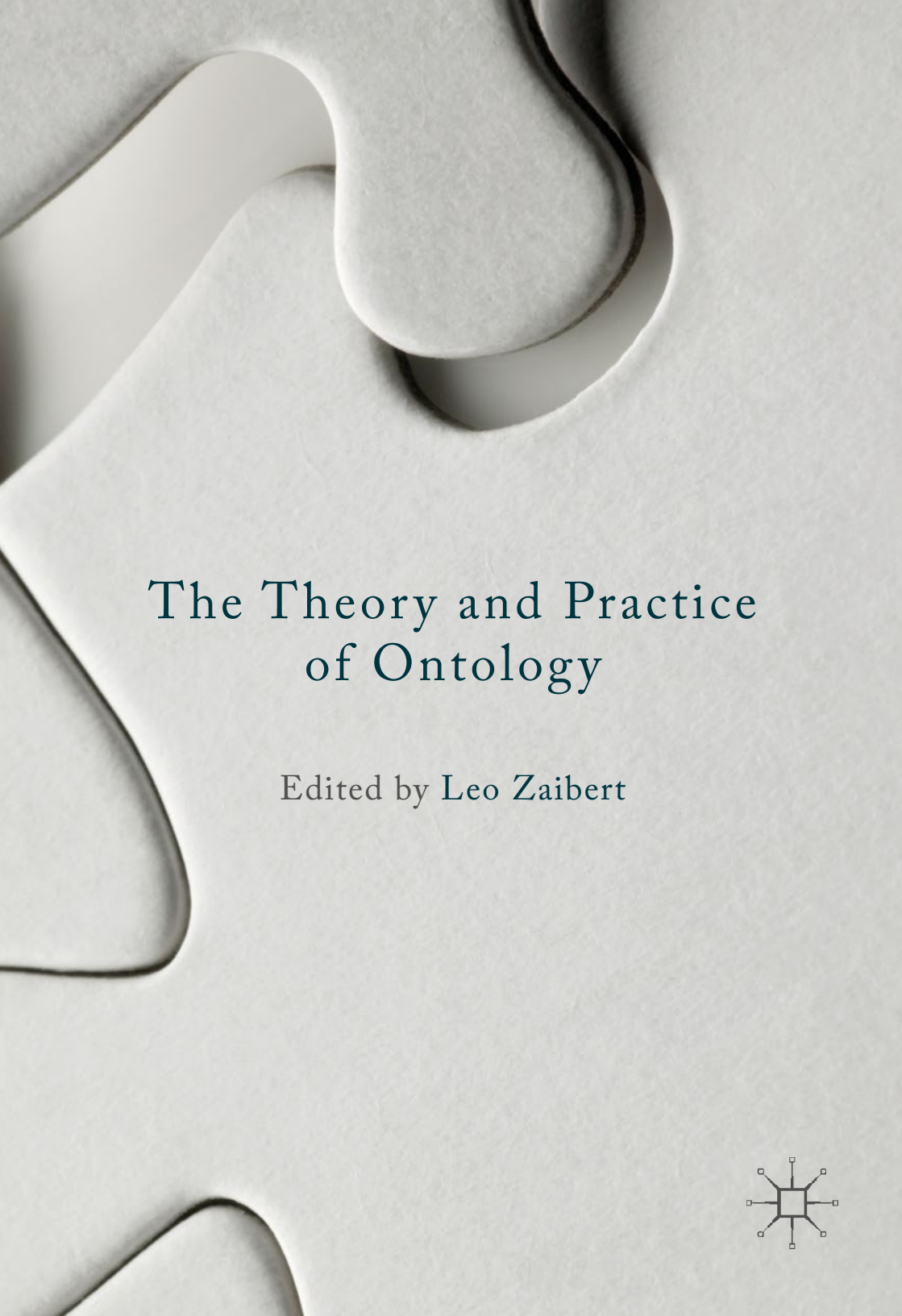

The Theory and Practice of Ontology

Edited by Leo Zaibert

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The contributors wish to dedicate this collection to Barry, in friendship and admiration.

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Introduction

Leo Zaibert

In one way or another—and often in various ways—all the contributors are indebted to Barry Smith. Some of us were Smith's students, and took our first steps in academia in the context of collaborative work with him. But even those who have never been, technically speaking, Smith's students, have nonetheless immensely benefited from his penetrating intelligence. As a matter of fact, in connection to Smith, the categories of "student", "colleague", and "collaborator", exhibit remarkable overlaps. All the contributors are equally grateful to Barry and they dedicate this volume to him, in friendship and in admiration indeed.

In terms of number of publications, Smith is one of the most prolific philosophers of his generation. In addition to his prodigious output, the articles contained in this volume reveal another impressive aspect of his career: the number of disciplines in which the influence of his work has been felt: biology, computer science and informatics, cognitive science, economics, genetics, geography, law, neurology, and phi-

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losophy itself. Smith has published important articles in all of these areas, and he has also received prestigious awards by the professional governing bodies of these diverse disciplines. He even holds professorships in six of these fields. Few scholars have ever materialized the real value of interdisciplinarity in anything like the way Smith has. The wide-ranging relevance of his work thus constitutes another, perhaps even more powerful, reason for publishing a volume such as this.

Smith received his BA in mathematics and philosophy (First Class Honours) from Oxford University in 1973—a degree which was subsequently converted to a MA in 1977—and his PhD in philosophy from the University of Manchester in 1976, with a dissertation titled "The Ontology of Reference: Studies in Logic and Phenomenology". He has held academic posts at the Universities of Sheffield and Manchester, at the International Academy of Philosophy (in Liechtenstein), and, since 1994, at the State University of New York at Buffalo. He has been an invited professor in dozens of universities across the globe, and he is a member of the editorial board of dozens of peer-reviewed publications. His work has been funded by the National Institutes of Health, the National Science Foundation, the Department of Defense, the European Union, the Volkswagen Foundation, and the Alexander von Humboldt Foundation, to name a few. No philosopher comes close to Smith in terms of the number of grants he has received, or in terms of the financial significance of those grants.

Smith's early interests, captured in the title of his dissertation, have remained at the center of his investigations during his long and fruitful career, and they are key in helping us understand how Smith has been able to contribute to so many diverse disciplines, and indeed how his influence is to be appreciated in the contributions to this volume. Above all, he has been preoccupied with the fundamental structure of the universe: with what philosophers have traditionally called "metaphysics" or "ontology". Given the ebb and flow of human intellectual pursuits, and given the progressive specialization of human knowledge and the subsequent proliferation of different disciplines and sub-disciplines, this important branch of philosophy became just that—a branch of philosophy, without much connection to the sciences or practical affairs. Interestingly,

however, it was nothing other than metaphysics that, say, the early pre-Socratic philosophers thought they were doing—and they did not see this focus as separate from their concern with what throughout different periods in human history have been labeled "purely" scientific endeavors. While in the Renaissance we witness efforts to emphasize the connections between philosophy and the sciences, these connections were particularly significant in the twentieth-century school of phenomenology, particularly in the work of Edmund Husserl. Smith has been greatly influenced by Husserl (he has published considerably on Husserl, and is the co-editor of the authoritative *The Cambridge Companion to Husserl*). Steeped in this phenomenological tradition, Smith sees his investigations as at once ontological (and thus philosophical) and scientific.

There is, of course, nothing objectionable about projects in, say, the philosophy of medicine, or the philosophy of music, and so on. But it is important to emphasize that this is not what Smith has done. Rather, he has mobilized philosophical tools and methods so that he can contribute to medicine itself, music itself, and so on. It is not that philosophers, qua philosophers, are familiar with the specific facts of medicine or music (etc.)—they are clearly not (hence the need for collaborative approaches such as those which Smith often directs). But philosophers do know better than physicians and musicians (etc.) how to conceptualize some abstract features of these very disciplines, and how to understand the relations between the different entities which fall under the purview of these disciplines. Philosophy, in the sense Smith practices it, is not a meta-discipline that hovers over other disciplines: it is, rather, the quintessential infra-discipline, which lives within these other disciplines.

That philosophers are better equipped to investigate and analyze the fundamental structure of the universe than any other professionals or academics has been Smith's animating conviction throughout his career. It is, after all, philosophers who are trained to deal with metaphysical or ontological questions. And it is philosophers, too, who are trained in formal logic, and thus likelier than others to approach these ontological questions with the rigor and systematicity that logic presupposes. So, in Smith's opinion, it is precisely in virtue of their expertise with those essentially philosophical tools that philosophers are so well-suited to come to the help of other disciplines. Smith's work shows that this help

goes much farther than conceptual clarity. The use to which Smith has put the philosophical tools afforded by ontology and logic in the service of other disciplines has been truly revolutionary.

Chronologically listing the title of some of Smith's influential publications provides hints as to why the preceding assertion is not hyperbolic at all. "The Ontogenesis of Mathematical Objects" (1975), "Logic, Form and Matter" (1981), "The Substitution theory of Art" (1986), "Textual Deference" (1991), "Putting the World Back into Semantics" (1993), "Formal Ontology, Common Sense, and Cognitive Science" (1995), "Geographical Categories: An Ontological Investigation" (2001), "The Metaphysics of Real Estate" (2001), "Husserlian Ecology" (2001), "Quantum Mereotopology" (2002), "Do Mountains Exist? Towards an Ontology of Landforms" (2003), "Biomedical Informatics and Granularity" (2004), "On Carcinomas and Other Pathological Entities" (2005), "Referent Tracking for Digital Rights Management" (2007), "Framework for a Protein Ontology" (2007), "Foundations for a Realist Ontology of Mental Disease" (2010), "Towards an Ontology of Pain (2011), "How to Do Things with Documents" (2012). As can be surmised from the titles above—some of which have appeared in leading publications outside of philosophy—Smith has contributed concrete, in-house advancements in many disciplines.

