain that there are differences in the mode of consciousness. I am quite certain that there is an internal difference between willing an action and merely thinking of it; between liking an object and merely seeing it: but not certain that there is any internal difference between seeing a red colour and seeing a blue one, or between seeing a colour and hearing a sound.

I recognise, then, as a second kind of undoubtedly mental entities, the qualities which distinguish one mode of consciousness from another. And these qualities, it seems to me, are "mental" in some new sense. They *are* not themselves acts of consciousness, but are, in some sense, qualities of such. In *what* sense exactly, I cannot discover. It seems obvious to say that they are mental, because they are qualities of a kind which can *only* belong to acts of consciousness: nothing but an act of consciousness can have the quality of being a volition, or being a belief. But then it is also true that nothing but an act of consciousness can have the property of being a consciousness of blue, or a consciousness of red. And in what way such a property, which I call a "property," differs from these other properties, which I call "qualities," I cannot define. Assuming, however, that the difference is understood, we may, I think, say, that to be "mental," in this third sense, *means* to be a "quality" (as distinguished from a "property") which can only belong to an act of consciousness.

Finally, a third kind of entity, which seems to me undoubtedly mental, may be defined as follows. A number of mental acts may be related to one another, in one or other of the hundred different ways, which may be expressed by saying that they form a "unity." And any collection of mental acts, which does in any sense form a "unity," may itself be said to be a

"mental entity." For instance, a process of reasoning is not itself a "mental act"; it consists of a number of different mental acts, combined together in some particular way: and yet it is undoubtedly a "mental entity." Any such collection of mental acts is, therefore, a mental entity; and is so in the sense that it is a collection of mental acts having some sort of unity. Here, then, is a fourth sense of "mental": namely, the "being a collection of acts of consciousness, as distinguished from being a single act of consciousness.

I recognise, then, three kinds of undoubtedly mental entities: (1) An act of consciousness; (2) certain "qualities" of acts of consciousness; (3) any collection of acts of consciousness which has some sort of "unity." And I cannot be certain that there are in the Universe any entities, deserving to be called "mental," except these. These, it seems to me, are marked off by very sharp and important lines of division from all other entities. And the certainty that these *are,* and are "mental," seems to me very much greater than in the case of any other sorts of entities which are sometimes said to be so.

II. DOUBTFUL MENTAL ENTITIES

Under this head I want to consider two kinds of cases: namely, firstly, cases where it may be supposed there is an entity, which, if there were any such entity, would undoubtedly be a mental one, but where it seems to me doubtful whether there really is any such entity as the one supposed; and secondly, cases of entities which undoubtedly *are* and which some people suppose to be "mental," but where it seems to me doubtful whether they are mental or not.

(1) The first entity I wish to consider under this head is *the mind itself*. It might be thought that, if any entity deserves to be called "mental," the mind itself undoubtedly does deserve it; and that, so far from being reckoned among doubtful mental entities, it ought to be reckoned as the clearest and most undoubted case of a mental entity. And, in fact, I do not doubt that the mind is a mental entity. I do not doubt, for instance, that I have a mind; that there is such a thing as my mind; and that it is a mental entity. But all that I mean when I say this, is that I am quite sure that when I or other people talk about "my mind," we are talking about something which really is and which is mental; that "my mind" is the name of some entity or other, and that a mental one. What I do doubt about, in the case of my mind, is what sort of an entity it is: in particular, whether it is an entity of one of the kinds which I have already described; or whether it is a new kind of entity different from any of these, and which is also "mental" in a different sense from that in which any of them are "mental."

There is a view (and I think Hume held it, for one) that my mind merely consists in the sum of all those mental acts, which are related to

one another in the way which we describe by calling them all "mine"; including, of course, any other entities (if there are any), beside mental acts, which may be related to my mental acts in this same way in which they are related to one another. And I cannot be sure that this view is not a true one! I am, in fact, much more sure that there are such things as my mental acts, than that there is any entity distinct from these, which could be called my mind. And if this view *were* a true one, if my mind does consist merely in the sum of my mental acts, it would, of course, merely be an instance of the third kind of entity, which I recognised as undoubtedly mental: it would be a collection of acts of consciousness, having some kind of unity.

In favour of this view I have to urge the difficulty that I find in discovering any entity, other than my mental acts, which could be my mind. And, also, it alone seems to me to allow any proper sense to the phrase we are tempted to use when we say that such and such an entity, such and such a mental act, for instance, is "in the mind." If my mind is merely the collection of all my mental acts (and perhaps some other entities), each of them could be properly said to be "in" it, in the sense of being one among the collection. Whereas, on any other view, I do not see how any mental act, or anything else, could be properly said to be "in" the mind at all.

But, on the other hand, there seem to me to be certain arguments against this view. We certainly talk, also, as if it were my mind which hears, my mind which thinks, my mind which wills; as if, in short, my mind were some entity, *of* which my mental acts are acts; as if it were identical with the Ego, the "me," the subject, which is conscious whenever I am conscious. And though a meaning can be given to these expressions, on Hume's view of the mind, it does not seem to me to be the meaning which they actually have. On Hume's view, we should have to hold that, when I say that *I*, or my mind, am seeing this paper or thinking these thoughts, what I mean is simply that my seeing and my thinking are, each of them, one among the mental acts which constitute me or my mind. And it does not seem to me that this is what I do mean. It seems to me that, when I say that *I* am seeing this room now, and saw another yesterday (and I am sure that I really am, and really did), I mean to assert quite a different sort of relation between me and my seeing, than that the latter is *a part* of me—one member of a collection of acts which constitutes me.

Moreover, even on Hume's view, there still remains the difficulty of saying what kind of relation it is that all my mental acts have to one another, which constitutes them "mine." That they most certainly have some relation to one another, which we express by saying that they are all "mine," I have already urged; some relation which distinguishes them from the mental acts of other people. And, if we consider what this relation can be, this consideration also seems to me to point to the falsity of Hume's view. What I seem to know, when I know that all my mental acts

are mental acts of *mine,* is that they all have a peculiar relation to some other entity which is me. I seem to know that their relation to one another consists in the fact that they all have the same relation to this other entity: I do not seem to be directly aware of any other relation which they all have to one another.

I think, therefore, there is something to be said for the view that *I* am an entity, distinct from every one of my mental acts and from all of them put together: an entity, whose acts they are; which is that which is conscious when I am conscious; and that what I mean by calling them all "mine," is that they all of them are acts of this same entity. But even if I am such an entity, it does not follow that it is a mental entity. There is still another hypothesis, against which I can find no conclusive arguments: namely, that this entity which hears and sees and feels and thinks is some part of *my body.* I cannot see anything conclusive against Locke's view that matter may be capable of being conscious; and hence that it may be my body which is conscious whenever I am conscious. If this were so, then, I should say we could not identify myself with "my mind." I myself should not, then, be a mental entity: I should be my body. Whereas anything that is properly to be called "my mind" must, I think, be allowed to be "mental." But we might combine this with Hume's view by saying that "my mind" was the collection of my mental acts; and that what made them all "mine" was not any direct relation they had to one another, but the fact that they all had a common relation to my body.

The view, therefore, that "my mind" is a mental entity, distinct from any one of my mental acts and from all of them, seems to me to be only one among several possible alternatives, against none of which I have ever seen or can find conclusive arguments. But it does seem to me to be one possible alternative and if it were true, then, we should have to admit that there is another mental entity, distinct from any of those I have hitherto recognised, and "mental" in a different sense from any of them. Every mind would, then, be a mental entity of a new sort; and it would be "mental" in the sense that it was something, *not* the body, *of* which certain mental acts were the acts—that it was that which is conscious whenever anyone is conscious.

(2) The second hypothesis I wish to consider is the hypothesis, previously mentioned, that any two mental acts which differ in respect of the fact that, whereas one is a consciousness of one entity, the other is the consciousness of a different entity, *also* differ in some other respect—have some mental difference, some internal difference, some difference of "quality" or of "content." If this were so, the quality which differentiated one from the other would undoubtedly be a mental entity, and a mental entity in the same sense in which the quality which differentiates belief or volition from mere apprehension is a mental entity.

Here, too, there seem to me to be arguments upon both sides. On the negative side—in favour of the view that there are no such entities—there seems to me to be the fact that I am quite unable, by introspection, to discover any such entities. When I consider what happens when I see a blue colour, or see a red colour, or hear a sound, I am quite unable to discover that there is any difference between the three cases except that in the one case what I am conscious of is blue, in the other red, in the third a sound instead of a colour. My *consciousness* of all three seems to me to be exactly the same in its nature. And so, too, when I think of St. Paul's Cathedral, or think of the Crystal Palace, all that I am able to be certain of is that, in the two cases, I am conscious of different entities—not that, in each case, my consciousness has a further difference—a difference of quality.

But on the other side, too, there seems to me to be some evidence. The argument which appeals to me on this side is that drawn from the causal connection between mental acts. Nothing seems to me more certain than that my consciousness of one object may (in some sense) have different effects from my consciousness of another object, even where I cannot discover any difference between the two except the fact that the one is a consciousness of one object and the other of a different one. For instance, I am quite sure that the sight of one object does cause me to remember some sorts of things, whereas the sight of another object will cause me to remember different things. But how, it may be said, can this be if the consciousness of the one object does not differ at all in quality from that of the other? , It might be attempted to answer this by saying that it is the different objects, and not my consciousness of them, which produce the different effects. But it seems to me pretty certain that this is not always, if ever, the case. What produces the effect is something which exists *now,* and the object does not by any means always exist when I think of it. For instance, if I happen to think of the Battle of Waterloo, this thought may lead me to have other thoughts which I should not have had if I had not thought of the battle; but it is (in some sense) my thought which exists *now,* which causes these other thoughts, not the battle itself, which does not exist now. I think, therefore, that it cannot be the different objects which produce the different effects; and therefore there seems to me some force in the argument that there must be some internal difference in my consciousness of the one and of the other, although I can discover none. But there does seem to me to be one possible alternative: namely, that in each case it is neither my consciousness of the object, nor the object itself, which produces the effect, but the whole fact—the fact that I am conscious of the object. This fact—the whole fact—is, it seems to me, certainly a different entity both from the object, and from my consciousness of it, if we mean by the latter merely what I have hitherto meant— namely, what is left over when we subtract the object from the whole fact. And the whole fact—the fact that I am conscious of one object—is certainly

always different from the fact that I am conscious of another object, even though my consciousness of the one may be exactly similar, internally, to my consciousness of the other. But I do not feel sure that this hypothesis will remove the difficulty; and therefore I reckon possible qualitative differences between mental acts, corresponding to every difference in their objects, as possible mental entities.

(3) The third question I wish to consider is one which was discussed at considerable length in both the two last papers of last Session, by Dr. Wolf and Professor Stout. It concerns those entities, which are often called "sensations" or "sense-presentations," but which I shall call, by preference, "sense-data." By sense-data I understand a class of entities of which we are very often directly conscious, and with many of which we are extremely familiar. They include the colours, of all sorts of different shades, which I actually see when I look about me; the sounds which I actually hear; the peculiar sort of entity of which I am directly conscious when I feel the pain of a toothache, and which I call "the pain"; and many others which I need not enumerate. But I wish also to include among them those entities called "images," of which I am directly conscious when I dream and often also when awake; which resemble the former in respect of the fact that they *are* colours, sounds, etc.; but which seem, as a rule, like rather faint copies of the colours, sounds, etc., actually seen or heard, and which, whether fainter or not, differ from them in respect of the fact that we should not say we actually saw or heard them, and the fact that they are not, in the strictest sense of the words, "given by the senses." All these entities I propose to call sense-data. And in their case there is, of course, no question whether there *are* such entities. The entities meant certainly *are,* whether or not they be rightly described as "sensations," "sense-presentations," "sense-data," etc. Here the only question can be, whether they are "mental." And, in fact, many philosophers seem to have held that they are so. Professor Stout, for example, held that they *all* are; Dr. Wolf, that some of them, namely "images," are and the rest not. I want briefly to consider in what sense, if any, these entities could be "mental."

But it is necessary here to distinguish two questions. Of some of these entities we certainly are sometimes directly conscious. But Professor Stout held, and I daresay others would agree with him, that they often exist in the mind, even when we are not conscious of them. I wish, therefore, to distinguish the two questions—(*a*) in what sense those sense-data of which we are directly conscious may be mental, and *(b)* in what sense those, if any, which are alleged to be in the mind, when we are not directly conscious of them, could be so.

(*a*) Some philosophers, I think, have held these entities to be mental, because they failed to distinguish between them and our consciousness of them—failed to distinguish, for instance, between a blue colour which

I see, and the direct consciousness which I have of it when I see it. For instance, I think it is plain from many passages in Hume that he failed to distinguish these two sorts of entities. In fact, he often confused an act of consciousness with that *of* which we are conscious. And we might, therefore, say of him that he thought sense-data to be mental, partly because he mistook them for acts of consciousness. But it is, I think, clear that they *are* not acts of consciousness, whatever they are. They are not, therefore, "mental" in my first and fundamental sense.

A second view which might be held, and has, I think, often been implied, is that they are what I have called "qualities" of conscious acts, and "mental" in this sense. But I think it is clear that this is not a true view either. It seems to me clear that the relation which a blue colour has to my consciousness of it, when I actually see it, is quite a different relation from that which the quality which distinguishes a volition or a belief from mere apprehension has to the act of consciousness which *is* a volition or a belief. When I am conscious of a blue colour, my act of consciousness is a consciousness *of* that colour: I am conscious *of* the colour. But when I will that an action should be done, this act of consciousness is not a consciousness *of* the quality which makes it a volition. I think, therefore, it is clear that sense-data, when I am conscious of them, are not qualities *of* my act of consciousness, in any sense in which what is a quality *of* an act of consciousness must be "mental."

A third view seems to be that these sense-data are mental in the sense that they have to my mental acts and to one another exactly that relation which my mental acts have to one another, and which I describe by calling them all "mine." This view is, in short, that sense-data are "mental," in the second sense which I recognised above: that the sense-data of which I am directly conscious are "in my mind" and related to my mind in exactly the same sense in which my direct consciousness of them is so. And against this view I have only to say that it does not seem to me to be so. I cannot persuade myself that a blue colour which I see is related to me in exactly the same manner in which my seeing of it is related to me. It seems to me to be related to me in no way at all except by the fact that I am conscious *of* it. But my consciousness of it is related to me in quite a different manner from this. Of my consciousness I am not by any means always conscious. Its relation to me is simply that it is my consciousness, an act of consciousness of mine: and the blue which I see certainly does not seem to me to be "mine" in this sense, whatever that sense may be. Hence, I cannot accept the view that *any* of the sense-data of which I am directly conscious—either "sense-data" proper or "images"—are related to me or to my mind in the manner in which my consciousness of them and my other mental acts are related to me. And I wonder that anybody should be able to feel sure that they really are so related. The relation which my mental acts have to me and to one another—the relation which I indicate

by calling them "mine"—seems to me to be a very peculiar relation; and, in practice, I can distinguish with the utmost certainty whether a given mental act has it or not; I am hardly ever in any danger of confusing another person's mental act with one of mine; and even, if I should confuse them, I should know quite well (though I cannot define) what I meant by calling it "mine." How am I to be assured that the sense-data, *of* which I am conscious, are related to my mental acts in this peculiar manner in which my mental acts are related to one another? All I can say is, that they do not seem to me to be so; that I can see no trace of their being so. But, on the other hand, it does not seem to me to be a question about which it is, at present, possible to be certain—to be certain either way. I conclude, then, that it is by no means certain that the sense-data or images of which I am directly conscious are related to me in this way: I see no reason to think they are; but, *if* they were, then, I think, they certainly would, in a perfectly good sense, be "mental" entities.

But finally it may be contended that these sense-data are "mental" on still another ground. It may be contended that absolutely every sense-datum, of which I am ever directly conscious, is an entity which *is* only at the moment at which I am conscious of it: that when my consciousness of it ceases to exist, it also always at once ceases to be; that it *is,* only when and so long as I am conscious of it. And the same in the case of all other minds: that all the sense-data of which anybody is ever conscious are entities which *are* only so long as that person is conscious of them. This is a property which does seem to me to belong to all "images"; and the fact that it does so seems to me sufficient to explain why people should be inclined to say that "images" are merely in their minds. But whether all the sense-data, which are in the strictest sense "given by the senses," also have this property, seems to me a very difficult question. Here, again, there seem to me to be good arguments on both sides; but none such as to justify a certain conclusion either way. And I have not space here to consider them as fully as they deserve. What I do wish to consider is, whether, if this were so, we should be justified in saying that all sense-data were mental; whether, for instance, supposing that all the images, of which I am directly conscious, are entities which have being only so long as I am directly conscious of them, I should be justified in saying that they were all mental and had being only in the mind. It seems to me that we could say this in a very good sense. If this view were true, the sense-data of which we are directly conscious, would certainly be attached to the minds of each of us in a very close and intimate sense; and that they should be attached to our minds, in this sense, would be a most important metaphysical property of theirs. But nevertheless it seems to me that there would be a great risk of confusion in saying that they were "mental," or "merely in the mind" or "part of the mind" on this ground alone. It seems to me that no philosopher does ever, when he talks of an entity being "mental," mean *merely*

that it has this property. I cannot believe, for instance, that Dr. Wolf, when he contended that images were "mental" and "a part of the mind," meant *merely* to assert that they had this property—merely that they are entities, which *are* only so long as we are conscious of them. It is, I think, when an entity is said to be "mental," without qualification, always implied that it is so in some one of the other senses which I have considered; and hence, if by calling sense-data "mental," it is meant *merely* to assert that they have this property, it should always be expressly stated that this and this only is meant.

(b) I pass now to consider the supposition that sense-data may be "in the mind" even when we are not directly conscious of them. And my reason for considering this supposition separately from the last is that, in their case, it obviously cannot be meant merely that they *are* only so long as we are conscious of them; since it is expressly asserted that they are when we are *not* conscious of them at all. All the arguments, therefore, directed to show that sense-data, of which we *are* directly conscious, exist only when we are conscious of them, cannot be used at all in favour of this second hypothesis; and yet it seems to me that these arguments are far stronger than any others which can be used to prove that sense-data are "mental" in any sense at all. If sense-data, of which we are not directly conscious, can be in the mind at all, they must be so in some one of the other senses which I have considered; and the reasons which I gave for doubting whether sense-data, of which we *are* directly conscious, are in the mind in any of those senses, will apply equally to these supposed sense-data, of which we are *not* directly conscious.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Knowledge by Acquaintance and Knowledge by Description

BERTRAND RUSSELL

VOLUME XI

1911

EDITORIAL NOTE

Bertrand Russell (1872-1970) was a British philosopher, logician and social reformer. He was a founding figure in the analytic movement in philosophy along with Gottlob Frege, G. E. Moore and Ludwig Wittgenstein, and won the Nobel Prize for Literature in 1950. Russell's contributions to logic, epistemology and the philosophy of mathematics established him as one of the foremost philosophers of the 20th century. He is also widely known as a campaigner for peace and for his popular writing on social, political and moral subjects.

Bertrand Russell was President of the Aristotelian Society from 1911 to 1913 and again in 1937 to 1938.

The following paper - "Knowledge by Acquaintance and Knowledge by Description" - was published in *Proceedings of the Aristotelian Society*, New Series, Volume XI (1910-1911), pp. 108-128.

XIII. KNOWLEDGE BY ACQUAINTANCE AND KNOWLEDGE BY DESCRIPTION

BERTRAND RUSSELL

THE object of the following paper is to consider what it is that we know in cases where we know propositions about "the so-and-so" without knowing who or what the so-and-so is. For example, I know that the candidate who gets most votes will be elected, though I do not know who is the candidate who will get most votes. The problem I wish to consider is: What do we know in these cases, where the subject is merely described? I have considered this problem elsewhere[1] from a purely logical point of view; but in what follows I wish to consider the question in relation to theory of knowledge as well as in relation to logic, and in view of the above-mentioned logical discussions, I shall in this paper make the logical portion as brief as possible.

In order to make clear the antithesis between "acquaintance" and "description," I shall first of all try to explain what I mean by "acquaintance." I say that I am *acquainted* with an object when I have a direct cognitive relation to that object, *i.e.* when I am directly aware of the object itself. When I speak of a cognitive relation here, I do not mean the sort of relation which constitutes judgment, but the sort which constitutes presentation. In fact, I think the relation of subject and object which I call acquaintance is simply the converse of the relation of object and subject which constitutes presentation. That is, to say that S has acquaintance with O is essentially the same thing as to say that O is presented to S. But the associations and natural extensions of the word *acquaintance* are different from those of the word *presentation.* To begin with, as in most cognitive words, it is natural to say that I am acquainted with an object even at moments when it is not actually before my mind, provided it has been before my mind, and will be again whenever occasion arises. This is the same sense in which I am said to know that 2 + 2 = 4 even when I am thinking of something else. In the second place, the word *acquaintance* is designed to emphasize, more than the word *presentation,* the relational character of the fact with which we are concerned. There is, to my mind, a danger that, in speaking of presentations, we may so emphasize the object as to lose sight of the subject. The result of this is either to lead to the view that there is no subject, whence we arrive at materialism; or to lead to the view that what is presented is part of the subject, whence we arrive at idealism, and should arrive at solipsism but for the most desper-

[1] See references later.

ate contortions. Now I wish to preserve the dualism of subject and object in my terminology, because this dualism seems to me a fundamental fact concerning cognition. Hence I prefer the word *acquaintance,* because it emphasizes the need of a subject which is acquainted.

When we ask what are the kinds of objects with which we are acquainted, the first and most obvious example is *sense-data.* When I see a colour or hear a noise, I have direct acquaintance with the colour or the noise. The sense-datum with which I am acquainted in these cases is generally, if not always, complex. This is particularly obvious in the case of sight. I do not mean, of course, merely that the supposed physical object is complex, but that the direct sensible object is complex and contains parts with spatial relations. Whether it is possible to be aware of a complex without being aware of its constituents is not an easy question, but on the whole it would seem that there is no reason why it should not be possible. This question arises in an acute form in connection with self-consciousness, which we must now briefly consider.

In introspection, we seem to be immediately aware of varying complexes, consisting of objects in various cognitive and conative relations to ourselves. When I see the sun, it often happens that I am aware of my seeing the sun, in addition to being aware of the sun; and when I desire food, it often happens that I am aware of my desire for food. But it is hard to discover any state of mind in which I am aware of myself alone, as opposed to a complex of which I am a constituent. The question of the nature of self-consciousness is too large, and too slightly connected with our subject, to be argued at length here. It is, however, very difficult to account for plain facts if we assume that we do not have acquaintance with ourselves. It is plain that we are not only *acquainted* with the complex "Self-acquainted-with-A," but we also *know* the proposition "I am acquainted with A." Now here the complex has been analysed, and if "I" does not stand for something which is a direct object of acquaintance, we shall have to suppose that "I" is something known by description. If we wished to maintain the view that there is no acquaintance with Self, we might argue as follows: We are acquainted with *acquaintance,* and we know that it is a relation. Also we are acquainted with a complex in which we perceive that acquaintance is the relating relation. Hence we know that this complex must have a constituent which is that which is acquainted, *i.e.* must have a subject-term as well as an object-term. This subject-term we define as "I." Thus "I" means "the subject-term in awarenesses of which *I* am aware." But as a definition this cannot be regarded as a happy effort. It would seem necessary, therefore, to suppose that I am acquainted with myself, and that "I," therefore, requires no definition, being merely the proper name of a certain object. Thus self-consciousness cannot be regarded as throwing light on the question whether we can know a complex without knowing its constituents. This question, however, is not impor-

tant for our present purposes, and I shall therefore not discuss it further.

The awarenesses we have considered so far have all been awarenesses of particular existents, and might all in a large sense be called sense-data. For, from the point of view of theory of knowledge, introspective knowledge is exactly on a level with knowledge derived from sight or hearing. But, in addition to awareness of the above kind of objects, which may be called awareness of *particulars,* we have also what may be called awareness of *universals*. Awareness of universals is called *conceiving,* and a universal of which we are aware is called a *concept*. Not only are we aware of particular yellows, but if we have seen a sufficient number of yellows and have sufficient intelligence, we are aware of the universal *yellow*; this universal is the subject in such judgments as "yellow differs from blue" or "yellow resembles blue less than green does." And the universal yellow is the predicate in such judgments as "this is yellow," where "this" is a particular sense-datum. And universal relations, too, are objects of awarenesses; up and down, before and after, resemblance, desire, awareness itself, and so on, would seem to be all of them objects of which we can be aware.

In regard to relations, it might be urged that we are never aware of the universal relation itself, but only of complexes in which it is a constituent. For example, it may be said that we do not know directly such a relation as *before,* though we understand such a proposition as "this is before that," and may be directly aware of such a complex as "this being before that." This view, however, is difficult to reconcile with the fact that we often know propositions in which the relation is the subject, or in which the relata are not definite given objects, but "anything." For example, we know that if one thing is before another, and the other before a third, then the first is before the third; and here the things concerned are not definite things, but "anything." It is hard to see how we could know such a fact about "before" unless we were acquainted with "before," and not merely with actual particular cases of one given object being before another given object. And more directly: A judgment such as "this is before that," where this judgment is derived from awareness of a complex, constitutes an analysis, and we should not understand the analysis if we were not acquainted with the meaning of the terms employed. Thus we must suppose that we are acquainted with the meaning of "before," and not merely with instances of it.

There are thus two sorts of objects of which we are aware, namely, particulars and universals. Among particulars I include all existents, and all complexes of which one or more constituents are existents, such as this-before-that, this-above-that, the-yellowness-of-this. Among universals I include all objects of which no particular is a constituent. Thus the disjunction "universal-particular" is exhaustive. We might also call it the

disjunction "abstract-concrete." It is not quite parallel with the opposition "concept-percept," because things remembered or imagined belong with particulars, but can hardly be called percepts. (On the other hand, universals with which we are acquainted may be identified with concepts.)

It will be seen that among the objects with which we are acquainted are not included physical objects (as opposed to sense-data), nor other people's minds. These things are known to us by what I call "knowledge by description," which we must now consider.

By a "description" I mean any phrase of the form "a so-and-so" or "the so-and-so." A phrase of the form "a so-and-so" I shall call an "ambiguous" description; a phrase of the form "the so-and-so" (in the singular) I shall call a "definite" description. Thus "a man" is an ambiguous description, and "the man with the iron mask" is a definite description. There are various problems connected with ambiguous descriptions, but I pass them by, since they do not directly concern the matter I wish to discuss. What I wish to discuss is the nature of our knowledge concerning objects in cases where we know that there is an object answering to a definite description, though we are not *acquainted* with any such object. This is a matter which is concerned exclusively with *definite* descriptions. I shall, therefore, in the sequel, speak simply of "descriptions" when I mean "definite descriptions." Thus a description will mean any phrase of the form "the so-and-so" in the singular.

I shall say that an object is "known by description" when we know that it is "*the* so-and-so," *i.e.* when we know that there is one object, and no more, having a certain property; and it will generally be implied that we do not have knowledge of the same object by acquaintance. We know that the man with the iron mask existed, and many propositions are known about him; but we do not know who he was. We know that the candidate who gets most votes will be elected, and in this case we are very likely also acquainted (in the only sense in which one can be acquainted with some one else) with the man who is, in fact, the candidate who will get most votes, but we do not know which of the candidates he is, *i.e.* we do not know any proposition of the form "A is the candidate who will get most votes" where A is one of the candidates by name. We shall say that we have "*merely* descriptive knowledge" of the so-and-so when, although we know that the so-and-so exists, and although we may possibly be acquainted with the object which is, in fact, the so-and-so, yet we do not know any proposition "*a* is the so-and-so," where *a* is something with which we are acquainted.

When we say "the so-and-so exists," we mean that there is just one object which is the so-and-so. The proposition "*a* is the so-and-so" means that *a* has the property so-and-so, and nothing else has. "Sir Joseph Lar-

mor is the Unionist candidate" means "Sir Joseph Larmor is a Unionist candidate, and no one else is." "The Unionist candidate exists" means "someone is a Unionist candidate, and no one else is." Thus, when we are acquainted with an object which is the so-and-so, we know that the so-and-so exists, but we may know that the so-and-so exists when we are not acquainted with any object which we know to be the so-and-so, and even when we are not acquainted with any object which, in fact, is the so-and-so.

Common words, even proper names, are usually really descriptions. That is to say, the thought in the mind of a person using a proper name correctly can generally only be expressed explicitly if we replace the proper name by a description. Moreover, the description required to express the thought will vary for different people, or for the same person at different times. The only thing constant (so long as the name is rightly used) is the object to which the name applies. But so long as this remains constant, the particular description involved usually makes no difference to the truth or falsehood of the proposition in which the name appears.

Let us take some illustrations. Suppose some statement made about Bismarck. Assuming that there is such a thing as direct acquaintance with oneself, Bismarck himself might have used his name directly to designate the particular person with whom he was acquainted. In this case, if he made a judgment about himself, he himself might be a constituent of the judgment. Here the proper name has the direct use which it always wishes to have, as simply standing for a certain object, and not for a description of the object. But if a person who knew Bismarck made a judgment about him, the case is different. What this person was acquainted with were certain sense-data which he connected (rightly, we will suppose) with Bismarck's body. His body as a physical object, and still more his mind, were only known as the body and the mind connected with these sense-data That is, they were known by description. It is, of course, very much a matter of chance which characteristics of a man's appearance will come into a friend's mind when he thinks of him; thus the description actually in the friend's mind is accidental. The essential point is that he knows that the various descriptions all apply to the same entity, in spite of not being acquainted with the entity in question.

