

WHAT MAKES POSSIBILITY POSSIBLE?

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IT IS THE PARADOX of experience that it denotes both that which is present, literally had and possessed, denotably there, confronting us, and also a domain of prophecy and potency, things eventual, tendencies, and possibilities, holding the promise or threat of something more to come. Experience is saturated with such reference to that which transcends, at any given time or place, what is then and there immediately present and directly verified. Were this not so, were experience restricted to an awareness of what literally confronts us in present given fact, then expectancy, watchful waiting, purposeful planning, attention, exploration and investigation, memory and remorse would be utterly nonempirical mysteries. The tiger stalking his prey, the hound following a scent, the astronomer scanning the heavens, the prospector searching for gold, of these and a thousand like transactions is the stuff of experience primarily comprised.

To be sure, something in some sense immediately had and experienced, something here and now present, provides the *pou sto*, the anchor or spring board of every transaction and venture of experience. And somewhere in every experience there might be discerned the boundary between such immediately present data and that more outlying, distant domain not here and now immediately possessed. The history of the problem of knowledge is the history of what reflective thought has made of this situation. Something is immediately present in experience. I shall use the term "actual" to denote any such ingredient of experience. All experience contains something actual. But no less idubitably does the world which is lived in and experienced contain that which transcends the actual, a trans-actual or hyper-actual. We live and act and know across that boundary, wherever it lies, between the immediate and the remote, the given and the hoped or feared for, present data and what they suggest, imply, portend, and mean.

I propose to approach the problem of the meaning and the status of possibility in the light of this pervasive aspect of experience. But before I come to the question of possibility, it will be useful if I formulate briefly certain propositions concerning this general aspect of experience. I shall do so summarily and without argument.

1. We have no experience of an isolated actual. There is never in experience an awareness of a pure given and of nothing else besides. There is no such thing as knowledge by acquaintance alone, that is, knowledge in which the content known completely coincides with something directly and immediately given. Putting it the other way around, what is actually given can never be known by itself in total isolation from everything not so given. This means the shipwreck of any theory of knowledge which supposes that the world of things known can be constructed out of entities immediately present in experience, given and actual.

2. The simplest object of awareness is complex. Its complexity is twofold. It is a relational and not a relationless entity. Also—and this will prove more interesting for our present problem—the simplest object of experience presents itself not only as a something here and now, as a *this*, but also as having a nature or character, as a *such*. The most elementary or atomic entity of experience or awareness is a *this-such*. There is a fundamental distinction between its *thisness* and its *suchness*, between the *that* (or *this*) and the *what*. Its being *this* precludes its being another *this* or *that*. But its being of *such* and *such* a nature does not preclude identity with another similar nature; on the contrary, it implies at least the possibility of *such* identification. I perceive a particular green patch. Its being *this* green patch prevents it from being any other green patch. But its being a patch of a certain kind, of a certain shade of green, implies the possibility of other exemplifications of the same nature. Even if one agrees, as I do, with Stout and others in holding that the color of this green patch is a particular, yet it is a particular *nature* and not a particular *this* which is here considered. And because it is of *this* nature or kind, no matter how particular it is, the thought of other possible occurrences of this particular shade of green is germane to and implicated in the awareness of this particular shade of green. Thus, the experience of the simplest and most elementary entity, so long as it is experi-

enced as having some nature, some *what* (and I do not know how, in the absence of any nature, anything could be experienced), implies the possibility of other occurrences of the same kind. That anything has a nature, and that this possibility exists, seem to me to say one and the same thing. We are introduced to possibility in the most elementary object of awareness and experience.

3. What of the *thisness*, as distinguished from the *suchness*? Surely the *this* is wholly actual, with no taint of possibility to lessen its actuality. Even if it be admitted that to be or to have a nature is to have a potential spread beyond the actual occurrence, the here and now *this*, to other at least possible *thises*, isn't it the privilege (or defect) of the *this* to exclude everything actual or possible beyond just *this*? I do not think so. The shadow or specter of possibility intrudes into the experience of *this* no less than it does into the experience of *such*. It does so in several ways. Let any *this* present itself so that one might say, "*this* at least exists." The word "exist," so Stout has reminded us, originally means to step out or forth, to come forth, to emerge. "This exists" means "this stands out from a background." A background makes possible the existence, the stepping forth of the *this*. Without such a background, no *this*. Moreover, the *this* is what is pointed to, indicated, demonstrated, and denoted. In pointing to this or that, I direct attention to it as an object of possible experience for you at the present time, or for me at some future time. Affixing names and symbols to this and that is to do more than barely indicate through pointing. It is at the very least, as Lewis has so well shown, predictive of other possible experience. To designate this thing as an apple is to say what further experiences would ensue if one did thus and thus. A series of hypothetical propositions is required to state and to justify the designation of any *this*.