In addition to the indirect evidence we could glean from these titles and from the sheer output of Smith's work, consider one example of the sort of strategy which Smith has employed in bringing philosophical tools to bear on other disciplines: the case of medicine, and in particular through the lens of the work of the Institute for Formal Ontology and Medical Information Science (IFOMIS), which Smith founded in 2001, after he was awarded the two million Euros attached to the Wolfgang Paul Prize, with which the Alexander von Humboldt Foundation honored him. Imagine a team of physicians who undertake to collate and systematize data surrounding a certain disease, in order to, for example, develop software that may render the diagnosis and treatment of this disease more efficient. It is of course common knowledge that physicians cannot undertake this project alone—computer scientists would be needed in this enterprise. What is not commonly acknowledged is that a

team of physicians and computer scientists working together would still need ontologists—that is, philosophers.

Neither physicians nor musicians (etc.), after all, are likely to understand—and at any rate are not trained to understand—the sometimes subtle but nonetheless important differences between the sorts of relations that may obtain between the fundamental entities with which their disciplines deal. For example, there are important differences between parts and proper parts; and there are important differences between something being either a part or a proper part of something else, on the one hand, and it being caused by that something else, on the other; between two entities overlapping and two entities underlapping, amongst many others. Smith's efforts in this area have both highlighted the ways in which philosophically uninformed approaches to medicine have failed, and have helped his team of researchers develop conceptual apparatuses better able to capture the ontological foundations of medicine. The results of Smith's efforts at the helm of IFOMIS can be appreciated not only by looking at the many academic publications that the institute has produced, but by the fact that other organizations—form the Volkswagen Foundation to the National Institute of Health—have continued to support his projects in this area, to the tune of many millions of dollars.

This volume is not conceived only as a celebration of Smith's work. It is also a stand-alone testament to how genuinely fruitful the work has been, and how the contributors take insights or interests prompted by his work in different directions. While not all of the contributions are about Smith's work directly, they all resonate well with topics to which he has devoted attention. The general theme that pervades the volume is, of course, connected to ontology. But the range of specific topics covered herein reflects the dizzying breadth of Smith's own career, and of the value of ontology. Preferring to let them speak for themselves, I shall only offer one-line summaries of the chapters, merely in order to offer at once a glimpse on the richness of the volume.

The volume opens with Peter Simons's "*Ontologia Utens* and Beings in Time", and with his investigation of the connections between "ontology" in the classical Aristotelian sense and the sort of novel applied realms to which Smith, above all, has put it to use. In "Against Fantology Again", Ingvar Johansson takes on Smith's attacks on a widespread assumption in

contemporary philosophy whereby the fundamental elements of ontology track the fundamental aspects of logical syntax. Achille Varzi, in "On Drawing Lines across the Board", turns our attention to the implications of Smith's work on the distinction between fiat and bona fide boundaries, not only regarding geography itself but regarding the surprisingly many other general areas of investigation in which it applies as well.

In "Social Reality, Law, and Justice", David Koepsell further highlights the scope of Smith's ontology by exploring its connection to some central worries of jurisprudence and to the burgeoning field of social ontology. Some of these concerns are further explored by Alessandro Salice's "Acts of Terror as Collective Violent Acts", in which an analysis of the elusive notion of terrorism is advanced. Maurizio Ferraris, in his "Letter of Pharisaism", discusses the implications of Heidegger's Nazism (particularly in light of the recent publication of the *Black Notebooks*). In "Just Organic Wholes", Leo Zaibert pays attention to the ways in which what Smith has dubbed the tradition of "Austrian Philosophy" may offer an unusually penetrating lens through which to look at the problem of the justification of punishment.

In "'Pain' in SNOMED CT: Is There an Anesthetic?" Werner Ceusters and Jonathan P. Bona offer an example of the sort of practical applications to which ontology can be put to use by examining the ways in which the *Systematized Nomenclature of Medicine—Clinical Terms* deals with pain. Similarly, in his "The Structure of Standard Musical Notation", Roberto Casati discusses both some principles that govern the representation of time in standard music notation, and some cognitive consequences of such notation. In her "Attitude: How we Learn to Inhabit the Future", Mariam Thalos offers a phenomenological account of the perception of time, and of how humans experience it at different stages of their lives. In her "Parental Love and the Meaning of Life" Berit Brogaard discusses some unsavory aspects of motherhood, by considering how motherhood conflicts with other valuable aspects of existence such as autonomy and welfare. And in "Foolishness and the Value of Knowledge" Kevin Mulligan closes the volume by presenting an analysis of foolishness in which it is importantly distinguished from stupidity, and in which it is seen as a form of an intellectual vice.

As it turns out the last note of the last article in the volume can be put to use in concluding this brief introduction as well. For not only does it appropriately conclude Mulligan's piece, but it offers an invitation to consider some of the multifarious ways in which Smith's seminal work on ontology—both theoretical and applied—yield fruit in the contributions contained herein.

> This tribute to Barry Smith has touched on only a few of the topics he has illuminated over a long and extraordinarily productive career, a career driven by an unusually large range of strong interests pursued in a very determined fashion. Barry Smith, his friends and admirers all agree, is in many ways an epistemic hero.

2

Ontologia Utens and Beings in Time

Peter Simons

1 Useful Ontology

Ontology, despite the relative newness of its name, goes back to Aristotle's principal definition of metaphysics as the science of being as being. Christian Wolff divided metaphysics into ontology or general metaphysics on the one hand and three branches of just slightly less general special metaphysics on the other. Husserl renamed the two sides as *formal ontology* (general) versus *regional ontologies* (special), while Donald Williams called the former *analytic ontology* and the latter *speculative cosmology*. Amid this terminological plethora it is sensible to stay with *ontology* as the name for the general part. But as the most general part of the most general discipline, how could ontology ever be useful? To see how useful it indeed is when understood sensibly and deployed as a general framework for database ontologies, it suffices to look at Barry Smith's work, not only

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his philosophical articles but more particularly his impassioned advocacy of realist philosophical ontology as the best framework in the construction and conceptual structuring of databases in all manner of subjects from genetics, medicine and other biomedical sciences to geography and the military. To achieve this penetration, Smith brought decades of work and experience in philosophy and its history, all conducted from a robust realist perspective and drawing on an encyclopedic knowledge of scientific philosophy from the last 150 years, including many of its less well-known corners.

It would be otiose to add further injunctions to take scientific ontology seriously and apply it as Smith has done to all of his well-argued articles. Those who have benefitted from the sensible and well-designed Basic Formal Ontology (BFO) can attest to the improvements wrought by taking this tool in designing computer ontologies. Since Smith and I agree on nearly all important philosophical matters and likewise on the need to apply ontology in the interest of clean and efficient data, in this paper I shall focus on one area in ontology in which we have a (fairly minor) difference of opinion, namely the relationship between objects that persist in time, continuants and occurrents.

2 Continuants and Occurrents: The Distinction

Consider objects in time. Perhaps there are some that exist instantaneously, for example a particularly shaped shadow cast by two objects that cross in front of one another in the sun, but aside from these, all the objects we encounter (and any of whose existence we can be sure) last for a period of time, even if a very short one. We shall confine attention to these. Following W.E. Johnson, we make a fundamental distinction between two ways in which objects that persist are in time. Some persist by getting longer and longer in temporal extent. These are *occurrents*, so called because their typical exemplars are events and processes, which occur or happen or go on. A popular kind of occurrent is a race, of which there are many kinds, involving humans, animals and machines: exam-

ples of these three genres are respectively a marathon, a greyhound race, and a Formula One motor race. A race lasts for a certain time, from the moment when the competitors are set off to the moment the last competitor to complete the course does so, and the winner is, of course, the competitor that completes the course in the shortest time. That stretch of time gives the clue to the nature of a race: it has a beginning, lasts for a period after that, and comes to an end. The temporal interval from beginning to end is its *duration*, and this can be subdivided into shorter sub-intervals, such as the first five seconds, or middle third, or the second half. Some of these sub-intervals are arbitrarily like these, others may be determined by physical features of the race, for example the period between the leader starting and completing a certain lap. Races are sometimes abandoned before they finish, for a variety of reasons, and when this happens, the incomplete or abandoned race itself has a duration, which is shorter than would have been the duration had the race proceeded to completion. All of this is well known, but the point is to illustrate the fundamental property of occurrents: that they last for a certain time, or, as Smith and his collaborators say, they *span* an interval of time. Ontologies dealing with such items are called by them SPAN ontologies.

Because occurrents span intervals, they have longer and shorter parts which span sub-intervals of the total interval. Another way to put this is to say that occurrents have temporal parts, that is to say, parts of the total occurrent which last a shorter time than the whole but which, when they are occurring, comprise all of the occurrent as then happening. A salient example is the first half of a football match, which comprises everything that happens in the match before the half-time interval. This is to be contrasted with the play that occurs throughout the game in one of the halves of the football pitch, which is a spatial part of the game. There are of course parts of the game which are neither spatial segments nor temporal segments like these, for example the part played by a particular player in the game, which may or may not endure throughout the whole game but which certainly does not take up the whole volume of the game at any time.

In addition to temporal parts that occupy a sub-interval of an occurrent, there are two other candidates for temporal parts. The first are topologically disconnected temporal parts, for example the play in the five min-

utes either side of half-time in a football match. These are occasionally of practical and theoretical significance. In many sports there are interruptions because of injuries and time-outs, but despite these we consider the event as a whole despite its intermittent nature. Similar remarks apply to say musical performances with short pauses between numbers of movements. The other case concerns the temporal boundaries of occurrents: the moment of beginning, the moment of ending, the half-way moment, and so on. Assuming we treat these as genuine items in our ontology, and nothing we have said either includes or precludes them, they are best treated as limiting cases of occurrents, because they are approximated by extended occurrents of arbitrarily short duration. As stated above, we shall not be much concerned with such cases.