When we, who did not know Bismarck, make a judgment about him, the description in our minds will probably be some more or less vague mass of historical knowledge—far more, in most cases, than is required to identify him. But, for the sake of illustration, let us assume that we think of him as "the first Chancellor of the German Empire." Here all the words are abstract except "German." The word "German" will again have different meanings for different people. To some it will recall travels in Germany, to some the look of Germany on the map, and so on. But if we are

to obtain a description which we know to be applicable, we shall be compelled, at some point, to bring in a reference to a particular with which we are acquainted. Such reference is involved in any mention of past, present, and future (as opposed to definite dates), or of here and there, or of what others have told us. Thus it would seem that, in some way or other, a description known to be applicable to a particular must involve some reference to a particular with which we are acquainted, if our knowledge about the thing described is not to be merely what follows logically from the description. For example, "the most long-lived of men" is a description which must apply to some man, but we can make no judgments concerning this man which involve knowledge about him beyond what the description gives. If, however, we say, "the first Chancellor of the German Empire was an astute diplomatist," we can only be assured of the truth of our judgment in virtue of something with which we are acquainted — usually a testimony heard or read. Considered psychologically, apart from the information we convey to others, apart from the fact about the actual Bismarck, which gives importance to our judgment, the thought we really have contains the one or more particulars involved, and otherwise consists wholly of concepts. All names of places—London, England, Europe, the earth, the Solar System—similarly involve, when used, descriptions which start from some one or more particulars with which we are acquainted. I suspect that even the Universe, as considered by metaphysics, involves such a connection with particulars. In logic, on the contrary, where we are concerned not merely with what does exist, but with whatever might or could exist or be, no reference to actual particulars is involved.

It would seem that, when we make a statement about something only known by description, we often *intend* to make our statement, not in the form involving the description, but about the actual thing described. That is to say, when we say anything about Bismarck, we should like, if we could, to make the judgment which Bismarck alone can make, namely, the judgment of which he himself is a constituent. In this we are necessarily defeated, since the actual Bismarck is unknown to us. But we know that there is an object B called Bismarck, and that B was an astute diplomatist. We can thus *describe* the proposition we should like to affirm, namely, "B was an astute diplomatist," where B is the object which was Bismarck. What enables us to communicate in spite of the varying descriptions we employ is that we know there is a true proposition concerning the actual Bismarck, and that however we may vary the description (so long as the description is correct), the proposition described is still the same. This proposition, which is described and is known to be true, is what interests us; but we are not acquainted with the proposition itself, and do not know *it,* though we know it is true.

It will be seen that there are various stages in the removal from acquaintance with particulars: there is Bismarck to people who knew him,

Bismarck to those who only know of him through history, the man with the iron mask, the longest-lived of men. These are progressively further removed from acquaintance with particulars, and there is a similar hierarchy in the region of universals. Many universals, like many particulars, are only known to us by description. But here, as in the case of particulars, knowledge concerning what is known by description is ultimately reducible to knowledge concerning what is known by acquaintance.

The fundamental epistemological principle in the analysis of propositions containing descriptions is this: *Every proposition which we can understand must be composed wholly of constituents with which we are acquainted*. From what has been said already, it will be plain why I advocate this principle, and how I propose to meet the case of propositions which at first sight contravene it. Let us begin with the reasons for supposing the principle true.

The chief reason for supposing the principle true is that it seems scarcely possible to believe that we can make a judgment or entertain a supposition without knowing what it is that we are judging or supposing about. If we make a judgment about (say) Julius Caesar, it is plain that the actual person who was Julius Caesar is not a constituent of the judgment. But before going further, it may be well to explain what I mean when I say that this or that is a constituent of a judgment, or of a proposition which we understand. To begin with judgments: a judgment, as an occurrence, I take to be a relation of a mind to several entities, namely, the entities which compose what is judged. If, *e.g.,* I judge that A love's B, the judgment as an event consists in the existence, at a certain moment, of a specific four-term relation, called *judging,* between me and A and love and B. That is to say, at the time when I judge, there is a certain complex whose terms are myself and A and love and B, and whose relating relation is *judging*. (The relation *love* enters as one of the terms of the relation, not as a relating relation.) My reasons for this view have been set forth elsewhere,[2] and I shall not repeat them here. Assuming this view of judgment, the constituents of the judgment are simply the constituents of the complex which is the judgment. Thus, in the above case, the constituents are myself and A and love and B and judging. But myself and judging are constituents shared by all my judgments; thus the *distinctive* constituents of the particular judgment in question are A and love and B. Coming now to what is meant by "understanding a proposition," I should say that there is another relation possible between me and A and love and B, which is called my *supposing* that A loves B.[3] When we can *suppose* that

[2] *Philosophical Essays,* "The Nature of Truth."

[3] *Cf.* Meinong, *Ueber Annahmen, passim*. I formerly supposed, contrary to Meinong's view, that the relationship of supposing might be merely that of presentation. In this view I now think I was mistaken, and Meinong is right. But my present view depends upon the theory that both in judgment and in assumption there is no single Objective, but the sev-

A loves B, we "understand the proposition" *A loves B*. Thus we often understand a proposition in cases where we have not enough knowledge to make a judgment. Supposing, like judging, is a many-term relation, of which a mind is one term. The other terms of the relation are called the constituents of the proposition supposed. Thus the principle which I enunciated may be restated as follows: *Whenever a relation of supposing or judging occurs, the terms to which the supposing or judging mind is related by the relation of supposing or judging must be terms with which the mind in question is acquainted*. This is merely to say that we cannot make a judgment or a supposition without knowing what it is that we are making our judgment or supposition about. It seems to me that the truth of this principle is evident as soon as the principle is understood; I shall, therefore, in what follows, assume the principle, and use it as a guide in analysing judgments that contain descriptions.

Returning now to Julius Caesar, I assume that it will be admitted that he himself is not a constituent of any judgment which I can make. But at this point it is necessary to examine the view that judgments are composed of something called "ideas," and that it is the "idea" of Julius Caesar that is a constituent of my judgment. I believe the plausibility of this view rests upon a failure to form a right theory of descriptions. We may mean by my "idea" of Julius Caesar the things that I know about him, *e.g.*, that he conquered Gaul, was assassinated on the Ides of March, and is a plague to schoolboys. Now I am admitting, and indeed contending, that in order to discover what is actually in my mind when I judge about Julius Caesar, we must substitute for the proper name a description made up of some of the things I know about him. (A description which will often serve to express my thought is "the man whose name was Julius Caesar." For whatever else I may have forgotten about him, it is plain that when I mention him I have not forgotten that that was his name.) But although I think the theory that judgments consist of ideas may have been suggested in some such way, yet I think the theory itself is fundamentally mistaken. The view seems to be that there is some mental existent which may be called the "idea" of something outside the mind of the person who has the idea, and that, since judgment is a mental event, its constituents must be constituents of the mind of the person judging. But in this view ideas become a veil between us and outside things—we never really, in knowledge, attain to the things we are supposed to be knowing about, but only to the ideas of those things. The relation of mind, idea, and object, on this view, is utterly obscure, and, so far as I can see, nothing discoverable by inspection warrants the intrusion of the idea between the mind and the object. I suspect that the view is fostered by the dislike of relations, and that it is felt the mind could not know objects unless there were something "in" the mind which could be called the state of knowing the object. Such a view,

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eral constituents of the judgment or assumption are in a many-term' relation to the mind.

however, leads at once to a vicious endless regress, since the relation of idea to object will have to be explained by supposing that the idea itself has an idea of the object, and so on *ad infinitum*. I therefore see no reason to believe that, when we are acquainted with an object, there is in us something which can be called the "idea" of the object. On the contrary, I hold that acquaintance is wholly a relation, not demanding any such constituent of the mind as is supposed by advocates of "ideas." This is, of course a large question, and one which would take us far from our subject if it were adequately discussed. I therefore content myself with the above indications, and with the corollary that, in judging, the actual objects concerning which we judge, rather than any supposed purely mental entities, are constituents of the complex which is the judgment.

When, therefore, I say that we must substitute for "Julius Caesar" some description of Julius Caesar, in order to discover the meaning of a judgment nominally about him, I am not saying that we must substitute an idea. Suppose our description is "the man whose name was *Julius Caesar.*" Let our judgment be "Julius Caesar was assassinated." Then it becomes "the man whose name was *Julius Caesar* was assassinated." Here *Julius Caesar* is a noise or shape with which we are acquainted, and all the other constituents of the judgment (neglecting the tense in "was") are *concepts* with which we are acquainted. Thus our judgment is wholly reduced to constituents with which we are acquainted, but Julius Caesar himself has ceased to be a constituent of our judgment. This, however, requires a proviso, to be further explained shortly, namely, that "the man whose name was *Julius Caesar*" must not, as a whole, be a constituent of our judgment, that is to say, this phrase must not, as a whole, have a meaning which enters into the judgment. Any right analysis of the judgment, therefore, must break up this phrase, and not treat it as a subordinate complex which is part of the judgment. The judgment "the man whose name was *Julius Caesar* was assassinated" may be interpreted as meaning "One and only one man was called *Julius Caesar,* and that one was assassinated." Here it is plain that there is no constituent corresponding to the phrase "the man whose name was *Julius Caesar.*" Thus there is no reason to regard this phrase as expressing a constituent of the judgment, and we have seen that this phrase must be broken up if we are to be acquainted with all the constituents of the judgment. This conclusion, which we have reached from considerations concerned with the theory of knowledge, is also forced upon us by logical considerations, which must now be briefly reviewed.

It is common to distinguish two aspects, *meaning* and *denotation,* in such phrases as "the author of Waverley." The meaning will be a certain complex, consisting (at least) of authorship and Waverley with some relation; the denotation will be Scott. Similarly "featherless bipeds" will have a complex meaning, containing as constituents the presence of two feet

and the absence of feathers, while its denotation will be the class of men. Thus when we say "Scott is the author of Waverley" or "men are the same as featherless bipeds," we are asserting an identity of denotation, and this assertion is worth making because of the diversity of meaning.[4] I believe that the duality of meaning and denotation, though capable of a true interpretation, is misleading if taken as fundamental. The denotation, I believe, is not a constituent of the proposition, except in the case of proper names, *i.e.* of words which do not assign a property to an object, but merely and solely name it. And I should hold further that, in this sense, there are only two words which are strictly proper names of particulars, namely, "I" and "this."

One reason for not believing the denotation to be a constituent of the proposition is that we may know the proposition even when we are not acquainted with the denotation. The proposition "the author of Waverley is a novelist" was known to people who did not know that "the author of Waverley" denoted Scott. This reason has been already sufficiently emphasised.

A second reason is that propositions concerning "the so-.and-so" are possible even when "the so-and-so" has no denotation. Take, *e.g.,* "the golden mountain does not exist" or "the round square is self-contradictory." If we are to preserve the duality of meaning and denotation, we have to say, with Meinong, that there are such objects as the golden mountain and the round square, although these objects do not have being. We even have to admit that the existent round square is existent, but does not exist.[5] Meinong does not regard this as a contradiction, but I fail to see that it is not one. Indeed, it seems to me evident that the judgment "there is no such object as the round square" does not presuppose that there is such an object. If this is admitted, however, we are led to the conclusion that, by parity of form, no judgment concerning "the so-and-so" actually involves the so-and-so as a constituent.

Miss Jones[6] contends that there is no difficulty in admitting contradictory predicates concerning such an object as "the present King of France," on the ground that this object is in itself contradictory. Now it might, of course, be argued that this object, unlike the round square, is not self-contradictory, but merely non-existent. This, however, would not go to the root of the matter. The real objection to such an argument is that the law of contradiction ought not to be stated in the traditional form "A is not both B and not B," but in the form "no proposition is both true and false." The traditional form only applies to certain propositions, namely,

[4] This view has been recently advocated by Miss E.E.C. Jones, "A New Law of Thought and its Implications," *Mind,* January, 1911.

[5] Meinong, *Ueber Annahmen,* 2nd ed., Leipzig, 1910, p. 141.

[6] *Mind,* July, 1910, p. 380.

to those which attribute a predicate to a subject. When the law is stated of propositions, instead of being stated concerning subjects and predicates, it is at once evident that propositions about the present King of France or the round square can form no exception, but are just as incapable of being both true and false as other propositions.

Miss Jones[7] argues that "Scott is the author of Waverley" asserts identity of denotation between *Scott* and *the author of Waverley.* But there is some difficulty in choosing among alternative meanings of this contention. In the first place, it should be observed that *the author of Waverley* is not a *mere* name, like *Scott. Scott* is merely a noise or shape conventionally used to designate a certain person; it gives us no information about that person, and has nothing that can be called meaning as opposed to denotation. (I neglect the fact, considered above, that even proper names, as a rule, really stand for descriptions.) But *the author of Waverley* is not merely conventionally a name for Scott; the element of mere convention belongs here to the separate words, *the* and *author* and *of* and *Waverley.* Given what these words stand, for, *the author of Waverley* is no longer arbitrary. When it is said that Scott is the author of Waverley, we are not stating that these are two *names* for one man, as we should be if we said "Scott is Sir Walter." A man's name is what he is called, but however much Scott had been called the author of Waverley, that would not have made him be the author; it was necessary for him actually to write Waverley, which was a fact having nothing to do with names.

If, then, we are asserting identity of denotation, we must not mean by *denotation* the mere relation of a name to the thing named. In fact, it would be nearer to the truth to say that the *meaning* of "Scott" is the *denotation* of "the author of Waverley." The relation of "Scott" to Scott is that "Scott" means Scott, just as the relation of "author" to the concept which is so called is that "author" means this concept. Thus if we distinguish meaning and denotation in "the author of Waverley," we shall have to say that "Scott" has meaning but not denotation. Also when we say "Scott is the author of Waverley," the *meaning* of "the author of Waverley" is relevant to our assertion. For if the denotation alone were relevant, any other phrase with the same denotation would give the same proposition. Thus "Scott is the author of Marmion" would be the same proposition as "Scott is the author of Waverley." But this is plainly not the case, since from the first we learn that Scott wrote Marmion and from the second we learn that he wrote Waverley, but the first tells us nothing about Waverley and the second nothing about Marmion. Hence the meaning of "the author of Waverley," as opposed to the denotation, is certainly relevant to "Scott is the author of Waverley."

We have thus agreed that "the author of Waverley" is not a mere name,

[7] *Mind,* July, 1910, p. 379.

and that its meaning is relevant in propositions in which it occurs. Thus if we are to say, as Miss Jones does, that "Scott is the author of Waverley" asserts an identity of denotation, we must regard the denotation of "the author of Waverley" as the denotation of what is *meant* by "the author of Waverley." Let us call the meaning of "the author of Waverley" M. Thus M is what "the author of Waverley" means. Then we are to suppose that "Scott is the author of Waverley" means "Scott is the denotation of M." But here we are explaining our proposition by another of the same form, and thus we have made no progress towards a real explanation. "The denotation of M," like "the author of Waverley," has both meaning and denotation, on the theory we are examining. If we call its meaning M', our proposition becomes "Scott is the denotation of M'." But this leads at once to an endless regress. Thus the attempt to regard our proposition as asserting identity of denotation breaks down, and it becomes imperative to find some other analysis. When this analysis has been completed, we shall be able to reinterpret the phrase "identity of denotation," which remains obscure so long as it is taken as fundamental.

The first point to observe is that, in any proposition about "the author of Waverley," provided Scott is not explicitly mentioned, the denotation itself, *i.e.* Scott, does not occur, but only the concept of denotation, which will be represented by a variable. Suppose we say "the author of Waverley was the author of Marmion," we are certainly not saying that both were Scott—we may have forgotten that there was such a person as Scott. We are saying that there is some man who was the author of Waverley and the author of Marmion. That is to say, there is some one who wrote Waverley and Marmion, and no one else wrote them. Thus the identity is that of a variable, *i.e.*, of an indefinite subject, "some one." This is why we can understand propositions about "the author of Waverley," without knowing who he was. When we say "the author of Waverley was a poet" we mean "one and only one man wrote Waverley, and he was a poet"; when we say "the author of Waverley was Scott" we mean "one and only one man wrote Waverley, and he was Scott." Here the identity is between a variable, i.e. an indeterminate subject ("he"), and Scott; "the author of Waverley" has been analysed away, and no longer appears as a constituent of the proposition.[8]

The reason why it is imperative to analyse away the phrase "the author of Waverley" may be stated as follows. It is plain that when we say "the author of Waverley is the author of Marmion," the *is* expresses identity. We have seen also that the common *denotation,* namely Scott, is not a constituent of this proposition, while the *meanings* (if any) of "the author of Waverley" and "the author of Marmion" are not identical. We have

[8] The theory which I am advocating is set forth fully, with the logical grounds in its favour, in *Principia Mathematica,* Vol. I, Introduction, Chap. III; also, less fully, in *Mind,* October, 1905.

seen also that, in any sense in which the meaning of a word is a constituent of a proposition in whose verbal expression the word occurs, "Scott" means the actual man Scott, in the same sense in which "author" means a certain universal. Thus, if "the author of Waverley" were a subordinate complex in the above proposition, its *meaning* would have to be what was said to be identical with the *meaning* of "the author of Marmion." This is plainly not the case; and the only escape is to say that "the author of Waverley" does not, by itself, have a meaning, though phrases of which it is part do have a meaning. That is, in a right analysis of the above proposition, "the author of Waverley" must disappear. This is effected when the above proposition is analysed as meaning: "Some one wrote Waverley and no one else did, and that some one also wrote Marmion and no one else did." This may be more simply expressed by saying that the propositional function "*x* wrote Waverley and Marmion, and no one else did" is capable of truth, *i.e.* some value of *x* makes it true. Thus the true subject of our judgment is a propositional function, *i.e.* a complex containing an undetermined constituent, and becoming a proposition as soon as this constituent is determined.

We may now define the denotation of a phrase. If we know that the proposition "*a* is the so-and-so" is true, *i.e.* that *a* is so-and-so and nothing else is, we call *a* the denotation of the phrase "the so-and-so." A very great many of the propositions we naturally make about "the so-and-so" will remain true or remain false if we substitute *a* for "the so-and-so," where *a* is the denotation of "the so-and-so." Such propositions will also remain true or remain false if we substitute for "the so-and-so" any other phrase having the same denotation. Hence, as practical men, we become interested in the denotation more than in the description, since the denotation decides as to the truth or falsehood of so many statements in which the description occurs. Moreover, as we saw earlier in considering the relations of description and acquaintance, we often wish to reach the denotation, and are only hindered by lack of acquaintance: in such cases the description is merely the means we employ to get as near as possible to the denotation. Hence it naturally comes to be supposed that the denotation is part of the proposition in which the description occurs. But we have seen, both on logical and on epistemological grounds, that this is an error. The actual object (if any) which is the denotation is not. (unless it is explicitly mentioned) a constituent of propositions in which descriptions occur; and this is the reason why, in order to understand such propositions, we need acquaintance with the constituents of the description, but do not need acquaintance with its denotation. The first result of analysis, when applied to propositions whose grammatical subject is "the so-and-so," is to substitute a variable as subject: *i.e.* we obtain a proposition of the form: "There is *something* which alone is so-and-so, and that *something* is such-and-such." The further analysis of propositions concerning "the so-and-

so" is thus merged in the problem of the nature of the variable, *i.e.* of the meanings of *some, any,* and *all.* This is a difficult problem, concerning which I do not intend to say anything at present.

To sum up our whole discussion: We began by distinguishing two sorts of knowledge of objects, namely, knowledge by *acquaintance* and knowledge by *description.* Of these it is only the former that brings the object itself before the mind. We have acquaintance with sense-data, with many universals, and possibly with ourselves, but not with physical objects or other minds. We have *descriptive* knowledge of an object when we know that it is *the* object having some property or properties with which we are acquainted; that is to say, when we know that the property or properties in question belong to one object and no more, we are said to have knowledge of that one object by description, whether or not we are acquainted with the object. Our knowledge of physical objects and of other minds is only knowledge by description, the descriptions involved being usually such as involve sense-data. All propositions intelligible to us, whether or not they primarily concern things only known to us by description, are composed wholly of constituents with which we are acquainted, for a constituent with which we are not acquainted is unintelligible to us. A judgment, we found, is not composed of mental constituents called "ideas," but consists of a complex whose constituents are a mind and certain objects, particulars or universals. (One at least must be a universal.) When a judgment is rightly analysed, the objects which are constituents of it must all be objects with which the mind which is a constituent of it is acquainted. This conclusion forces us to analyse descriptive phrases occurring in propositions, and to say that the objects denoted by such phrases are not constituents of judgments in which such phrases occur (unless these objects are explicitly mentioned). This leads us to the view (recommended also on purely logical grounds) that when we say "the author of Marmion was the author of Waverley," Scott himself is not a constituent of our judgment, and that the judgment cannot be explained by saying that it affirms identity of denotation with diversity of connotation. It also, plainly, does not assert identity of meaning. Such judgments, therefore, can only be analysed by breaking up the descriptive phrases, introducing a variable, and making propositional functions the ultimate subjects. In fact, "the so-and-so is such-and-such" will mean that "x is so-and-so and nothing else is, and x is such-and-such" is capable of truth. The analysis of such judgments involves many fresh problems, but the discussion of these problems is not undertaken in the present paper.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Appearances and Real Existence

G. DAWES HICKS

VOLUME XIV

1914

EDITORIAL NOTE

The following paper by G. Dawes Hicks - "Appearances and Real Existence" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume XIV (1913-1914), pp. 1-48.

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XIV. APPEARANCE AND REAL EXISTENCE

G. DAWES HICKS

WE are being told by many of those who ought to know, that at the present time we are passing through a transition stage in philosophical thinking, and that there is being manifested, on all sides of us, a growing discontent with the constructive work of the generations immediately preceding our own. I confess that statements of this sort make less impression upon me than they would do had I not discovered that whenever philosophical inquirers endeavour to take stock of the achievements of the age in which they live, they are almost invariably to be found lamenting over the unsatisfactory condition of philosophical research. The stream of disparaging estimates took its rise at least as far back as Heracleitus, who discerned only an "art of mischief" (κακοτεχνίη) in the investigation that was going on around him. Plato's reiterated complaints about the status of philosophy in his day are too well known to be set down here, and even Aristotle, fond as he was of summarising the views of others, rarely does so without seeing in them either blurred and hazy anticipations of his own or else one-sided and crude misinterpretations of the truth. To Descartes, the fundamental conceptions of the contemporary philosophy seemed so infirm that the superstructure reared upon them would collapse before the slightest attack; Locke felt himself confronted with a "sanctuary of vanity and ignorance"; whilst Hume declared that "principles taken upon trust, consequences lamely deduced from them, want of coherence in the parts, and of evidence in the whole" were "everywhere to be met with in the systems of the most eminent philosophers," and were "bringing disgrace upon philosophy itself." I will not pursue the story; from Hume's day to this its course has been consistent with that which preceded it. "The crisis of modern speculation" is the title of a well-known essay of Ferrier's, and the truth is, I suppose, that to be perpetually in front of crises is an indication, so far as philosophy is concerned, not of decrepitude or of impending death, but rather of healthy and vigorous life. If philosophical thinking is progressive, it must, at every stage of its advance, be creating for itself new problems, and in view of their largeness and comprehensiveness, the situation can scarcely fail to present a certain aspect of hopelessness to the minds that are wrestling with them.

I do not conceive, then, that to speak of a crisis in the speculation of the present day implies any unusual state of affairs. But I have been more and more convinced of late that the subject to which I propose on this occasion to invite attention is being forced upon us by the various diverging lines of philosophical reflection which, during the last few years, have been

occupying our minds. Since the publication of Mr. Bradley's great work in 1893, no distinction has been more readily pressed into service as a means of making headway in metaphysical construction than the distinction between appearance and reality. Mr. Bradley explained with much care and precision the significance which the distinction had for him. Anything which comes short when compared with reality is called by him "appearance," meaning thereby not that the thing always itself is an appearance, but that its character becomes an appearance in any judgment we can make concerning it. Reality being conceived as the single Absolute Experience, immanent in finite centres of feeling but never wholly included in any one finite centre, it follows that the contents of a finite subject's experience will point beyond themselves, and will come to have for knowledge a meaning, this meaning being used as an idea, as an adjective qualifying that which is other than its own being. Appearance, therefore, will be constituted by the looseness of content from existence, by the "what " becoming alienated from its "that" and passing away towards another "that." Discursive knowledge will thus always be knowledge of appearance, because, on the one hand, it will always be knowledge of an adjective of reality, and on the other hand the adjective will not in itself be real. Moreover, because every such finite fact in order to complete itself must pass beyond itself, nothing in the end will be real except the Absolute, although every finite fact, as qualifying the Absolute, will possess a degree of reality, the degree depending upon the amount of supplementation required for its completion. How far this mode of interpreting the distinction is coherent and able to bear the weight of all that is made to repose upon it has been a well worn subject of controversy, but to Mr. Bradley belongs the credit at any rate of recognising the necessity of an attempt to formulate as unambiguously as possible the import of the distinction and its implications. In later treatments of metaphysical problems, however, I find the term "appearance," or equivalent expressions, freely used, but without any corresponding effort to make explicit and unmistakable the exact sense in which it is to be understood or how what it implies is to be interpreted. When, for example, Professor Ward tells us that, according to his system of monadism, "material phenomena are only the manifestation of minds,"[1] the reflection cannot be avoided that the whole crux of the position is contained in the perplexing notion of *manifestation,* employed to characterise the nature of the phenomena, and that until that notion is cleared up there are no means of testing the strength of the theory. Or, again, when we are told that in the metaphysics of Dr. Bosanquet and M. Bergson "there is practically entire agreement in the way in which the problem is presented," and that "in both theories the world as we know it in our everyday experience is appearance, and the reality has to be sought for,"[2] one feels, I think, at once that the latter statement could only be truly significant if the conno-

[1] *Realm of Ends,* p. 247.

[2] *Life and Logic,* by Dr. H. W. Carr, in *Mind,* October, 1913, p. 485.

tation, at all events, of the term "appearance" were for the two thinkers in question substantially similar. But if for the one "appearance is distinguished from reality by its selected or partial conditions," and approaches nearer and nearer to reality the more this defect is remedied, whilst for the other "appearance" is a fabrication of the intellect which no amount of supplementation could ever transform into the reality which has to be sought for, then I doubt whether much, or anything, is gained by trying to constitute an identity of problem in the two cases. Or, once more, when Professor Husserl persists in calling the pure science which he takes to be presupposed by empirical psychology on the one hand and by the criticism of knowledge on the other "Phänomenologie," he is availing himself apparently of a use of the term "phenomena" such as is baldly indicated in Brentano's remark that "neither ought natural science to be defined as the science of bodies nor psychology as the science of the soul, but the former is to be regarded as the science of physical and the latter in like manner as the science of psychical phenomena." Starting with this more or less popular acceptation of the word, Husserl describes the fundamental philosophical discipline, the field of which he is concerned to differentiate, as a *Wesenslehre,* a theory not of real but of transcendentally reduced phenomena, and he constitutes straightway, within the sphere of the phenomena as thus conceived, a distinction between *Tatsache* and *Wesen, Reales* and *Nicht-Reales*. Moreover, the inquiry into the groups of problems, the lines and methods of research, characteristic of the new science, does not proceed far until a further distinction, and a distinction of vital moment, has to be drawn. In the domain of the psychical there is no difference, he contends, between appearance and being; the psychical is experienced not as that which appears but as *Erlebnis,* and an *Erlebnis* does not present itself *(stellt sich nicht dar)* but is perceptible in immanent perception. In the domain of the physical, on the other hand, the case is very different. A *thing* is necessarily given in mere ways of appearance, because it is itself always transcendent, and can, therefore, as such never form part of the stream of living experience. The spatial thing is, indeed, notwithstanding its transcendence, directly given *to* consciousness; there is *in* consciousness no picture or sign which is immanently apprehended in the place of the thing itself. It is given, however, subject to the conditions imposed by the circumstance that consciousness is in a state of perpetual change and flux; it is given, too, in various settings and in different perspectives. As given, it shadows off *(sich abschatten)* in manifold directions, and it does so in consequence of its spatial relations to a vast number of other things. But *ein Erlebnis schattet sich nicht ab;* it is *absolutely* there, with all its qualities, etc., in immanent inner perception, and to speak of it as appearing, as presenting itself through adumbration, is senseless.[3] Stimulating and suggestive as Professor Husserl's analysis undoubtedly is, it suffers, I venture

[3] See Husserl's article in *Jahrbuch für Philosophie und pänomenologische Forschung,* Bd. i, 1913.

to urge, all through from the want of a preliminary determination of the precise meaning he intends the terms "phenomenon" and "appearance" to bear, and of the position to be assigned in the world of reality to what is denoted by these terms. I have taken simply examples that happened to be ready at hand. They could be easily multiplied, were it needful, from current philosophical literature.

In fine, it can hardly be gainsaid that in this reference, as in so much else in philosophy, we run the danger of allowing ourselves to be satisfied with a mere phrase. Certain it is that no metaphysical account of reality is in any way furthered by simply dismissing either some or all the features of the world of experience as merely apparent or phenomenal. Even though we go to the extent of pronouncing that which is specifically appearance to be illusory, still an illusion is none the less an entity that calls for explanation, and the ground of its possibility must be rendered intelligible if such procedure is to be justified as philosophically valid. It does not, indeed, require any great amount of reflective consideration to convince ourselves that many of our ordinary views of things are in a manner illusory, that they imply in regard to real existence what is wholly incompatible with that which we have good reason for thinking must be its nature. But, all the same, as given in experience, they must have corresponding to them something in the conditions under which experience comes about. *Wie viel Schein, so viel Hindeutung aufs Sein*—this dictum of Herbart's retains its validity, even though we reject entirely his mode of representing the constitution of the ultimately real. A conception of reality that leaves inexplicable those features of experience which we characterise as unreal fails undoubtedly in fulfilling one of the main functions required of such a conception.