Experience, then, is never restricted to the actual. The actual, as experienced, is surrounded by the trans- or hyper-actual. Neither the future nor the past is actual as is the present. In listening to music, the only sounds and harmonies which are actual are the ones being heard. These actual sounds constitute a living present, moving like the crest of a wave through the entire symphony from beginning to end. This is not to say that only the actual present exists or is real. I am quite sure that both past and future events are real and may in some measure be known. The

past is the background from which the actual present steps forth and exists; in being aware of any actual present, I am also aware of the nonactual but real past and future. With respect to future, predictable events, Eddington writes:

I infer the existence in 1999 of a configuration of the sun, earth and moon which corresponds to a total eclipse. The shadow of the moon on Cornwall in 1999 is already in the world of inference. It is not easy to see in what way it will gain in status when the year 1999 arrives and the eclipse is observed.¹

Eddington can so state it only because he supposes—wrongly, as I think—that no physical state of affairs is ever directly experienced or actual (in my terminology). All physical objects and happenings are inferred; including those which are mistakenly said to be perceived now; they belong to the world of inference. If we abandon this assumption, as I think we must, then the eclipse observable in Cornwall in 1999, while in some sense it is real now, just as the battle of Hastings is a real event, will become actual only when and if there will be persons in Cornwall in 1999 to observe the eclipse.

In situations such as this, we are confronted with the first major domain and meaning of the possible. The actual is contrasted to and surrounded by that which is other and more than the actual. This other and more than the actual is both the possible and the real. But although more and other than the actual, the possible and the real are continuous with the actual. In seeing a circular greenish patch in front of me and in naming it an apple, I am both positing a set of characters which are now real, continuous with, and linked to the shape actually seen, and asserting the possibility of experiences which I or you would have if we manipulated the apple in specific ways. These possible experiences are likewise continuous with my present actual experience of greenish, circular shape. Because of such continuity between this type of the possible and actual experience, I shall designate this as the “continuous possible.” This is merely an abbreviation for “any possible which is continuous with and an extension of any actual experience.” There is, we shall see, another meaning and domain of the possible. There are possibles not thus continuous with present actual experience, but transcending, in a sense requiring careful

¹ *Proc. Aristotelian Soc., Suppl.*, X, 168.

definition, both the actual and the real. This second kind of possibility I shall designate as "transcendent possibility." But I wish first to consider some aspects of the class of continuous possibles—of entities which stretch beyond the actual, yet are continuous with the actual.

The possible which is conceived as a continuation and extension of the actual is the realm of possible experience. With respect to this realm and concept of possible experience, I shall make two comments. First, as I have already noted, what is actually experienced may be contrasted with what is not, yet might be, under specifiable conditions, so experienced. Or, it may be contrasted with what is said to be real, as having a being independent of its being experienced. What is actually experienced may be thought of as a fragment of the wider realm of possible experience, or of a world with respect to which experience, actual or possible, is in a sense irrelevant. Anyway, since we do sometimes contrast the actually experienced with possible experience, and sometimes with the real, a question arises concerning the relation between what is said to be real and what is said to belong to the realm of possible experience. The center of the earth has never been actually experienced. When now one says that the center of the earth is solid and not gaseous, what does one mean? For my own part, I am quite sure that I never mean merely that, if I were to dig a tunnel through the center of the earth and journey halfway through, I should then have actual experiences of the sort that I now have when I touch solid bodies. Whatever is for me at the present time a possible experience can become actual only at some future time. But when I assert that the center of the earth *is* solid, I intend to assert a present state of affairs and not a future one. Moreover, the statement that if I or anyone else were to do something, I or the other person would have certain actual experiences, appears to me to be a statement about me or someone else rather than a statement about the center of the earth.

There are two alternative ways of describing the relation between possible experience and the real, depending upon which one of these is taken to be the more fundamental. One may say: By the real I mean nothing whatever except the possibility of further experience. Or one may say: By the possibility of further experience I mean the present reality of that which transcends actual experi-

ence in a manner different from that in which possible experience transcends actual experience. The first of these two descriptions can, I suppose, be called pragmatic. It is clearly set forth by Lewis. What does it signify [he asks] that there should be verifiably more to any object than is given in the single experience of it? It can mean nothing else than the possibility of other experiences, of a predictable sort, related to this experience in particular ways. Any other kind of "more" attached to the presentation would be unverifiable.²

The other way of describing the situation can be said to be realistic. For the pragmatist of the type just referred to, it is possible experience alone which extends and connects fragmentary bits of actual experience. For the realist, the realm of possible experience is not left hanging in the air; its possibility rests upon a reality continuous with the bits of reality disclosed by actual experience. I am not always sure to what extent this difference between a pragmatic and a realistic interpretation of experience is a verbal one, but I am inclined to think that it is more than verbal. For a pragmatist such as Lewis, the question, What makes any experience possible, What is it that confers upon possible experience its status of possibility, would, I am sure, be ruled out as meaningless. Possible experience is the ultimate category. There is nothing more ultimate which makes it possible. This does not quite satisfy me. The possibility of experiencing solidity at the center of the earth results from a state of affairs to which the term "possibility" is quite inappropriate. The solid center of the earth is more than a possibility. It is a reality continuous with the reality of the surface of the earth which is actually experienced. The fragmentary bits and perspectives of nature which manage to filter through the channels of our sense experience and thus become actual for us need to be woven together, extended, and supplemented. The non-actual filling of nature is continuous with the actualized portions—continuous in kind, in space-time, and in the modality of its being. I do not know how piecemeal and scattered actualities can be cemented together to form a continuous order by entities which have merely the status of possibility.