The other basic kind of object in time are *continuants*, so called because they continue to exist for a period. Examples of continuants are familiar and legion. The earth, the heavenly bodies, geographic features, the organisms on the earth, including ourselves, our many artefacts such as buildings and means of transport, bodies and masses of matter, and much else that interests us are continuants. They comprise what Aristotle called substances and what are often called just things or objects, if inanimate, and animals, plants etc. if living. They include the parts of these things, such as the rock strata of a mountain, the organs and tissues of an animal, the bricks of a house, the wheels of a car, etc. They also include social and collective things like families, clubs, orchestras, firms, governments, nations and dynasties, as well as their individual members, officials and so on. They comprise enduring qualitative and quantitative properties of continuants, the white color of this wall, the mass of this apple, the shape of this vase, and so on. Since these are items which are also in time and which depend for their existence on the substantial whole to which they belong, these are individual accidents, moments or *tropes*, not the universal kinds to which they belong.

Whereas occurrents endure by acquiring later stages or temporal parts, continuants endure by simply "hanging in there", remaining in existence. Of a continuant we may be able to state when it came into existence, how long it existed for, and when it went out of existence. For instance Napoleon Bonaparte was born on August 15, 1769 and died on May 5, 1821. Leaving aside by convention the months when he was develop-

ing in his mother's womb, we count the period of Napoleon's existence as being between these dates, though with greater strictness and accuracy we should take the developmental period between conception and birth into account. We do not in ordinary parlance and ways of thinking regard continuants as having temporal parts or phases like occurrents. Thinking of Napoleon, while we might say he has spatial parts like his left arm or his top half, we do not say he has a first half or a middle third. That to which we refer such talk is not Napoleon himself but his *life*, which does have temporal parts, for example the part when he attended the *École Militaire*, or the part spanning the period of his marriage to Joséphine de Beauharnais. There is of course a uniquely intimate relation between Napoleon and his life, as attested by biographies, which consist in descriptions of both the man and the events in which he participated. The same goes for other continuants. Stretching the term somewhat, we may call the temporal whole consisting of all the events, states and processes intimately involving the continuant that continuant's life, or, if we prefer, its *history* (to use the BFO term). This is not alien terminology: we often hear about the life of a star, a building, an institution, and everyone recognizes the metaphor as appropriate without being led to think that stars, buildings and institutions are ever literally alive. A continuant's life goes on when and only when, and for as long as, it exists. Provided we do not confuse an object's history *qua* events involving it with the story or account of its history, that terminology is equally apt.

3 Some Consequences

Both continuants and occurrents vary across time. A party which started quietly gets louder, the fall of a body gets more rapid, a tree which is bare in winter puts forth leaves in spring and loses them in the fall. In the case of continuants like the tree we call this variation *change*. Typically there are three components to change. One is the thing that changes. The other two are characteristics or properties that it has before and after the change. For this to be a change, and not just variety, the properties have to be analytically incompatible, such as being quiet and being loud, or being leafless and being leaved, but more importantly, there is the ques-

tion whether that which varies itself changes, in that the very same thing has first one property then another, or whether the incompatible properties can be ascribed to parts of the whole thing. A river which is swift and narrow near its source but sluggish and broad near its outlet does not itself change from being narrow to being broad; rather, different parts of the river are narrow and broad. Likewise, a party which starts quietly and ends noisily varies in that early phases of the party are quiet while later phases are noisy. It is true that we may use the same word, "change" for both kinds of alteration, but in the case of continuants, since they lack temporal parts, there is nothing but the continuant itself to which the properties can be ascribed. For that reason only continuants change in the strict sense, occurrents vary over time but do not change.

As a result of the difference, predications about continuants and predications about occurrents differ in the way they treat time. Because continuants themselves exist and have properties at different times, when we talk about them and their properties, we generally need to specify the time at which the continuant has the property, and we do this using tense and/or some other temporal specifier, for example

Sally was happy yesterday but is unhappy today
Hong Kong was a small trading post in 1850 but a huge metropolis in 1990

By contrast, since an occurrent extends over time, predications ascribing different properties at different times can be referred to temporal parts:

The first half of the game was dull but the second half was exciting
The battle started with artillery exchanges but moved to massed infantry assaults

There is in particular a radical asymmetry concerning location. While a continuant can be first here, then there, an occurrent which "moves" does so only in that different phases are in different places. When a wedding starts in church but ends in a marquee it is the guests that move, not the wedding.

4 The Problem

It appears then that we have a fundamental distinction between these two kinds of entities in time, but there are also clear and intimate connections between them. As a biography demonstrates, the person and the events which constitute his or her life are inseparable. The person cannot exist without at least some occurrents going on in their life, namely those vital processes which constitute being alive, and conversely, no occurrent in which the person is involved or is a participant would be the occurrent it is were they not to be so involved. The involvement can be peripheral, as being a spectator at a tennis match, or it can be essential, as being one of the players in the match. It is questionable whether there are any clear cases of occurrents which do not involve some continuant as a participant. Fluctuation and propagation in fields such as electromagnetic or gravitational fields may be candidate cases. In such cases it might be said that the field is the requisite continuant bearer of changes, but again it is not clear whether fields should be reified in this way. At all events, the majority of continuants and occurrents with which we are concerned come together in reality.

That raises the question as to the nature of the relationship between occurrents and continuants, and whether one category is essentially dispensable, or whether both are required, and if so, whether one has ontological priority over the other. That gives us a total of five possible positions, metaphysically speaking:

1. There are only continuants and no occurrents.
2. There are only occurrents and no continuants.
3. There are both, and neither is prior to the other.
4. There are both, and continuants are prior to occurrents.
5. There are both, and occurrents are prior to continuants.

This excludes two other positions, neither of which is I think to be taken seriously. The first is that there are, ultimately, neither continuants nor occurrents; the other, that both are reducible to or posterior to some third neutral category. As far as I know, this last option has not been taken, while the former only makes sense for sceptics, monists, or other

philosophical extremists. In this chapter I shall not address answers 1 and 4, although they have been upheld. They are minority positions usually associated with some form of Aristotelian substantivalism. By far the most commonly supported views in contemporary metaphysics are answers 2, 3, and 5. In his insistence on the indispensability of both continuants and occurrents, and the equally important suggestion that reality is too complex for a single theory or perspective to capture all its aspects, Smith is a supporter of answer 3. My own preference is for answer 5. Answer 2 will be considered because it is perhaps the most favored view among contemporary metaphysicians. We consider it first.

5 Process-Only Philosophy

For a variety of reasons, philosophers have concluded not only that occurrents exist, but that, of objects that persist in time, only occurrents exist. Often called by the not especially helpful name "four-dimensionalism", this is a kind of process philosophy in which one of two similar attitudes is taken in regard to continuants, namely

> 2a. There really are no continuants, there are only processes and other occurrents.
> 2b. What we consider continuants are, in fact, occurrents: they have temporal parts.

It is hard to make a clear distinction between those two positions. It may turn on matters of rhetoric, as when someone says, "There are no trees, there are only tree-processes", in which case they are exponents of 2a; or whether they say, "Of course there are trees: they are just very slow-moving dull processes", in which case they uphold 2b. We might call 2a Continuant *Eliminativism* and 2b Continuant *Revisionism*. The difference may also turn on whether the proponent thinks we could paraphrase talk of continuants into talk of occurrents (2b) or should for metaphysical purposes get rid of talk of continuants altogether (2a). I am skeptical in regard to the possibility of eliminating continuant-talk and equally skeptical in regard to being able to reduce it or paraphrase it by suitable

occurrent-talk. I am one with Smith in thinking that ontology must, if it is to be taken seriously and do a useful job, maintain its contact with the language and practice of science, which is thoroughly saturated with both continuant and occurrent talk. For that reason I shall not even consider language revision. But for the same reason I do not think there can be any clear separation between what the people and the scientists, engineers, doctors etc. say, and what the metaphysicians say. If metaphysicians are happy to talk with the vulgar outside the Philosophy Room but talk a wholly different and disconnected idiom inside it, they are already undermining their own subject and turning it into an irrelevant glass-bead game that deserves all the scorn of positivists.

For practical purposes, then, there is little to choose between 2a and 2b, so let us consider whether there is any sense in holding that stars, planets, islands, plants, animals, bacteria, houses, and aircraft have temporal parts. If we do so hold, we will have to admit this would entail a radical linguistic revision, but maintain that it can "in principle" be carried out. The question is rather whether it makes metaphysical sense to embark on the revision.

The attraction of a process-only metaphysics is that it reduces the number of basic categories of entity. Its disadvantage is the mentioned disconnection from extant ways of speaking and conceptualizing. Most proponents seriously underestimate the amount of upheaval required to revise our thought in this way, but if the metaphysical payoff were worth it, that would not be a final obstacle.

Perhaps the major shortcoming of the non-eliminativist position 2b is that it collapses the distinction between a continuant and its life. If Napoleon is a long drawn-out process extending from 1769 to 1821, then the biography has only one kind of subject: Napoleon-processes, their parts such as his marrying Joséphine, or his right-hand-process; and the wholes of which they are part such as Austerlitz, which is itself already an occurrent, but also France between 1769 and 1821, which would have to be a larger nation-process. No one should seriously deny that Napoleon existed, the question is, what was he?

It would be easy if we could somehow show that the assumption that Napoleon has temporal parts is simply analytically contradictory. For example, we may claim that Napoleon was present himself, as a whole, at

the battles of Austerlitz and Borodino, while only parts of the Napoleon-process were compresent with Austerlitz and other parts with Borodino. The proponent of four-dimensionalism will however adjust the talk so it is right to say that parts of the total process were present first here, then there, but that because they are both parts of the greater whole we can say, if in a somewhat Pickwickian sense, that the whole process was also around at both Austerlitz and Borodino. Parts of it weren't. If that is being Pickwickian, since we can equally well say that parts of the whole process were neither at Austerlitz nor at Borodino, we have no clear reason to think Napoleon himself *as a whole* was at either, or indeed anywhere else, provided he moved around. So was Napoleon *himself* present at both battles? The reasons given to say he was are also reasons to say he was in many other places as well. This falls just short of holding that he both was and was not at Austerlitz (without qualification), and so falls short of a contradiction. It may be awkward, but is not inconsistent. The problem turns on how to interpret not especially helpful terms such as "as a whole" or "himself", and the different interpretations, favoring opposing positions, might be considered question-begging.