I.

The consideration upon which I have just been laying stress can, perhaps, best be followed up by reference to the celebrated argument developed by Plato in the *Sophist*. It is one of the outstanding merits of that great dialogue that Plato connects with the larger inquiries of metaphysics what might at first sight be regarded as no more than a problem of psychology or of epistemology. He sees that the feature of unreality attaching to the notion of phenomenon cannot be disposed of by the easy device of dismissing that feature as a subjective error, incapable of belonging to the world of fact. He sees that at the root of the distinction between appearance and reality there lies the fundamental question as to the interpretation to be put upon negativity as a characteristic of what is known, and it would not be untrue to say that he here treats the notion of μὴ ὄν as the crucial notion in a system of philosophy.

"That a thing should appear and seem to be, and yet not be, or that a

man should assert what is not true—all this," declares the Eleatic Stranger, "is now, as it always has been, a matter of profound difficulty." And the difficulty arises because the Sophistic doctrine that what seems to a man real or true is real or true for him, and that consequently there is no such thing as falsity, accords, after a fashion, with the dictum of Parmenides that only being is and non-being is not.

By a series of steps, each of them sufficiently obvious, the Eleatic Stranger reaches a position from which it becomes clear that the dictum of Parmenides will have to be abandoned. In the first place, if non-being (μὴ ὄν) be taken to signify pure nought or nothingness, then non-being is not predicable of any being, nor of any existing thing (τὶ), for to speak of a thing in abstraction from all being is evidently impossible. And, in the second place, being is not predicable of non-being, as thus understood, and since number possesses being, we cannot speak either of μὴ ὄν or of μὴ ὄντα, and this means that to affirm even the unthinkableness or inconceivability of non-being is contradictory, for these terms, no less than the copula of the judgment, all imply the conception of number and χωρὶς ἀριθμοῦ non-being cannot be so much as named. To fall back, therefore, in arguing against the sophists, upon the notion of appearance or of image (εἴδωλον) would, on the supposition in question, be manifestly futile, for the demand would then immediately be made, to say what it is that is meant by an appearance or an image. Were it to be defined as a sort of other, or counterpart, of the true (τὸ πρὸς τἀληθινὸν ἀφωμοιωμένον ἕτερον τοιοῦτον), it would be requisite to admit that in that case the ἕτερον must in some sense *be (*ἔστι γε μήν πως), for the description of it as ἐοικός would otherwise be nonsense. And if being, in any sense, is to be ascribed to it, how is such being to be pronounced false or fictitious?

"A strange interweaving (συμπλοκή) of being and non-being is that in which we are involved," exclaims Theaetetus, and in fact the epithet συμπλοκή, extracted from him in a moment of bewilderment, affords the key to the whole situation. For when the theory of Parmenides is further tested, it turns out that the idea of nought, in the sense in which Parmenides opposed it to the idea of being, is (to use Bergson's phrase) a pseudo-idea, which, when seriously entertained, envelops the idea of being in no less perplexity than that by which it is itself encompassed. Whether the universe of reality be conceived as in nature a plurality or a unity, the perplexity is equally patent. If as the former, then, in regard to any two elements, being must either be regarded as a third element over and above the two, or as one of them, or as both, and whichever alternative be chosen, the difficulty will be to explain how the elements can be two and yet in another aspect one. If as the latter, then, presuming names stand for real characteristics, by describing the real as both being and unity, we are forthwith committing ourselves to a plurality. The εἰδῶν φίλοι, for example, constitute a radical antithesis between οὐσία and γένεσις, and contend

that the latter is absolutely distinct (χωρίς) from the former. According to them we participate in becoming through means of the bodily senses and in true being through means of the mind's rationality (διὰ λογισμοῦ). But there arises at once the question, what is implied by this process of participation (τὸ κοινωνείν) which is asserted of both? Does it not point to a feature which both the contrasted terms, οὐσία and γένεσις, possess in common? The thinkers referred to deny that being involves that which the phrase "participation" might be thought to indicate,—a certain power, namely, of acting and of being acted upon,—and persist in confining this power to becoming. Yet, surely νοῦς, the entity by which *ex hypothesi* true being is apprehended, would itself become unintelligible were it conceived as devoid of activity and life. In short, do what we will, we shall be forced to the admission that κίνησις and στάσις, opposing principles though they be, both *are,* and since it would be absurd to say either that both move or that both rest, or that being is a combination of both, there is no course left save to recognise that by being, in this connexion, is meant a third principle distinguishable from either, but in which both share.

The outcome of the dialogue, then, so far, has been to show that the relation of ὄν to ὄν is no less obscure than the relation of ὄν to μὴ ὄν, and to emphasise the importance of the concept of κοινωία in dealing with the whole problem which has thus emerged. The next advance consists in establishing the fact that some entities are in communion with one another whilst others are not. Selecting the three εἴδη already referred to, viz., ὄν, στάσις, and κίνησις, it is noted that whilst the last two are each in communion with ὄν they are not in communion with one another. Moreover, since each of the three is the same with itself and is other than the remaining, there may be added ταὐτόν and θάτερον to this list of the principal or leading εἴδη. If now we take any one of the five, say κίνησις, we may say that it is other than στάσις and is, therefore, not στάσις; that it participates in ὄν and is, therefore, ὄν; that it is other than ταὐτόν and is not, therefore, ταὐτόν, although it is the same with itself and is, therefore, ταὐτόν; that it is other than θάτερον and is, therefore, both ἕτερον and οὐκ ἕτερον; that it is other than ὄν and is, therefore, not ὄν, although in a different sense we have seen that it is ὄν. So that κίνησις is at once being and non-being, and a like assertion would be true of the other εἴδη mentioned, ὄν itself included.

A point of view is in this way obtained from which a new interpretation can be offered of the conception of μὴ ὄν, and a fundamental difficulty can be thus removed from the notion of appearance. By non-being we do not, in truth, denote the absolute opposite (ἐναντίον) of being, but only that which is the ἕτερον of being, that which is different from it. This conclusion becomes, indeed, inevitable so soon as the element of difference is admitted at all. When being is recognised as that which is common to the complex objects of the determinations of thought, then non-being must evince itself as the negative side or aspect of those determinations,

and as, therefore, no less οὐσία than ὄν itself. All the εἴδη participate in being, for they all are, but each is distinguished from being as itself an εἶδος. They are, but they are not it; they exist, in other words, but they are not existence. Or, to bring out the point in the reverse way, existence as an εἶδος is distinguished from, that is to say, participates in otherness in relation to, all the remaining εἴδη. Existence is itself, but it is not the indefinite variety of existing entities. The negative particle distinguishes between positive existences, and even a negatively determined existence "has many predicates," or positive contents. Accordingly, non-being, in the sense of otherness, is the element of connectedness in multiplicity, or the conceptual expression for the pervading continuity that permeates the realm of difference. The theory of κοινωνία εἰδῶν, which Plato is here developing, requires, in short, as its necessary presupposition the principle of negativity, in the sense explained. And the conception of the κοινωνία subsisting between the εἴδη in the realm of ultimate reality leads at once to the conception of a κοινωνία subsisting between the εἴδη and the so-called things of sense-perception; indeed, the latter conception is no more than a consistent development of the former, for a thing, in so far as it is knowable, is just a group or system of certain εἴδη. The non-reality or relative non-existence attaching to the world of generation means for Plato the impossibility of knowing it without reference to something else, and the fact of its pointing to something else in whatever knowledge we could be said to have of it.

I have used the term "existence" as the equivalent of οὐσία, but Lotze's well-known protest against doing so has not been absent from my mind. Lotze urged that the Platonic doctrine had been grotesquely misrepresented by the notion that Plato had ascribed to the εἴδη a mode of existence apart from things and yet of like kind with the existence of things. The reality, however, which Plato intended to assert of the ideal world was the reality of truth or validity (*Geltung*), and not the reality of actual existence or occurrence. The latter kind of reality accrues no doubt to the ideal elements in those moments in which they become, as objects of an act of presentation, members of this changing world of existence and genesis, but the recognition or thinking of a truth does not involve its having been then and there created for the first time; and Plato was referring to the timeless validity that truth possessed altogether independent of its ever finding manifestation in the world of existence or a place as an object of knowledge.[4] So far as Lotze's contention merely implies that the εἴδη were not conceived by Plato after the manner of "things," and that Aristotle was unjust to the Platonic theory when he described the εἴδη as reduplications of the particulars of sense, no doubt, I think, can be entertained in respect to its soundness. But I question whether the distinction between the true and the existent, as it is drawn by Lotze, is correctly attributable to Plato.

[4] Lotze, *Metaphysic,* § 316 *sqq*.

For one thing, the fact that in the very dialogue we have been considering (*Sophist,* 249 A) movement and activity are expressly claimed for the εἴδη presents in itself strong evidence to the contrary. And the general tendency of Plato's thought can hardly be said to be reconcilable with the antithesis which Lotze supposed to have been explicitly in his mind. Rather would one say that quite simply and directly Plato identifies existence and truth, objective being and universal validity. The εἴδη constitute, in his view, the real objects of knowledge; they are the sources from which the world of phenomena derives whatsoever measure of existence it may be said to possess. And quite in accordance with this way of regarding Platonism, we find Plato taking for granted that a distinction in thought must have invariably an exact correlative in the sphere of existence. Always his problem is to show how existence of the more special, concrete kind is deducible from existence of a general, abstract kind, and the constant difficulty confronting him is that of vindicating the claim not of the εἴδη, but of the particulars of sense, to the predicate of existence.

Nevertheless, apart from the legitimacy of crediting it to Plato, the distinction upon which Lotze insisted is unquestionably of vital moment in regard to the problem I am here considering. Lotze's phrase "the validity of a truth" may have been badly chosen, and we may be satisfied to substitute for it the now current phrase "subsistence of a universal." But the important matter was, at any rate, to make clear that a fundamental error is committed when the contents of truth are forthwith identified with the contents of existence. Equally important is, however, the further question whether the concrete, particular things of the realm of existence are rightly described as phenomena or appearances. Lotze held that in the act of apprehension, the content apprehended, whether universal or particular, becomes *ipso facto* an existent entity, and that it owes its existence to a creative function on the part of the mind. It is that assumption, widely prevalent in one form or another, that I wish particularly to examine, and for that discussion the result of Plato's inquiry in the *Sophist* will prove to be helpful.

II.

I can, I think, best bring to light the bearings of the particular issue I wish to raise by first of all briefly examining the modes in which the problem of the relation of appearance to reality has been dealt with in certain historical systems of philosophy. I select for this purpose the systems of Plato, Kant, and Hegel respectively, because in large measure they exhaust between them the solutions which have hitherto been attempted.

1. In the midst of the conflicting opinions entertained by modern scholars in regard to what is to be accepted as genuine Platonic doctrine, one cannot profess to handle with confidence those features of the material

with which we are here specially concerned. Plato's speculation proceeds throughout under the influence of a thought which he rarely makes explicit, the thought, namely, of the ideal or real world as being that which is capable of being known by reason (νοῦς). The temptation is strong, especially in view of the later Neo-Platonic development, to convert this implicit thought into the concrete picture of an infinite mind, the contents of whose intelligence are the εἴδη or ideal essences. And then it is easy to suppose that, after the fashion of certain modern systems, Plato conceived of the infinite mind as differentiating itself into a number of finite minds, and of sense phenomena as being ways in which these finite minds, in consequence of their finitude, imperfectly represent to themselves the truly real. But such a mode of interpretation goes far beyond anything that is to be found in the Platonic texts themselves. The implicit thought by which, as I have said, we do know Plato was influenced, is never employed by him to fulfil the purpose for which the concrete picture serves, namely, to explain the existence of the εἴδη. And it is not so employed for the very good reason that from Plato's point of view their existence stood in need of no explanation. Bather is it employed by him as the means by which a definite relation may be seen to subsist between the world of Ideas and the world of phenomena. The implicit thought is developed, no doubt, into the conception of the World Soul (ψυχὴ τοῦ κὸσμου), characterised by the two functions of knowing and of originating movement. As possessed of these two functions, the Soul can produce change in the realm of the mutable in accordance with a rule or law derived from its vision of the true reality, and its work is represented as bringing about within the region of space-extension something having an intelligibility corresponding at least to the intelligibility with which it is familiar in the realm of Ideas. This trend of reflexion can undoubtedly be traced in the *Timaeus* especially. But to the notion of the World Soul in particular I am persuaded it would be an error to attach too literal a significance, and to take Plato to be instituting a mechanical separation between it and the world of Ideas. It is, I should say, his figurative way of expressing one aspect of the latter, for, after the emphatic declaration in the *Sophist* (249, A) that παντελῶς ὄν cannot be devoid of life and intelligence, one can scarcely be right in regarding the ideal world as merely a separate model requiring to be supplemented in order to give rise to the concrete particulars of experience. Nor does it seem to me consonant with sound exegesis to attribute to Plato the doctrine that "'things' are not separate entities, external to the mind, but sensations existing within it."[5] Neither space nor time are, in Plato's view, subjective, and, as regards even the secondary qualities of bodies, it is hard to reconcile his admittedly uncertain utterances in respect to them with the assertion that they are merely sensations existing within the mind.

Whilst, then, not disputing that a certain measure of justification can

[5] Jackson, *J. of Philology,* vol. xiii, 1885, p. 21.

be offered for interpreting the Platonic theory after the manner just indicated, I think one is able to trace in the Platonic writings a mode of viewing the world of phenomena which does not throw the burden of explanation upon the constitution of the apprehending mind. I have already referred to the way in which in the *Sophist* the contention is maintained that there must be systematic relatedness, κοινωνία, among the εἴδη in order that intelligible apprehension of them should be possible, and to the emphasis which, in the attempt to determine which εἴδη are communicable with which others, is laid upon the all-important pair of Ideas, ταὐτόν and θάτερον. Each εἶδος is one with itself and shares in the nature of Being and the Same; it is also other than all the εἴδη besides itself, and shares, therefore, in the nature of Non-being or Difference. I conceive it is to this notion of ἕτερον, which, it is true, is not worked out in such a manner as to enable us to speak with certainty, that we must look for a means of understanding the non-being which Plato is wont to regard as characteristic of what is phenomenal. With the conception of the entire realm of the Ideas as being interpenetrated by the form of otherness, Plato combined the position reached by him as the result of his early advance from the Socratic doctrine,—the position, namely, that the εἴδη presented an orderly arrangement from the more general to the less general, that they formed a graduated scheme of existence comprising within itself without breach of continuity the sum total of what could lay claim to the title real. Confronting him, in this attempt, was, however, on the one hand, the boundless region of indeterminate particulars, and, on the other hand, the form of otherness or difference as the inevitable shadow, so to speak, of the ideal world itself. If, now, we follow up this conception of θάτερον, it is not, I think, difficult to see that the realm of phenomena was for Plato a metaphysical necessity,—not a merely contingent creation of some external artificer. He declares, it is true, that the ideal world cannot be the ground or cause (ἀιτία) of what is variable and transient. And in the *Timaeus* we find him insisting upon the necessity of some third entity which, whilst affording a place for all that comes into being, should be itself eternal. But this third element is not simply an extraneously introduced *tertium quid*. It is described as the receptacle (ὑ π οδοχή) and nurse of all becoming, which is apprehensible by a sort of spurious reason (λογισμῷ τινὶ νόθῳ), and is identified by Plato with space (χώρα), which again Aristotle expressly informs us Plato took to be identical with ὕλη *(Phys.,* 1, 9). Space is contemplated by Plato as the very essence of otherness, the pure form of difference; and, as regards positive characteristics, if it will admit, with any tolerable security, the application to it of the term τοιοῦτον, we ought, he thinks, to be content. It is not, indeed, separable from the Ideas. Like them, it is identical with itself and is eternal (ταὐτόν ἀυτὴν ἀεὶ προσρητέον), and although it is only by a λογισμὸς νόθος that it is apprehended, yet the process of apprehension is λογισμός and not αἴσθησις. On the other hand, however, it is emphatically distinguished from the Ideas. There clings to it

something unfathomable, something incomprehensible. As the content of a notion it is something χαλεπὸν καί ἀμυδρόν, and the manner in which it participates in the intelligible (νοητόν) is, we are told, most bewildering and hard to grasp. For the ὑποδοχή is in no way determinable; it is absolutely formless and void. In and for itself, it is not productive of anything; it is not that out of which (ἐξ οὗ) but that in which (ἐν ᾧ) things become. In short, in relation to the whole realm of Ideas, it is just the element of μὴ ὄν which, according to the argument of the *Sophist,* is inherently involved in the notion of being. This conclusion is almost expressed in the *Timaeus* in so many words, for the γιγνόμενον is described as μεταξύ in reference to the Idea on the one hand and the ὑποδοχή on the other, and it is a familiar Platonic doctrine that a γιγνόμενον stands midway between being and non-being. As projected, then, into space, or, if the phrase is permissible, as presented under the form of externality, the εἴδη come to appear as though they were differentiated into a multiplicity of shapes or images (εἰσιόντα καὶ ἐξιόντα); the parts of space being characterised by their side-by-sidedness, the self-identity of the ultimate reality assumes, under these circumstances, the aspect of innumerable copies or likenesses (μιμήματα τῶν ἀεὶ ὄντων). Along this line of reflexion it was natural that Plato should have assigned the importance he did to the mathematical aspects of phenomena. The material substratum of a thing, as he conceived it, was nothing else than figured space, which is capable of expression in numerical ratios, and geometrical forms were the ways in which the εἴδη found representation in the otherness of spatial extension. In fact, the so-called μαθηματικά occupy in Plato's system a sort of intermediary position between the εἴδη and αἰσθητά, and serve to bridge the interval between the singleness of the former and the multiplicity of the latter. And in the well-known passage of the *Republic* (vi, 509 D, *sqq.)* where the four stages of intelligence are discussed, numerical ratios are represented as standing in much the same relation to the Ideas as, amongst δοξαστὰ, images (εἰκόνες) stand to tangible things.

For our present purpose the main interest of Plato's treatment consists in the essentially objective attitude which, according to the trend of reflexion I have been following, he consistently preserves. Neither ultimate realities nor phenomena are regarded by him as depending for their existence upon mind. As I have said, even the secondary qualities of material objects can scarcely be described as in his view subjective in character. Rather does he seem to say they arise as the conjoint result of the fundamental geometrical properties of things on the one hand and the specific nature of the bodily organism on the other. "The general problem with which the theory of Ideas is concerned," says Professor Adamson, in one of those profound remarks of his which go to the very root of the systems of thought with which he may be dealing, "may be defined as the explana-

tion of the world of generation."[6] Plato attempted, no doubt, to force his way to a solution of the problem along more roads than one, but the direction of his thought which I have been trying to indicate is, I am convinced, that which accords most with the fundamental principles of his philosophy. And what it comes to is, in short, this—that the distinctive features of the phenomenal world rest, as thus conceived, upon the peculiarities of spatial extension, which is, in its turn, a necessary accompaniment of the non-spatial realm of real existence. I dwell not now on the inherent difficulties of the Platonic doctrine—difficulties which may be said to confront every attempt to apply a purely deductive method in philosophical speculation. Whosoever seeks to deduce from the nature of absolute being the character and structure of what is relative and particular must find it, and invariably does find it, impossible to extract from the former that in which the latter specifically differs from it. Plato's endeavour, strenuous though it was, to show that the world of particulars follows necessarily from the nature of absolute being is no more successful than later endeavours of a similar kind. Much as he strives, in order to meet the exigencies of his theory, to avoid attributing to space positive characteristics, he cannot help doing so, and it is obvious that such metaphorical expressions as μέθεξις and μίμησις throw no real light upon the relation supposed to hold between the Ideas and things. Despite every effort, the two worlds will fall asunder, and the notion of the systematic unity of real existence cannot, on this basis, be sustained. But when so much has been admitted it would be absurd to conclude that the value of Plato's work has disappeared. On the contrary, I believe modern research is leading us to see the profound significance of much, in the *Timaeus* especially, that has usually been taken to be fantastic imagery. And particularly, so far as the question we have before us is concerned, Plato, I think, was certainly on the right lines in directing attention to space as an essential consideration in respect to the nature of sensible appearance. Whether he was justified in regarding space as the εκμαγεῖον, the plastic material capable of being moulded into any form, I have not now to discuss, and it may well be the case that upon this doctrine he found it difficult to differentiate between εἰκόνες and things. But that space is a condition of the possibility of εἰκόνες is a truth which the idealistic tendencies of subsequent philosophy have too often obscured from view.

2. In Kant's mode of handling the problem, the attitude has profoundly changed. As employed by Kant, the term "phenomenon" sums up of itself much that is the direct opposite of the course of reflection pursued by Plato; it indicates, on the one hand, that which alone in the strict sense can be said to be known, and on the other hand, the essentially relative character attaching to knowledge in Kant's view of it. With scarcely less unreservedness than Plato, Kant institutes a fundamental severance be-

[6] *The Development of Greek Philosophy*, p. 128.

tween the functions of sensibility and thought, the one pure receptivity, the other pure spontaneity; but thought as he conceives it has no objects of its own, and no means of transcending the limits imposed by sense. On the other hand, it is Kant's purpose to show that what constitutes the reference, as he expresses it, in the apprehended content to an object can never be given, or extracted from the given. The given as such has no mark of the orderliness, the uniformity, the connectedness, which points to the contrast between subjective impressions and objective fact. Thought, cannot, therefore, abstract from sense-data the notion of object. Without putting to himself the question, how we know that sense-affections *are* produced in us at all, Kant takes for granted that they are, and is satisfied to accept as a sufficient criterion of what is not thus produced but is supplied by the mind itself the characteristics of universality and necessity, or, in other words, of objectivity. Those elements in the perceptive material which we call space and time, and the categories by means of which order, uniformity, connectedness, are introduced into that material, must, therefore, be regarded as *a priori* factors in the complex whole of experience. But inasmuch as these factors are formal only, inasmuch as the entire qualitative content of what is apprehended is of the nature of produced sense-affection, the object known can only be an appearance in the mind and not a reality independent of it. Kant, indeed, was committed to this conclusion by the initial assumption with which he started. If sensibility and thought be viewed as fundamentally disparate functions, and if the object known be regarded as made up of factors contributed by each of these functions, then the said object must be held to be of the nature of a *product* or *construction,* in which the two detached sets of elements have been compounded or welded together. In that case, the process of synthesis will resolve itself into a process of making, and it will be difficult to see how a process which consists in making an object can at the same time be a process of knowing it as already made. Moreover, if thought be conceived as an instrument whereby the given material of sense is worked up into the form of organised experience, the resultant, even admitting it could be a content known, will inevitably occupy the position of a *tertium quid* between the cognising mind and the world of reality. That, indeed, is precisely the ground of Kant's contention that things in themselves are outside the context of experience and cannot be known. But, then, in that case, the difficulty confronts him that it is not reality but appearances that appear; and to speak of such appearances as appearances *of* reality is meaningless.

The difficulty just mentioned did not fail to force itself upon Kant's notice, and along various lines of reflexion he is to be found wrestling with it. It will be sufficient to refer to one of these. He had reached the conception of nature as a complex of phenomena in space and time connected together by the general relations summed up in the category of reciprocity.

Nature was a whole, each part of which was connected with other parts according to general laws. But within that whole a possible object might be either an object of inner experience or an object of external perception. And the question arises how the distinction, which is thus recognised, between what is real as a portion of the inner life and what is real as a portion of what is taken to be the external world is to be construed. The familiar method of regarding external perception as representative of something existing independently of experience and inner perception as having no such reference could not be followed by Kant. The difference, whatever it was, could only, according to his view, be expressed in terms of experience and not in terms of that which *ex hypothesi* was not and could not be within experience. It could not, therefore, be assumed that an external perception referred to a thing-in-itself and was, on this account, distinguished from an internal perception. Still less could the reality of an internal perception be distinguished from that of an external perception on the ground that in the one case it does and in the other does not adequately represent the thing-in-itself, seeing that the thing-in-itself has as little relation to inner as to outer perception. Both the material object and the self as an object are alike immediately apprehended parts of the context of experience. How, then, do we come to determine the one as an outer object and the other as an inner object? Kant maintains that the distinction is based on the primary and irreducible difference between the space-occupying and the non-space-occupying. All the contents of intuition are in time, some are also in space, or have space as their formal element. Irreducible, Kant calls this difference, and he steadfastly insists that the perplexity in which we are apt to find ourselves when we try to conceive how the inner life should be connected with external corporeal fact can in the long run be traced back to the error of supposing that an answer is possible to the question *why* our intuitions should take these two forms. The difference, then, is ultimate, and on the ground of this ultimate difference, he argues, problematic, or Cartesian, idealism calls to be rejected. The representatives of problematic idealism had always tended to interpret space as being in its own nature excluded from mind, as being, in fact, the characteristic mark of material or non-mental realities. Naturally, therefore, they had taken the judgment which asserts the existence of extended, space-occupying, objects to be the result of an inference, based upon premises which were themselves judgments respecting the non-extended, non-spatial, facts of the inner life. Such a judgment of existence must accordingly be problematic in character. The critical theory of space as a form of perception had, however, changed the situation. The space-occupying reality could no longer he regarded as lying outside of, or as constituting the opposite of, mind. On the contrary, it was part of the experience which went to build up the mind. Consequently, argued Kant, the apprehension of the space-extended is no less direct and immediate than the apprehension of non-spatial inner states.

But now, although doubtless it may be made out in this way that the space-extended is directly apprehended and not inferred, it is obvious that so far Kant has not touched the problem as to what is involved in the judgment that a particular external object *exists*. Space-extendedness, considered merely as a characteristic of the content of apprehension, will not in itself supply the additional element needed in order to justify the judgment of existence, save indeed such existence as may be ascribed to the content of perception itself and which would belong to contents of mere phantasy no less than to contents of perception. It ought to have been clear to Kant from the outset that neither problematic nor any other idealism can be refuted by emphasising the characteristic of space-extendedness which is possessed by the contents of dreams and illusions no less unmistakably than it is possessed by the contents of actual sense-perception. Since the judgment that a particular object exists evidently goes beyond the presented content, and implies in its very nature that which is distinct from the presented content, it is futile to offer a characteristic of the latter as its justification. The reference in such judgment is, as Kant himself recognises, to a real existing thing as distinct from the *Vorstellung* of it. Is, then, this real existing thing to be conceived as a thing-in-itself? No, replies Kant, for it can be characterised in no other terms than terms of experience. It is essentially an empirical thing—a thing in space and time, and subject to the conditions imposed by the categories. None the less such empirical thing must be taken to exist, and to exist as distinct from the content of the *Vorstellung* of it. It exists, that is to say, independently of the sense-content in and through which it is apprehended. And later Kant is to be found defining this empirical thing as the movable in space, and declaring it to be the precondition of the awareness, on the part of the conscious subject, of his own existence in time. The assumption of the existence of empirical things, as distinct, on the one hand, from the mere contents of the *Vorstellungen* of them and, on the other hand, from the hypothetical things-in-themselves, is a standing difficulty of the Kantian conception of phenomena, and it is a difficulty from which Kant certainly never succeeded in extricating the critical theory. He is constrained, in short, to describe both the empirical thing and the content of the *Vorstellung* of it as equally phenomena, although the very reasons he assigns for maintaining the phenomenal character of the latter are precisely those which, according to his own analysis, would be absolutely untrue in regard to the former. Kant's difficulty is curiously enough parallel to the difficulty already noted in the Platonic theory, according to which both εἰκόνες in the stricter sense and tangible objects are grouped together as δοξαστὰ. In fact, corresponding with Plato's phrase εἰκόνες, Kant frequently speaks of phenomena, when he is using the term for the contents of *Vorstellungen,* as images (*Bilder*).

An *impasse* of the kind I have been indicating is surely in itself sufficient to induce us to return upon the conception of an object as a complex

of sense-impressions unified by means of the relating activity of thought, and to ask the question whether that conception is in truth justified. I would submit that there is, in fact, no warrant for either of the assumptions it involves. As I have tried to show in previous communications to this Society, sense-perception and thought do not evince themselves, on psychological analysis, as two disparate functions, each complete in itself. Bather must we regard their developed forms, in which alone they seem to afford ground for thus separating them, as two stages in the evolution of the one common process of apprehension, which process is in kind generically similar throughout. Now this result carries with it the necessity of radically changing our ordinary notions of the nature both of sense-perception and of thought. On the one hand, the notion of sensibility as passive receptivity must be wholly, and not merely partially, discarded. What is given to the mind, in other words, is never so much impressed material, never an affection, which, in order to be experienced, must be incorporated into the mind's own structure; what is given to the mind, if we retain a phrase that has become misleading, is a real existent entity which is and remains other than the mind itself Stimulation, impression, affection—these appertain to the sense organs and the cerebral mechanism alone; the mental process which occurs in conjunction or correlation with these bodily changes is an act of discriminating and discerning—of discriminating and discerning not what is *in* the mind, as its processes are in it, but what is presented *to* the mind, or given to the mind, in the sense just explained. On the other hand, whilst in one sense, it is true, an act of combining or relating, thought will not be conceived as performing the specific kind of synthesis which Kant attributed to it. For whereas sense-impressions or affections could not be *received* as connected, what is *presented to* the mind for discrimination not only may be, but must be, a connected whole. And the act of distinguishing and recognising the given relations as such will be explicable as a more elaborate mode of the process by which the qualities and features of what is presented are discriminated and apprehended. These changes involve, no doubt, a considerable departure from Kantian doctrine, but they may not unfairly be said to follow from a more rigorous attempt to be faithful to the critical method. So soon as they are made, the grounds that weighed with Kant for insisting upon the phenomenal character of empirical things vanish. An empirical thing is certainly not a thing-in-itself, if by that be meant an unknown and unknowable entity. But there is no reason for refusing to recognise it as a veritable fact of the real world. It stands on an altogether different level from the appearances in and through which it is apprehended.