That the possibility of possible experience rests upon a reality continuous with the actual and not itself describable merely in terms of possibility is indicated by a second consideration. The

² C. I. Lewis, *Mind and the World Order*, p. 72.

distinction between the actual and the continuous possible—possible experience continuous with actual experience—is epistemic. What is actual and what is possible depends upon us, upon the position we chance to occupy, the direction of our attention, our powers of observation, and the like. The fireplace in front of me is now actually experienced. While I am experiencing it, the bookshelves behind me are objects of possible experience. All I need do to transform them into objects actually experienced is to turn around. Now it is the fireplace which is a possible experience. It has ceased to be actually experienced. Which of these two is to be actual and which possible depends wholly upon me, it being understood that both of them belong to one continuous, real world, independent of and indifferent to the direction of my gaze. To say that the boundary between the actual and the possible is epistemic is thus to think of both regions as belonging to the real, and the boundary line as dependent upon the observer. The continuous possible is the extended and supplemented actual, the actual expanded into and continuous with the real.

Are there principles of a different type, possibilities which are not continuous with the presented actual, different in nature and status from, say, the center of the earth as an object of possible experience? Are there possibilities the distinction of which from either the actual or the real is not epistemic but constitutive? Do possibilities as such await our discovery, do they exist *in rerum natura*? I believe that there are such possibles, and the remainder of my discussion will be devoted to them. In order to distinguish them from continuous possibles, I propose to call them transcendent possibles. In so designating them, however, I would caution the reader not to conclude at once that I am to invoke a separate realm of subsistence and to populate that world with entities for which there is no place in the world of existing nature. I may say that my views of the nature and significance of possibles other than the extended actual are the outcome of an attempt to avoid the Scylla of such a realm of subsistence transcending all that exists, and the Charybdis of a view which finds nowhere a legitimate place for objective possibilities. I want objective and constitutive possibilities, and I do not want subsistent dualism. Of course, what I or anyone else merely happens to want and to like has nothing to do with the validity of theories, but I may be pardoned for so stating

the matter in order to give some indication of the general drift of my discussion.

A transition to a kind of possibility different from the continuous possible is indicated by an aspect of the realm of possible experience. All the objects of possible experience are more than possible. They are extensions of the actual. But there are possible verifications of the real, the extended actual, which are not and never will be real. The taste of poisonous mushrooms, I hope never to verify. If men are judicious in picking mushrooms, the taste will never be verified. The taste itself is a possible actual. (To defend this statement would require a discussion of the status of secondary qualities which I must here forego.) The term "possible experience" is ambiguous. It may mean either the object of a possible experience, or it may mean the possibility of verifying, of actualizing such an object in or through experience.

There is an indefinitely vast realm of possible verifications, of possible experiences, which may never become actual verifications; they always remain transcendent to actual experience. Royce, in the discussion of his third conception of Being, laid stress upon this situation.

There are countless possible experiences which you never test. . . . The prices and credits of the commercial world involve far more numerous types of valid possible experience than any prudent merchant cares to test; for if these facts are valid as they are conceived, their very Being includes possibilities of unwise investment and bankruptcy, which the prudent business man recognizes only to avoid. In fact, since our whole voluntary life is selective, we all the time recognize possibilities of experience only to shun the testing of them.³

Now the possibilities thus recognized by us—only to shun their testing and verification—are not the objects to which these possibilities make reference. They are possible alternative ways of behavior between which we make a choice. We now have, in a rejected alternative, a possible which is not an extended actual, nor continuous with the actual, but only a possibility. It has a status quite different from that of the center of the earth, or of the wall behind my back. These objects of possible experience are always more than mere possibilities. They are, if not actual, at least real. There are countless testings and verifications of such objects, which always remain possibilities and never become any-

³ Royce, *World and Individual*, I, 258.

thing more. Some of these possibilities of verification also become actual. I mean by a transcendent possibility one which always remains just a possibility. Continuous possibilities are the real, hence more than possible, objects of possible verification. We have now to consider more in detail transcendent possibilities.

An objective realm of transcendent possibilities does, *prima facie*, confront us. In both practical and theoretical intercourse with our world we are constrained to take account of objective possibilities just as we are with actualities and the reals which are continuous with them. Let us survey some of the inhabitants of the domain of objective possibilities. I would direct attention to three kinds of possibility—the alternative, the capacity, and the tendency.