Likewise, saying, for example, that Napoleon has a childhood part and a twenties part may be barbarous, inelegant or out of keeping with how we ordinarily speak and think, but that is precisely what is at issue. Later we shall see that with a theory of how continuants are related to occurrents we can give a constructive account of why such talk jars, but again it is hard to find an independent reason to prefer this view to alternatives. I conclude that it is hard to convict position 2 of any *cognitive* defect worse than being radically revisionary.

6 Continuant–Occurrent Dualism

By contrast, the view that continuants and occurrents are coeval, equally basic categories, upheld by Smith and favored by myself in earlier times, is positively straightforward. We call it continuant–occurrent *dualism*. It emerges in the requirement enshrined in BFO that both a SNAP ontology (dealing with continuants at a time) and a SPAN ontology (dealing with occurrents over time) be part of an ontology with any serious

applications. There have to be both categories in any serious ontology applicable to the real world, because we have to meet people, especially scientists and practitioners, where they conceptually are, and they are using modes of thought in which both continuants and occurrents are vital. Precisely because it is conservative rather than revisionary, it raises fewer questions of principle.

But not none. The main question is how continuants are related to the occurrents in which they participate or are involved. There are here terms used to describe the relation. Continuants "participate in" events and other occurrents, these "happen to" or "happen in" them, they "are involved" in them. Napoleon participated in, was involved in, the Battle of Austerlitz, as of course were many others, his various breaths and heartbeats during the battle happened in him, his actions and orders involved him as agent, and so on.

The standard view of involvement (as I shall preferentially call it) is that it is a *sui generis*, indefinable primitive. It is hard to see what other option there is for a dualist. Indefinable or primitive relations are not in themselves bad: there have to be some indefinables in metaphysics of all sciences. On the other hand, if there is an alternative theory in which the supposedly indefinable primitive is defined or explicated, and in a way which preserves and/or explains its principal characteristics, that is—on that count—preferable. In this case, I think there is a better alternative, and to that we proceed.

7 Existence at a Time

Together with Smith, Kevin Mulligan and numerous others, I consider that one way to approach metaphysical questions is by considering truth-makers for various salient propositions. The basic idea is that contingent truths about the real world are in some way answerable to that world, they do not float free. That does not mean, as truth-maker maximalists hold, that every truth has a truth-maker, but it does mean that there has to be an account of why contingent propositions are true or false which turns on what there is or is not in reality. A truth-maker for a proposition p is an object or objects A such that p is true because A exist. The true

statement "RMS *Titanic* collided with an iceberg on April 14, 1912" is true because of the existence (occurrence) of a collision at 23:40 ship's time on that day between the ship and one particular iceberg. That the sentence uses the past tense is because we are speaking about it afterwards: someone who correctly predicted such a collision would use the future tense, while someone describing it at the time would use the present tense.

Because of the nature of the truth-making relation, one between an entity in the world on the one hand and a truth-bearer on the other, the most straightforward and indeed almost trivial case of truth-making is one that pertains between an entity and a truth-bearer to the effect that that entity exists. So the famous collision makes it true that *that* collision as referred to exists (using the verb here in a non-tensed sense) and so, by the principle that what makes something true makes any logical consequence of it true, makes true that *such* a collision exists, and that is equivalent to the true statement above, modulo the use of the past tense.

An event like a collision has its time of occurrence built into it, it essentially occurs when (and where) it occurs. But when we are talking about a continuant, to say it exists is to say it exists at some time, but not necessarily at this or that time. If we wish to be more specific about when a continuant exists, we have to bring in the time explicitly, so we say Napoleon existed (i.e., was alive) on December 2, 1805, as also later on June 18, 1815. That he did so was in neither case necessary or essential to him: he might easily have died earlier of a childhood disease or at some previous battle. But the force of truth-making is that the existence of the truth-maker *necessitates* the truth of the truth-bearer in question: it cannot be the case that the truth-bearer exists, and the truth-maker exists, but the truth-bearer is not true. Clearly Napoleon himself does not necessitate that he be alive on December 2, 1805, since he might have died earlier. Therefore something else must be the truth-maker for the temporally specific proposition "Napoleon existed on December 2, 1805". Occurrents have their time built into them, so if we can find an occurrent or occurrents from December 2, 1805 which make it true that Napoleon exists then, we have our truth-maker. And there are such: they are the vital processes which sustain Napoleon on that day. They are not Napoleon, but they are essential to his existence then, and can thus serve as truth-maker to the temporally specific singular existential proposition.

While not entailed by this analysis, the solution strongly suggests that Napoleon exists *because* such vital processes exist: this is something we know anyway from biology as well as from common experience. Heartbeats, blood circulation, breathing, oxygenation, brain and nervous activity, all are needed for life to persist. Now we ambitiously generalize from this example to the suggestion that *any* continuant exists because certain essential constitutive processes go on. What nature these processes are may vary widely from one kind of continuant to another. For a star it will be a complex of nuclear reactions, gravitational and electromagnetic interactions, while for a quieter continuant like a pebble it will be a plethora of minute nuclear and electromagnetic interactions which ensure its continued existence and integrity.

8 Continuants from Occurrents

If this is right, then we still need to account for the relationship between a continuant and the occurrents that constitute it. So far all we have done is to trade one indefinable, "involve", for another, "constitute", and that is no advance over dualism. However, help is at hand. The hallmark of continuants is precisely that they continue, they persist, not by the accretion of temporal parts, but by "hanging in there", and this must somehow turn on the continuation (with accretion) of constitutive processes. Let us assume then that what keeps Napoleon going are the constitutive occurrents which sustain his life from one time to another. These processes etc. then form a sort of chain, a Napoleon-sustaining chain. Consider then the totality of such Napoleon-sustaining processes at a time, or over an interval. It is then a temporal part of the whole Napoleon-sustaining process from 1769 to 1821. It is related by a particular kind of ancestry to other such temporal parts, and we call the relation between such temporal parts which do not overlap mereologically, following Kurt Lewin, *genidentity*. Genidentity is an equivalence relation, but it is obviously not identity. However, where we have an equivalence relation we may abstract and consider what is invariant across all members of the equivalence class. That which alone is invariant across all genidentical Napoleon-sustaining processes is nothing other than the man himself. Note that despite the

use of the term "abstract", Napoleon is not an abstract object, in the sense in which numbers and other mathematical objects are. He is indeed paradigmatically concrete, having a position, causal capacities and material characteristics at any time he exists, but the idea is that he owes these to the position and causal characteristics of his sustaining processes, to which he is therefore metaphysically posterior.

When abstraction occurs, some characteristics are invariant under the equivalence, others are not. So for example the processes sustaining the multiple strands of DNA, hormones, proteins and other organic materials in Napoleon invariantly assure his humanity and masculinity, so he is throughout a human male. By contrast he is not throughout a general, or an adult, or in Austria. When we ascribe invariant properties to the outcomes of abstraction, we sometimes use the same word for both concretum and abstractum, but there is an adjustment of sense required. So it is invariant of a class of equiform expression tokens that they are tokens and are located somewhere, but their abstracted type is not a token, nor is it located anywhere. Likewise, it is invariant of Napoleon-sustaining processes that they are occurrents and have their locations essentially, but Napoleon is not an occurrent, nor is his location ever essential to him. When properties vary across concreta, it requires a restrictive modification to say something related of the abstracta: the Grey Wolf is near-white in Arctic regions but brown, grey, black and other dark colors further south. Likewise, Napoleon was vigorous and alert on December 2, 1805 but torpid and unwell on June 18, 1815. That explains why property ascriptions for continuants, for variable properties, require temporal specification.

9 Upshot for Ontology and Ontologies

If it is right that occurrents are metaphysically prior to continuants, that does not give us the right to declare that continuants don't exist, or that they have temporal parts after all. Our analysis constructively explains why there are continuants, albeit not as metaphysical primitives, and why they do not have temporal parts, while their sustaining occurrents do, since having this or that temporal part is one of the things abstracted

away from under genidentity. So continuants are in time, but do not extend over time. This is a metaphysical theory, and as such is subject to the usual warnings and caveats about metaphysical theories. On the other hand it precisely does *not* require us to revise either our view that continuants exist, or the language, vernacular, scientific and technical, that we use to describe them. So the linguistic pluralism characteristic of BFO (Smith's Formal Ontology) is upheld. In this regard it is one with dualism. On the other hand it offers more of an explanation of the relationship between continuants and occurrents, and to that extent is to be metaphysically preferred.

3

Against Fantology Again

Ingvar Johansson

The term "fantology" has not yet (August 2016) entered *The Stanford Encyclopedia of Philosophy*, the world's most up-to-date philosophical dictionary. This being so, one has to ask: what is fantology? Barry Smith, who coined the term, starts his paper "Against Fantology" by introducing it with this paragraph:

> A dark force haunts much of what is most admirable in the philosophy of the last one hundred years. It consists, briefly put, in the doctrine to the effect that one can arrive at a correct ontology by paying attention to certain superficial (syntactic) features of first-order predicate logic as conceived by Frege and Russell. More specifically, fantology is a doctrine to the effect that the key to the ontological structure of reality is captured syntactically in the 'F*a*' (or, in more sophisticated versions, in the 'R*ab*') of first-order logic, where 'F' stands for what is general in reality and '*a*' for what is indi-

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> vidual. Hence "fantology". Because predicate logic has exactly two syntactically different kinds of referring expressions—(F), (G), (R), etc., and (*a*), (*b*), (*c*), etc.—so reality must consist of exactly two correspondingly different kinds of entity: the general (properties, concepts) and the particular (things, objects), the relation between these two kinds of entity being revealed in the predicate–argument structure of atomic formulas in first-order logic. (Smith 2005, 153)

His view is not meant as a criticism of first-order predicate logic with identity understood as a *logic*; it is only meant as a criticism of directly corresponding *ontologies*. His paper fell dead from both the press and the Web. My paper is a new attempt to put the notion of fantology on the philosophical agenda. It is done in the hope of making clear a danger that is intrinsic to philosophical-ontological work (N.B. not ontologies in the information sciences).