3. The line of reflexion pursued by the Post-Kantian idealists, and especially by Hegel, whilst in certain respects taking the direction I have just been indicating, tended in other respects to confuse its true outcome. Hegel may certainly be credited with having realised with clearness and

distinctness the fundamental identity of nature pervading the apprehending process throughout the various phases of its evolution. Some of his best and most fruitful work was devoted to tracing the way in which cognitive experience progressed, through a continuous and unbroken course of development, from its first crude beginning in mere sense immediacy to the higher ranges of intellectual comprehension and rational insight. But the dominating conception of Hegel's advance from the Kantian standpoint consisted in his elaborate attempt to exhibit the world of experience as due to the orderly constructive operation of thought or self-consciousness. By thought was certainly not meant, what critics of the system have often argued as though it did mean, the subjective activity of the individual mind. Extending Kant's tentative suggestion of an "intuitive understanding," an understanding in which the universal produces and determines the particular, Hegel attained to the notion of an absolute mind or self-consciousness, that manifests its life or intelligence in the whole detailed structure of experience. According to that notion, the products of the constructive activity of thought are in no way to be regarded as dependent upon the individuality of a concrete subject; relatively thereto they are to be described as objective, and the distinction which the finite subject recognises between reality and its own procedure is to be taken to indicate an inevitable precondition of that conscious subject's awareness of its own finitude. Hegel might have admitted, he did in fact admit, that a finite subject may clothe the particular objects of its experience with many a character which expresses no more than the relation of such finite subject to the real which it apprehends, and that in a manner an addition of that kind may be said to be subjective. At the same time, he would have argued, we ought not to be oblivious of the consideration that this very clothing, this very addition, is itself an incident in the whole process of real development, so that the distinction of what we call the objective from what we call the subjective features of a thing rests upon no fundamental severance in the ultimate nature of reality. But empirical things, although independent, in the sense I have indicated, of the mental procedure of the individual mind, and although Berkeley's dictum that their *esse* consists in *percipi* be in truth wholly inapplicable to them, yet are not, in Hegel's view, to be credited with ultimate independence of being. They are, so he would insist, no more than particular ways in which the ultimate nature of real existence is exhibited not merely to finite intelligences but in itself. Regarded in isolation, no one of them is truly intelligible. Each becomes intelligible only in so far as it is related to the whole, only in so far as it is seen to be the expression of a universal principle of the absolute thought.

Looked at from Hegel's point of view, it is, then, this relation of the part to the whole that yields philosophical significance to the term "phenomenon." Phenomena are not merely appearances to an individual mind; they are appearances of that whose reality just consists in making

itself manifest. Essence, to use Hegel's own terminology, is the ground of existence; and essence which exists is what is designated a "thing." Each thing is one way in which the essence or the real makes its appearance, expresses itself extrinsically, and such measure of unreality as attaches to the notion of phenomenon indicates no more than the unreality which belongs to a part when taken in abstraction from the whole. The essentially real *must* appear or show itself,—that is the very characteristic by which it is distinguished from mere being. So that there is no ultimate antithesis to be drawn between a phenomenon and the real of which it is phenomenal. That antithesis which continually besets our thinking between things as they are and things as they appear is not an antithesis between two separate spheres of existence. Things as they appear are not external to or independent of things as they are; things as they are *do* appear, and are, in fact, nothing except in so far as they do appear. The contrast falls within experience itself and in no way points beyond it. And there is no difference in kind between the ways of knowing phenomena and the ways of knowing the real as such. The world of experience is one world, and any portion of that world, if regarded in isolation, carries with it the aspect of incompleteness, of contingency, of illusoriness, which forms one of the peculiarities of the ordinary notion of phenomenon or appearance. But this peculiarity is not in any special way a peculiarity of our subjective mode of apprehending. The absolute whole, just because it is absolute, cannot be *immediately* manifested, and on that very account there is bound to be a "beyond " to what is immediately apprehended. A law, for example, is, in a sense, "beyond" its manifestations, but the relation between them is not external or fortuitous. They are moments in a single process; the law "appears" in the detailed particulars which it is said to control; there is no law without particulars, and no law except *in* particulars. The Absolute, then, which forms the ground of finite phenomena, and issues forth, so to speak, into them, is not an indefinable other essence to be placed alongside of these particulars. It can only be interpreted in such a way as shall at once conform to the general principle of intelligence and at the same time allow of an intelligible connexion between it and the multiplicity of appearing particulars.

Quite apart from the metaphysical system on the basis of which it is worked out, there are, unquestionably, sufficient elements of permanent value in Hegel's conception of appearance to entitle it to consideration on its own account. To these elements I shall have occasion to refer in what follows. I direct attention meanwhile to features of the conception that seem to me of dubious stability. It can hardly escape notice that, when the ultimate relation of appearance to reality is under discussion, the main burden of explanation is thrown by Hegel upon the notion of "manifestation" or "expression." The minimum demand which the theory ought to satisfy is that it should offer some clear indication of what is to be under-

stood by the perplexing notion of *manifestation*. There can, I imagine, be little doubt as to the region of experience within which that notion, as ordinarily employed, takes its origin. It is that of our own practical activity. When a human agent realises an end previously represented to himself in idea, that which is accomplished is often said to be a manifestation of the mind or character of the agent. But the analogy breaks down hopelessly when, as in the philosophy of Hegel, it is applied to an absolute mind or to absolute thought. So far as the human agent is concerned, not only is the end dependent for its realisation upon a material environment, but the idea itself of the end is only formed by him in and through relation to that environment. Absolute thought, however, must be conceived as creating its own contents and constituting them as such into "manifestations." And that is just exactly what finite thought never does. It must, I think, be admitted that neither by Hegel himself nor by any of his followers has any serious attempt been made to explicate a notion upon which, as they employ it, so much depends. And this leads me further to note that the Kantian difficulty upon which I laid stress is only escaped by Hegelian thinkers through their simply denying the distinction between the contents of apprehension and empirical things. All phenomena—empirical things, with the rest,—are, according to their view, contents of apprehension. Or, as the doctrine is more familiarly expressed, subject and object mutually involve one another; neither can exist except in correlation with the other; they are inseparable factors in the unity of experience. The subject is that which is for itself through the object; the object, which has no being except for a subject, is that which is for the subject in virtue of the activity of the subject. As usually stated, the contention is open to the obvious charge of assuming what has to be proved. If by object be meant a content of apprehension, then clearly there can be no object without a subject, for, in that case, subject and object are correlative terms. But that in no way settles the question whether empirical things are objects in this sense. Even, however, though it be maintained on grounds less easily disposed of than this, the difficulty of the contention becomes evident when the corollary to it is added, that, in dealing with experience, we have to take account of both subject and object at once, for the one changes with the other. On the contrary, it would seem to be a fundamental postulate of knowledge that a fact is in no way changed through the circumstance that an individual mind comes to be aware of it. If the object changes with every change in the apprehending subject, and if all things are objects, we have the old problem upon our hands of finding any intelligible sense in which there can be for a community of minds any common world of things at all. In short, objective idealism, as thus represented, comes dangerously near to the weakest form of subjectivism.

III.

In the three important systems of philosophy to which I have been referring very different meanings are attached to what is described as phenomenon or appearance, and, as might therefore be expected, the denotation of the term as employed by any one of these thinkers does not correspond with its denotation as employed by the others. In the Platonic philosophy, the nature of phenomena is least of all regarded as dependent upon the minds of percipient subjects, but on the other hand Plato is most of all compelled to institute a rigid severance between the phenomenal and the real. In the critical philosophy, it may be said to be laid down as a cardinal principle that whatsoever is claimed to form part of the world of experience must be capable of being construed in terms of mind, and Kant tends to interpret this theorem as though it signified that the experience of a conscious subject consisted of *Vorstellungen* and was on that account phenomenal in character, although, as we have seen, he was forced to admit the existence of empirical things distinct from *Vorstellungen*, to allow their knowability, and hence to include them, on that account, within the sphere of phenomenal reality. Finally, in the Hegelian metaphysic, everything that can be objectively apprehended, although not necessarily a *Vorstellung* in Kant's limited sense of the term, is yet a content of mind and is in no case to be conceived as a "thing" existing independently of conscious intelligence.

With whatever consistency, however, empirical things are assigned in all three systems to the realm of phenomena, and it is largely, I think, due to this circumstance that the nature of those phenomenal appearances which, in any case, are certainly not empirical things has been, as I now wish to submit, so persistently misconceived. All the thinkers to whom I have been directing attention agree in ascribing the predicate of existence to phenomena or appearances. Now, certainly, if by phenomenon or appearance be meant an empirical thing or a determinate object of perception, which as apprehended is placed in relation to other empirical things or objects of perception and in a relation expressible by a general law or notion, then to dispute that phenomena exist would be, as Mr. Bradley puts it, "nonsense." "Successive appearance in space and time is," says Dr. Bosanquet, "what existence means."[7] And he thinks so because he takes successive appearance in space and time to consist of the empirical things or determinate objects which together constitute the world of our ordinary experience. So, too, Mr. Bradley emphatically asserts it to be "absolutely certain" that appearances exist. Yet Mr. Bradley himself can hardly be said to adhere consistently to that strong assertion. For he is to be found arguing in another place against the theory of "external relations " that any object, if taken apart from its place and position in the whole, is not an "existence" but a "character," which character can remain unchanged,

[7] *The Value and Destiny of the Individual,* p. 15.

though the existing thing is altered with its changed existence.[8] And since, according to his own account, an appearance is always more or less of a fragment taken apart from its place or position in the whole, the consequence would seem to follow that an appearance is not an existence, but simply a character. I am not, however, concerned to press that criticism now. The contradiction, if it be one, points, I think, to the importance of the consideration upon which I am anxious to insist.

Leaving, then, for a moment the question whether empirical things are rightly taken to be phenomena, I concentrate attention upon what, in ordinary common-sense speech, would be described as the "appearances" of such things as distinguished from their reality—in other words, upon what I may be permitted to call, for want of a better word, the "contents" of our perceptions, when our perceptive activity is directed, as we say, upon real objects. An example will serve to illustrate the problem we have to face. Let me take one that has recently become sufficiently popular. A table of a certain shape, with sheets of paper upon it, I am convinced is beside me as I sit writing. This table, or what I take to be this table, appears to be of slightly different colour from different points of view, and although I believe it to be really of the same colour all over, the parts of it that reflect the light will look brighter than the parts of it which do not. So again, if the opposite sides of the table are "really" of equal length, they will look as if the nearer side were longer; if they are "really" parallel, they will look as if they converged to a point away from the spectator, and so on. The question I wish to raise is, whether these various appearances can be said to exist *in the same sense* in which we unhesitatingly speak of the table itself as existing.

The answer to that question will largely depend upon the way in which we conceive these appearances to come about. If it be supposed that they arise in some way as an effect or consequence of the operation of the real thing upon the mind, or that they are produced through the operation of activities occasioned by the real thing upon the nervous mechanism of the bodily organism of the percipient, then doubtless the appearances must be regarded as existent entities. In that case, the appearances, conceived as distinct and separate from the real thing, will be taken themselves to constitute an object, and it will be *this* object and not the real thing that will be held to be immediately known. The produced object will thus be regarded as standing between the knower and the real thing, and the doubt will inevitably be awakened whether after all we are entitled to assume the existence, apart from them, of any real thing at all, which *ex hypothesi* could only in that case be mediately inferred and never directly apprehended. This whole mode of accounting for the act of perception seems, however, to me to be, for reasons I have urged elsewhere, and briefly indicated above, psychologically erroneous and untenable. If, on

[8] *Appearance and Reality,* 3rd ed., p. 578.

the other hand, we start from what Professor Alexander would describe as the compresence of the mind with the real thing, and if we recognise that what is occasioned by that compresence is not a new object, but, through the mediation of the bodily mechanism, an act or process of apprehending the real thing, then the appearances will not require to have a mode of existence ascribed to them independent of, and separate from, the reality of which they are appearances. They will evince themselves then as ways in which the reality itself is apprehended,—as partial, imperfect, incomplete ways in which the reality is known.

Proceeding, then, from the latter standpoint, I lay stress on the contention that appearances are not objects but are ways in which objects are apprehended. Now, Kant, as we have seen, when he is engaged in emphasising the wholly relative character of what he calls phenomenal experience, when he is desirous of distinguishing empirical things from things-in-themselves, uses as his most potent argument the consideration that empirical things are, in the long run, no more than *Vorstellungen,* presentations to the mind, and implies certainly that they are within the mind just as the knowledge of them is within the mind. But, as I have tried to show, this argument breaks down the moment the question is pressed as to what, in such case, is to be understood by the existence of an empirical thing. Kant was obliged to recognise that the object, to which, in his phraseology, the *Vorstellungen* referred, is not itself within the mind in the sense in which the contents of *Vorstellungen* may be said to be within the mind. If, therefore, in an act of perceiving, the empirical thing is the object apprehended, it follows that the contents of the *Vorstellungen,* in and through which the apprehension of this empirical thing is effected, cannot as such constitute that object. The notion that do constitute it only seems irresistible because we persist in looking upon sensibility as passive receptivity, as the receiving of what is given, in which case, of course, what is given can be no other than sense-data, sense appearances, and these must make up the object perceived. What, we shall then ask, as Kant asked, can empirical things be but phenomenal appearances?

The crux of the entire situation lies, I am convinced, here. The issue can be raised by referring to the assumed mental act it has recently been proposed to call "knowledge by acquaintance." That process is described as the direct or immediate awareness we have of anything without the intermediary of the process distinguished from it as the process of inference. Thus, it is argued, in the presence of a table I am acquainted with the sense-data making up the appearance of that table,—its colour, shape, hardness, smoothness, etc.; these are all things of which I am immediately conscious when I am said to be seeing and touching the table. Knowledge of the table as a physical object, on the other hand, is, it is maintained, not direct knowledge, but is obtained, such as it is, through acquaintance with the sense-data making up the appearance of the table, whilst the actual

thing which is the table is not, strictly speaking, known to us at all. Now, I believe this account of sense-experience to be based on an error similar to that which vitiated the Kantian theory. The error consists, I think, in supposing that the sensa, or sensibilia, as distinct from the physical object, are themselves the entities upon which the act of apprehension is directed. I urge, in the first place, that upon this view the "act of apprehension," as it is called, becomes inexplicable. For an "act," I take it, implies the exercise of some function; it cannot consist in a mere relation between the mind and a sensibile. And if we are serious with that implication, it will be impossible to escape the admission that in knowing the sensibile there breaks out again the contrast between what is known and the way in which it is known. I can understand, although I do not agree with, the position that in sense-awareness, there is *no* distinction to be drawn between the sensing and the sensum. But what I do not understand is how there can be an *act* of apprehending a sense factor which is distinct from the said act, and yet the "act" itself be simply a mere "relation" between the mind and this sense factor. If the mind does nothing, with what propriety is it said to "act," and if it does something, in what can its activity consist if not in that process of discriminating, comparing and relating, which, so far as psychological analysis can disclose, would seem to be the nature of its functioning throughout? Kant's dictum affirming that in and by itself sense would be blind does not lose applicability in this particular context, and is certainly not evaded by the easy device of postulating as a fact that of which it is required to show the possibility. I urge, in the second place, that to suppose sensibilia, as distinguished from physical things, are directly apprehended objects is contrary to what can be gathered from a careful examination of actual experience. What we are *immediately* aware of in mature sense-perception are certainly not sensibilia understood in the way I have indicated. In the presence of the table, I am not *immediately* aware of *patches* of colour, of appearances of shininess, of smoothness, of an oblong shape, and the rest. What I am *immediately* aware of is a single solid object, possessing innumerable characteristics, which, when I am challenged, I can enumerate in detail, but which are never presented in isolation. It is, for example, only by a deliberate and sustained effort of attention, and through the aid of artificial devices, that I apprehend patches of colour in and for themselves at all. Our ordinary experience is so dominated by what is misleadingly called "the reference to externally existing things" that visual presentations, or sensibilia, are not as such contemplated by us, but do duty merely as signs. Our interest is centred upon what we take to be the real nature and relations of things, which are interpreted no doubt by means of visual (and other) presentations, but which there is no ground whatever for supposing are themselves groups of such presentations. If, then, the term "immediate" be used in reference to our mature experience, it is of *things* that we are immediately aware, whilst presentations simply as such are not immediately known by us.

Many considerations will serve to illustrate the truth of what I have just been urging. For example, it is a well attested psychological fact that concentration of attention upon visual presentations reveals a duality or duplication of these presentations which in ordinary circumstances passes entirely unnoticed. By far the larger number of the visible objects lying within the field of vision at any one moment, although usually recognised by us as single, do nevertheless simultaneously affect both eyes, and give rise to a duplication of presentations of which by an effect of attention we may become conscious. This duality of the visual presentations is, however, altogether overmastered by the teaching of experience that the objects within the visual field are single and not double; we are immediately aware not of the dual sensibilia but of the oneness of the object. Again, there can be little question that in ordinary experience the apprehension of what is called the distance of an object appears to be no less immediate and direct than the apprehension of its colour. Yet it is psychologically demonstrable that what appears to be the immediate apprehension of distance is in truth a complex estimate based upon a number of data and is essentially of the character of a judgment. But of the data themselves, on which the judgment is based, there is no immediate apprehension; their influence is largely indirect and in the region of obscure consciousness. And what is true of the apprehension of distance is true in like manner, though with certain qualifications, of the apprehension of form, of magnitude and of movement. If, then, all these factors which go to make up what seems to be the immediate awareness of an object indicate that processes of judging,—that is to say, of discriminating, comparing and relating,—are throughout operative, it is certainly difficult to resist the conclusion that in the apprehension of so-called secondary qualities the like mental activities are not involved.

So far I have been confining attention to mature experience, and it is to mature experience that those who defend the theory I am criticising invariably appeal. But the case I am trying to represent is strengthened and becomes much more convincing when we extend our view to the way in which experience develops—a point of view, be it observed, too often ignored in discussions of the problem before us. Experience does not advance by a gradual building up of the concrete objects of perception from originally isolated and detached sensibilia. We do not start with the apprehension of innumerable patches of colour, with visual presentations of form and of magnitude, with tactual presentations of hardness, smoothness, and the like, and out of such definite appearances *construct* the complexes which are designated "things." In the evolution of conscious intelligence nothing of the kind takes place. On the contrary, we start with an environment the characteristics of which are but dimly and confusedly apprehended, and the parts of which are but crudely and vaguely recognised as distinguishable from one another. And conscious intelligence ad-

vances by a continuously growing capacity of discriminating differences, of distinguishing features previously undistinguished, of holding elements apart that formerly were confused together. By degrees things come to be differentiated from things, and the properties of any one thing to be differentiated from one another and from the thing. I do not apprehend the brown colour of the table merely on account of its distinction from other actual or possible hues, but I can only apprehend it as a distinct content, as a single fact of experience, if there are supplied in my inner life sufficient means for discriminating it from all else. In short, at no stage in the history of the mental life, and least of all in the earlier stages, can there be said to be immediate awareness of detached and isolated sensibilia. Such awareness as we have of these is always attained through a process of abstraction, and cannot, therefore, be "immediate" in the sense that is claimed for it. The conclusion, then, to which the facts I have been dwelling upon lead is this—that sense-appearances presuppose, as the condition of their possibility, real existing things which appear, that the appearances are dependent upon the realities, and not the realities upon the appearances. Accordingly, if we are entitled, in regard to knowledge, to speak of an immediate relationship, that relationship must subsist between the mind and things, whilst the relationship between the mind and the appearances of things is secondary and derivative.

Although in accord with the ordinary common-sense view, which it does little else than translate into accurate phraseology, the conclusion just expressed will probably be pronounced paradoxical, or worse, by the adherents of many current modes of philosophical thought. The dogma that all we can know directly and primitively of the external world consists of sense-data, sense-appearances, and that any knowledge we suppose ourselves to possess of things is inferential and precarious, is constantly reasserting itself. I have been maintaining, on the contrary, that there is no difference in kind between the ways in which we know appearances and the ways in which we know real existing things. Things, it is true, do not "wander into our consciousness" but then neither do sense-data "wander into our consciousness." According to the theory I am criticising, "the faculty of being acquainted with things other than itself is the main characteristic of a mind," and sense-data should rather be said to be "*before* the mind" than "*in* the mind." And *in* the mind in the sense in which mental acts are in the mind I agree they never are. But, on the other hand, in normal circumstances it is only as properties of things that they are "before the mind"; in abstraction from things, as mere presentations, they are not usually "before the mind," and, indeed, the ordinary unsophisticated consciousness is not so much as aware of their presence. To suppose that sensibilia *in such abstraction* and as the raw material of sense-apprehension actually exist and are cognised as objects, and that they are the sole data with which observation and experiment can deal, is, I submit, to make an

assumption which the facts of experience certainly do not warrant and for which, so far as I can see, no justification can be obtained from elsewhere.

I contend, then, that neither philosophical nor psychological analysis does in truth invalidate what certainly seems to be an empirically established fact, that a finite mind is a real existing entity in the midst of a vast environment of other minds and of physical objects. The physical object is, it is true, not to be thought of as consisting merely of imperceptible molecules, composed of atoms or, in the last resort, of electrons. Not that there is the least occasion for throwing doubt upon the results which physical science appears to be establishing. All we need be concerned to maintain is that these elements do not exhaust the nature of the physical object, that the physical object in its entirety possesses also, in addition, the properties which have been described as secondary qualities. And, except the ungrounded assumption that the latter are products of mechanical motion, I can find no reason for holding such a conjunction of factors to be inconceivable. Upon this object, then, in consequence of the cerebral change to which stimuli emanating from it give rise, a mental act is directed, and the object is apprehended; it is distinguished from other objects, and its characteristics are discriminated, but always imperfectly and in fragmentary fashion, and in some circumstances much more imperfectly and partially than in others. It is precisely in this contrast between the imperfect, the partial, and the perfect, the complete, that the significance of what is denoted by the term "appearance" is to be discerned. The object is apprehended only incompletely, and that incompleteness may often amount to positive error. But the incompleteness does not give rise to a new object, does not bring into existence a *tertium quid* which is thenceforth there, ready to be apprehended whenever the opportunity occurs. On the contrary, it is throughout still the physical object that is being apprehended, and upon which the act of apprehension is directed; the appearances arise only in and through the act of apprehension being directed upon the physical object. In conformity with this mode of viewing the facts, we find that in numerous cases the continued direction of the apprehending act upon the object results in increased discrimination of the properties of the object,—in a gradual lessening, that is to say, of the incompleteness of its apprehension. Fresh characteristics of it are noted; characteristics of it previously noted are more clearly and distinctly discerned.

When we pursue the matter further, a number of other considerations require to be taken into account, but with the general interpretation I have been trying to explain the ascertained facts will, I am persuaded, be found to accord. For instance, the importance of space as a determining factor in the character of appearances becomes, on careful scrutiny, more and more manifest. To take the simplest illustration, it is a notorious circumstance that near objects are visually apprehended more clearly and accurately than distant objects. A table which from one point of view appears rect-

angular may from a more distant point of view appear to have two acute and two obtuse angles. There is, however, absolutely no need to resort to the violent and impossible assumption that the table really possesses both shapes, or that these different shapes, as distinct from the real table, both exist, ready to be seen by observers in suitable positions for seeing them. For, given the existence of the table and its particular shape (whatever it may be), the apparent shape of the table is explicable as a consequence of the real shape and of the known characteristics of space. In other words, owing to the conditions of perspective, to which visual perception is necessarily subject, the spatial relations of a material object can never, as a matter of fact, visually appear precisely as they are. So that here, and in all such cases, the distinction between appearance and reality is necessitated by the very nature of space itself. Consider, again, the time-honoured instance of a straight stick partially immersed in water. The stick in water is, it is true, not really the same thing as it was out of the water, but all the same, there are good and sufficient reasons for asserting that it is not really bent as it appears to be. The laws of refraction being, however, what they are, that the stick, under such circumstances, should appear visually as bent is an inevitable consequence of the actual state of things. Here, as in the previous instance, the distinction between appearance and reality is necessitated by objective conditions. If, however, we persist in saying, as some writers do, that the visual appearance *is* bent, we are going far beyond what the facts warrant. We are assuming that it is upon a bent entity of some sort that the act of perception is directed. And that is precisely what strict adherence to the facts gives us no ground for assuming. On the contrary, what the facts entitle us to say is that, when the act of perception is directed upon a straight stick partially immersed in water, then the stick in question appears bent, and that no such appearance would arise unless the act of perception were, or had been, so directed. The appearance, that is to say, does not subsist at all apart from the physical object of which it is an appearance. Once more, I believe an argument of similar purport is applicable in regard to the secondary qualities of physical things. Take the case of colour, and let our example be that already used of the table. It is contended that there is no one colour which pre-eminently appears to be *the* colour of the table, or even of any one particular part of it. I think this assertion open to well-founded objection, but meanwhile let it pass. The table appears to be of different colours from different points of view, and there is, it is maintained, no reason for regarding one of these colours as more really its colour than the others. Further, even from a given point of view the colour will seem different by artificial light, or to a colour-blind man, or to a man wearing blue spectacles, while in the dark there will be no colour at all, though to touch and hearing the table will be unchanged. Therefore, so the argument runs, colour is not something which is inherent in the table, but something depending upon the table and the spectator

and the way in which the light falls on the table.[9] It is obvious, I think, that this argument is fallacious, and that the conclusion does not follow from the premisses. For, in order to test it, suppose that colour of some kind *is* inherent in the table, that the table *has* a specific colour. Then, surely, there would be nothing to conflict with this supposition in the circumstances that such real colour will present a different aspect if another colour be reflected upon it, or if a blue pair of spectacles intervene between it and the eyes of the observer, or if it be enveloped in darkness rather than in daylight. The reasoning would only be valid on the assumption that if the table is really coloured, the real colour *must* appear the same in darkness and in daylight, through a pair of blue spectacles and without them, in artificial light and in the sun's light—an assumption which, on the view I am taking, is at once to be dismissed as untenable. If the colour did appear to be the same in these varying circumstances, then certainly there would be reason, and sufficient reason, for doubting the reliability of visual apprehension. For obviously the conditions mentioned—real, objective conditions, as I take them to be—cannot be without influence upon any real colour the table may be said to possess. With reference to colourblindness a different set of factors come into play, but the principle is the same. Assume for the moment that the table really is brown, and that by normal vision it is apprehended as brown, then there is nothing extraordinary in the fact that it should appear different to the man whose vision is not normal. It would, indeed, be extraordinary if it did not. If *normal* vision is the way in which the real colours of objects are more or less accurately apprehended, is it not a strange demand to make that *abnormal* vision must also likewise be a way of more or less accurately apprehending them? Finally, the specious argument that turns upon the difficulty of determining what the actual colour, if there be one, of a physical object is seems to me utterly irrelevant. Granted that the difficulty is insuperable—and I should be very far from admitting the insuperability—still the difficulty of determining the actual colour of an object is no more a reason for supposing it has not got one than the insuperable difficulty of determining the character of the other side of the moon is a reason for supposing that the other side of the moon is not hemispherical.

I have been purposely emphasising the objective conditions of phenomena or appearances, because these are too often overlooked. I have done so, however, with no intention of minimising the subjective factors also involved. The facts of revival and of memory are sufficient in themselves to indicate, not indeed that sense-data are retained and preserved as entities in the mind, but that, by means of a process of the nature of which we know little, the characteristics of what has once been perceived can be recalled. And it is obvious that in imagination and thought the mind is capable of exercising a certain constructive power in regard to the

[9] B. Russell, *The Problems of Philosophy,* p. 13.

contents thus at its disposal. Nor is such constructive activity confined to efforts of a deliberate and purposive kind. Throughout the life of mind there is involved the working of what Lotze designated "psychical mechanism," and of what Kant partly had in view when he spoke of "a blind but indispensable function of the soul." In dreaming, for example, what appear to the dreamer to be real existing objects are apprehended by him, although we know that, as a matter of fact, no such objects are present. And it is no doubt considerations such as these that seem to contradict the position that appearances arise through the direction of apprehending activity upon real existing things. But I do not believe there is in truth any such contradiction. We are concerned here with the processes of revival or memory, and scanty though our psychological knowledge of the nature of these processes certainly is, there are certain general propositions one can lay down respecting them, and which are of significance in this connexion. In the first place, imagination and memory are dependent upon perception and would be, in the case of any mental life with which we are familiar, impossible without it. They do not produce new characteristics; such construction as there is consists in manipulating what is revived of characteristics previously perceived. In the second place, the contents revived are never isolated sense-data. As Professor Ward puts it, "what are revived in memory and imagination are percepts, not unlocalised sensations and movements."[10] Now, even those who regard sense-data as in themselves given objects can scarcely maintain that images, if one may use that term for revived contents of the character indicated, are also there, ready to be apprehended, prior to the act of imagination coming into operation. One can hardly suppose, for example, that dream-apparitions are actually given in their entirety, and that the dreamer has simply to discern and contemplate them. In the third place, it would seem likely that in imagination, and particularly in dreaming, some amount of actual perception is taking place,—that the mind, in other words, is even then directed upon an external object, and that this object, which under the circumstances is barely discriminated, becomes the centre of reference for masses of suggested imagery.