We are confronted by alternatives whenever we are in a problematic situation. Problematic situations are either practical or theoretical. A practical problematic situation is one in which the problem takes on the form of *What is to be done? Quid faciendum?* When I wish to use my car and can't start it, I am in a problematic situation. There are alternative modes of procedure. I can experiment in a variety of ways with the car, or I can abandon the car, ask to borrow my neighbor's car, or call a taxi, or walk, or give up going altogether. Possible, alternative modes of behavior confront me and, no matter what I do, I make a choice. Ethical problems, in which there are conflicts of interests and desires, of loyalties and duties, consist of the presence in my world of competing, alternative determinations of conduct and interest. My decision decrees which of these possibilities shall become actual. But, prior to my decision, I am aware of and possess a knowledge of the relevant possible alternatives. There is, I may note in passing, no adequate provision for this prior knowledge of possibilities in an instrumental theory of mind and of knowledge. For a naturalistic, biological theory of mind, the function which mind performs is pragmatic and operational. It exists in order to effect reconstructions in experience, to manipulate, contrive, and control. Intelligence arises under the stress of complex, problematic situations for which habit and routine are inadequate. Intelligence is said to be practical, and supposedly it is the vice of traditional, classical philosophy to conceive of the mind and of knowledge as a contemplative spectator. I would point out that the mind would be wholly

helpless to resolve or reconstruct a problematic situation unless it first had just such a contemplative, spectator knowledge of objective possible alternatives. Before we can reconstruct our economic order intelligently we need to know, in the traditional sense of contemplative presentation, what the objective possibilities really are. Without such contemplative knowledge, mind could not perform its equally important function of guiding practice.

In theoretical experience we are likewise confronted with problematic situations, containing objective, alternative possibilities. A theoretical problematic situation is one in which there are competing possible alternative explanations and interpretations of given fact. These possible explanations are hypotheses. There are two differences between practical and theoretical problematic situations. Each of several alternative scientific or theoretical hypotheses can be tested in turn, and the most adequate hypothesis selected. But, in every practical choice among alternative possible actions, the decision to do this rather than that precludes the actual testing, in that unique situation, of any alternative mode of behavior. Shall I boil or scramble these eggs? Either is possible, but I cannot test both possibilities in any single practical situation. If I want to know whether a number is prime or not, I can test each of these two alternative possibilities.

In the second place, theoretical questions appear to differ from practical questions primarily in the method of their resolution, in the source of the decision decreeing which possible alternative is to be chosen. It is not we who make the decision, but the evidence and the facts. "Is this a dagger which I see before me?" To put this question is to be confronted by at least two alternatives each of which, prior to a decision, is possible. Either it is a dagger or it is not. Whether it is or is not depends on how this thing behaves when I manipulate it. The alternative possibilities relevant to a theoretical question need not be explicitly formulated. How many quail are there at this moment in my garden? I cannot see and therefore cannot count them. The alternative possibilities are but vaguely defined. There may be none, or one or two or three—any number up to a vague limit. I am quite certain that there are not a million.

Alternative possibilities are not restricted with respect to their temporal reference. We discover alternative possibilities in the past as well as in the present and future. Otherwise, the conditional

perfect tense would be inexplicable and meaningless. The chess moves which I might have made and the one which I now see that I ought to have made instead of the one that I actually made, are alternative possibles relevant to the past. Renouvier wrote a hypothetical history of Europe "not as it was but as it might have been" if the Christians had remained an Eastern sect and had not obtained political mastery of the West. And Gibbon, in a famous passage, recounts the possible consequences which might have attended a Saracen victory at the Battle of Tours. "Perhaps the interpretation of the Koran would now be taught in the schools of Oxford, and her pulpits might demonstrate to a circumcised people the sanctity and truth of the revelation of Mahomet." An economic depression which might have been worse and more severe than the actual depression in which we now find ourselves is an alternative possibility relevant to a present state of affairs. The possible chess moves which I may make when I next play are objective possibilities relevant to the immediate future. Possibilities relevant to the past and the present always remain transcendent possibilities, whereas some possibilities relevant to the future may become actual.

A second type of transcendent possibility is indicated by the capacities in terms of which we describe things. Cotton is inflammable, sugar is soluble, dogs are teachable, and so forth. Adjectives like these, formed by the suffix "ble" denote the capability or possibility of exhibiting certain characteristics under certain general, specifiable conditions. This lump of sugar is soluble though it may never be actually dissolved. Its solubility is just as objective a character of the sugar as its shape, size, and specific gravity. Locke put his finger on such objective possibilities when he declared that "powers form a great part of our complex ideas of substances." The description of things in terms of their possibilities, their capacities, does explicitly the very thing which, as we saw above, is implied by the nature or suchness of anything, even by the apparently simple, atomic qualities such as this particular shade of green. To have such and such a nature or characteristic is to be capable of other equally particular possible exemplifications. Capacities denote this spread beyond the actual in a more explicit manner than do simple natures and atomic qualities.

A tendency is another kind of possibility, *prima facie* objective.