I will not summarize Smith's paper. Instead, I will make two moves that hopefully will cast new light on the importance of its central notion. First, I will present fantology in the light of a more general and in itself ontologically neutral operation that I call *a default ontologization of a language*; also proposed in Johansson (2013). Then, in the second and third sections, I will discuss Willard van Orman Quine's views, since he is the most outspoken fantologist in the second half of the twentieth century. I think his lasting high philosophical status explains much of today's lingering fantology in analytic metaphysics. Smith only hints at Quine's explicit proposal for a *canonical notation* when in passing he states:

> Fantology sometimes takes the form of a thesis according to which the language of standard predicate logic can serve the formulation of the truths of natural science in a uniquely illuminating way (its syntax mirrors, after all, the very structures in reality which such truths represent). So Quine, with his doctrine according to which the ontological commitments of a theory become evident only when the theory has been regimented in fantological fashion. (Smith 2005, 156)

1 Default Ontologization

The Sapir–Whorf hypothesis says that a certain community's natural language either determines (strong version) or influences (weak version) how the members of that community think and perceive, and thereby also partly how they act. One of Whorf's classic presumed yet contested examples is that the Hopi Indians are anti-realists about time because their language lacks tensed words; instead of the words "past", "present", and "future" events they use "recalled", "reported", and "anticipated" events.

It is only the weak version that can be taken seriously. When Whorf became multilingual he did not become totally immersed in the new languages he learnt, and Hopis can learn English. Even if true, the weak Sapir–Whorf hypothesis only states that the *default* key to a community's lived reality—its experienced ontology—is its primary language.

This hypothesis is about the semantics of natural languages. Smith, however, is concerned with the syntax of logical languages. On the one hand, we have to distinguish between default ontologizations of *natural* and *logical* languages, respectively; and, on the other, between default ontologizations of a *semantics* and a *syntax*, respectively. All default ontologizations look upon the language in question as if it were unchangeable, but, of course, all languages, natural as well as logical, are malleable.

All languages can be given at least one default ontologization, that is, the *central* terms are *hypothetically* taken *pretty straightforwardly* to represent (in a wide sense of the term) something in a reality outside of the linguistic speech-or-writing and listening-or-reading acts; I do not regard parenthesis symbols as central terms. A default ontologization does not in itself say anything about how the actual language users in question conceive of non-linguistic reality, since they may move from language to language-independent reality in a more roundabout way. But it might deliver a good point of departure when trying to find out. Ontologizations that allow even purely spatial relations between terms to be ontologized, I call *non-default ontologizations*.

A default ontologization of a *logical* language is mainly an ontologization of a syntax, since in a logical language semantic content is by definition abstracted away or never put in. However, a default ontologization of a syntax can only give rise to a pure structure, since a syntax is

just a structure, but normally we want more from an ontology. Therefore, some abstract content must also be inserted into some of the non-logical symbols. This means that a logical language may allow for more than one default ontologization; a fact that will be exemplified in due course.

Also, it may be discussed whether a certain logical constant allows for an ontologization or not. Bertrand Russell and David Armstrong have argued that some constants do and some do not. Armstrong, for instance, thinks that the conjunction symbol allows for ontologization, but that the disjunction and the negation symbols do not (Armstrong 1978 II, chs. 14–15). If need be, one may call an ontologization of *all* central terms a *primary* default ontologization, and one where some of the constants are put aside as not being possible to ontologize a *secondary* default ontologization.

Fantology can now be characterized by means of the following statement: only a default ontologization of traditional *first-order predicate logic* can display what the world is like. It can be explicitly put forward, as by Quine, or merely be implicitly taken for granted, as Armstrong seemingly does (Smith 2005, sect. 5). If fantologists cannot express their initial ontological thoughts in first-order logic, they dismiss them. Since, as pointed out above, a logical language can allow for more than one default ontologization, this does not mean that all fantologists agree in ontological matters. But, in their hands, first-order predicate logic nevertheless functions as a norm that prohibits many ontological positions to be stated. (Default ontologizations of logics such as modal logic and Prior's tense logic do not count as fantology.)

Since all logical languages can be given at least one default ontologization, so can Aristotelian subject–predicate logic. Also, of course, each default ontologization can in a second step be claimed either to express the true ontology or to hide it. And Russell has claimed that (in my terms) all default ontologizations of subject–predicate logic seriously hide the true ontology. I will use his claim to give some more contents to the abstract notions of fantology and default ontologization presented so far.

The fundamental sentence of subject–predicate logic is "*S is P*", and Russell claims that if subject–predicate logic is regarded as the one and only logic, then its ontologization leads to the false position of monism. That is, to some kind of monism. Since nothing in "*S is P*" has semantic

content, no conclusions about whether "*S*" refers to something physical, something mental, or something else, can be drawn from the subject–predicate logic alone. Russell, therefore, calls it "*logical* monism."

I think Russell's reasoning can be reconstructed as follows. All entities in the world are either directly or indirectly related to each other. Now, if between two entities in the world, *a* and *b*, there is a relation *R*, then the natural symbolization of it is, as in predicate logic, "*Rab*". However, in order to turn this logical form into the form "*S is P*", one has to write either "*a is Rb*" or "*b is Ra*". In what follows, I will reason as if the second alternative always applies. Assume next that there is a relation between *b* and *c* (predicate logic: "*Rbc*"); it must then be given the form "*c is Rb*". The conjunction "(*c is Rb*) & (*b is Ra*)" shows that *c* certainly is at least indirectly related to *a*, too; and if the copula relation is transitive, then *c* is directly related to *a* just as much as to *b*. The reasoning can be repeated with new entities *d*, *e*, *f*, etc. entering the scene. This means that if the copula relation is all-embracing, as it is if the subject–predicate logic is taken to be the only proper logic, then there must be something of which all the entities *a*, *b*, *c*, etc. can be regarded as being properties. Russell himself says:

> Spinoza's metaphysic is the best example of what may be called 'logical monism'—the doctrine, namely, that the world as a whole is a single substance, none of whose parts are logically capable of existing alone. The ultimate basis for this view is the belief that every proposition has a single subject and a single predicate, which leads us to the conclusion that relations and plurality must be illusory. (Russell 1974, 559–560)

In this quotation, only Spinoza is mentioned, but Russell is of the same opinion with respect to the monisms of Hegel and Bradley (Russell 1974, 703; 1910). And, in the quotation below, he accuses Leibniz of inconsistency when Leibniz puts forward his pluralist monadology, but nonetheless regards the subject–predicate logic as the only logic. Leibniz claims that each monad is one single completely self-enclosed substance that has no relations to other substances, only a number of properties inhering in itself. This view fits well the sentence "*S is P*". But how can one express the view that there are many distinct monads?

> Whether any valid inferences are possible from language to non-linguistic facts is a question as to which I do not care to dogmatize; but certainly the inferences found in Leibniz and other *a priori* philosophers are not valid, since all are due to a defective logic. The subject–predicate logic, which all such philosophers in the past assumed, either ignores relations altogether, or produces fallacious arguments to prove that relations are unreal. Leibniz is guilty of a special inconsistency in combining the subject–predicate logic with pluralism, for the proposition "there are many monads" is not of the subject-predicate form. To be consistent, a philosopher who believes all propositions to be of this form should be a monist like Spinoza. (Russell 1974, 575)

The Russell quotations above are from his *History of Western Philosophy*, which was written during World War II. But in *The Philosophy of Logical Atomism*, written during World War I, he thought it possible to create a logical language that would depict the ontology of the world much better than either a natural language or the subject–predicate logic can. He sometimes called it a *logically perfect language*, but I think that the expression "*ontologically* perfect language" is more appropriate as soon as a vocabulary is added. He says:

> In a logically perfect language the words in a proposition would correspond one by one with the components of the corresponding fact, with the exceptions of such words as "or", "not", "if", "then", which have a different function. In a logically perfect language, there will be one word and no more for every simple object, and everything that is not simple will be expressed by a combination of words. … A language of that sort … is set forth in *Principia Mathematica*. … It is a language which has only syntax and no vocabulary whatsoever. … It aims at being that sort of language that, if you add a vocabulary, would be a logically perfect language. Actual languages are not logically perfect in this sense, and they cannot possibly be, if they are to serve the purposes of daily life. (Russell 1986, 176)

Needless to say, Russell could not possibly start by believing (to quote Smith) "in the doctrine to the effect that one can arrive at a correct ontology by paying attention to certain superficial (syntactic) features of first-order predicate logic," since he was among the creators of this logic. He

came to his ontological positions independently of first-order predicate logic, but when it had been created, he meant that others could arrive at parts of the true ontological structure of the world by looking at its syntax.

Smith is partly turning Russell upside-down, but without denying relations. He claims that the syntax of Russell's predicate logic does not display the ontological structure of the world, but that the Aristotelian "*S is P*" comes closer to doing so. However, he does not ontologize "*S is P*" without further ado. He claims that Aristotle's famous *ontological square*—consisting of: *substantial* (natural kinds) universals and particulars, and *accidental* (qualities/properties) universals and particulars—should be complemented by the pair *process* universals and particulars (processes in his sense include actions, events, and occurrences) and turned into an *ontological sextet* (Smith 2005, sect. 19).

Both subject–predicate logic and first-order predicate logic can be given a default ontologization. If one thinks that default ontologizations of first-order predicate logic are seriously misleading, one may use Smith's term and call them fantologies. And if one thinks that default ontologizations of subject–predicate logic are so, then one may (to coin a term) call them SisP-ontologies or sispontologies. Russell can then be said to accuse Spinoza, Hegel, and Bradley of being sispontologists, just as Smith accuses Armstrong of being a fantologist (Smith 2005, sect. 4).