Neither the facts of perception nor those of imagination and memory lend countenance, then, to the view that appearances are objects. Nor do they in any way tend to show that appearances are mental entities, or, more specifically, reactions of the mind on stimulation. As a reaction of the mind, an appearance would not be the appearance of what was other than the mind, but, if the term "appearance" had in that case significance, an appearance of the mind itself. But the mental life, so far as its nature is psychologically known, consists of a stream of conscious process, evincing itself in the various modes which it is customary to describe as those of perceiving, imagining, thinking, feeling, willing, and so forth. In what

[10] *Encyclopaedia Britannica,* ix ed., vol. xx, p. 57.

conceivable way can this stream of process be supposed to give rise to colours and sounds, tastes and smells, and the other data of sense? To speak of sense-data as products of conscious process is, in truth, as meaningless as to speak of sense-data as products of mechanical movement. Sense qualities are *sui generis* and to attempt to explain their mode of origin is as fruitless as to attempt to explain the mode of origin of matter or of mind. Not to produce them, but to become aware of them, is the function of conscious process, and it is that awareness which is capable of being revived and reproduced when the object is no longer present. If, then, sense-data are mental entities, it can only be because the mind, in addition to being a stream of conscious process, is also a storehouse of sensuous material. I do not envy the task of him who tries to be serious with such a conception as that. What intelligible notion could we frame of a mental life which, besides fulfilling the functions indicated by the term "mental," was at the same time a repository of huge supplies of the ingredients required for the construction of objects, such ingredients being massed somewhere in the regions of sub-consciousness, where also the mysterious operation of construction must be supposed to be going on? The assumption would be less readily made if the question of what it implies were not so lightly passed over.

In the light of the considerations upon which I have been insisting, the significance of the contention that appearances, as ways in which existent reality is apprehended, are not themselves existences will be sufficiently manifest. To some extent, at least, this is but a re-statement of Aristotelian doctrine. Sense-perception was characterised by Aristotle as a power of apprehending the forms or essences of sensible objects without their matter—that is to say, he did not conceive the content of the perceiving act to be an existing entity, because to constitute an existing entity both matter and form were, in his view, necessary. Aristotle, it is true, maintained that the sentient soul was passively affected (πάσχει τι), but such passive affection was, in his view, only one side of the whole process, which besides being in its more important aspect the actualisation of what the sentient soul is potentially was also essentially in nature an act of discriminating. Much more certainly does the non-existential character of the contents of apprehending activity, or as we may now say of appearances, follow from the nature of perception, if the notion of passive receptivity be entirely relinquished. The external object itself is, so far as can be discovered, in no way altered or affected through the fact of being apprehended— none of its constituents are abstracted from it and transferred into the apprehending act—but in and through the apprehending act there is *awareness of* certain of its features, and it is this awareness of a group of its features that constitutes that group, as the content of the act of apprehension, an appearance as contrasted with the real existing thing. The apprehending act exists, the external object exists, but there is no ground at all for re-

garding the appearance as a third existent. On the contrary, there is every ground for not so regarding it. Appearances, as distinct from the things of which they are appearances, do not occupy any part of the common space in which physical objects exist. They do not set other things in motion, and they are not set in motion by other things. They do not act and react upon one another; they do not obey the law of gravitation or of chemical affinity; they do not exert force, nor are they modes of energy. They do not perceive or think or feel or will. They do not, in short, form part of what we describe as the inter-connected system of concrete existing facts. Now to define an ultimate term, such as the term existence, is, of course, impossible. We can only point to instances of it, just as we can only point to instances of red, in order to make clear what we mean by redness. And there can, I take it, be little question that in ordinary usage we should not speak of that as existing of which all the characteristics I have just specified have to be denied. It is but expressing, in a different form, Plato's argument in the *Sophist* to emphasise the necessity of drawing a distinction between existence and being. The distinction is, as Mr. Russell says, essential, if we are ever to deny the existence of anything. "For what does not exist must be something, or it would be meaningless to deny its existence; and hence we need the concept of being, as that which belongs even to the non-existent."[11] In refusing, then, to ascribe existence to phenomena or appearances, we are not dismissing them to that fictitious realm of nothingness, of which Plato tried to demonstrate the impossibility. Appearances most indubitably *are,* but their mode of being is not *the* mode of being which is exhibited by existing things. "We shall find it convenient," writes Mr. Russell, "only to speak of things existing when they are in time, that is to say, when we can point to some time *at* which they exist (not excluding the possibility of their existing at all times),"[12] I venture to submit, although he will not have it so, that, according to this criterion also, a sensible appearance must be said, no less than a universal, to "*subsist* or *have being,* where being is opposed to 'existence' as being timeless." As an abstraction, of the kind I have been attempting to explain, from the existing object, the sensible appearance is, in truth, no less than a universal, unchangeable, rigid, eternally the same with itself. Nothing can alter it, for the simple reason that it is not an entity which can be operated upon, acted on, or affected in any way whatsoever. The process of apprehending the object, from which, in the manner described, it is abstracted, is doubtless dependent upon temporal conditions, and is in time, but the sensible appearance itself differs not at all, so far as timelessness is concerned, from a universal.

Reverting now, in conclusion, to the three historical conceptions of phenomena which we have had before us, we are, I think, in a position

[11] *The Principles of Mathematics,* vol. i, p. 450.

[12] *The Problems of Philosophy,* p. 155.

to assert that a fundamental error is committed in all of them,—the error, namely, of placing empirical things and the ways in which empirical things are apprehended upon the same level, as both of them phenomenal in character. One of the main grounds, if not *the* main ground, upon which, in these three systems of thought, empirical things were taken to be phenomena turns out to be that empirical things (if, for the moment, we do not include mental lives under that heading) are in space. According to the Platonic theory, space offered the strongest antithesis imaginable to the reality of the Ideas, and things in space could not but share in the unreality, the shadowy character, attaching to space itself. According to the Kantian theory, space was essentially a form of perception, and things in space could not but participate in the subjectivity which must be assigned to a form of perception. According to the Hegelian theory, space is a partial and imperfect manifestation of what in truth is non-spatial, and things in space could not but exhibit a like incompleteness and imperfection. Now, the fact that things are in space has, as I have tried to show, a very important bearing upon the ways in which those things appear. But when once the view of the unreality of space, in any of the senses mentioned, has been discarded, when once it is recognised,—as, of course, I should be prepared to argue must be recognised,—that space has a being and reality of its own, the plausibility of the doctrine that empirical things are phenomena, or groups of appearances, vanishes. For it is possible, then, both to conceive of the existence of real things in space, and to understand how those real things may be apprehended in a variety of ways by minds that are subject not only to the manifold conditions of mental growth and development but subject also to the conditions which space imposes, even where apprehension has attained its highest degree of accuracy.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Symposium: The Status of Sense-Data

G. E. MOORE
&
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VOLUME XIV

1914

EDITORIAL NOTE

The following paper by G. E. Moore and G.F. Stout - "Symposium: The Status of Sense-Data" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume XIV (1913-1914), pp. 355-406.

For Moore's biography, please scroll up to page 64; for Stout's, page 33.

XV. THE STATUS OF SENSE-DATA

Symposium by
G.E. MOORE & G. F. STOUT

I. G. E. MOORE

THE term "sense-data" is ambiguous; and therefore I think I had better begin by trying to explain what the class of entities is whose status I propose to discuss.

There are several different classes of mental events, all of which, owing to their intrinsic resemblance to one another in certain respects, may, in a wide sense, be called "sensory experiences," although only some among them would usually be called "sensations." There are (1) those events, happening in our minds while we are awake, which consist in the experiencing of one of those entities, which are usually called "images," in the narrowest sense of the term. Everybody distinguishes these events from sensations proper; and yet everybody admits that "images" intrinsically resemble the entities which are experienced in sensations proper in some very important respect. There are (2) the sensory experiences we have in dreams, some of which would certainly be said to be experiences of images, while others might be said to be sensations. There are (3) hallucinations, and certain classes of illusory sensory experiences. There are (4) those experiences, which used to be called the having of "after-images," but which psychologists now say ought rather to be called "after-sensations." And there are, finally, (5) that class of sensory experiences, which are immensely commoner than any of the above, and which may be called *sensations proper,* if we agree to use this term in such a way as to exclude experiences of my first four sorts.

Every event, of any one of these five classes, consists in the fact that an entity, of some kind or other, *is experienced*. The entity which is experienced may be of many different kinds; it may, for instance, be a patch of colour, or a sound, or a smell, or a taste, etc.; or it may be an image of a patch of colour, an image of a sound, an image of a smell, an image of a taste, etc. But, whatever be its nature, the entity which *is* experienced must in all cases be distinguished from the fact or event which consists in its being experienced; since by saying that it is experienced we mean that it has a relation of a certain kind to something else. We can, therefore, speak not only of *experiences* of these five kinds, but also of the entities which *are experienced in* experiences of these kinds; and the entity which is experienced *in* such an experience is never identical with the experi-

ence which consists in its being experienced. But we can speak not only of the entities which *are* experienced in experiences of this kind, but also of *the sort* of entities which are experienced in experiences of this kind; and these two classes may again be different. For a patch of colour, even if it were not actually experienced, would be an entity *of the same sort* as some which are experienced in experiences of this kind: and there is no contradiction in supposing that there are patches of colour, which yet are not experienced; since by calling a thing a patch of colour we merely make a statement about its intrinsic quality, and in no way assert that it has to anything else any of the relations which may be meant by saying that it is experienced. In speaking, therefore, of *the sort of* entities which are experienced in experiences of the five kinds I have mentioned, we do not necessarily confine ourselves to those which actually *are* experienced in some such experience: we leave it an open question whether the two classes are identical or not. And the class of entities, whose status I wish to discuss, consists precisely of all those, whether experienced or not, which are *of the same sort* as those which are experienced in experiences of these five kinds.

I intend to call this class of entities the class of *sensibles;* so that the question I am to discuss can be expressed in the form: What is the status of sensibles? And it must be remembered that images and after-images are just as much "sensibles," in my sense of the term, as the entities which are experienced in sensations proper; and so, too, are any patches of colour, or sounds, or smells, etc. (if such there be), which are not experienced at all.

In speaking of sensibles as *the sort of* entities which are experienced in sensory experiences, I seem to imply that all the entities which are experienced in sensory experiences have some common characteristic other than that which consists in their being so experienced. And I cannot help thinking that this is the case, in spite of the fact that it is difficult to see what intrinsic character can be shared in common by entities so different from one another as are patches of colour, sounds, smells, tastes, etc. For, so far as I can see, some non-sensory experiences may be exactly similar to sensory ones, in all intrinsic respects, except that what is experienced in them is different in kind from what is experienced in any sensory experience: the relation meant by saying that in them something *is experienced* may be exactly the same in kind, and so may the experient. And, if this be so, it seems to compel us to admit that the distinction between sensory and non-sensory experiences is derived from that between sensibles and non-sensibles, and not *vice versa*. I am inclined, therefore, to think that all sensibles, in spite of the great differences between them, have some common intrinsic property, which we recognise, but which is unanalysable; and that, when we call an experience sensory, what we mean is not only that in it something is experienced in a particular way, but also that this

something has this unanalysable property. If this be so, the ultimate definition of "sensibles" would be merely all entities which have this unanalysable property.

It seems to me that the term "sense-data" is often used, and may be correctly used, simply as a synonym for "sensibles"; and everybody, I think, would expect me, in discussing the status of sense-data, to discuss, among other things, the question whether there are any sensibles which are not "given." It is true that the etymology of the term "sense-data" suggests that nothing should be called a sense-datum, but what *is* given; so that to talk of a non-given sense-datum would be a contradiction in terms. But, of course, etymology is no safe guide either as to the actual or the correct use of terms; and it seems to me that the term "sense-data" is often, and quite properly, used merely for *the sort of* entities that are given in sense, and not in any way limited to those which are actually given. But though I think I might thus have used "sense-data" quite correctly instead of "sensibles," I think the latter term is perhaps more convenient; because, though nobody ought to be misled by etymologies, so many people in fact are so. Moreover the term "sense-data" is sometimes limited in yet another way, viz., to the sort of sensibles which are experienced in *sensations proper;* so that in this sense "images" would not be "sense-data." For both these reasons, I think it is perhaps better to drop the term "sense-data" altogether, and to speak only of "sensibles."

My discussion of the status of sensibles will be divided into two parts. I shall first consider how, in certain respects, they are related to our minds; and then I shall consider how, in certain respects, they are related to physical objects.

I.

(1) We can, I think, distinguish pretty clearly at least one kind of relation which sensibles, of all the kinds I have mentioned, do undoubtedly sometimes have to our minds.

I do now see certain blackish marks on a whitish ground, and I hear certain sounds which I attribute to the ticking of my clock. In both cases I have to certain sensibles—certain blackish marks, in the one case, and certain sounds, in the other—a kind of relation with which we are all perfectly familiar, and which may be expressed, in the one case, by saying that I actually *see* the marks, and in the other, by saying that I actually *hear* the sounds. It seems to me quite evident that the relation to the marks which I express by saying that I *see* them, is not different in kind from the relation to the sounds which I express by saying that I *hear* them. "Seeing" and "hearing," when thus used as names for a relation which we may have to sensibles, are not names for different relations, but merely express the fact

that, in the one case, the kind of sensible to which I have a certain kind of relation is a patch of colour, while, in the other case, the kind of sensible to which I have the same kind of relation is a sound. And similarly when I say that I feel warm or smell a smell, these different verbs do not express the fact that I have a different kind of relation to the sensibles concerned, but only that I have the *same* kind of relation to a different kind of sensible. Even when I call up a visual image of a sensible I saw yesterday, or an auditory image of a sound I heard yesterday, I have to those images exactly the same kind of relation which I have to the patches of colour I now see and which I had yesterday to those I saw then.

But this kind of relation, which I sometimes have to sensibles of all sorts of different kinds, images as well as others, is evidently quite different in kind from another relation which I may also have to sensibles. After looking at this black mark, I may turn away my head or close my eyes, and then I no longer *actually see* the mark I saw just now. I may, indeed, have (I myself actually do have at this moment) a visual *image* of the mark before my mind; and to this image I do now have exactly the same kind of relation which I had just now to the mark itself. But the image is not identical with the mark of which it is an image; and to the mark itself it is quite certain that I have *not* now got the same kind of relation as I had just now, when I was actually seeing it. And yet I certainly may *now* have to that mark itself a kind of relation, which may be expressed by saying that I am *thinking of* it or remembering it. I can *now* make judgments about *it itself*—the very sensible which I did see just now and am no longer seeing: as, for instance, that I did then see it and that it was different from the image of it which I am now seeing. It is, therefore, quite certain that there is a most important difference between the relation I have to a sensible when I am actually seeing or hearing it, and any relation (for there may be several) which I may have to the same sensible when I am only thinking of or remembering it. And I want to express this difference by using a particular term for the former relation. I shall express this relation, which I certainly do have to a sensible when I actually see or hear it, and most certainly do not have to it, when I only think of or remember it, by saying that there is in my mind a *direct apprehension* of it. I have expressly chosen this term because, so far as I know, it has not been used hitherto as a technical term; whereas all the terms which have been so used, such as "presented," "given," "perceived," seem to me to have been spoilt by ambiguity. People sometimes, no doubt, use these terms as names for the kind of relation I am concerned with. But you can never be sure, when an entity is said to be "given" or "presented" or "perceived," that what is meant is simply and solely that it has to someone that relation which sensibles do undoubtedly have to me when I actually see or hear them, and which they do *not* have to me when I only think of or remember them.

I have used the rather awkward expression "There is in my mind a

direct apprehension of this black mark," because I want to insist that though, when I see the mark, the mark certainly has to *something* the fundamental relation which I wish to express by saying that it is directly apprehended, and though the event which consists in its being directly apprehended by that something is certainly a mental act of *mine* or which occurs in my mind, yet the something which directly apprehends it may quite possibly not be anything which deserves to be called "I" or "me." It is quite possible, I think, that there is *no* entity whatever which deserves to be called "I" or "me" or "my mind"; and hence that nothing whatever is ever directly apprehended by *me*. Whether this is so or not, depends on the nature of that relation which certainly does hold between all those mental acts which are *mine,* and does not hold between any of mine and any of yours; and which holds again between all those mental acts which are yours, but does not hold between any of yours and any of mine. And I do not feel at all sure what the correct analysis of this relation is. It may be the case that the relation which unites all those acts of direct apprehension which are mine, and which is what we mean to say that they have to one another when we say they all are mine, really does consist in the fact that one and the same entity is *what* directly apprehends in each of them: in which case this entity could properly be called "me," and it *would* be true to say that, when I see this black mark, *I* directly apprehend it. But it is also quite possible (and this seems to me to be the view which is commonest among psychologists) that the entity which directly apprehends, in those acts of direct apprehension which are mine, is numerically different in every different act; and that what I mean by calling all these different acts *mine* is either merely that they have some kind of relation to *one another* or that they all have a common relation to some other entity, external to them, which may or may not be something which deserves to be called "me." On any such view, what I assert to be true of this black mark, when I say that it is seen by me, would not be simply that it is directly apprehended by me, but something more complex in which, besides direct apprehension, some other quite different relation was also involved. I should be asserting *both* (1) that the black mark is being directly apprehended by *something, and* (2) that this act of direct apprehension has to something else, external to it, a quite different relation, which is what makes it an act of *mine*. I do not know how to decide between these views, and that is why I wished to explain that the fundamental relation, which I wish to call direct apprehension, is one which quite possibly never holds between *me* and any sensible. But, once this has been explained, I think no harm can result from using the expression "I directly apprehend A" as a synonym for "A direct apprehension of A occurs in my mind." And in future I shall so speak, because it is much more convenient.

The only other point, which seems to me to need explanation, in order to make it quite clear what the relation I call "direct apprehension"

is, concerns its relation to *attention;* and as to this I must confess I don't feel clear. In every case, where it is quite clear to me that I am directly apprehending a given entity, it seems also clear to me that I am, more or less, attending to it; and it seems to me possible that what I mean by "direct apprehension" may be simply identical with what is meant by "attention," in *one* of the senses in which that word can be used. That it can, at most, only be identical with *one* of the relations meant by attention seems to me clear, because I certainly can be said to attend, in some sense or other, to entities, which I am not directly apprehending: I may, for instance, think, with attention, of a sensible, which I saw yesterday, and am certainly not seeing now. It is, therefore, clear that to say I am attending to a thing and yet am *not* directly apprehending it, is not a contradiction in terms: and this fact alone is sufficient to justify the use of the special term "direct apprehension." But whether to say that I am directly apprehending a given thing and yet am *not* attending to it, in any degree at all, is or is not a contradiction in terms, I admit I don't feel clear.

However that may be, one relation, in which sensibles of all sorts do sometimes stand to our minds, is the relation constituted by the fact that we directly apprehend them: or, to speak more accurately, by the fact that events which consist in their being directly apprehended are *in* our minds, in the sense in which to say that an event is *in* our minds means merely that it is a mental act of *ours* —that it has to our other mental acts that relation (whatever it may be) which we mean by saying that they are all mental acts *of the same individual.* And it is clear that to say of a sensible that it is directly apprehended by me, is to say of it something quite different from what I say of a mental act of mine, when I say that this *mental act* is *in my mind:* for nothing is more certain than that an act of direct apprehension or belief may be in my mind, without being itself directly apprehended by me. If, therefore, by saying that a sensible is *in our minds* or is *ours,* we mean merely that it is directly apprehended by us, we must recognise that we are here using the phrases "in our minds" or "ours" in quite a different sense from that in which we use them when we talk of our mental acts being "in our minds" or "ours." And why I say this is because I think that these two relations are very apt to be confused. When, for instance, we say of a given entity that it is "experienced," or when the Germans say that it is "erlebt," it is sometimes meant, I think, merely that it is directly apprehended, but sometimes that it is in my mind, in the sense in which, when I entertain a belief, this act of belief is in my mind.

But (2) it seems to me to be commonly held that sensibles are often in our minds in some sense quite other than that of being directly apprehended by us or that of being thought of by us. This seems to me to be often what is meant when people say that they are "immediately experienced" or are "subjective modifications"; though, of course, both expressions are so ambiguous, that when people say that a given entity is

immediately experienced or is a subjective modification, they *may* mean merely that it is directly apprehended. And since I think this view is held, I want to explain that I see no reason whatever for thinking that sensibles ever are experienced by us in any other sense than that of being directly apprehended by us.

Two kinds of argument, I think, are sometimes used to show that they are.

(a) It is a familiar fact that, when, for instance, we are in a room with a ticking clock, we may seem suddenly to become aware of the ticks, whereas, so far as we can tell, we had previously not heard them at all. And it may be urged that in these cases, since the same kind of stimulus was acting on our ears all the time, we must have *experienced* the same kind of sensible sounds, although we did not directly apprehend them.

But I think most psychologists are now agreed that this argument is quite worthless. There seem to me to be two possible alternatives to the conclusion drawn. It may, I think, possibly be the case that we did directly apprehend the ticks all the time, but that we cannot afterwards remember that we did, because the degree of attention (if any) with which we heard them was so small, that in ordinary life we should say that we did not attend to them at all. But what, I think, is much more likely is that, though the same stimulus was acting on our ears, it failed to produce any mental effect whatever, because our attention was otherwise engaged.

(b) It is said that sometimes when we suddenly become aware, say, of the eighth stroke of a striking clock, we can *remember* earlier strokes, although we seem to ourselves *not* to have directly apprehended them. I cannot say that I have ever noticed this experience in myself, but I have no doubt that it is possible. And people seem inclined to argue that, since we can remember the earlier strokes, we must have experienced them, though we did not directly apprehend them.

But here again, the argument does not seem to me at all conclusive. I should say, again, that it is possible that we did directly apprehend them, but only with a very slight degree of attention (if any). And, as an alternative, I should urge that there is no reason why we should not be able to remember a thing, which we never experienced at all.

I do not know what other arguments can be used to show that we sometimes *experience* sensibles in a sense quite other than that of directly apprehending them. But I do not know how to show that we do not; and since people, whose judgment I respect, seem to hold that we do, I think it is worth while to say something as to what this sense of "experience" can be, in case it does occur.

I have said that sometimes when people say that a given entity is "experienced" they seem to mean that it belongs to some individual, in the sense in which my acts of belief belong to me. To say that sensibles were experienced by me in this sense would, therefore, be to say that they sometimes have to my acts of belief and acts of direct apprehension the same relation which these have to one another—the relation which constitutes them *mine*. But that sensibles ever have this kind of relation to my mental acts, is a thing which I cannot believe. Those who hold that they are ever experienced at all, in some sense other than that of being directly apprehended, always hold, I think, that, whenever they are directly apprehended by us, they also, at the same time, have to us this other relation as well. And it seems to me pretty clear that when I do directly apprehend a sensible, it does *not* have to me the same relation which my direct apprehension of it has.

If, therefore, sensibles are ever experienced by us at all, in any sense other than that of being directly apprehended by us, we must, I think, hold that they are so in an entirely new sense, quite different both from that in which to be experienced means to be directly apprehended, and from that in which to be experienced means to occur in some individual's mind. And I can only say that I see no reason to think that they ever are experienced in any such sense. If they are, the fact that they are so is presumably open to the inspection of us all; but I cannot distinguish any such fact as occurring in myself, as I can distinguish the fact that they are directly apprehended. On the other hand, I see no way of showing that they are *not* experienced in some such sense; and perhaps somebody will be able to point it out to me. I do not wish to assume, therefore, that there *is* no such sense; and hence, though I am inclined to think that the *only* sense in which they are experienced is that of being directly apprehended, I shall, in what follows, use the phrase "experienced" to mean *either* directly apprehended *or* having to something this supposed different relation, if such a relation there be.

(3) We may now, therefore, raise the question: Do sensibles ever exist at times when they are not being experienced at all?

To this question it is usual to give a negative answer, and two different *a priori* reasons may be urged in favour of that answer.

The first is what should be meant by Berkeley's dictum that the *esse* of sensibles is *percipi*. This should mean, whatever else it may mean, at least this: that to suppose a sensible to exist and yet *not* to be experienced is self-contradictory. And this at least seems to me to be clearly false. Anything which was a patch of colour would be a sensible; and to suppose that there are patches of colour which are not being experienced is clearly not self-contradictory, however false it may be.

It may, however, be urged (and this is the second argument) that, though to suppose a thing to be a sensible and *yet* not experienced is not self-contradictory, yet we can clearly see that nothing can have the one property without having the other. And I do not see my way to deny that we may be able to know, *a priori,* that such a connection holds between two such properties. In the present case, however, I cannot see that it does hold, and therefore, so far as *a priori* reasons go, I conclude that there is no reason why sensibles should not exist at times when they are not experienced.

It may, however, be asked: Is there any reason to suppose that they ever do? And the reason, which weighs with me most, is one which applies, I think, to a certain class of sensibles *only;* a class which I will try to define by saying that it consists of those which *would* (under certain conditions which actually exist) be experienced in a *sensation proper, if only* a living body, having a certain constitution, existed under those conditions in a position in which no such body does actually exist. I think it is very probable that this definition does not define at all accurately the kind of sensibles I mean; but I think that what the definition aims at will become clearer when I proceed to give my reasons for supposing that sensibles, of a kind to be defined in *some* such way, do exist unexperienced. The reason is simply that, in Hume's phrase, I have "a strong propensity to believe" that, *e.g.,* the visual sensibles which I directly apprehend in looking at this paper, still exist unchanged when I merely alter the position of my body by turning away my head or closing my eyes, *provided* that the physical conditions outside my body remain unchanged. In such a case it is certainly true in some sense that I *should* see sensibles like what I saw the moment before, *if only* my head were still in the position it was at that moment or my eyes unclosed. But if, in such a case, there is reason to think that sensibles which I should see, if the position of my body were altered, exist in spite of the fact that I do not experience them, there is, I think, an equal reason to suppose it in other cases. We must, for instance, suppose that the sensibles which I should see now, if I were at the other end of the room, or if I were looking under the table, exist at this moment, though they are not being experienced. And similarly we must suppose that the sensibles which *you* would see, if you were in the position in which I am now, exist at this moment, in spite of the fact that they may be more or less different from those which I see, owing to the different constitution of your bodies. All this implies, of course, that a vast number of sensibles exist at any moment, which are not being experienced at all. But still it implies this only with regard to sensibles of a strictly limited class, namely sensibles which would be experienced *in a sensation proper,* if a body, having a certain constitution, were in a position in which it is not, under the given physical conditions. It does not, for instance, imply that any *images,* of which it may be true that I *should* have them, under present physical conditions,

if the position of my body were altered, exist now; nor does it imply that sensibles which *would* be experienced by me now in a sensation proper, if the physical conditions external to my body were different from what they are, exist now.

I feel, of course, that I have only succeeded in defining miserably vaguely the kind of sensibles I mean; and I do not know whether the fact that I have a strong propensity to believe that sensibles of a kind to be defined in some such way, do exist unexperienced, is any good reason for supposing that they actually do. The belief may, of course, be a mere prejudice. But I do not know of any certain test by which prejudices can be distinguished from reasonable beliefs. And I cannot help thinking that there may be a class of sensibles, capable of definition in *some* such way, which there really is reason to think exist unexperienced.

But, if I am not mistaken, there is an empirical argument which, though, even if it were sound, it would have no tendency whatever to show that *no* sensibles exist unexperienced, would, if it were sound, show that this very class of sensibles, to which alone my argument for unexperienced existence applies, certainly do not so exist. This, it seems to me, is the most weighty argument which can be used upon the subject; and I want, therefore, to give my reasons for thinking that it is fallacious.

The argument is one which asserts that there is abundant empirical evidence in favour of the view that the existence of the sensibles which we experience at any time, always depends upon the condition of our nervous system; so that, even where it also depends upon external physical conditions, we can safely say that sensibles, which we should have experienced, if only our nervous system had been in a different condition, certainly do not exist, when it is not in that condition. And the fallacy of this argument seems to me to lie in the fact that it does not distinguish between the existence of the sensibles *which* we experience and *the fact that we experience them.* What there *is* evidence for is that *our experience* of sensibles always depends upon the condition of our nervous system; that, according as the condition of the nervous system changes, different sensibles are *experienced,* even where other conditions are the same. But obviously the fact that our experience of a given sensible depends upon the condition of our nervous system does not directly show that the existence of *the sensible experienced* always also so depends. The fact that I am now experiencing this black mark is certainly a different fact from the fact that this black mark now exists. And hence the evidence which does tend to show that the former fact would not have been a fact, if my nervous system had been in a different condition, has no tendency to show that the latter would not have been so either. I am sure that this distinction ought to be made; and hence, though I think there may be other reasons for thinking that the very existence of the sensibles, which we experience, and not merely the

fact that we experience them, *does* always depend upon the condition of our nervous systems, it seems to me certain that this particular argument constitutes no such reason.