A tendency is distinguished from a capacity—not sharply—in that a capacity of anything depends for its actualization upon the positive presence of other things and outlying conditions, whereas a tendency does not. Sugar is soluble. Whether any bit of sugar will be actually dissolved depends upon its being immersed in a liquid. There is no tendency toward solution in the sugar itself. On the contrary, a coiled spring tends to unwind. For the tendency to be realized and made actual, it is only required that it be let alone. What things and structures do really have tendencies, so that a negative policy of *laissez faire* is all that is needed to insure their fruition, is another question. I suggest in passing that the modern social and economic theory of *laissez faire* may be in grievous error precisely because of an uncritical ascription (in Aristotelian and Scholastic fashion) of tendencies to the ingredients of social processes. The history of science is, in large measure, the substitution of relational capacities for inherent tendencies.

Alternatives, capacities, and tendencies by no means exhaust the universe of possibilities. There is a familiar passage in Hume's *Enquiry* which indicates how vast and apparently inexhaustible that universe is. Hume is portraying what he takes to be a false and unwarranted view of the power and scope of thought.

Nothing [he says] seems more unbounded than the thought of man, which not only escapes all human power and authority, but is not even restrained within the limits of nature and reality. While the body is confined to one planet, along which it creeps with pain and difficulty, the thought can in an instant transport us into the most distant regions of the universe. What never was seen or heard of may yet be conceived; nor is anything beyond the power of thought, except what implies an absolute contradiction.⁴

This passage is cited to bring before us the apparent correlation between the world or worlds of the possible, infinitely wealthier than the world of reality, and the function of thought as distinct from sense experience. A creature endowed with sensory awareness alone, were this possible, would have no apprehension of any possibilities. Its world would be limited to the present actual. There would be for such a creature no alternatives, capacities, tendencies, no "might have beens," fictions, nor supposals. The question concerning the nature and status of possibles is the question concerning the nature and status of objects of thought, and accordingly

⁴ Hume, *Enquiry Concerning Human Understanding* (ed. Selby-Bigg), p. 18.

the question concerning the office and function of reason or thought in experience. The realm of the possible, thus expanded beyond alternatives, capacities, and tendencies, to include fictions and imaginary creations, David Copperfield and Timothy Forsyte, the exploits of Jack the Giant Killer, and the adventures of Alice, the pantheons and pandiablons of mythology and superstition—this appears to be a realm of possibles which are transcendent of the actual with a vengeance. Yet all such entities are possible, because men conceive and imagine them.

Let us explore this realm and try to see what it is that sustains our human interest in the possible as anything whatever which is imaginable or conceivable. I want to show that this realm is genuinely objective, and that it does not constitute a world of essence or subsistence, separate from what exists, from nature, if nature means the totality of what exists.

We are not content merely to allocate all conceivable entities, all possibles, to a realm separate from the world of real and actual existence. We have, rather, a profound interest in discovering the difference between two kinds of such conceivable, transcendental possibles. In all the typical major forms of human experience we have a vital and persistent concern with the difference, as we are likely to say, between what is really possible and what is not really possible. It will avoid confusion if I refrain from using the terms "real" and "unreal." However, the distinction here, like that between real and unreal elsewhere, is eulogistic in that it is not independent of considerations of interest and value. We might, without impropriety, call the two sorts of possibles "good" and "bad." Perhaps we can best use the terms "genuine" and "spurious." I am saying that this is a distinction which falls within the very wide universe of the possible as the barely thinkable and that there are two kinds of possibles, spurious and genuine. But of course a spurious possibility turns out to be not really a possibility at all. It is an impossibility, and we reach the somewhat curious result that an impossibility is a certain kind of possibility.

This is not so paradoxical as it sounds, for there is a further ambiguity in the meaning of "possibility," and we have to distinguish between an unrestricted and a restricted denotation of the possible. Only in the narrower sense does the possible coincide with the conceivable. In its unrestricted sense, possibility means not

conceivability but, as it were, anything that is a candidate for conceivability. And not all candidates pass the test. Impossibility is a candidate, hence possible in the wide sense, but its candidacy is rejected and therefore it is impossible. Are round squares possible? Yes and no. When I ask this question, I am proposing a round square as a candidate for the status of possibility. Round squares, as Alexander says, though self-contradictory and impossible, can nevertheless be "entertained in thought." But as soon as the idea is entertained and proposed, it is rejected as really inconceivable. As a proposal, it is a possibility. As a rejected candidate it is judged to be a spurious possibility, that is, an impossibility. This is a simple example. No extended process is needed to test the genuineness of this possibility. But mathematics is full of examples of this same general kind, differing only from the round square in the length of the interval between the proposal and the decision. Is it possible to square the circle or to trisect an angle with straight edge and compass? These questions do not answer themselves immediately. They have occasioned difficulty in the history of mathematics. Men have tried to square the circle and to trisect an angle. There is a longer interval between the proposal of these and the decision which rejects them, than there is in the consideration of round squares. These are possible until they are shown to be not possible. But even after their spurious possibility, their impossibility, has been demonstrated, they still retain the status of having been candidates for possibility, that is, possible in the unrestricted sense.