Subject–predicate logic contains a copula, be it "*is*", as in "*S is P*", or "*are*", as in "*Some S are P*" and "*All S are P*"; but first-order predicate logic contains no copula at all. Look at "*Fa*", "$\exists xFx$", and "$\forall xFx$". This makes Smith talk about "the vanishing [of the] copula" in fantology (Smith 2005, sect. 13). Traditionally, the copula of true subject–predicate sentences has been taken to represent an *inherence relation* in the world. If "*S is P*" is true, then what is represented by "*P*" (normally a property) is taken to inhere in what is represented by "*S*" (normally a kind, natural or artificial). No such explicit relation symbol can be found when formulas in first-order predicate logic are to be ontologized. The early Armstrong answers the question of what the relationship (in *Fa*) between the referent of "*F*", which Armstrong takes to be a universal, and a referent of "*a*", which he takes to be a ("thin") particular, by saying:

> It is concluded, therefore, that although particularity and universality are inseparable aspects of all existence, they are neither reducible to each other nor are they related. Though distinct, their union is closer than relation. (Armstrong 1978, II, 3)

Since first-order logic contains no symbol for a relation that connects universality and particularity, there is nothing that can be ontologized into such a relation. One might use Armstrong's last sentence to characterize, conversely, the very symbol "*Fa*" itself, and say that though "*F*" and "*a*" are distinct, the union between them is in predicate logic closer than that of a relation.

But there is more to be noted in relation to the copula. It is not only a matter of something that represents an inherence relation; it is also a matter of what kinds of entities the relation can relate. In "*S is P*", be *S* and *P* either universals or instances of universals, a property can be predicated both about another property (e.g., "scarlet is red") and about a kind of substance (e.g., "tomatoes are red"). But in "*Fa*" and "$\exists xFx$" it is taken for granted that "*F*" is a general term, "*a*" the name of a particular, and "*x*" a variable for particulars. That is, the predications in question are never of a *kind*-of-particular, but always of particulars-as-particulars.

Of course, one can in first-order predicate logic introduce a distinction between two sorts of monadic predicates, *kind* predicates ("*S*") and *property* predicates ("*P*"). The counterpart of the subject–predicate logic's sentence "*S is P*" would then be "*Sa* & *Pa*", which contains both a kind ascription and a property ascription. But this move does not introduce anything like an inherence relation into predicate logic. A conjunction of *two predications* of the same particular-as-particular does not, in contradistinction to the subject–predicate logic, contain the possibility of speaking about an inherence relation between a property and a kind-of-entity. It does not make it possible to *predicate P of S*. In order to do that, a second-order predicate logic would be needed. One in which "$P(S)$" is regarded as a well-formed formula.

Armstrong does not make any attempt to amend predicate logic by a distinction between kind-predicates and property-predicates. And since he believes in universals, he therefore is of the opinion that there are no "irreducibly substantival [substantial] universals" (Armstrong 1978, II,

62), only monadic property universals. Russell also wanted to get rid of the whole notion of substance and its concomitant kind-of-substance: "'Substance' when taken seriously, is a concept impossible to free from difficulties" (Russell 1974, 211). Quine substitutes classes for both property universals and kind universals.

Within the philosophy of science, the anti-substantial view defended by Russell and Armstrong has a clear repercussion. It means that it is not only everyday languages that should not be allowed to be ontologized, the same also goes for all known scientific languages. As Smith points out, many typical sentences of science conform to the "*S is P*" form (Smith 2005, sect. 8). Not even physics contains only mathematical formulas.

I would like to stress that today's fundamental particle physics does not make claims only about property bearing particles-as-particulars, but also about *kinds* of particles. And these are placed within a minor taxonomical framework. The so-called standard model divides particles into quarks, leptons, gauge bosons, and the Higgs boson; and the first three taxa are divided further into more fine-grained ones. For instance, "the genus" gauge boson subsumes "the species" gluon, photon, Z boson, and W boson; and W bosons have non-zero values of all the three fundamental properties mass, electric charge, and spin. It is even from a physicalist stance quite a radical move to claim, that these purported natural kinds should not be allowed to be ontologized, and not be allowed to be regarded as having properties *inhering* in them.

According to Smith, fantology also brings with it "a peculiar insensitivity to time" (Smith 2005, sect. 15). I agree. As I said earlier, one reason why Russell wanted to replace subject–predicate logic with predicate logic was that predicate logic already displays on the surface the possibility of irreducible relations. But he had a second ontological reason to favor first-order predicate logic, too. In some papers 1905–07 (e.g., "On Denoting" [Russell 1905]), he criticized Alexius Meinong's view that there are not only existing entities but also subsisting ones; that is, that there are different *ways of existence*. Consequently, in its syntax, first-order predicate logic already rules out the possibility of talking of tense as modes of being as, for instance, Roman Ingarden does. Everything that belongs to a domain of discourse to which predicate logic is applied, has to exist in the same way.

In predicate logic, "existence" is a quantifier. This is in line with G.E. Moore's view that "existence" is not a predicate; and so, when ontologized, with Kant's view that existence is not a property. But for Russell there is more to say than this. The view that "existence"/existence is neither a predicate nor a property, does not preclude the view that there are different ways or modes of existence. It merely means that no such way is a property representable by a predicate.

For Russell, it is important, from the ontological point of view, that predicate logic contains *exactly one* existential quantifier. From a purely logical point of view, however, the existential quantifier "$\exists x$" may well be allowed to take subscripts that represent different ways of existence; for example, "$_1\exists x$" (in mode 1 there is at least one x), "$_2\exists x$" (in mode 2 there is at least one x), and so on. However, everything that is claimed to exist by means of sentences expressed in traditional first-order predicate logic is claimed to exist in the same way.

Subject–predicate logic, in contrast, allows that "*S is P*" may be replaced by "*S was P*" or by "*S will be P*". Since predicate logic contains no copula, it cannot do exactly this. Of course, its symbolism allows time indexing of both the "*F*" and the "*a*" of "*Fa*", but that is quite another thing. It does not introduce ways of existence; it merely specifies where in uniform time the referents of "*F*" and the "*a*" are to be situated.

Let it be noted that there are a number of language-independent reasons for adopting a four-dimensionalist (or eternalist) view of time, in which all times exist in parity. But it follows from what I have said, that any naturalist default ontologization of first-order predicate logic is bound to embrace four-dimensionalism. Presentists cannot be fantologists.

2 Quine's Canonical Notation

First-order predicate logic does not in itself entail a distinction between synthetic and analytic sentences or a denial that there is such a distinction. Therefore, both Russell and Quine can be fantologists; both of them subscribe to a distinction between language and reality. Two quotations from Quine's central work *Word and Object* will be my point of departure in this section. When reading them, it should be kept in mind that

Quine regards (i) the existential quantifier as being definable by the universal quantifier together with the negation symbol, and (ii) names as being replaceable by definite descriptions. Therefore, neither the existential quantifier nor names are mentioned as immediately belonging to his canonical notation:

> Taking the canonical notation [first-order predicate logic with identity] thus austerely, … we have just these basic constructions: predication, universal quantification …, and the truth functions. … The ultimate components are the variables and general terms, and these combine in predication to form the atomic open sentences. What thus confronts us as a scheme for systems of the world is that structure so well understood by present-day logicians, the logic of quantification or calculus of predicates.
>
> Not that the idioms thus renounced are supposed to be unneeded in the marketplace or in the laboratory. … The doctrine is only that such a canonical idiom can be abstracted and then adhered to in the statement of one's scientific theory. The doctrine is that all traits of reality worthy of the name can be set down in an idiom of this austere form if in any idiom.
>
> It is in spirit a philosophical doctrine of categories, except that it is peculiarly relative in its import. Of itself it sets no limits to the vocabulary of unanalyzed general terms admissible to science. (Quine 1960, 228)

And here comes what has been made famous under the motto "to be is to be the value of a bound variable":

> In our canonical notation of quantification, then, we find the restoration of law and order. Insofar as we adhere to this notation, the objects we are to be understood to admit are precisely the objects which we reckon to the universe of values over which the bound variables of quantification are to be considered to range. … To paraphrase a sentence into the canonical notation of quantification is, first and foremost, to make its ontic content explicit, quantification being a device for talking in general of objects. (Quine 1960, 242)

A logical language may allow for more than one default ontologization, and first-order predicate logic does. The predicate symbols always represent something general or abstract, but opinions may differ about what should be regarded as general. For Russell and Armstrong, the predicate

symbols represent property universals, whereas for Quine they represent classes or sets (he uses the terms interchangeably). This difference, however, is mitigated by the fact that the late Quine regards classes as universals (somewhere in the 1950s, he stops being a nominalist). In a response to Armstrong he writes: "What Armstrong has not perceived is that I, like him, espouse rather a realism of universals" (Quine 1981, 182). Armstrong and Quine have also in common the views that (i) they leave it for future empirical science to decide what universals there are, (ii) they regard four-dimensionalism as the correct philosophy of time, and (iii) they deny that there are any mental entities.

The late Quine is a reductionist in two ways, and a non-reductionist in one way. He regards all physical objects to be reducible to the objects postulated by basic physics, and he regards all universals and abstract objects to be reducible to classes. He claims, however, that it is impossible to reduce classes to physical objects. He defends a physicalism-with-classes ontology. I quote:

> Let us not leave the latter topic quite yet: ontology, or the values available to variables. As seen, we can go far with physical objects [he allows even spatiotemporal points to be called physical objects]. They are not, however, known to suffice. Certainly, as just now argued, we do not need to add mental objects. But we do need to add *abstract* objects, if we are to accommodate science as currently constituted. Certain things we want to say in science may compel us to admit into the range of values of the variables of quantification not only physical objects but also classes and relations of them. (Quine 1966, 244)

The early Armstrong, as I said, claims that the union between property universals and particulars-as-particulars is closer than that of a relation; and that therefore there is no need to discuss any relation between them. Quine behaves analogously. At first sight, since the symbol "*Fa*" can be read "*a* is member of the class of *F*s" or "$a \in F$", it may seem as if he posits a kind of ontological membership-relation to explain the connection between physical objects and classes. But things are more complicated:

> The further part of logic is set theory, which requires there to be classes among the values of its variables of quantification. The one sign needed in set theory, beyond those appropriate to elementary logic, is the connective '∈' of membership. (Quine 1966, 110)

Quine here divides logic into set theory and elementary logic (the canonical language), which means that (a) he places the epsilon symbol *outside* of his canonical language, and (b) he regards it as being a *connective*. Both these things are important in relation to a pertinent question that I will soon raise.