And I think that those who suppose that it does are apt to be influenced by an assumption, for which also, so far as I can see, there is no reason. I have admitted that the only reason I can see for supposing that sensibles which we experience ever exist unexperienced, seems to lead to the conclusion that the sensibles which would be seen by a colour-blind man, if he occupied exactly the position which I, who am not colour-blind, now occupy, exist now, just as much as those which I now see. And it may be thought that this implies that the sensibles, which he would see, and which would certainly be very different from those which I see, are nevertheless, at this moment, in exactly the same place as those which I see. Now, for my part, I am not prepared to admit that it is impossible they should be in the same place. But the assumption against which I wish to protest, is the assumption that, if they exist at all, they *must* be in the same place. I can see no reason whatever for this assumption. And hence any difficulties there may be in the way of supposing that they could be in the same place at the same time as the sensibles which I see, do not at all apply to my hypothesis, which is only that they exist *now, not* that they exist *in the same place* in which mine do.

On this question, therefore, as to whether sensibles ever exist at times when they are not experienced, I have only to say (1) that I think there is certainly no good reason whatever for asserting that *no* sensibles do; and (2) that I think perhaps a certain amount of weight ought to be attached to our instinctive belief that certain kinds of sensibles do; and that here again any special arguments which may be brought forward to show that, whether some sensibles exist unexperienced or not, *this* kind certainly do not, are, so far as I can see, wholly inconclusive.

II.

I now pass to the question how sensibles are related to physical objects. And here I want to say, to begin with, that I feel extremely puzzled about the whole subject. I find it extremely difficult to distinguish clearly from one another the different considerations which ought to be distinguished; and all I can do is to raise, more or less vaguely, certain questions as to how certain *particular* sensibles are related to certain *particular* physical objects, and to give the reasons which seem to me to have most weight for answering these questions in one way rather than another. I feel that all that I can say is very tentative.

To begin with, I do not know how "physical object" is to be defined, and I shall not try to define it. I shall, instead, consider certain proposi-

tions, which everybody will admit to be propositions *about* physical objects, and which I shall assume that I know to be true. And the question I shall raise is as to how these propositions are to be interpreted—*in what sense* they are true; in considering which, we shall at the same time consider how they are related to certain sensibles.

I am looking at two coins, one of which is a half-crown, the other a florin. Both are lying on the ground; and they are situated obliquely to my line of sight, so that the visual sensibles which I directly apprehend in looking at them are visibly elliptical, and not even approximately circular. Moreover, the half-crown is so much farther from me than the florin that *its* visual sensible is visibly smaller than that of the florin.

In these circumstances I am going to assume that I know the following propositions to be true; and no one, I think, will deny that we can know such propositions to be true, though as we shall see, extremely different views may be taken as to what they mean. I know *(a)* that, in the ordinary sense of the word "see," I am *really seeing two coins;* an assertion which includes, if it is not identical with, the assertion that the visual experiences, which consist in my direct apprehension of those two elliptical patches of colour, *are* sensations proper, and are not either hallucinations nor mere experiences of "images"; *(b)* that the upper sides of the coins are *really* approximately circular, and not merely elliptical like the visual sensibles; *(c)* that the coins *have* another side, and an inside, though I don't see it; *(d)* that the upper side of the half-crown is really *larger* than that of the florin, though its visual sensible is *smaller* than the visual sensible of the upper side of the florin: *(e)* that both coins continue to exist, even when I turn away my head or shut my eyes: but in saying this, I do not, of course, mean to say that there is absolutely *no* change in them; I daresay there must be *some* change, and I do not know how to define exactly what I do mean. But we can, I think, say at least this: viz., that propositions *(b)*, *(c),* and *(d)* will still be true, although proposition *(a)* has ceased to be true.

Now all these propositions are, I think, typical propositions of the sort which we call propositions about physical objects; and the two coins themselves *are* physical objects, if anything is. My question is: *In what sense* are these propositions true?

And in considering this question, there are, I think, two principles which we can lay down as certain to begin with; though they do not carry us very far.

The one is *(α)* that the upper side of the coin, which I am said to *see,* is *not* simply identical with the visual sensible which I *directly apprehend* in seeing it. That this is so might be thought to follow absolutely from each of the two facts which I have called *(b)* and *(d);* but I am not quite sure that it does follow from either of these or from both together: for it

seems to me just possible that the two sensibles in question, though *not* circular *in my private space,* may yet be circular in *physical* space; and similarly that though the sensible of the half-crown is smaller than that of the florin *in my private space,* it may be larger *in physical space*. But what I think it does follow from is the fact that another person may be seeing the upper side of the coin in exactly the same sense in which I am seeing it, and yet his sensible be certainly different from mine. From this it follows absolutely that the upper side of the coin cannot be identical with *both* sensibles, since they are *not* identical with one another. And though it does not follow absolutely that it may not be identical with *one* of the two, yet it does follow that we *can* get a case in which it is not identical with *mine;* and I need only assume that the case I am taking is such a case.

From this it follows that we must distinguish that sense of the word "see" in which we can be said to "see" a physical object, from that sense of the word in which "see" means merely to directly apprehend a visual sensible. In a proposition of the form "I see A," where A is a name or description of some physical object, though, if this proposition is to be true, there must be some visual sensible, B, which I am directly apprehending, yet the proposition "I see A" is certainly not always, and probably never, identical in meaning with the proposition "I directly apprehend B." In asserting "I see A" we are asserting not only that we directly apprehend some sensible but also something else about this sensible—it may be only some proposition of the form "and this sensible has certain other properties," or it may be some proposition of the form "and *I know* this sensible to have certain other properties." Indeed we have not only to distinguish that sense of the word "perceive" in which it is equivalent to "directly apprehend," from *one* sense in which we can be said to perceive a physical object; we have also to distinguish at least two different senses in which we can be said to perceive physical objects, different both from one another and from "directly apprehend." For it is obvious that though I should be said to be now seeing *the half-crown,* there is a narrower, and more proper sense, in which I can only be said to *see* one side of it—*not* its lower side or its inside, and not therefore the whole half-crown.

The other principle, which we can lay down to start with is *(β)* that my knowledge of all the five propositions *(a)* to *(e)*, is based, in the last resort, on experiences of mine consisting in the direct apprehension of sensibles and in the perception of relations between directly apprehended sensibles. It is *based* on these, in at least this sense, that I should never have known any of these propositions if had never directly apprehended any sensibles nor perceived any relations between them.

What, in view of these two principles, can be the sense in which my five propositions are true?

(1) It seems to me possible that the only *true* interpretation which can be given to any of them is an interpretation of a kind which I can only indicate rather vaguely as follows: Namely, that all of them express only a kind of fact which we should naturally express by saying that, *if* certain conditions were fulfilled, I, or some other person, *should* directly apprehend certain other sensibles. For instance, the only *true* thing that can be meant by saying that I really see *coins* may be some such thing as that, *if I* were to move my body in certain ways, I should directly apprehend *other* sensibles, *e.g.* tactual ones, which I should not directly apprehend, as a consequence of these movements, if these present visual experiences of mine were mere hallucinations or experiences of "images." Again, the only true thing that can be meant by saying that the upper sides of the coins are *really* approximately circular, may be some such thing as that, if I were looking straight at them, I should directly apprehend circular sensibles. And similarly, the only true interpretation of *(c)* may be some such fact as that, *if* I were to turn the coins over, or break them up, I *should* have certain sensations, of a sort I can imagine very well; of *(d)* that, *if* I were at an equal distance from the half-crown and the florin, the sensible, I should then see corresponding to the half-crown, would be bigger than that corresponding to the florin, whereas it is now smaller; of *(e)* that, *if,* when my eyes were closed, they had been open instead, I should have now certain sensibles.

It is obvious, indeed, that if any interpretation on these lines *is* the only true interpretation of our five propositions, none of those which I have vaguely suggested comes anywhere near to expressing it in its ultimate form. They cannot do so for the simple reason that, in them, the conditions under which I *should* experience certain other sensibles are themselves expressed in terms of *physical objects,* and not in terms of sensibles and our experience of them. The conditions are expressed in such terms as "if I were to move my body," "if I were to look straight at the coins," "if I were to turn the coins over," etc.; and all these are obviously propositions, which must themselves again be interpreted in terms of sensibles, if our original five propositions need to be so. It is obvious, therefore, that any *ultimate* interpretation of our five propositions, on these lines, would be immensely complicated; and I cannot come anywhere near to stating exactly what it would be. But it seems to me possible that *some* such interpretation could be found, and that it is the *only* true one.

The great recommendation of this view seems to me to be that it enables us to see, more clearly than any other view can, how our knowledge of physical propositions can be based on our experience of sensibles, in the way in which principle *(β)* asserts it to be. If, when I know that the coins are round, all that I know is some such thing as that if, after experiencing the sensibles I do now experience, I were to experience still others, I should finally experience a third set, we can understand, as clearly as we

can understand how any knowledge can be obtained by induction at all, how such a knowledge could be based on our previous experience of sensibles, and how it could be verified by our subsequent experience.

On the other hand, apart from the difficulty of actually giving any interpretation on these lines, which will meet the requirements, the great objection to it seems to me to be this. It is obvious that, on this view, though we shall still be allowed to say that the coins *existed* before I saw them, are *circular* etc., all these expressions, if they are to be true, will have to be understood in a Pickwickian sense. When I know that the coins existed before I saw them, what I know will not be that anything whatever existed at that time, in the sense in which those elliptical patches of colour exist now. *All* that I know will be simply that, since the elliptical patches exist now, it is true, that, *if* certain unrealised conditions had been realised, I should have had certain sensations that I have not had; or, *if* certain conditions, which may or may not be realised in the future, were to be so, I *should* have certain experiences. Something like this will actually be the *only true* thing that can be meant by saying that the coins existed before I saw them. In other words, to say of a *physical object* that it *existed* at a given time will always consist merely in saying of some sensible, *not* that *it* existed at the time in question, but something quite different and immensely complicated. And thus, though, when I know that the coins exist, what I know will be merely some proposition about these sensibles which I am directly apprehending, yet this view will not contradict principle *(α)* by *identifying* the coins with the sensibles. For it will say that to assert a given thing of *the coins* is not equivalent to asserting the *same thing* of the sensibles, but only to asserting of them something quite different.

The fact that these assertions that the coins exist, are round, etc., will, on this view, only be true in this outrageously Pickwickian sense, seems to me to constitute the great objection to it. But it seems to me to be an objection, only, so far as I can see, because I have a "strong propensity to believe" that, when I know that the coins existed before I saw them, *what* I know is that something existed at that time, in the very same sense in which those elliptical patches now exist. And, of course, this belief *may* be a mere prejudice. It *may* be that when I believe that I *now* have, in my body, blood and nerves and brain, *what* I believe is only true, if it does *not* assert, in the proper sense of the word "existence," the *present* existence of anything whatever, other than sensibles which I directly apprehend, but only makes assertions as to the kind of experiences a doctor *would* have, if he dissected me. But I cannot feel at all sure that my belief, that, when I know of the present existence of these things (as I think I do), I am knowing of the present existence (in the proper sense) of things other than any sensibles which I or any one else am now directly apprehending, is a mere prejudice. And therefore I think it is worth while to consider what, if it is not, these things, of whose existence I know, can be.

(2) It is certain that if, when I know that that half-crown existed before I saw it, I am knowing that something existed at that time in other than a Pickwickian sense, I only know this something *by description;* and it seems pretty clear that the description by which I know it is as *the* thing which has a certain connection with this sensible which I am now directly apprehending. But *what* connection? We cannot simply say, as many people have said, that by "that half-crown "I mean *the* thing which *caused* my experience of this sensible; because events which happened between the half-crown and my eyes, and events in my eyes, and optic nerves, and brains are just as much *causes* of my experience as the half-crown itself. But it may perhaps be the case that the half-crown has some particular *kind* of causal relation to my experience, which these other events have not got—a kind which may be expressed, perhaps, by saying that it is its "source." And hence, when I know that that half-crown is circular, I may perhaps be knowing that the *source* of this experience is circular.

But what sort of a thing can this "source" be?

One kind of view, which I think is very commonly held, is that it is something "spiritual" in its nature, or something whose nature is utterly unknown to us. And those who hold this view are apt to add, that it is not really "circular," in any sense at all; nor is the "source" of my half-crown experience, in any sense at all, "bigger" than that of my florin experience. But if this addition were seriously meant, it would, of course, amount to saying that propositions *(b)* and *(d)* are not true, in any sense at all; and I do not think that those who make it, really mean to say this. I think that what they mean is only that the only sense in which those "sources" are circular, and one bigger than the other, is one in which to say this merely amounts to saying that the sensibles, which they *would* cause us to experience, under certain conditions, *would* be circular, and one bigger than the other. In other words, in order to give a true interpretation to the propositions that the coins are circular and one bigger than the other, they say that we must interpret them in the same kind of way in which view (1) interpreted them; and the only difference between their view and view (1), is that, whereas *that* said that you must give a Pickwickian interpretation *both* to the assertion that the coins *exist, and* to the assertion that they are *circular,* they say that you must *not* give it to the former assertion, and must to the latter.

To this view my objection is only that any reason there may be for saying that the "sources" exist in other than a Pickwickian sense, seems to me to be also a reason for saying that they are "circular " in a sense that is not Pickwickian. I have just as strong a propensity to believe that they are really circular, in a simple and natural sense, as that they exist in such a sense: and I know of no better reason for believing either.

(3) It may be suggested, next, that these "sources," instead of being something spiritual in their nature or something of a nature utterly unknown, consist simply of sensibles, of a kind which I have previously tried to define; namely of all those sensibles, which anybody *would,* under the actual physical conditions, experience in *sensations proper* of which the half-crown and the florin were the source, *if* their bodies were in any of the positions relatively to those coins, in which they would get sensations from them at all. We saw before that it seems *possible* that all these sensibles do really exist at times when they are not experienced, and that some people, at all events, seem to have a strong propensity to believe that they do. And in favour of the view that some such huge collection of sensibles *is* the upper side of the half-crown, is the fact that we do seem to have a strong propensity to believe that any particular sensible, which we directly apprehend in looking at the upper side of the half-crown, and of our direct apprehension of which the upper side is the source, is *in the place* in which the upper side is. And that *some* sense might be given to the expression "in the same place as," in which it could be true that sensibles of all sorts of different shapes and sizes, and of all sorts of different colours, were in the same place at the same time, seems to me to be possible. But the objection to this view seems to me to be the same as to the last; namely that if the upper side of the half-crown were identical with such a collection of sensibles, then the only sense in which it could be said to be "circular," or bigger than that of the florin, would certainly be very Pickwickian, though not the same as on that view.

(4) If, for the reasons given, we reject both (1), (2), and (3) as interpretations of our five propositions, the only alternative I can think of that remains, is one which is roughly identical, so far as I can see, with Locke's view. It is a view which asserts that the half-crown and the florin really did exist (in the natural sense) before I saw them; that they really are approximately circular (again in the natural sense); that, therefore, they are not composed of sensibles which I or others should directly apprehend under other conditions; and that therefore also neither these sensibles (even if such do now exist) nor those which I am now directly apprehending are in the place in which the coins are. It holds, therefore, that the coins do really *resemble* some sensibles, in respect of the "primary" qualities which these have; that they really are round, and one larger than the other, in much the same sense in which some sensibles are round and some larger than others. But it holds also that no sensibles which we ever do directly apprehend, or should directly apprehend, if at a given time we were in other positions, are *parts* of those coins; and that, therefore, there is no reason to suppose that any parts of the coins have any of the "secondary qualities"—colour, etc.— which any of these sensibles have.

On this view, it is plain, there is nothing to prevent us from holding that, as suggested in I (3), all sorts of unexperienced sensibles do exist.

We are only prevented from holding that, if they do, those which have the same source all exist in the *same place* as their source. And the natural view to take as to the status of sensibles generally, relatively to physical objects, would be that none of them, whether experienced or not, were ever in the same place as any physical object. That none, therefore, exist "anywhere" in physical space; while, at the same time, we can also say, as argued in I (2), that none exist "in the mind," except in the sense that some are directly apprehended by some minds. And the only thing that would need to be added, is that some, and some only, *resemble* the physical objects which are their source in respect of their shape.

To this view I can see no objection except the serious one that it is difficult to answer the questions: How can I ever come to know that these sensibles have a "source" at all? And how do I know that these "sources" are circular? It would seem that, if I do know these things at all, I must know *immediately,* in the case of *some* sensibles, both that they have a source and what the shape of this source is. And to this it may be objected that this is a kind of thing which I certainly cannot know immediately. The argument in favour of an interpretation of type (1) seems to me to rest wholly on the assumption that there are only certain kinds of facts which I can know immediately; and hence that if I believe I know a fact, which is not of this kind, and which also I cannot have learnt mediately, my belief must be a mere prejudice. But I do not know how it can be shown that an assertion of the form: Facts of certain kinds are the only ones you can know immediately; is itself not a prejudice. I do not think, therefore, that the fact that, if this last view were true, we should have to admit that we know immediately facts of a kind which many people think we cannot know immediately, is a conclusive objection to it.

II. G. F. STOUT

BOTH Mr. Moore and I have for many years spent much time and labour on the group of problems which is now to be discussed between us. We initially set out with views so divergent as apparently to exclude all hope of reaching agreement. This is no longer so to nearly the same degree as in the past. We are now in essential agreement on some points on which we once essentially differed. In some other respects there is still fundamental divergence. But as far as regards one great question, our agreement is sufficient to yield a good basis for further discussion. We can proceed on the basis of common presupposition in dealing with the nature of the knowledge of physical objects by way of sense-perception. I shall therefore, in what follows, mainly confine myself to this topic, referring to other questions only in so far as they seem relevant to it.

On pp. 372 and 373 of his paper, Mr. Moore lays down two principles

which I accept without reservation. He states both with special reference to a particular example. But it is obvious that he intends them to be taken universally. The first may be stated as follows:—"*The sensibles which we directly apprehend in perceiving a physical object are never simply identical with the physical object itself or with any physical part of it or with any quality belonging to it.*"[1] The second principle is that *what we know through sense-perception of a physical object is based in the last resort on the direct apprehension of sensibles and the perception of relations between directly apprehended sensibles.*

Under the guidance of these two fundamental principles, Mr. Moore proceeds to discuss various typical theories of the knowledge we have by way of sense-perception of the physical objects perceived. One of these theories seems virtually identical with Mill's well known doctrine of matter as constituted by a fixed and systematic order of actual and possible sensations. It is distinctively characterised by the consistent attempt to dispense with any reference in sense-perception to anything distinct from and independent of the possible and actual sense-experiences of the percipient subject. Mr. Moore thinks it possible that this view may be true. But he admits that neither he himself nor anyone else has been able to state it in a consistent way. He also finds in it other serious difficulties which lead him not indeed to reject it absolutely, but to regard it only as a last resource on which he may fall back if no better alternative can be found. Here, I differ from Mr. Moore only in being more decidedly negative. I cannot admit that the permanent possibility theory is tenable in any form. Without going so far as this, it is plain that Mr. Moore is strongly inclined to look in another direction for a satisfactory interpretation of the facts. The type of theory which he seems to prefer is that according to which each sense apparition is, from the outset, connected with an immediate knowledge of it as related to its source in an existence beyond itself. Here also I agree. Mr. Moore next discusses three special forms which the source theory may assume. One of these he distinctly prefers to the others, and here again I find myself at one with him on the most vital points. I agree with him as concerns the following essential positions. (1) What is primary in our knowledge of physical objects through sense-experience is not merely "direct apprehension" of sensibles, but also direct knowledge that these sensibles are connected with existence beyond themselves. (2) Our primary knowledge of the relation of sensibles to their source includes a knowledge of the nature of the source as in some respects akin to the sensibles; this implies that the source is complex and that there are relations within it corresponding to relations between the sensibles which are referred to it.

In Mr. Moore's special development of this general doctrine I find much to disagree with. The main points at issue may be provisionally stat-

[1] I am not perfectly sure that Mr. Moore intends to assert that the sensibles are never identical with any *quality* of the thing. But I think that he must mean this.

ed as follows. (1) According to Mr. Moore, the correspondence in nature between sensibles and their source is restricted to certain sensibles and is not found in the case of others essentially akin to these. I, on the contrary, hold that the correspondence exists for all sensibles in accordance with one uniform principle. (2) For Mr. Moore, the original reference of sensibles to a source does not include the whole source but only that part of it which enters into the constitution of what we call, in ordinary language, the perceived object—the thing said to be seen, felt, tasted or smelled. I, on the other hand, hold that the original reference is to the whole source indiscriminately and that it is only by a further process that we come to distinguish that part of it which belongs to the particular thing perceived from other parts. My third divergence from Mr. Moore concerns (3) the definition of what is ordinarily meant by a physical object. As I understand him, he simply identifies the physical object with the source and the nature of the physical object with the nature of the source. On this view the sensibles with which we are directly acquainted, though they are essential conditions of our knowing a physical thing in no way enter into its constitution. I say, on the contrary, that the physical object as perceived or imagined includes not only the source but the nature of the sensibles so far as the sensibles express the nature of the source—so far as they stand to the source in the relation of being its sensible appearances, actual or possible. I thus include in my conception of the physical object all that the permanent possibility theory of Mill or Berkeley can say of it. This may be expressed by saying that for me the physical object, as such, is essentially a phenomenon. In what follows I have to develop the source theory, as thus defined, so as to show that it is tenable. I cannot, of course, within my limits, do this in full detail. It will be sufficient if I attempt to meet certain difficulties on which Mr. Moore lays stress. Mr. Moore finds it difficult to answer two questions. (1) How can we know that sensibles have a source at all? (2) How can we know that the source is akin in nature to the sensibles, or at least to some of them? Such knowledge must ultimately be immediate. But "this seems to be a kind of thing which I certainly cannot know immediately." The precise nature of the difficulty Mr. Moore does not attempt to define. I take it that there are two stumbling blocks in his way. First, he finds it hard to understand how the knowledge of sensibles, in general, can involve knowledge of a correlated existence other than their own—how the scratch can be aware of the thorn. In the second place, he probably finds a special difficulty in this knowledge being, as he supposes, limited only to certain sensibles and not extended to others essentially similar in nature and mode of occurrence.

Beginning with the first problem, we have to inquire how it is possible to know that any directly apprehended sensible is correlated with an existence beyond its own. Let us commence by considering a parallel case. Mr. Moore, in explaining the distinction between *thought* and what

he calls *direct apprehension,* refers to the relation of an image to the primary sensible of which it is an image. To take his own illustration, when I look at a black mark, there is actually present to my mind a certain visual apparition, so that I directly apprehend it. If I now turn my head away the original visual apparition is no longer actually present. Its place is now filled by what is called a mental image. It is this image that I now directly apprehend and not the primary sensible. Yet I am still, in a certain way, cognisant of the original apparition. In the very act of directly apprehending the image, I think of or remember the primary sensible. I am not merely cognisant of the image, but cognisant of it as standing in a peculiar relation to the previous existence of the primary sensible. I am aware of the image as in a peculiar fashion conditioned by and derived from the primary sensible. I am aware of it as more or less like and as more or less unlike the primary sensible in quality, in intensity and in the relations of its component parts. All this implies that I am in some manner aware of the primary sensible when it is no longer actually present as it was when it first existed. Following the usage of ordinary language, we may describe this mode of awareness by saying that we are not merely thinking of the image, but are, in Mr. Moore's phrase, directly apprehending it.

There seems to me to be a very important analogy between our knowledge of the connexion of image and primary sensible and our knowledge of the connexion of a primary sensible and its source. In the first place, there is in both cases the thought of a particular existence other than that of the sensible which we directly apprehend, and this other existence is not, at the moment, directly apprehended. In both cases the thought of this existence is specified and determined by the nature and existence of the actually present sensible. It is in both cases thought of as connected, in certain respects, with the actually present sensible. In particular, it is in both cases thought of as the source of this sensible, though in different ways. Here it may be objected that there is a vital difference which destroys the analogy in its most fundamental point. It may be urged that whereas, in the case of the image, we have already apprehended directly the corresponding primary sensible in previous experience, in the case of the supposed source of the primary sensible itself, we have had no such previous experience. I reply that in the present moment in which we directly apprehend only the image, our direct apprehension of the primary sensible is entirely gone. It is no longer a factor actually forming part of the present situation. It operates only indirectly, inasmuch as it conditions the direct apprehension of the present image or of some equivalent present existence. It is only this present existent which supplies a cue to thought in referring to the existence of the primary sensible and in determining its nature, just as it is only the primary sensible itself which supplies a cue to thought in referring to the existence of its source and in determining the nature of its source.

Note next, that both the knowledge of the image in relation to its primary sensible and the knowledge of the primary sensible in relation to its source are immediate. In both cases, if we were initially without such knowledge, there seems to be no process of inference by which we could acquire it. At this point, I must take note of a serious inconvenience besetting Mr. Moore's phrase "direct apprehension." It is natural to use the term "apprehension" in a very wide sense, so as to cover all kinds of cognition. Hence, when "direct apprehension" is contrasted with mere thought, it seems to be implied that thought, as such, is indirect. But this is not so, if we mean by "indirect" anything which would ordinarily be called inference, or if we take it to involve uncertainty. There is only one sense in which thought, as such, need be indirect.[2] In thinking of a particular existent, we may know directly *that* it exists, that it is such and such and so and so related, though the particular existent itself is not, at the moment, an actual apparition in consciousness. Our knowledge of it may be called indirect, in the sense that we know it only inasmuch as we know propositions about it—inasmuch as we know "that it exists and is such and such." But the propositions about it may themselves be known immediately and, so far as this is the case, our knowledge of it is in another sense direct. Thus when I have just felt a pang of toothache, I may know immediately that I have felt it, and so far my knowledge of it is immediate. But the pang is not itself actually present to consciousness in the way in which it was present when it was actually being felt. The kind of presence which it has in actually being felt I have been in the habit of calling "*existential* presence to consciousness." Existential presence may be either simply identified with Mr. Moore's "direct apprehension" or regarded as an essential condition of it. If we choose the second alternative, direct apprehension may be defined as "that kind of apprehension which depends on existential presence."[3]

A third point of analogy between the reference of image to primary sensible and the reference of primary sensibles to a source is to be found in the initial absence, in both cases, of anything in the nature of reflective analysis, separately marking off from each other the various factors involved In ordinary experience, apart from special motives, the mind does not, explicitly and separately, set before itself the propositions that the image is distinct from the primary sensible and stands in certain relations to it. It is true that it knows the primary sensible only as this is related to the image But it does not know that it knows the primary sensible only in relation to the image. What is before it is, for the most part, only the unanalysed complex including image and primary experience and their connexion, without separate discrimination of these factors. Analysis is

[2] I should myself maintain that there is only one sense in which thought *can* be indirect.

[3] It is the second alternative which I take to be the true one. Here I differ from Mr. Moore. But it would take too long to discuss the question, important as it is, within the limits of the present paper.

fully and adequately carried out only on critical reflexion, the sort of reflexion which Mr. Moore and I are now attempting. The same holds good for the reference of primary sensibles to a source. Here, too, what the mind is aware of is initially an unanalysed complex including sensible and source and their connexion. It does not separately formulate to itself the propositions that the source is an existence distinct from the sensible and that they are related in a certain way.

This original and habitual tendency to think the whole complex confusedly, without analysis into its constituent factors, is apt more or less to influence us even when we do attempt to analyse. We may be tempted, for example, in the case of the image, to suppose not only that we can distinguish it from the primary sensible, but also that we can isolate it so as to be able to think of it as existing by itself, entirely stripped of all relation to primary sense-experience. So far as I can discover, this is quite erroneous. We are never able to apprehend an image without regarding it as the image of something.[4] The reason why we may ignore this is that the reference to the primary experience is so familiar and so much a matter of course that we fail expressly to take separate notice of it. If we then proceed to put the question to ourselves whether the image, as such, necessarily involves the thought of the primary sensible, we are bound to get a negative answer. For the reference to the primary sensible has already been unwittingly included by us in the image as we conceive it, and cannot therefore be found beyond it. We shall be in the position of a man who is looking for his spectacles while, all the time, he has them on. He cannot find them so long as, in looking for them, he is looking through them. If, after this fallacious mental experiment, we remind ourselves that as a matter of fact the image must in some way carry with it the immediate knowledge of a primary sensible, this fact will appear strange. The connexion of the image with the primary sensible will appear not to be the kind of fact which we can know immediately. This sort of fallacy is, I think, more commonly committed in the treatment of other questions. For instance, it seems to me to pervade Hume's discussion of causal connexion. Above all, it is likely to be a source of confusion in the attempt to examine the connexion of a primary sensible and its source. If this connexion is not, initially and in ordinary experience, implicitly presupposed rather than explicitly distinguished, we may easily, even in the act of seeking to distinguish, be all the time unwittingly assuming it, in such a way that we shall really be endeavouring to distinguish it from itself. The attempt must fail. What we take to be merely the primary sensible will seem to be something relatively loose and separate, having nothing in its own nature and existence to connect it with an existence beyond itself. I would suggest that this may be part of the reason why Mr. Moore has difficulty in admitting that the

[4] Even when the image is freely constructed by the imagination, we still are aware of it as reproducing primary experience in a modified form, and we still think of a possible primary experience as corresponding to it.

connexion of primary sensible and source belongs to the class of things which we can know immediately. It is not, however, in any case, the whole reason. As I shall point out later on, there is also another very important reason which certainly does influence Mr. Moore.