Round squares, circle squaring, and the like are not genuinely possible because they are internally discrepant and self-contradictory. There is a second class of rejected possibles, another ground for recognizing some possible entities as spurious or impossible. There are possibilities (in the wide sense) which are rejected as spurious not because they are internally discrepant but because they do not accord with the known conditions of the real world, of the actual and the extended actual. So far as I know, there is nothing internally or logically contradictory in the notion of a perpetual motion machine. Unlike a round square, it is logically possible both in the unrestricted and in the narrower sense. Yet physicists tell us that a perpetual motion machine is not genuinely possible. Its impossibility arises from the fact (if it be a fact) that it is no possible determinant of any general determinable or set

of determinables which comprises the known nature of physical processes. If this were all, we might hope some day to discover a set of general determinables of which a perpetual motion machine would be a determinate arrangement. Such a hope seems groundless in the light of our present knowledge of the general conditions of natural processes.

Thus, there are two main types of spurious possibles, two grounds for rejecting candidates for the status of genuine possibility. Either the proposed possibility collapses immediately or eventually through internal contradiction, or it conflicts with some known general conditions of nature. What is left are genuine or real possibilities. The discovery of genuine possibilities and their discrimination from spurious possibilities is a momentous affair in human experience. In such discrimination and discovery lies the essential office of reason, of thought, of intelligence. Mind itself, from its very first beginnings, is elicited by the existence of real possibilities in the one world which is the habitat of mind. The intelligent direction of behavior, the resolution of problematic situations, foresight, and purposive planning, hinge upon the discovery of genuine possibilities and their discrimination from spurious possibles. What we most need to know in the present economic crisis are the real possibilities resident within our existing economic and social structures. If the relevant possibilities are viewed as inhabiting a separate domain of subsistence, then there is nothing which men can do to alter and control the actual situation. How, indeed, real possibilities exist within the one world of nature, I have presently to consider. Before doing this, I shall deal briefly with two other matters.

The discovery of genuine possibilities within our world is not only of supreme practical importance. What appear to be aesthetic and imaginative creations of poets and novelists are, in part, the discovery of real possibilities. What does Mr. Galsworthy do in creating the Forsyte family? The individual, Timothy Forsyte, is indeed a fiction. His birth certificate is not recorded in Somerset House. Nevertheless, I think it is wholly false and misleading to say, as Russell does in speaking of the difference between Hamlet and Napoleon,

that it is of the very essence of fiction that only the thoughts, feelings, etc. in Shakespeare and his readers are real, and that there is not, in addition to them,

an objective Hamlet. When you have taken account of all the feelings roused by Napoleon in writers and readers of history, you have not touched the actual man; but in the case of Hamlet you have come to the end of him.⁵

But I think it is nonsense to say that the existence of Hamlet is dispersed among the thoughts, feelings, and mental events of innumerable minds in the last three hundred and forty-four years. Hamlet is no more mental than was Napoleon, though Shakespeare's creation of Hamlet and the reader's appreciation of him may properly be called "mental," if anything is. I agree with Stout in calling such literary fictions real possibilities. Timothy Forsyte is a real possibility because his character and actions conform to the real general conditions of recent English social and economic life. These general determinables are observed, discovered, contemplated, and portrayed by Mr. Galsworthy. Timothy Forsyte is an individual determinant of such real, general determinables. If the novel is true to life, there is no collision between the determinate individual men and events portrayed and any of the known general conditions and variables which quite literally exist within some specific historical culture. Imaginative creation and invention here as elsewhere rest upon insight and discovery. I should go even farther and say that the ridiculous creations of the exuberant fancy of Mr. Wodehouse, or the Yankee in King Arthur's Court, or the incredible exploits of the creatures of myth and fairyland, all rest upon *some* general known conditions of nature and experience. The general determinables with which they collide, which make them as a whole impossible, are simply left out of account. There is always some discoverable general feature of our world, some existing universal, I should say, which makes possible the wildest creations of imagination and fancy. In this respect they are all really possible. They are seen to be spurious possibles, impossibles, only when all the known general conditions of nature are taken into account. Practical experience differs from aesthetic experience in that it requires a consideration and knowledge of the entire range of relevant general conditions.

Secondly, I would observe that the distinction between spurious and genuine possibles is not epistemic. This marks its radical difference from the distinction between the actual and an object of possible experience. It is our perspective, our observing or fail-

⁵ Russell, *Mathematical Philosophy*, p. 169.

ure to observe, upon which depends the boundary between the actual and the continuous possible. But no alteration of our perspective, nothing that we can do, affects the boundary between spurious and genuine possibles, between the impossible and the possible. We discover what is really possible; its existence does not wait upon our knowledge. The framework of the possible is set for us and not by us. Within that framework we act and choose, imagine and conceive, invent and create. The question I would now ask is, What makes possible the distinction between spurious and genuine possibles, between the impossible and the possible? What makes genuine possibilities possible?

I shall outline my answer to this question through a brief consideration of certain types of philosophical analysis which preclude any such discrimination, and therefore any discovery and knowledge of the genuinely possible. I am willing to make this the test of the adequacy of a philosophical theory: Can you show how, in terms of your theory, the distinction between the impossible and the possible—and this means the discovery of the genuinely possible—is plausible and significant? I say this because in the discovery of the possible there is compressed pretty much the whole venture of mind and of human experience.