On the surface, it looks as if a second-order logic is needed in order to make quantifications over classes possible; that is, abstract classes must be representable by a variable in order to be able to be bound by a quantifier. But, if this first impression were true, the first-order logic of the canonical language would not allow classes to exist. Therefore, in order to have a consistent ontological position, Quine has to explain how classes can become represented by variables in first-order predicate logic. I will now put forward the foreshadowed question: *where and how does Quine try to accomplish this feat?* As far as I can see, he never makes any explicit attempt. Moreover, I will now argue, if he had made one, he could not possibly have succeeded.

As is clear from the philosophy of science, reductions of one kind of physical objects to other kinds of physical objects (e.g., molecules to subatomic particles) are confronted with problems; and as is clear from the philosophy of mathematics, reductions of one kind of abstract objects to other kinds of abstract objects (e.g., numbers to classes) are confronted with problems. Both these kinds of reduction problems, let it be noted, Quine regards as being soluble (whereas I consider them insoluble). However, his problem with how to make classes representable by variables in first-order logic is of quite another kind—and magnitude.

He must be able to define a relationship between the *physical* objects represented by the variables in the canonical language and the *abstract* class objects. The problem is analogous to Plato's problem of how to explain the relationship between the sensible things in the spatiotemporal world and the entities in his transcendent atemporal realm of ideas. Plato introduced a relation of participation, but Quine can only appeal to the

epsilon symbol and what it might represent. As I will point out next, this is not enough.

Quine regards classes as extensionally defined by their members; classes that have exactly the same members are identical. Therefore, classes that have physical objects as members cannot ultimately be defined without the epsilon symbol being used; they cannot be regarded as non-definable particulars and then quantified over. Nonetheless, as noticed, he explicitly regards "$\in$" both (a) as being outside of predicate logic, and (b) as being a logical connective, not a relation predicate. Position (a) means that the membership relation needed in order to define classes cannot be stated in the canonical notation. Position (b) means that even if, in some way or other, the epsilon symbol could be made a natural part of the canonical language, it is not allowed to be ontologized, since it is on a par with the logical constants that, for Quine, are non-ontologizable.

In the same way that Russell claims that Leibniz is wrong in thinking that his monadology needs no other logic than subject–predicate logic, I claim that Quine is wrong in thinking that his physicalism-with-classes ontology needs no other logic than first-order predicate logic. Just as Leibniz cannot explain how on his own premises he can say "there are monads", Quine cannot explain how on his own premises he can say "there are classes".

I find what has now been said reason enough, when doing ontology, for not letting oneself to be bound by Quine's canonical notation. Nonetheless, another reason will be presented in the next section.

Smith is against fantology primarily because it makes it impossible to claim that there is an inherence relation between properties (qualities) and kinds (substances), and that there is a has-as-participant relation between processes and kinds. Claims that are central to his *ontological sextet*. In outline, I am on Smith's side in this criticism, even though I may differ from him with respect to some details concerning the philosophy of time, but I will not delve into this. Instead, I will now say some words about fantology in relation to an issue that remains untouched by Smith, namely, the existence or non-existence of intentionality.

3 Intentionality in the Canonical Notation

Since first-order predicate logic is extensional, fantology takes the whole realm of intentional phenomena and the referents of intensional propositions away from the ontological picture. Some kind of physicalism is declared to be the fundamental ontological truth:

> One may accept the Brentano thesis [of the irreducibility of intentionality] either as showing the indispensability of intentional idioms and the importance of an autonomous science of intention, or as showing the baselessness of intentional idioms and the emptiness of a science of intention. My attitude, unlike Brentano's, is the second. … Not that I would forswear daily use of intentional idioms, or maintain that they are practically dispensable. But they call, I think, for bifurcation in canonical language. … If we are limning the true and ultimate structure of reality, the canonical scheme for us is the austere scheme that knows no quotation but direct quotation and no propositional attitudes but only the physical constitution and behavior of organisms. … If we are venturing to formulate the fundamental laws of a branch of science, however tentatively, this austere idiom is again likely to be the one that suits. But if our use of canonical notation is meant only to dissolve verbal perplexities or facilitate logical deductions, we are often well advised to tolerate the idioms of propositional attitude. (Quine 1960, 221)

In traditional post-medieval epistemology—to be contrasted with modern so-called meta-epistemology—something *non-physical* has always played a central role. Descartes ended his quest for certain knowledge in his presumed indubitable utterance "*cogito ergo sum*", which represents something in consciousness. Hume, despite his general skepticism, found the existence of simple impressions indubitable, and they were mental in character. Late nineteenth- and early twentieth-century empiricism saw attempts to ground epistemology in entities that are supposed to be neither physical nor mental. Most famous are Mach's sensations or elements (Mach 1959 [1886]), Russell's neutral monism (which allows relations) (Russell 1961 [1921]), and Carnap's elementary experiences (1969 [1928]). These observations give rise to the following question: what does

the epistemology of the physicalist Quine look like? He cannot, on pain of inconsistency, introduce something non-physical apart from classes.

It should be noted, that in systematic philosophy there cannot possibly be a gulf between ontology and epistemology. If one claims that an ontology is true, one lays claim to have some knowledge; and if one makes epistemological claims, one presupposes the existence of at least one cognitive faculty. Quine has to say something about epistemology, and he does.

One Quine expert says: "Much of Quine's work in epistemology is thus a more or less speculative discussion of how a child might acquire cognitive language" (Hylton 2014, 4.1). And this means how *from a third-person perspective* cognitive language is acquired. In Quine's physicalist "empiricism," empirical evidence has nothing to do with consciousness or any ontologically neutral entities. Empirical evidence is made equivalent to physical impacts on our physical sensory system. Below comes another quotation (Quine makes no distinction between "intensional" and "intentional" idioms):

> All three of these idioms—'perceives that', 'thinks that', 'It occurred to him that'—are idioms of so-called *propositional attitude*. … As they stand, the idioms of propositional attitude resist predicate logic. … Their underlying trait, which pervades mentalistic talk pretty generally, is that they are *intensional*, whereas predicate logic is extensional. … Extensionality is much of the glory of predicate logic, and it is much of the glory of any science that can be grammatically embedded in predicate logic. I find extensionality necessary, indeed, though not sufficient, for my full understanding of a theory. (Quine 1995, 90–91)

Quine—rightly to my mind—rejects traditional rationalism and empiricism and their quest for certainty, but he also—wrongly to my mind—denies the mere existence of non-physical entities beside the abstract classes. Is such a denial really epistemologically possible? How does Quine manage to take conscious thinking and perceiving completely away from the epistemological picture? The explanation has been delivered by A.W. Moore, and I refer to him for the argumentation. Here is his conclusion:

> [T]he single most important feature of Quine's entire philosophy [is]: *that its real driving force is his naturalism*. Everything else flows from that; everything else must be understood in terms of that; everything else needs to accommodate that. (Moore 2012, 308)

Beneath both Quine's peculiar form of "empiricism" and his non-nominalist physicalism, there is an *epistemological naturalism* that he thinks grounds both. It says that the natural sciences' way of investigating and making sense of things is the one and only way. No place is given to complementary ways. If the quest for absolute certainty is taken away from Descartes, Hume, and the early Carnap, their views can be reformulated as follows. Descartes: the seemingly most indubitable fact is that there is at least one mental substance. Hume: the seemingly most indubitable fact is that there are simple impressions. Carnap: the seemingly most indubitable fact is that there are elementary experiences. According to Quine, the seemingly most indubitable fact is that the natural sciences have recourse to a method that increases our knowledge of the world.

In my opinion, one can be a fallibilist and dismiss the quest for certainty without, *pace* Quine, denying the mere existence of conscious phenomena, whether they are then later best classified as states, as acts, as events, or as being of all three kinds. Within my fallibilist framework I trust the natural sciences, but I also look upon Descartes's *cogito ergo sum* as containing quite a kernel of truth. It can be laid bare as follows. The term "*cogito*" subsumes both the expressions "I perceive" and "I think". One can just as well say to oneself (a) "I perceive, therefore I am" as (b) "I think, therefore I am". However, in order to make a truly good epistemological point one cannot, like Descartes, speak as if a conscious moment of perceiving/thinking shows that there is a mental *property bearer*, which, moreover, is an *enduring* entity. Both these features can be doubted, but the belief in conscious occurrences nonetheless be retained.

The two Cartesian self-reflective utterances above should be replaced by: (a′) "now I am perceiving, therefore there *now* exists a conscious *occurrence*", and (b′) "now I am thinking, therefore there *now* exists a conscious *occurrence*". Using the term "propositional attitude", I claim that I know (c′): "now I am perceiving-something/thinking-about-something, therefore there now exists a conscious occurrence of a propositional attitude".

In fact, I am *more* certain that I have conscious moments of propositional attitudes, than I am that there is a mind-independent world studied by physics. But I am pretty certain of both.

My view does not entail the existence of any momentary free-floating Cartesian substances. The occurrences spoken of may well be—and I think they are—phenomena that are for their existence *dependent on* a brain-and-body without being *identical with* such a substratum. Just as physicists can discuss what subatomic particles there are, believers in conscious occurrences can discuss both what the parts and the structure of such phenomena are like, and what kind of material conditions of existence they have. The fact *that there are* conscious occurrences of perception and thinking does not imply *that their content and structure* are epistemologically transparent; my own conjecture about the structure of consciousness is presented in Johansson (2014).