So far, I have attempted to meet the supposed difficulty of our having an immediate knowledge of primary sensibles, as correlated with a source, only by referring to an analogous case which seems clearer and less open to doubt. But both cases fall under the general head of what Hume would call knowledge of matter of fact which anticipates experience, and what Kant would call knowledge of synthetic propositions *a priori.* Can all such knowledge be brought under a common principle? In my opinion it can. Here Mr. Moore and I have common ground to start from. We both, I believe, agree that a mere appeal to the constitution of the knowing mind can supply no explanation except in so far as it is the nature of the mind to know what has being, in relative independence of its coming or ceasing to be known. We both agree in denying mere being for thought as contrasted with what has being apart from thought. From this common postulate, it seems to follow that no more ultimate reason can be given for the possibility of anything being known than that it has being and that a mind is there to know it. But this principle is by itself insufficient to account for the actual development of our knowledge. For, by itself, it does not explain why we are not omniscient—why we do not know, in detail, all that is. To answer this question, we must take account also of the fundamental principle of empirical philosophy, the principle that knowledge is throughout limited by experience. This means that we have cognisance of the rest of the Universe only in so far as we are cognisant of its connexion, however indirect this may be, with those particular existents which, in my phrase, are existentially present to consciousness, or, in Mr. Moore's language, are directly apprehended. If, now, these particular existents were in their own nature self-complete and self-contained, so as to imply nothing beyond themselves, if each were a universe in itself, we could not through knowing them have knowledge of anything beyond them. We should thus be cognisant only of the particular existents which happened at any moment to be existentially present. We should be confined to an infinitesimally small portion of what we come to know as the real world.[5] But if we find a difficulty here, it is entirely of our own making. It arises from a perfectly arbitrary assumption—the assumption that the existentially present data are in their own nature self-complete and self-contained. If, in their own nature, they are in various ways and respects incomplete existences, we need no further reason why we should know them as, in various ways and respects, incomplete, and, therefore, as connected in various ways and respects with existence beyond their own. It may be objected that reflective analysis apparently fails to discover the incompleteness. I reply that, so

[5] Whether even this could be known, under the assumed conditions, is a further question, which I should answer in the negative.

far as this may be so, the fault lies in the inadequacy or confusion of the reflective analyses. If, in critical reflexion, we are expecting a fresh revelation of something unknown before, we are bound to be disappointed. The original unreflective act of referring an existentially present sensible to a correlated existence beyond it, is itself the immediate knowledge of the sensible as incomplete. On the other hand, in the attempt to rediscover distinctly what we thus already know indistinctly, we are prone to fall into the fallacy which I have already discussed. We are prone to assume, unwittingly, what we are trying to find and then to look for it elsewhere, as if we had not already presupposed it. We are then, as I have said, in the position of a man who is looking *through* his spectacles *for* his spectacles.

There remains a special difficulty, which requires separate treatment, in dealing with the reference of primary sensibles to a source. The difficulty is that the relation to a source does not seem to be uniform for all primary sensibles or even for all of the same class. Consider, for example, visual experience. We may, in dreams and hallucinations, directly apprehend a visual apparition, which is not, in any ordinary sense, the visual appearance of a perceived physical object, present to the senses. We are always, under such conditions, impelled to think of the presence of a perceived object, and it is true that, apart from special reasons to the contrary, we believe that it actually exists. But what is important is that the object which we seem to perceive may not exist; that we may become convinced for sound reasons that it does not exist, and that when we are so convinced we have no insuperable difficulty in accounting for the primary sensible in other ways, *e.g.,* by tracing it to physiological conditions not involving the existence of a perceived object of which it is the sensible appearance. The primary sensible, in such instances, seems to be recognised as "loose and separate" from the existence of a source in any object perceived by means of it. *Prima facie,* this seems to be a very serious objection to any theory which asserts an immediate knowledge of primary sensibles as having their source in objects which need not be otherwise known to us. Another form of the same difficulty is clearly brought out by Mr. Moore. Even when a physical object really is seen, its visual appearance is variable, and some of its variable appearances yield a much more adequate and accurate knowledge of their source than others. How are we to account for this difference between primary sensibles, fundamentally alike in their own nature, on the view that the knowledge of their connexion with a source is original and immediate?

It seems to me that difficulties of this kind can be satisfactorily met. They are due to an over hasty assumption. They arise from the precipitate assumption that the reference of primary sensibles to a source is confined only to that part of the source which may be contained in the particular physical object which is perceived by means of them, the particular object of which they are the sensible appearance, the particular tree, stone,

or animal which is said to be seen or touched or heard. As against this, I would maintain a radically different view. My position is that what is ordinarily called the perception of this or that particular thing forms only one special development due to special conditions of the original reference to a source. To explain this, it is necessary to begin by pointing out that our knowledge of a physical world is not, in any case, constituted merely by apprehending a multiplicity of separate sensibles, each in relation to an existence beyond itself. It also involves the gradual discovery of the connexion of these items with each other. If we agree to call a particular primary sensible, together with whatever information it may convey concerning the existence and nature of its source, a primary datum of sense, then we may say that the development of our knowledge of external objects involves, from the outset, the discovery of interconnexion of such primary data.

For our present purpose it is of chief importance to distinguish the ways in which this takes place. The first is essential to what we ordinarily call perceiving this or that particular thing. The same piece of sugar may be perceived in many distinct perceptual acts, each involving a different and more or less dissimilar primary sensible, I may see it, touch it, or taste it; and in seeing or touching it I may, on different occasions, have an indefinite variety of visual or tactual sensations. None the less I take myself to be perceiving, throughout, only one and the same piece of sugar. Now, since the primary sensibles involved in my varying perceptions are not the same or similar, it must be the source which is taken to be identical. The primary data of sense are correlated with each other inasmuch as they are regarded as having a source in common though the primary sensibles are distinct and different. This is expressed, in ordinary language, by saying that in all of them the same thing is perceived, though it is perceived under varying sensible appearances. Of course the thing, and consequently the source, is not taken to be simple and indivisible. It has different qualities and distinguishable parts. Some of its varying sensible appearances may be appearances of the same quality of the same part, as when we first perceive the same extension by sight and then by touch. Some may be appearances of different qualities, as when we first touch the sugar and then taste it. Some may be appearances of different parts, as when we first look at one side of a thing and then, going behind it, look at the opposite side.

I have said this reference of primary sensibles to a common source is essential to what we ordinarily mean by perceiving a particular thing. In ordinary usage, when I say that I myself or that someone else perceives a piece of sugar, this is most naturally taken to imply that the sugar is perceived as being sugar. But this, of course, presupposes that the present sensible appearance is recognised as connected with many other possible appearances of the same object. We may, however, also speak of perceiving a thing where there is no recognition of it as belonging to a special

class or kind. We then usually add an explanation. We say, for instance, "I saw a bird, but without knowing it to be a bird." In such instances as well as in definite recognition there is still correlation of the present datum of sense with other data, on the basis of past experience, though this correlation is of a vaguer and more general kind. We are at least aware that the thing has other distinctive characters ascertainable by further observation, though we cannot specify in advance what these are. Further, there is a certain general scheme or plan, broadly similar for all perceived things, in accordance with which their various perceptible qualities and parts are connected with each other, and in accordance with which we can pass from one sensible appearance of the same thing to others. This, of course, presupposes that the primary sensible which we directly apprehend has a meaning acquired in the course of past experience. Let us now retrace the course of mental development and consider the position of a mind which has not yet learned to correlate its sense-data by referring different sensibles to a common source. Can we properly say, taking the term perception in its ordinary sense, that such a mind perceives this or that particular object? So far as primary sensibles are locally distinct and separable by relative change of position, it will refer them to relatively different sources. It will, however, have no means of connecting different sensibles with the same source. But, inasmuch as this is part of what we ordinarily mean by *perceiving,* it seems plain that if we choose to use the term in such a case, it will be by a more or less arbitrary extension of its usual meaning. If we consider the position of the undeveloped mind from the basis of our own developed knowledge, we shall be tempted to speak of it as perceiving this or that. It directly apprehends, as we presume, a certain primary sensible, and it refers this to a source. This source we ourselves know to be a certain piece of sugar. Hence we may say that there is here a case, however rudimentary, of the perception of a piece of sugar. But we must be on our guard against the psychologist's fallacy of attributing to the primitive mind knowledge which we possess, but which it does not possess. We must put ourselves at the point of view of the undeveloped mind and enquire whether it really refers the primary sensible to its source in the sugar, in the same way as we do when we perceive a particular physical object. Now there seems to me to be a fundamental difference here which leads us to the heart of our problem. The primitive mind, we suppose, directly apprehends a primary sensible, and in so doing refers it to a source. But there are no motives or conditions which could lead it to make any distinction or reservation in this reference to a source. In particular, there is nothing which could lead it to single out one part of the source from others and refer distinctively to this. The reference will be to the source in general. But in ordinary perception the reference is only to part of the source; it is limited to this by the way in which different sensibles are correlated with each other as having a common source. It is only a part of the source of each sensible which can be common to it and

the others; and even this part is only an indirect source, inasmuch as its connexion with sense-experience is mediated through a series of intervening conditions.

We find cogent evidence for both these statements in our developed knowledge of the physical and physiological conditions of sense-perception. From this point of view, we can see that the perceptual correlation of different sense-data is possible only under one condition. It is possible only if the sense-organs are freely movable relatively to the thing perceived and therefore spatially external to it. We know that the primary sensibles through which an object is perceived are experienced only when and so far as the object, directly or indirectly, acts on the sense-organ and there gives rise to a series of processes ending in a certain change in a certain portion of the nervous system. We know that the primary sensible constantly varies according to the varying character of the processes in the sense-organ and nervous system by whatever condition such variations may be produced. We know that when there actually is no perceived object, similar sense-experiences may arise in the way of dreams and hallucinations and recurrent sensations, conditioned only by the state of our bodies. Further, our general knowledge of the executive order of nature shows us that when the primary sensible is the appearance of a perceived object, this object operates only through a chain of processes which do not, in giving rise to the sense-experience, produce any corresponding change in the object itself. They no more affect the perceived physical thing than the breaking of a window affects the body of the man who throws a stone at it. None the less, as I have said, the primary sensible, which we directly apprehend, is conditioned in its nature by the varying character of such processes. From such considerations taken in their interconnexion, it seems to me to follow irresistibly,[6] first, that only part of the source of the primary sensible through which we perceive a thing belongs to the separate constitution of the thing itself; and, secondly, that even this part is not directly but more or less remotely connected with the relevant sense-experiences.

These propositions may be maintained on the basis of our acquired knowledge of the order of the physical world. But we have still to consider how the interval between our present point of view and that of a more primitive consciousness comes to be crossed through a gradual development. In dealing with this problem, I cannot stir a step without presupposing the reference of primary sensibles to a source and without also presupposing that the reference is initially to the whole source and that to the end it includes a reference to the whole source. I have to show how this total source becomes more or less definitely distinguished into parts, and how one part is taken to belong to the thing perceived, while the other parts are taken to belong to the constitution of objects perceptible by

[6] Perhaps the conclusion is not absolutely necessary; but it could only be evaded, so far as I can see, by a series of complicated, arbitrary, and perfectly unverifiable hypotheses.

means of other primary sensibles. The principle on which I proceed is that all such distinctions arise in the process of correlating primary sense-data with each other. This assumes various forms. One of these is correlation by reference to one source. This depends, in part, on the experience of continuous change in what is recognisable as the same sensible in different phases of its existence, as contrasted with the simultaneous or successive occurrence of different sensibles. We may illustrate by the difference between variation in the intensity of a sound or the brightness of a colour as contrasted with the transition from one sound or colour to another, or from a colour to a sound. But by far the most important case, under this head, is that of continuous change of place, as when a visual apparition shifts its place in the field of visual sensation or a tactual apparition shifts its place in the field of tactual sensation, when, for example, a bird flies across the field of view or a fly creeps over the skin. Under such conditions the varying phases of the same sensible are referred to the same source. This, however, is only an initial step, and it is by itself far from accounting for that correlation of sensory data which is involved in what we ordinarily call the perception of a thing. Further advance is conditioned by the discovery of a certain uniform and systematic concomitance and co-variation of different sensibles, such that change in one entails change in others. We may take, as a typical and most important case, the correspondence and co-variation of the extension, shape, relative position, and motion of tactual and visual sensibles when the same thing is both seen and touched. My position is that such correspondence is the original motive and evidence for referring different sensibles to a common source. In contrast to this, there is a fundamentally different group of motives which leads to the correlation of sense-data by reference to causal relations between distinct things, each of which is constituted by its own sense-appearance as connected with others by their common source. The cue for this is still afforded by regular conjunctions discoverable in the order of primary sensibles. But the order is of a different kind. It is an order connecting sensibles locally external to and separable from each other, and it is conditioned by variable local relations. The sense-apparition of a flame in continuous proximity to that of a sheet of white paper is followed by the apparition of the burning paper. But this does not follow, in the same way or with the same immediacy, if the apparition of the paper and that of the flame are separated by intervening sensibles. If the sequence of sense-experiences were due to their having a common source, it would not be contingent in this way on variable local relations. Change in the common source would always be attended by correlated changes in its sensible appearances, independently of such conditions. Where such conditions are indispensable the only mode of interpretation open either to ourselves or to the primitive mind is that which presupposes interaction between distinct things. Our knowledge of the causal order progresses in detail; it brings with it a further development of the knowledge of the union of different qualities

in the same thing. These qualities come to include an increasing number of what Locke calls "active and passive powers," *i.e.*, characteristic modes in which a thing affects and is affected by other locally distinct things in variable local relations. There thus arise further motives for referring a group of sensibles to the same source. Change in part of the group not only involves change in other parts; it also involves change of active and passive powers.

The original reference of primary sensibles to a source is developed in detail in these two ways, partly by reference of different sensibles to one source, partly by reference to distinct sources in interaction with each other. But there still remains a certain class of regular and systematic variations in our sense-experience which is not accounted for in either of these two ways. I refer, of course, to variations in the primary sensibles which do not involve and are not taken to involve any corresponding change or difference in the thing which we perceive by means of these primary sensibles—which do not and are not taken to involve change or difference in the source so far as the source belongs to the constitution of the particular thing perceived. Here two questions confront us: (1) How does the primitive mind come to be aware of variations in the sense-appearance as occurring independently of change or difference in the perceived object? (2) How does it account for these variations by reference to a correspondingly variable source? The answer to the first question is that these variations are not found to be correlated with corresponding variations in other primary sensibles in such a way as to suggest reference to the same source; also that they are found to make no difference to the way in which a perceived thing acts on or is acted on by others,—to its active and passive powers. The answer to the second question is that they are referred to corresponding variations in the body of the percipient and in its variable relations to the perceived object. The motives for this are present and obvious from the outset. From one point of view, the body of the percipient is a member of the general causal order, so that it interacts with things outside it, as these interact with each other. But, besides this, it is also, from the outset, found to occasion, in a regular way, another class of sensible changes which cannot be thus interpreted. Movements of the body or its parts which are not such as to produce any relevant change in things outside it are none the less constantly and regularly accompanied by obvious and impressive changes in sense-experience. The simplest case is that in which we successively bring within the range of sense-perception different things or different parts or qualities of the same thing. This happens, for instance, when I turn my eyes from the paper before me to a book on my shelves, or when I first see the paper and then touch it with my hand. The transition from one primary sensible to another does not in such cases involve any discoverable change or transition in the things perceived. The same holds good for the coming and going of primary sen-

sibles in such instances as that of opening or closing the eyes. It may be admitted that evidence of this kind, though it certainly shows the dependence of the direct apprehension of primary sensibles on the body and its movements, is not of itself sufficient to indicate unambiguously that the primary sensibles have part of their source in the body. There are, however, manifold other experiences which make the inference unambiguous. The primary sensibles, through which a thing is perceived, are constantly found to vary in manifold ways, where, on the one hand, the variation cannot be referred to any variation in the thing perceived or in any transition from the appearance of its parts or qualities to others, and where, on the other hand, it obviously *can* be referred to correspondingly variable movements of the percipient›s body and organs of sense. At a somewhat later stage the influence of conditions intervening between the body and the thing perceived will be taken account of. It will be longer before the part played by the varying state and constitution of the body itself will be definitely recognised. The final stage is represented by the physiological treatment of the conditions of sensation, as exemplified in such doctrines as that of specific energies or in the explanation of hallucinations.

What I have endeavoured to show in the above discussion is that the perception of particular physical objects is only one special development of the general reference of primary sensibles to a source. The source in the perceived object is not the whole source or the most immediate part of it. The distinction of this part of the source is not an original datum, but acquired in connexion with certain special experiences, and in the same process there arises the distinction between mere variation in the sensible appearance and variation in the thing perceived. It follows that we have no need to assume an immediate and original knowledge of this distinction and of the fact that some appearances express the nature of the object more adequately and accurately than others. What is original is the reference to the whole source. But there is no reason to suppose that, in this respect, there is any difference between one sensible and another. The principle, throughout, is that all directly apprehended relations of primary sensibles are correlated with corresponding relations in their source. For the secondary qualities, it is only qualitative relations of resemblance and difference which are involved. For the primary it is also local and temporal relations. Finally, there is nothing, in the further development of knowledge, to show that this initial postulate is false or inaccurate. So far as we can discover, the correlate of a primary sensible, inasmuch as it is not to be found in the perceived object, is capable of being found elsewhere in some other part of the source. There is nothing, therefore, to raise a doubt as to the immediacy or the certainty of the knowledge that all differences and relations of primary sensibles are matched by differences and relations in their source.

I have now stated, in broad outline, my own positive view of the na-

ture of our knowledge of physical objects. But there is one relevant point of disagreement between Mr. Moore and me which I have not yet mentioned. He says that he feels a strong propensity to believe that certain experienced sensibles continue to exist when they are not experienced. "I have," he says, "a strong propensity to believe that, *e.g.,* the visual sensibles which I directly apprehend in looking at this piece of paper still exist unchanged when I merely alter the position of my body by turning away my head and closing my eyes, provided that the physical conditions outside my body remain unchanged." The importance, for me, of the question here raised, lies in its bearing on my view that part of the source of these sensibles, and the most immediate part, is in the body of the percipient and not in the perceived thing. This view seems incompatible with the belief that the sensibles continue to exist independently of the body.

No doubt if such an instinctive belief existed and if it were universal, we should have to attach great weight to it. But, so far as I can see, it does not exist, and in any case it is not common to all mankind. I am sure that I myself do not share it, and it is clear that Berkeley, and those to whom Berkeleyanism seems plausible at first sight, do not share it. In my own case, I do indeed feel a strong tendency to believe that after I have seen a thing and then ceased to see it, the thing continues to exist with the characteristics which I perceived as belonging to it, provided that the physical conditions outside my body remain unchanged. But, as Mr. Moore himself points out, what I see is, according to the usage of ordinary language, not the visual sensible directly apprehended, but the physical object. Besides this physical object with its perceptible qualities, there is certainly nothing else which I strongly tend to regard as persisting after the perception has ceased. The same holds good, so far as I can discover, for mankind in general. If it is admitted that the thing seen with its perceptible qualities persists, they do not ask for more than this. The only question which remains, therefore, is whether there is a strong propensity to believe that the directly apprehended sensible is itself a quality of the thing. From what Mr. Moore says (p. 372), I gather that he would deny that the sensible, as such, can be simply identified with a quality of the thing. Either, then, his instinctive belief contradicts one of his fundamental principles, or he believes that the sensible persists without believing it to be a quality of the perceived object. In the latter case, his propensity to believe seems so exceptional that we can hardly attach much importance to it.

I would suggest that Mr. Moore does not really feel a propensity to the belief which he himself defines. I am therefore bound to offer some explanation of the fact that he supposes himself to feel it. I think that what he really feels is a strong tendency to reject what he wrongly takes to be the only alternative to the belief that the sensibles themselves persist when they are not directly apprehended. He seems to take it for granted that if we do not believe that the sensibles actually continue to exist, then our

belief that the physical object continues to exist is merely a belief in the continued existence of the *source* considered in complete abstraction from the nature of the sensibles as expressing the nature of the source. This seems to be clearly wrong. What we mean by a physical thing includes not only the source, but also the kind of sensible which expresses the nature of the source. It does not follow at all that when the thing is not perceived the primary sensible through which it is perceptible must actually persist. It is sufficient as well as necessary that possible sensibles standing in the required relation to the source should be included in what we mean when we think of the physical object. The possibility must be of such a nature that its realisation does not affect the existence or nature of the source, but depends on other conditions—the conditions which we recognise as making a difference to the sensible appearance and not to the thing itself. This being presupposed, we may and must, if we are to represent the physical thing to ourselves at all, represent it as it would appear under such conditions, and include in our conception of it the whole range of its possible appearances under varying conditions. If we entirely leave out of count such relation to sense-experience, what is left is not a physical object at all. If we undertake the mental experiment of abstracting from sensible appearance, we find ourselves confronted with the problem of what things may be in themselves, apart from their relation to our sensibility, a problem which does not trouble common sense or science. For science and common sense things are *phenomena,* and a phenomenon is an object such as it appears to the senses. If a difficulty is still felt in understanding how the nature of primary sensibles, inasmuch as they express the nature of the source, is included in what we mean by the continued existence of an unperceived object, this may, perhaps, be made clearer by considering a case which is partly analogous. We think of a book as continuing to exist when no one is reading it. What we take to persist does not merely consist in certain marks on paper. These persisting marks are regarded as still forming words, sentences, paragraphs, etc., even when no one is reading the book. The marks are thought of as still having a meaning even when they are not actually conveying their meaning to any mind. Otherwise what we regard as persisting would not be a book. Similarly, physical things are still thought of as they appear to the senses, even though they are not supposed to be actually perceived by anyone. Further, if we thought of them otherwise, we should not be thinking of physical things as such at all.

Is this explanation sufficient; or must we go farther and say that there is a strong propensity to believe that primary sensibles themselves persist when they are not experienced? As I have already said, if such a tendency exists, I must identify it with a tendency to believe that the primary sensible endures as a part or quality of the thing. Otherwise, I have no clue to what is meant, and can only say that if some minds feel this tendency,

I, at least, do not either feel it or anything which could be mistaken for it. The only question, for me, then, is whether there is a strong tendency to regard the immediately apprehended sensibles as persistent qualities of the things perceived. I find that if and so far as I use all means at my disposal for securing that the precise nature of the question is sharply defined and clearly kept in view, the answer is negative. We are all prepared to recognise that the same thing in the same aspect of its nature may have variable appearances to the senses without itself undergoing corresponding changes. But if we ask ourselves whether we strongly tend to believe that the varying primary sensibles exist and persist as qualities of the thing, we are bound, I think, to come to the conclusion that we do not. Is there a strong propensity to believe that all, or even more than one, of the varying primary sensibles persist in this way? Whether this is intrinsically possible or not we need not here enquire. We may, however, assert positively that there is no natural tendency to believe it. There is no natural tendency to believe that a thing possesses simultaneously and persistently all the various shapes and sizes which belong to its various visual appearances. Yet all these appearances may be possible without any change in the physical condition outside the body of the percipient; and hence the strong propensity to believe ought to cover all of them. It may seem more plausible to maintain that we are naturally prone to identify some one of such a series of primary sensibles with a persisting character of the thing. But this position also owes its plausibility to a fallacy of confusion. Some of the appearances express the nature of the thing more adequately than others; at the same time, they are especially convenient for purposes of reference both in thinking of the thing ourselves and in communicating with others. There thus arises a tendency to regard certain modes of appearing as standard modes of appearing, and to prefer these to the others in thinking about the thing. I cannot also detect a strong and stubborn tendency simply to identify the primary sensibles involved in such appearances with persistent characters of the external object. Let us put to ourselves some test questions. For the ordinary purposes of daily life, we, for the most part, select as the standard appearance of a thing to the eye, that which it presents for normal eyesight, when we look straight at it from a certain convenient distance. Are we therefore strongly impelled to identify this appearance in distinction from all others with the persistent quality of the thing? Are we, for instance, impelled to prefer it in this way to the appearance which would be presented under the microscope or to eyesight of superhuman keenness? The standard appearance itself is by no means fixed with absolute precision. It really includes a series of more or less variable appearances, due to relatively small differences in the position and distance of the observer, in the organ of vision and in the illumination. Have we then a strong tendency to identify some one of these rather than the others with the persistent size, shape, and colour of the thing? Consider, next, the relation of sight and touch. There is undoubtedly a strong natu-

ral tendency to identify the extension of a thing as seen with its extension as touched. But the tactual and the visual sensible differ so greatly and obviously that they cannot be simply identified with each other. Hence it follows that neither of them can be identified with the extension of the thing seen and touched. So soon as the question is clearly and distinctly put, we become aware that we do not identify either with the extension of the thing, but regard both as sensible appearance distinct from what appears. In the case of touch there is another point which deserves notice. When I touch a thing, I perceive at least two surfaces, the surface of the thing touched and that of my own skin in contact with it. But there are not two but only one extensive tactual sensible. I cannot identify this with both surfaces and I do not identify it with one rather than the other. I do not really identify it with either. The case becomes further complicated in such instances as that of the blind man groping with his stick. Here, there are three surfaces perceived, that of the hand, that of the stick in contact with the band, and that which is explored by the other end of the stick. But there is only one extensive tactual sensible.

PROCEEDINGS OF THE ARISTOTELIAN SOCIETY

Sense-Data and Physical Objects

T. PERCY NUNN

VOLUME XVI

1916

EDITORIAL NOTE

The following paper by T. Percy Nunn - "Sense-Data and Physical Objects" - was originally published in *Proceedings of the Aristotelian Society*, New Series, Volume XVI (1915-1916), pp. 156-178.

For Nunn's biography, please scroll up to page 159.

XVI. SENSE-DATA AND PHYSICAL OBJECTS[1]

T. PERCY NUNN

THE question of the relation between sense-data and physical objects has, during the last 15 years, frequently engaged the attention of this Society. It has also received much consideration elsewhere, Mr. Bertrand Russell's Lowell lectures on *Our Knowledge of the External World* and Mr. C. D. Broad's *Physics, Perception and Reality* being recent as well as very important instances. In raising the question once more I beg leave to refer to my contribution to a discussion[2] with Dr. Schiller under the title *Are Secondary Qualities Independent of Perception?* In this I argued, in opposition to the idealism of Locke and Berkeley, and more particularly in opposition to Professor Stout's doctrine of the "representative" character of sense-data, that colours, sounds, hotnesses and coldnesses may all exist although no one is perceiving them. A careful reader will observe that the main purpose of the argument was not to prove that they do so exist but to support the view that in any case they are non-mental entities. The philosophers I have named had all assumed it as obvious that sense-data *cannot* exist except in being perceived, and drew the conclusion that they are therefore psychical. My central aim was to destroy the force of this conclusion by disproving the necessity of the assumption upon which it is based. In other words, I wished not so much to preach a positive doctrine as to demonstrate the tenability of an hypothesis long deemed by the orthodox to be absurd. In that way I hoped to help in clearing the way for *any* "realist" doctrine of the physical world.

At the same time I should be lacking in candour if I did not admit that I was (and remain) considerably impressed by the positive value of my arguments as well as by their destructive force! I am aware that they covered only part of the field and left many vitally important parts untouched. Still they have convinced their author, if no one else, that the hypothesis of the existence of unperceived sense-data is not only tenable but, on the whole, the most satisfactory theory of perception hitherto advanced; and this conviction, though I am prepared to abandon it for good cause shown, has not been seriously disturbed by later reflexion or by the results of other investigators.

The paper to which I refer has received a certain amount of notice. (I do not allude to Professor Alexander's much too generous acknowledg-

[1] The substance of this paper was given as an address to the Oxford Philosophical Society on November 30, 1914.

[2] *Proc. Arist. Soc,* 1909-10, pp. 191-231.

ment of my services to the cause which is so justly identified with his philosophic activity.) One of the six American realists, Professor E. B. Holt, has sought, in a careful study[3] to elaborate and substantiate the position that my theory of perception is not incompatible with the facts of illusory experience. His colleague, Professor E. B. Perry, has supplied an important defect in my case by giving, in reply to Dr. Schiller's challenge, a welcome analysis[4] of the notion of "independence." Mr. Russell, in his paper[5] on "The Relation of Sense-data to Physics," seems to indicate that my views had some influence in leading him to adopt his theory of "perspectives." But, although Mr. Russell prefers not to assume the hypothesis of unperceived sense-data, neither he nor, so far as I know, any other writer has directly criticised my arguments in its favour. On the other hand, Dr. G. E. Moore and Professor Stout, in the Durham symposium[6] on "The Status of Sense-data," though they do not actually refer to these arguments, probably had them in mind. In any case their papers may be regarded as important re-statements of views I had sought to oppose. For this reason I intend to offer some criticisms of them from the-standpoint of my paper of 1910.

I.

The points to which I shall restrict my observations concern the doctrine that physical objects must not be identified, either wholly or in part, with sense-data, but are revealed in perception as existences of which we have immediate knowledge that they are the "source" of our sense-data. Dr. Moore and Professor Stout both hold this doctrine, but assert it with important differences in detail, for different reasons and (apparently) with different degrees of conviction. It will be convenient, therefore, to examine their opinions separately.

In the case of Dr. Moore the task is facilitated not only by the extreme clearness of his conceptions and his exposition, but also by the frankness with which he explains his attitude towards the various theories of perception which seem to him, *prima facie,* admissible. His method of procedure is, in brief, as follows: He supposes himself to be confronted with a florin and a half-crown, so placed that both coins are "visibly elliptical," while the florin is "visibly larger" than the half-crown. He then lays down five propositions about the coins, which *in some sense* must be taken to be certainly true. These are: *(a)* that he is really seeing them "in the ordinary

[3] *The New Realism,* pp. 303-373.