There are two contrasted types of philosophy, both of which make implausible and impossible any distinction between spurious and genuine possibles. Hume and Bergson may serve as examples of one type, Bradley and Bosanquet as examples of the other. According to Hume, the contrary of any matter of fact is always possible. It is really possible for the fire burning in my hearth to congeal me instead of warming me. There is no knowledge of any general conditions, determinables, and structures in nature which precludes this as a spurious possibility. If we rule out this and its kind as highly improbable and guide our actions accordingly, it is not because of any rational or cognitive insight into the connections and relatedness of events within a system, but solely because of an irrational and instinctive propensity, necessary for life but without reasonable or theoretical warrant. Now I submit that where anything whatever is possible, nothing is really or genuinely possible. Unless there is some ground for distinguishing what is really possible from spurious possibilities, it is meaningless to say that *this* and not *that* is possible. But, as we have seen, this is

just what we need to know if intelligent practice is possible. The search for the really possible implies the rejection of all sorts of merely conceivable possibles as spurious and impossible. Is the Russian economic system possible for us in America? It is conceivable; no internal contradictions need be present. Whether it is or is not really possible depends upon what we know about the dominant scheme or structure within our economic life, and whether the specific Russian plan is a determinate individual concretion of such general determinables as are actually found to exist in our situation. For Hume, anything whatever is possible, or (what amounts to the same thing) nothing is genuinely possible, because of his nominalism. He denies knowledge of anything in nature except particular, actual or real, entities. He denies the existence of general, pervasive recurrent patterns, types, rhythms. For him, reason and thought do no more than provide pale replicas of particular impressions. They yield no insight into the general structure of things.

Bergson is a Hume who takes time seriously. Like Hume, Bergson refuses to accord to reason and thought any theoretical insight into the general patterns and structures of reality. The creative advance of duration moves within no formal, organized structures. There are no known, general, relational patterns which provide the framework of concrete events. There is no knowledge, no cognitive discovery of recurrent types, forms, schemata of organization, within which moves the creative impulsion of nature. From each actual living present, there is a blind, unpredictable, forward thrust, a creative leap in the dark, unconstrained by any formal, general, intelligible structure. A mind devoted solely and purely to knowledge, uncontaminated by any practical necessities of acting, of choosing and controlling things, would be wholly absorbed in the actual. Unlike Hume's actual, that of Bergson is not punctual, atomic, and nontemporal. The present actual is a duration penetrated by the past which is literally carried along in and by the present. The entire content and wealth of the real is packed within the present actual and its creative advance into novelty. What is it, then, that leads or misleads the mind to entertain the notion of anything nonactual, ranging from the possible to non-being? Bergson tells us that all the major difficulties and problems of philosophy arise from the fact that the schemata necessary for human

action adventure beyond their proper domain. The necessities of action and control breed concepts and habits of thought which intrude into, infect, and falsify our cognitive and theoretical apprehension of reality. The requirements of practical action invoke and imply the notion of something nonactual, of nothing, and of the limbo of the possible, suspended halfway between nothing and existence. When theoretical insight is purified and made immune from such contamination, nothing remains but the actual. Bergson is true to the spirit of Positivism in this polemic against any species whatever of the nonactual. He differs from the scientific Positivism of Mach and Schlick, and from the positivistic wing of the neo-Kantian movement in making the notion of the possible, the nonactual, spring, not from the accidental shortcomings of our observation and knowledge, but from the illegitimate intrusion of practical concepts into the domain of knowledge and intuition.

The result is that for Bergson, as for Hume, there can be no discrimination between spurious possibilities and genuine possibilities, that is to say, between the impossible and the possible. For Bergson, as for Hume, nothing is really possible because, viewed in the light of what we may know, anything and everything are possible. For both Hume and Bergson, we possess no knowledge of structures, forms, recurrent schemata, relational systems which indubitably belong to the real no less than do atomic impressions or creative, present durations. A denial of such forms and structures is the one characteristic earmark of all degrees and varieties of nominalism.

Does real possibility, distinguishable from spurious possibility or impossibility, fare any better in the type of philosophy represented by Bradley or Bosanquet? I do not think that it does. Here, the ground upon which real possibility is, in the end, excluded, is not that there are no recognizable structures and patterns in the world, apprehended by thought, but that ultimately there is nothing else. The real universal is concrete and not abstract. Possibility is a species of necessity. The real absorbs the possible. Concrete, particular specifications and details flow from and are determined by the universal which pervades them. In the concrete universal, the true individual, the universal is exhaustively displayed without remainder in the total spread of its particular manifestations. There can be in the Absolute no possible exempli-

fications of the universal other than those which do comprise the actual, necessary contents and life of the Absolute.

Bradley has made explicit denial of the existence of the abstract universal. "The abstract universal and the abstract particular are what does not exist . . . what is real is the individual . . . the abstract universal is a mental creation, not a fact outside our heads."⁶ That is to say, the concept of possibility reflects only our ignorance. It is not only not constitutive, not a bona fide metaphysical concept; it is not even epistemic. To characterize its status, one would have to invent a term which is related to "ignorance" as "epistemic" is related to the requirements and necessities of our knowledge. Bosanquet puts it without ambiguity.