[4] *Op. cit.,* pp. 99-151.

[5] *Scientia,* July, 1914, pp. 1-27.

[6] *Proc. Arist. Soc.,* 1913-14, pp. 355-380, and 381-406. It should be noted that I follow Dr. Moore in using the term " sense-data" as a synonym for "the sort of entities given in sense," and in not limiting its application "to those which are actually given."

sense of the word 'see'"; *(b)* that their upper sides are "really circular"; *(c)* that each has another unseen side; *(d)* that the upper side of the half-crown is "really larger" than that of the florin; *(e)* that both coins continue to exist when he ceases to see them. In addition, he states two principles which must be borne in mind in any attempt to determine in *what* sense these fundamental propositions are true; they are (1) that the upper sides of the coins are not simply identical with the sense-data he is directly apprehending—for another person, directly apprehending different sense-data, may yet be said to be "seeing" the coins in the same sense as he is; (2) that knowledge of the five fundamental propositions is based, in the last resort, entirely on direct apprehension of sense-data and perception of the relations between them. He then asks what truths, in view of these two principles, the five propositions can be held to express.

To this question there are, he thinks, four plausible answers. The first is intended (I believe) to be the theory that physical objects are "permanent possibilities of sensations" in the form which Mr. Russell has given it. Dr. Moore treats this view with obvious respect, but finds in it a difficulty which compels him to reject it, namely, that, if we accept it, the propositions that the coins continue to exist when unperceived, that they are really circular, and that the half-crown is really larger than the florin, can only be interpreted in a sense "outrageously Pickwickian."

The second answer would assert that the coins he "sees" are to be identified each with a permanent "source" which has some particular causal relation to experience, and is either "spiritual" or of some nature utterly unknown. Upon this view the statement that the coins exist when unperceived would cease to be "Pickwickian," but the statements that they are circular, and that one is larger than the other, would require the same forced interpretation as before. It must therefore, be regarded as equally unacceptable.

The third answer is, so far as it goes, identical with the one I should myself offer, namely, that the "source" is not an "existence beyond" the visual sense-data, but includes the whole collection of such "sensibles" as could be directly apprehended by perceiving subjects under different conditions. Against this view Dr. Moore raises only his former objection, that it makes the assertion of the circularity of the coins and of the larger size of the half-crown "very Pickwickian," though, as he observes, the difficulty in understanding these attributes of the "source" is not now the same as in the case when the source is regarded as of a spiritual or other unknown nature.

If, for the reasons given, the first three answers are rejected, there remains only one, "which is roughly identical . . . with Locke's view." This answer is not without its own difficulties, but it is the one to which Dr.

Moore is inclined to adhere. It asserts that the physical object apprehended when we "see" a certain coin is a "source" which is not to be identified either with all or with any of the sense-data connected with it, and exists "in the natural sense" when none of these is actually the object of direct apprehension. But (and here is the Lockean touch) it is also circular "in the natural sense," so that it must *resemble* some of the sense-data in respect of their "primary" qualities. Finally, the experiences in which the various sense-data are directly apprehended are the ground not for mediate deduction, but for immediate knowledge that the source exists, and that it is really circular.

I need scarcely add that the foregoing paragraphs give only a bald summary of Dr. Moore's arguments, which the reader who would do justice to them must study *in extenso*. Moreover, I have, for the sake of clearness, deliberately omitted reference to one point of much importance, namely, that Dr. Moore, like myself, shares with Hume a "strong propensity to believe" that, under certain conditions, sense-data exist with all their qualities even when nobody is directly apprehending them. The assumption that they do so exist is, of course, the differentia between the first answer and the third. But for Dr. Moore, as for me, it is more than an hypothesis put forward as the basis of a theory; it is a strong prejudice, which necessarily affects his attitude towards all views of perception. He finds in it a powerful contributory reason against the acceptance of the first of the four theories, and he feels at least strongly urged to import it into the Lockean theory to which he ultimately gives his preference. Thus, in his view, what I know immediately as the result of my observations of a half-crown is not only that there is a "really existent" source, "really circular," but also that the sense-data, which somehow derive from this source, are themselves (so long as the physical conditions remain unchanged) "really existent" in the same sense. Nevertheless, the sense-data form no part of the source or physical object; for the precedent argument has shown that they cannot exist together with the source in "physical space," but must be supposed to have their home in "private spaces" accessible only to individual apprehenders.

Now I should like to say at once that I have no objection to the notion of "private spaces" (or "perspectives"); on the contrary, I regard it as probably in some form a necessary completion of my own theory of perception. I did not bring it into my paper of 1910 partly because the scope of the paper was perforce limited, but chiefly because I had not the wit to conceive it as Mr. Russell has since done. The doctrine of relativity has shown that our ideas of space and time must be made much less rigid and much richer than we used to suppose; and Mr. Russell has proved that we may think of private spaces and times as so co-ordinated with one another as to yield all the properties that were formerly attributed to the two great "common receptacles" of our experiences and their objects. But it seems

obvious that to add to a properly conceived scheme of private spaces (Dr. Moore does not deal with the question of time) a "physical" space not identified with, but standing in mysterious relations to, the former is a complication only to be justified by extreme theoretical necessity. What are the motives that have led Dr. Moore to load his universe with such an *embarras de richesse?* So far as I can see there is one and one only: namely, his determination that a half-crown shall be "circular" in what he calls the "natural" sense. This, as we have seen, is, at bottom, the reason why he rejects the "possibilities of sensation" theory and the theory that sense-data spring from a source of "spiritual" or some unknown nature. It also appears to be the sole reason why he adds to what I may, for brevity, call my theory the Lockean notion of a "really circular" physical object. It is evident that a motive which wields such power over Dr. Moore's thought deserves careful scrutiny.

I agree that Dr. Moore's five fundamental propositions are straightforward expressions of the plain man's immediate knowledge about physical objects; and I agree that, whatever happens, they must be regarded as true. The question is whether a given re-statement of one of these is to be rejected merely because the plain man would be surprised if told that it is equivalent to his own way of putting the matter. (That is what Dr. Moore appears to mean by calling it "Pickwickian.") My belief is that the plain man easily recovers from such shocks, provided the re-statement does not ignore the facts nor attempt to explain them away. Let me give a simple illustration. Observation of the sky for a couple of hours on a clear night will give anybody immediate knowledge that the stars are constantly moving from their places. When I recommend young teachers—men and women properly brought up in secondary schools and universities—to exhibit this truth to their future pupils they are almost invariably puzzled and confused. They do not, of course, doubt the facts, but they resent my "outrageously Pickwickian" way of stating them. When everybody knows that the stars are "really" at rest and the earth "really" revolving, is it not (they ask) almost immoral to allow a child to say that the stars move? Yet it is clear that the statement, as they prefer to make it, is really the "Pickwickian" rendering of the facts, and that they have ceased to feel it to be so merely because it accords with a view of the stellar universe which they have been led by instruction to adopt.

It is a trite remark that science is full of such "Pickwickian" transformations of truths of observation and that progress is effected largely by means of them. Dr. Moore's paper does not fail to afford a remarkable illustration of this. Consider his statement that, when a dozen people are looking at a half-crown lying on the floor before them, each is, at one and the same moment, contemplating a "really elliptical" sensible situated in a "private space" and a "really circular" source which lies in a totally distinct "physical" space. Could any proposition be more startling

to common sense? It has been known to throw even seasoned members of this Society into a state of unphilosophic astonishment. Yet it is simply Dr. Moore's way of rendering truths that he regards as obvious to everybody's inspection.

I urge, then, that Dr. Moore would have no right to reject the "possibilities of sensation" theory if it merely gave a "Pickwickian" interpretation to the truth that a half-crown exists when unperceived. The valid ground for rejecting it (or at least for regarding it with great suspicion) is that it ignores our strong propensity to believe that sense-data exist when unperceived; in other words, that it does not simply paraphrase the original truth but offers a substitute in which the original is not contained and from which it cannot be deduced.

Similarly, I do not think that either the second or the third of the four theories is to be rejected simply because it gives a "Pickwickian" form to the truth that the half-crown is "really circular"; the theories are to be condemned (so far as concerns this point) only if the proffered form is not merely "Pickwickian" but does actual violence to the original facts. The critical question is, therefore, whether this logical crime may justly be charged against the modes of interpretation which Dr. Moore has in view.

It would be easier to discuss this question if Dr. Moore had told us precisely what is the "simple and natural sense" in which he believes a half-crown to be "really" circular and "really" larger than a florin. To deal with the second attribute first: Can it consist in anything more "simple and natural" than the fact that whenever the two coins are placed so that the centres of their faces coincide the florin leaves part of the half-crown uncovered? If this explanation of the meaning of the attribute—or its equivalent in terms of sense-data—is too "Pickwickian" for acceptance, I am utterly at a loss to know what to substitute for it; and I am confident that the plain man would share my perplexity. Can it be that Dr. Moore requires a *reason why* the florin fails to hide the half-crown? And does he consider the statement that the half-crown is "really" larger than the florin to be that reason, and not merely an alternative statement of the fact itself? If so, I can only suppose that by declaring the half-crown to be "really" larger than the florin he means (i) that when the two really circular surfaces of the coins occupy to the greatest extent possible the same place in physical space, there are parts of the surface of the half-crown which are not in the same physical place as any part of the surface of the florin, and (ii) that the converse of this statement is not true. Now this account of the greater size of the half-crown certainly differs *materially* from the former, for it contains no reference to sense-data; nevertheless it seems evident that the two accounts are *formally* identical. But, for one who holds Dr. Moore's views, to eliminate reference to sense-data can hardly be in itself desirable; for he still has the sense-data on his hands as extra-mental

existences which must be accommodated in *some* sort of space. Assuming, then, that I have guessed his meaning correctly, I cannot see what he gains in "simplicity and naturalness" by invoking admittedly hypothetical "sources" in order to say about them something formally identical with what must in any case be said about indubitable sense-data.

Next with regard to the attribute of circularity. I can myself discern no departure from the "simple and natural" in the statement that by calling a half-crown (which appears at the moment elliptical) "really circular" I mean that it would appear circular if held in any one of a certain specifiable series of positions. (This statement is capable of expansion in terms of sense-data, but it does not seem necessary for my purpose actually to expand it.) In order that I may know that it is really circular it is certainly *sufficient* to know that it appears so when held in one of these positions. Moreover, the condition is also *necessary.* For, considered by itself, no one sensible appearance can tell us any more about the "reality" of the coin than any other. Unless I know, directly or indirectly, that the coin looks circular when placed in one of the standard positions. I cannot possibly know that it really is circular. Here, as in the former instance, I cannot see why Dr. Moore should be dissatisfied with an account of the matter which would, I believe, be accepted by the plain man as clear and sufficient. And again his invocation of a source to carry the attribute of "real" circularity appears to me a piece of superfluous ingenuity, creating more embarrassment than it can possibly remove. For while, from the assumption that the source resembles the circular sense-data in shape, we can certainly draw the conclusion that some of the sense-data are circular, it is equally certain we cannot deduce that others will be elliptical. If we must have a source at all I suggest that one (such as the spiritual source Dr. Moore rejects) which makes no pretence to explain the shapes of any of the sense-data is preferable to one which, by explaining some of the shapes, only makes us more acutely conscious of its failure to explain the rest.

To this objection Dr. Moore may retort that he invokes the source not to explain why the sense-data have certain shapes, but to explain why one of those shapes is believed to be "really" the shape of the coin; and that his theory is not to be discredited because it does not do what it was never intended to do. To such a defence I should reply that, if the assumed circularity of the source can explain nothing except our belief that the coin is "really" circular, then it is a hypothesis deserving of extremely little respect. For the chief claim that a hypothesis invoked to explain a fact can make upon our confidence is that it brings into relation with this and with one another facts whose connexion was previously unknown or obscure; and persistent failure to do so generally justifies suspicion of its validity. I urge, then, that Dr. Moore should not ask us to accept his hypothesis until he has either found some further useful work for it to do or has at least demolished the view referred to in the preceding paragraph.

Finally, it is, I think, pertinent to ask why Dr. Moore applies his method of explanation only to the belief that the coin is "really circular." To my mind it is no more certain that it is, in some sense, "really circular," though it often appears to be elliptical, than that it is, in some sense, also "really silver-white," though it often appears to be of another colour. If "Pickwickian" expressions are, in the former case, to be ruled out, why should they be admitted in the latter? Unless a satisfactory answer can be given to this question we seem bound to suppose that the source is not only "really circular" but also "really silver-white," and the whole group of sense-data which have other colours is at once added to our embarrassing collection of inexplicables.

In the face of these difficulties the hypothesis that all the appearances of the coin are parts or aspects of the coin—some revealed under certain conditions, some under others—seems to me refreshingly straightforward and simple. I do not pretend that it has no difficulties of its own; but these seem to me to be due to the complexity of the problem; they are not introduced into the situation by the very form of the proffered solution. Again, I do not claim that it is a *complete* theory of the nature of physical objects. For example, in addition to a vast collection of sense-data directly apprehensible by supra-human, human, and infra-human subjects and in addition to the perceivable relations between these, a half-crown *may,* for all I know, contain elements "spiritual" in their nature or of a nature "utterly unknown to us." It may be that such elements are essential to its character as a "thing," and it may be that they, or some of them, are actually "existentially present to consciousness" at times when sense-data are being directly apprehended. On the other hand, I can find no reason to suppose that these elements (if they exist) are the "source" of the sense-data, if by that is meant that the sense-data are not as truly parts of the thing as they are. And my consideration of Dr. Moore's belief in sources of this kind has only strengthened my scepticism.

II.

I turn to the consideration of Professor Stout's paper. As I have already said, he agrees with Dr. Moore in holding that sense-data are not to be regarded as identical with a physical object "or with any physical part of it," but *are* to be regarded, when directly apprehended, as giving immediate knowledge that they have their source in an "existence beyond themselves." Further, he shares Dr. Moore's view that our knowledge of their connexion with the source includes a knowledge of the nature of the source as being "in some respects akin" to the sense-data.

An examination of Professor Stout's position shows that it is not nearly so close to Dr. Moore's as the statement of these points of resemblance would suggest. The differences between them appear, indeed, to

be profoundly significant and to indicate a gulf between Professor Stout's views and my own much wider than the one which separates me from Dr. Moore. Nevertheless Professor Stout's doctrine presents, I venture to think, a greater degree of logical coherence than Dr. Moore's, being free from the arbitrary complications to which I have called attention in the previous section. For example, Professor Stout does not regard the correspondence between the nature of the sense-data and the nature of their source as restricted to certain sense-data only, but as extended, in accordance with a uniform principle, to all. Again, though he disclaims any propensity to believe that sense-data exist when unperceived, he brings such being as he allows them into close relations with the nature of the source. For him they are not (as they seem to be for Dr. Moore) unintelligible satellites of the physical object, tied to it by undiscoverable bonds. They are, so to speak, the means by which, from time to time, the source expresses its permanent nature to a percipient. The source may, therefore, be thought of as always including the nature of the sense-data in its own nature, somewhat as the printed marks in a book may be thought of as always forming words and sentences even when no one is reading them.

In this analogy the permanency of the source answers to the permanency of the printed symbols, while the fleeting sense-data correspond to the meaning—always potentially present but emerging into actual existence only when the book is read. In general, as readers of Professor Stout are well aware, his conception of the relation between sense-data and physical object inverts this comparison: the sense-data are fleeting and variable symbols; the physical object or source is their permanent and constant meaning. It is probably not rash to suggest that the idea of the relation between symbol and meaning has for years played a dominating part in Professor Stout's thought. He has used it (if I may say so without impertinence) in a masterly manner and with results of permanent importance. In the paper before us he has, I think, made some novel applications of it; but I am bound to add that these seem to me of very questionable validity. I gather that, in his view, sense-data are, from the first moments of experience, vehicles of meaning—meaning which consists, from the outset and all through, in reference to a source. But we must not think that in the beginnings of experience the reference of sense-data to a source is a reference to what the experient will ultimately come to recognise as distinct things—people, furniture, trees, etc. It is initially a reference to the whole source of sensational experience. Only as experience develops does this total source, first glimpsed as what James called "a big, buzzing, blooming confusion," become more or less definitely distinguished into parts in more or less definite relations with one another. The work of progressive differentiation and integration within the total source goes forward for a considerable distance under the stimulus of the conditions of ordinary life. It is carried on immensely farther by the systematic activities of the

sciences. Its goal is an ideal situation in which all physical reality (including the parts that are vehicles of life and consciousness) would be known as a perfectly articulated whole, and every element of sensory experience referred to its special source in the nature of some distinguished part or aspect of that whole. But, even then, the reference of sensory experience to its source would still include that reference to the whole source from which its development started.

This is, I think, a fair paraphrase of an argument which Professor Stout develops at some length and in a very impressive and instructive manner. I shall have to inquire later whether the process he describes is correctly represented as giving a knowledge of sense-data as having their source in "existence beyond themselves." For the present I wish to raise the narrower question whether his doctrine is self-consistent. For the sake of argument let us grant the assumption that when a new-born child first apprehends a certain succession of circular and elliptical brightnesses his mental activity includes a reference of his experience to a total source which is only later to be differentiated, *inter alia*, into a physical half-crown in varying spatial relations to his own physical body. My difficulty is in seeing that there is any real parity in the development of the reference in so far as it concerns the two terms— the coin and the body—respectively. For, though the direct apprehension of the varying sense-data and their relations gives the child eventually, as Professor Stout claims, his knowledge of the real nature of the half-crown as a thing, it cannot be said to afford him any immediate acquaintance with the nature of his body. He gains from it nothing but the bare perception that the state of his body and its spatial relations to the half-crown somehow play a part in determining what appearances the coin shall present. Thus it cannot (for example) be contended that the blurred character of the visual sensibles of a short-sighted person "express the nature" of the myopic eye in the same sense as their forms and colour express (upon Professor Stout's theory) the nature of the half-crown. If it were so, then the physical coin must be a thing-in-itself whose nature is eternally inaccessible to direct experience. It would be still more clearly absurd to contend that the development of the child's reference of his sense-data to a source leads to any direct knowledge of the nature of the neural mechanism which functions in his body in the act of seeing.

This objection is so obvious that it is incredible that Professor Stout should have left his theory open to it (as I think he does) except for some very strong reason. He makes it abundantly clear what that reason is. As I pointed out in the 1910 paper, illusions and hallucinations are at least as great an obstacle to Professor Stout's theory of the representative function of sense-data (as he formerly stated it) as they are to my own realistic theory. Upon either theory (as I then said) "the differentia of sensational experience is that it presents me with data from which I may infer imme-

diately the presence of an extra-mental existent or physical body. But how can this account be true if sometimes (as in hallucination) when sense-data are given the inference is incorrect? . . . Either the immediate inference must always hold good or else there is no inference at all, but merely such a coefficient of correlation between the presence of certain sensations in my mind and the spatial presence of certain physical things, that in most cases, when I have the sensations, it is a safe shot to guess that the physical thing is at hand. But if there is merely this external relation between sensation and thing, we are obviously brought back to the old puzzle of how we know anything about the thing at all." The feature of Professor Stout's later exposition, which I am now discussing, is intended, as he himself indicates, to meet objections of this kind. It must be understood that he contends not only that sense-data always include a reference to the whole source, but, in addition (to quote his words), "first, that only part of the primary sensible through which we perceive a thing belongs to the thing itself; and, secondly, that even this part is not directly but more or less remotely connected with the relevant sense-experience." These positions granted, the difficulties presented by dreams and hallucinations can, he thinks, be satisfactorily met. For though in such cases we are impelled to believe that a perceived object exists and is present which, as a matter of fact, does not exist or is not present, yet the reference to a source beyond the sense-data has not failed. There are "physiological conditions" in the brain and sense-organ, and in any case there is the total source, and the reference may be taken to be directed to these.

I find it hard to believe that this explanation does not put a very severe strain upon Professor Stout's theory. However he may qualify it, the essence of his thesis is that sense-data are neither substantial entities nor epiphenomena, but genuine appearances or expressions of the nature of physical reality, and that, as sensational experience develops, we achieve through them genuine knowledge of the detailed structure or character of their source. How can his explanation of hallucination be regarded as compatible with this thesis? Macbeth is directly apprehending sense-data whose reference is, by hypothesis, partly to the total source, partly to the part of the source which we call his body, partly to a part of the source which we call a dagger. But there proves to be no dagger there. Thereupon Professor Stout hastens to restore our confidence—rather badly shaken by this *contretemps*. It is true, he admits, that the sense-data which give its specific character to Macbeth's present experience are sensibles whose special business is to "refer" to daggers. They express the nature of the part of the total source which we call daggers, and are the only means by which we can know that nature. It is also true that on this occasion the reference has gone astray. It is a little provoking, but there is no reason for perturbation. The sense-data are there, the reference to the source is there, the specific part of the source to which the reference is specially directed is

there. It simply happens that the last of these, instead of being a dagger, is, *pro hac vice,* the abnormal condition of Macbeth's perceptual apparatus!

Professor Stout is a thinker whose views one must always reject with caution, fearing lest the Johnsonian breadth of his common sense has given due weight to considerations which one has underestimated or overlooked. In the present instance, however, I must confess to an uneasy feeling that, despairing of a solution of the problem of error really consonant with his own methods, he has surreptitiously adopted those of another eminent philosopher.

> "He thought he saw an albatross that fluttered round a lamp;
> He looked again and saw it was a penny postage stamp."

But such an incident gives no ground for doubting that perception is veridical. Were we not warned at the beginning that the reference of sense-data was always to the whole source, and are not albatrosses and postage stamps equally parts of that source?

I am bound, then, to register my opinion that Professor Stout has neither given a satisfactory solution of the epistemological problem of hallucinations nor strengthened his general position by his attempt to do so. I now pass to examine the relation between his theory of the source and the facts upon which he bases it.

It seems clear that the theory derives its plausibility from its connexion (1) with psychological theories of individual experience, (2) with physico-physiological theories of the mechanism of sensation and the physicist's general view of the material world. From the first of these Professor Stout draws his cardinal idea that sense-data are symbols pointing to existence beyond themselves; from the second the idea that this existence is a "source" consisting in an organised totality of elements which are (or may be) all involved in determining the content of any given moment of sensational experience.

That the content of perceptual experience includes a reference to something beyond the actual sense-data is without doubt true from a very early stage in the individual's life. It *may* be true of his very earliest experiences. Mr. MacDougall finds the phenomena of instinct inexplicable unless the sense-data which set the instinctive mechanisms in motion are already charged with meaning. Even Professor Lloyd Morgan, whose caution in matters of this kind is so well known, grants that such sense-data, upon their first emergence in consciousness, may carry, as it were, a faint aura of meaning. If this view is well founded, at least if Mr. MacDougall's form of it is true, it must have a very important bearing upon our theory of perception. Upon my principles it would seem to show that even the first appearance of a "thing" to a percipient may reveal more of the thing

than is contained in the sense-data which form the core of the experience. This supplementary content may be of the nature of a form or schema to be filled up by subsequent sensational experience. If the thing has a special relevance to fundamental instinctive dispositions in the percipient, the schema may even have a specific (though necessarily vague) character. But I see no reason to suppose that it would have the character of a "source." By that I mean that it would be experienced as coming *together with* the sense-data, as a kind of framework into which they fit, but not as their cause or origin. But if (as I think Professor Lloyd Morgan is inclined to hold) the meaning of the first appearance of the thing consists entirely in felt relevance to conational elements in the instinctive disposition, then this result would not follow. There would still be a schema, but it could not be said to belong specifically to the thing; the schema of the thing would be an *a posteriori* result of manifold sensory experience. Upon either view the relevance of sense-data to conational dispositions in the percipient is the condition which starts and maintains the process by which the schemata of the body and the thing become more or less clearly separated from one another, and become filled with detail in the manner which Professor Stout has described. At every stage in the process perceptual experience does indubitably contain reference, beyond the actual sense-data, to these schemata and the concrete details of their filling. But I can find no evidence in my own experience of a duplicated reference, that is, of a reference to a "source" in addition to the filled schemata. And it seems perfectly evident that the filled schemata which register the results of previous sensory experience cannot possibly be regarded as the source (in Professor Stout's sense) of my present sense-data.

I conclude that the argument from psychological observation and analysis leads to the notion not that the thing is a source or part of a source but that it is a scheme of necessarily connected sensibles. In what other quarter, then, can support be found for the theory of a source? The answer would seem to be: physical science, wherein the notion of a permanent "material substratum of phenomena" has achieved such triumphs. It will be necessary, therefore, to glance in this direction, however briefly. Speaking broadly, the most impressive achievements of physical science fall under one of two types or else under a third type which is a combination of these two. In the first the varying appearances of things and their behaviour as manifested through those appearances are shown to be explicable as the result of changes in the spatial configuration of permanent entities which do not appear directly at all. The explanation of chemical phenomena in terms of atoms and molecules is an obvious instance of this type. In the second, appearances observed *here* are connected with appearances observed *there* by the postulation of a "continuous medium" connected with the "substratum" of both sets of appearances. The theory of the transmission of light will occur to every one as an example. Let us

consider this type first. Examination of the use made of such hypothetical entities as "ether" and "electricity" shows, I think, conclusively that they are simply derivates from the familiar things of common-sense *thought into* a context in which sensory experience cannot or at least does not actually disclose them.[7] If this is the ease, then they must be conceived, upon my principles, as schemes of necessarily connected but unperceived sensibles—and so, I believe, they are. It is true that nobody inquires what is the colour of ether. This is partly because things, even as we know them, do not always have colour, but chiefly because the colour of ether, if it had any, would be irrelevant: unperceived sensibles which are not needed for the purposes of a theory may be ignored. On the other hand, certain kinds of sensibles are essential for the theoretical work which the hypothesis is to do, and those most assuredly are thought to be present. Similar considerations hold good with regard to the first type of scientific explanation. Take as an instance the experiments on Brownian movement which M. Perrin showed us a year or so ago at King's College. In these, microscopic particles of gamboge of uniform size were suspended in water and were observed to be constantly moving as if bombarded irregularly by invisible particles around them. It was shown that the distribution of the particles of gamboge was precisely what would follow from Avogadro's famous principle that the number of molecules in a given volume of a gas is independent of the gas's chemical composition, and we were asked to accept the deduction not only that water probably consists of discrete particles capable of relatively independent movement, but also that the kinetic theory of gases may be regarded as giving a true account of the nature of that form of matter.

Now I am not concerned either to affirm or to deny that "matter" really is composed of "ultimate particles," as these experiments and other recent ones so strongly suggest. My point is that, even if it is so, molecules (and atoms) are simply the molar bodies of everyday experience conceptually reduced in size. Whatever belongs to the latter may belong to the former also. The whole force, for instance, of the argument based upon the Perrin experiments depends upon the idea of continuity between the Brownian phenomenon and the molecular movements in gases. At what point in the reduction of the gamboge-particles to ultimate molecules are we to locate the tremendously important transition from things manifested through sensibles to things-in-themselves, incapable, not only in fact but actually in principle, of being revealed to any kind of perceptive faculty? The question is equally relevant when we consider the modern view of the atom as being itself a complicated system of electrons in relative movement. Here, again, physical speculation assumes complete continuity between the behaviour of molar bodies and of these ultimate constituents of matter. The once unitary atom becomes simply a solar system in small,

[7] *Cf.* my papers in *Proc. Arist. Soc.* for 1905-6, 1906-7, 1911-12.

and its theory a planetary theory, modified, it is true, yet based fundamentally upon the same conceptions as the old one. It will be objected that planets have qualities which no one has ever attributed either to the ancient atom or to the modern electron. That objection is easily met. Planets have these additional qualities because we encounter them in direct sensational experience, and not merely (as we encounter electrons) in the world of theory. In the planetary theory they have just the same kind of qualities as electrons and no more: namely, those they must have if they are to serve as subjects of the mathematician's equations. If other qualities followed necessarily from the qualities assigned to electrons in theory, those qualities they would assuredly have—however inconvenient it might be to admit them.

I am, of course, aware of the common belief that physical theory has "accounted for" the appearances called secondary qualities by showing that they are consequences from the structure and behaviour of entities which are devoid of such qualities. My view is that this belief is unfounded. Given the facts (i) that the number of people killed in railway accidents in these islands is proportionately very small, and (ii) that the number in the year 1912 was 119, a statistician can deduce that (things remaining as they are) the annual death-roll from this cause would exceed 160 only about once in each period of 3000 years. He achieves this remarkable prediction without needing to attribute any specifically human qualities to the agents whose actions must combine to make it true. Has he therefore proved that they have none? If not, then neither has the physicist proved that his ultimate material elements have no other qualities than those postulated in the reasonings that "explain" the production of the conditions which appear to our perceptive faculty in the guise of secondary qualities. As a matter of fact I do not believe that physical theory seeks the result which is erroneously attributed to it. Its aim is (I submit) simply to carry as far as possible the work that common sense begins but lays down at the point where it ceases to be interested in it—namely, the work of analysing the history of the material world into the behaviour of "things" acting and reacting upon one another in definite ways. The hope which guides its efforts is that the analysis will terminate in the discovery of things so simple in their nature that further analysis is unnecessary, and governed in their behaviour by principles that apply to all and are never contravened. It has found that the most profitable clue to the solution of its problem is to ignore some of the aspects presented by the things of common sense and to confine its attention to others. This is, no doubt, a fact of great significance, but it does not imply that physical analysis has ever reached an ontological plane different from the one upon which it began. In other words, it gives no support to the notion of a source of sensibles in the form in which Dr. Moore and Professor Stout hold that notion.

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