Possibility results in referring to reality, without transition, but subject to an estimate, what is only connected with it by transitions. When the whole transition is made explicit, the allegation of possibility is superseded. The judgment which has all its conditions and reservations fully assigned to it is of the apodeictic order; possibility arises from effecting the reference to reality apart from the conditions. The idea of "possibility" is our substitute for the omitted conditions. Obviously, such an idea may emanate from all degrees of confused perception or of reflection.⁷

Now I am far from thinking that there is nothing to be said for the kind of thing which, in Hegelian terminology, has been named or rather misnamed the "concrete universal." The concrete organized structures and processes of nature, life, and mind exhibit an endless variety. This variety is in part describable in terms of the relative looseness or compactness between the universal dominant scheme, the relational pattern on the one hand, and the particular empirical details, the factual content on the other hand. Our world contains both machines and symphonies, space-time patterns and the Platonic Form of the Good. All forms, principles of organization, all universals are abstract, even those discoverable within the most concrete and individual structures. There is always, that is, some gap, not only for our knowledge or ignorance, but within nature or reality between any schemata and its empirical detail. The latter is always, in some measure, contingent. This is, I take it, the meaning of Whitehead's description of every actuality, every actual occasion, as a "decision." Decision is in its root meaning a "cutting off," an exclusion of alternative actualizations within the

⁶ Bradley, *Logic*, I, 188.

⁷ Bosanquet, *Logic*, I, 373.

framework of the possible. Such a framework is always present. It is no artifact, no consequence of ignorance, nor is it to be superseded at any more adequate level of knowledge. The question, What makes possibility possible? is the question, What makes it possible to distinguish between spurious and genuine possibles, between the impossible and the possible? In what sort of world is it possible to discover real possibilities? That kind of world, I have suggested, lies somewhere between the worlds of Hume and Bergson and the Hegelian world of Bradley and Bosanquet, defined ultimately in terms of the concrete universal. It will be a world in which there are types, kinds, relational structures, forms, and universals. It will be a world in which such general determinables have possible occurrences as well as actual occurrences. The existence of such possible occurrences is the existence of those more general structures. It will be a world whose factual details are made intelligible by the more general patterns and forms which they exemplify, but which are not deducible, without remainder, from such general structures. It will be a world of which the theoretical grasp and knowledge and practical mastery require the presence and the activity of ideas, of thought, and of reason. It will be a world the very first impact of which upon any sensitive thing or organism implies and entails the thought of that which transcends the immediately delivered content. It will be a world in which the function of reason, implicitly present in the simplest sensory response, is none other than a disclosure of objective possibilities. For as Kemp Smith, to whom much of my discussion is greatly indebted, has remarked, it is "with the possible that reason, *qua* reason, is primarily concerned."

Is such an account as this adequate to the inexhaustible range of objects of thought, of possibles in the unrestricted sense, including contradictions and the creations of fancy and imagination as well? Can such an account do justice to what Alexander has described as the "liberty of the mind, released from the control established in sense by things"? This question is answered in the negative by all those who lodge possibilities, together with all objects of thought, supposition, and imagination in a separate domain of subsistent nonexistence. They are made to inhabit a literal no-place, a utopia. With reference to all such types of subsistent realism, I shall limit myself to one comment. I should like to place the mo-

tives—and they are urgent ones—which lead to such an extrusion of objects of thought from the actual and the real alongside of those motives which have led to the expulsion from nature of secondary qualities. It is quite clear that nature was not described exclusively in terms of extension, of primary qualities, because secondary qualities had first been authenticated as mental and subjective. It was the other way around. Secondary qualities were voted out of nature because there was no place for them in nature as described and interpreted in a certain way, in terms of mechanistic naturalism. The traditional dualism of primary and secondary qualities, of nature and mind, holds out now a challenge and a problem. Are there any equally or more adequate alternative interpretations of nature which find a legitimate place in nature for secondary qualities? Perhaps the expulsion of secondary qualities from nature is a dodge necessitated by an attractive and relatively simple description. The lure of theoretical simplicity may mask objective complexities. Can we formulate a description of nature as overlapping and including secondary qualities? I know of no such completely adequate description, but I think that those who are searching for one are on the right track. I will leave it to the reader to carry over the analogy from this affair of primary and secondary qualities to the question of the relation between the objects of sense experience—the actual and the continuously expanded actual—and objects of thought, possibilities. Any description of the real, of the world of objects of actual and possible experience, which banishes objects of thought to a separate domain is, at best, a challenge. It stimulates doubt: such an interpretation may be altogether too simple. Transcendent possibles, alternatives, capacities, and tendencies, of which *all* the exemplifications may, yes, *can*, never be actual, are nevertheless discovered by mind, by thought and ideas, within the one world which comprises the habitat of our minds, the one inexhaustible domain of our knowing, our appreciation, and our doing.