The first Quine quotation in this section contains the statement "If we are limning the true and ultimate structure of reality, the canonical scheme for us is the austere scheme that knows … only the physical constitution and behavior of organisms." The expression "the true and ultimate structure of reality" is of crucial importance. *Implicitly*, Quine here brings in the old distinction between appearances and reality, and says that his canonical language is only meant for the ontology of the latter. But this he cannot say without allowing two different ways of existence, one for appearances and one for reality. Furthermore, if this were allowed, he could no longer claim that *all* ontological claims have to be translatable into the canonical language. Surely, if appearances there are, they must exist in *some way*. Thus, quite independently of the inconsistency noted in the last section, there is in Quine's philosophy another inconsistency, too.

Quine's fantological ontology is doubly incoherent.

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4

On Drawing Lines Across the Board

Achille Varzi

1 A Geographic Preamble

In his celebrated *Romanes Lecture* of 1907, George Curzon of Kedleston—former British Viceroy of India under Queen Victoria and King Edward VII and future Secretary for Foreign Affairs under King George V—emphasized the overwhelming influence of political frontiers in the history of the modern world.

> The majority of the most important wars of the [last] century have been Frontier wars. Wars of religion, of alliances, of rebellion, of aggrandisement, of dynastic intrigue or ambition—wars in which the personal element was often the predominant factor—tend to be replaced by Frontier wars, i.e., wars arising out of the expansion of states and kingdoms, carried to a point, as the habitable globe shrinks, at which the interests or ambitions of one state come into sharp and irreconcilable collision with those of another. (Curzon 1907, 5)

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He knew what he was talking about. At the time of his lecture, the determination of the geopolitical frontiers of the British Empire was a major source of diplomatic preoccupation, if not of international danger, and Curzon himself had just returned from a continent where he had been responsible for the security of a land frontier 5,700 miles in length ("the most diversified, the most important, and the most delicately poised in the world", 4). It was not without authority, therefore, that he would see his lecture as an opportunity to urge British foreign ministers and ambassadors to concentrate their efforts on frontier policy, in the conviction that many sources of political discord could be removed through the adjustment of rival "interests and ambitions" at points where the relevant territorial borders adjoin.

> Frontiers are indeed the razor's edge on which hang suspended the modem issues of war or peace, of life or death to nations. […] Just as the protection of the home is the most vital care of the private citizen, so the integrity of her borders is the condition of existence of the State. (7)

As Curzon himself pointed out, at the time of his lecture no comprehensive work had ever been devoted to the subject of frontiers as a whole. The formulae of frontier policy were hidden "in the arcana of diplomatic chancelleries"; its incidents and drama were in the hands of a few silent men "in the clubs of London, or Paris, or Berlin" (5). His 58-page text may therefore be considered the first sustained attempt to fill in that important gap, not only from the perspective of political history and "the science of government", as he would call it, but also in the theoretical foundations of geopolitics as we know it today. In fact, Curzon's text is admirable for the rich supply of historical and political examples with which he illustrates his main thesis about the overwhelming importance of frontiers. However, what makes it a truly groundbreaking contribution is precisely the theoretical framework in terms of which Curzon articulates his thesis. And what makes the framework powerful, today as in 1907, is that it rests entirely on a single, fundamental conceptual distinction. It is the distinction between those frontiers, or boundaries, that are afforded by "the natural features of the earth's surface", such as mountain ranges, ravines, coastlines, river banks, desert barriers, etc., and those

boundaries which, not being dependent upon any such landmarks for their selection, have instead been "artificially created by man" and find their origin "in the complex operations of race, language, trade, religion, and war" (13).

To us, this may sound like an obvious distinction to draw.[1] Any atlas will contain maps of two sorts, physical and political, and any history book will reveal that the history of boundaries is to a great extent a chronicle of the progressive need to supplement or to replace natural boundaries of the first kind by artificial boundaries of the latter kind as the human population increased, commerce and industry grew, and naval and military forces (along with imperialism) developed. Yet what seems obvious to us was not as plain and clearly understood at the time of Curzon's lecture. More importantly, Curzon did not simply codify the distinction; he also showed that the natural/artificial opposition is of great significance from a broader theoretical perspective. For precisely insofar as the "condition of existence" of a political unit lies in the "integrity of its borders", it makes a big difference whether the borders themselves have been robustly fixed by nature or simply drawn conventionally by people through political agreement, unilateral stipulation, or warfare. Again, this may sound like a truism, and Curzon himself seemed to think it was:

> That a country with easily recognized natural boundaries is more capable of defence and is more assured of a national existence than a country which does not possess those advantages; that a country with a sea Frontier, such as the British Isles, particularly if she also possesses sea-power, is in a stronger position than a country which only has land Frontiers and requires a powerful army to defend them; that a mountain-girt country is the most secure of internal States—these are the common-places of political geography. (10)

The fact remains, however, that the point had never before been made and articulated so explicitly, and for this reason alone, if not for Curzon's actual use of the distinction in the course of his long political career,[2] his *Romanes Lecture* should be regarded as a milestone in the foundations of modern geopolitics.

Indeed, Curzon's point bites even deeper than that. It bites deeper and wider, for boundaries are not a prerogative of geography. Boundaries are at work in articulating *every* aspect of the reality with which we have to deal. They stand out in *every* map we draw of the world—the world of geography as well as the world of human experience at large, beginning with the contents of perception. There is, at bottom, a map in every child's line drawing. And this ubiquity of boundaries goes in concert with the pervasiveness of the natural/artificial distinction, the apparent contrast between objective and subjective demarcations, the opposition—in Barry Smith's more recent terminology[3]—between *bona fide* joints of reality and *fiat* articulations that lie skew to any factual differentiations on the side of the world and simply reflect, in whole or in part, human practices, decisions, and cognitive operations. In short, Curzon's distinction betokens the general opposition between what is *found* or *discovered* and what is *made* or *created*, and this opposition has ramifications that go far beyond the "common-places of political geography"; they take us straight to the fundamental metaphysical opposition between realism and anti-realism. For the question of realism is, in an important sense, the question of what are the natural boundaries, those that "carve at the joints". And in this sense, anti-realism may be seen as the radical stance enticed by the limit case: What if there aren't any? What if, *pace* Lord Curzon, all boundaries are, on closer examination, of the fiat, artificial sort?

2 From Geography to Metaphysics

Let me elaborate on the thesis that boundaries, and the natural/artificial distinction that they elicit, are not a prerogative of the large-scale geographic world that we find depicted in ordinary maps and atlases. In this regard, Barry Smith's work over the years has been enormously influential, and thoroughly comprehensive, but the point it is still worth stressing.[4]

To some extent the thesis is self-evident. Consider, for instance, the smaller-scale world featured in cadastral registries, a domain amply studied by Smith himself in his joint work with Leo Zaibert. Here it is immediate that the parceling of land into real estate is a twofold boundary

business of the sort described by Curzon. In some cases the parceling may reflect physical discontinuities to be found in the land itself, such as ditches, cliffs, creeks, etc. More often, however, it is just a matter of fencing off a plot of land by fiat. The ownership of the plot does not depend on its physical properties and associated natural rights; it is entirely an institutional affair, a matter of social and legal agreements.

> The act of fencing alone is not sufficient for such object-creation. [It] requires also the existence of what John Searle calls collective intentionality, that is, it requires that other persons (simplemindedly or not) *believe* that the land is indeed the property of he who fenced it off. (Smith and Zaibert 2001, 162)[5]

Or consider the partitioning of the ecological environment effected by what biologists call niche construction (Odling-Smee 1988).[6] Here, again, we have a clear illustration of the pervasiveness of boundaries in the organization and representation of the space around us, and again Curzon's distinction applies immediately (though obviously without recourse to explicit conventions or legal agreements). There are niches that are fully enclosed within a physical retainer, such as an egg, a closed oyster shell, or a larval chamber; niches that, like a kangaroo pouch or a bear's cave, are bound partly by a physical boundary and partly by an immaterial boundary marking (more or less vaguely) the opening through which the organism is free to leave; niches that are bounded by a physical retainer to a very low extent, as with the niche of the oxpecker removing ticks from the back of an African rhinoceros (bounded by a part of the rhinoceros's hide); and, finally, niches that lack a physical retainer altogether and are bordered entirely by boundaries of the fiat sort, as with a fish orbiting underwater or a falcon in the sky circling above the area where its prey is to be found. It is indeed remarkable how closely such a variety of niche structures mirrors the geopolitical variety described by Curzon. His "common-places of political geography" are also confirmed, for obviously the *prima facie* strength and protective function of any particular niche—what Gibson (1979) calls its "affordance-character"—is to a large degree determined by the sort of boundaries that delimit it. And just as the history of geopolitical boundaries is, to a great extent, a history

of the progressive need to supplement natural boundaries with artificial ones, so the history of evolution is, in many ways, a history of the growth in complexity of organism–environment relations. As Richard Lewontin famously put it:

> Unless there is some preferred or natural way to subdivide the world into niches the concept loses all predictive and explanatory value. […] There is a constant interplay of the organism and the environment, so that although natural selection may be adapting the organism to a particular set of environmental circumstances, the evolution of the organism itself changes those circumstances. (1978, 215)

Now, it is not an exaggeration to say that these sorts of consideration apply across the board, including the mapping of reality that emerges from the cognitive acts of single individuals. I mentioned, for instance, the contents of perception. We know that these are structured for the most part in terms of figure–ground organization (Rubin 1921), which is to say the organization of the visual field into objects that stand out from their surroundings. This is entirely a matter of drawing boundaries. And here, too, we find the same mix of bona fide and fiat components that is so central in geographic representations[7] (which may explain why Kant, of all people, was so keen on teaching geography throughout his career[8]). On the one hand, we tend to see and track the middle-size objects in our immediate environment on the basis of the natural boundaries they seem to possess. The use of edge-detection techniques for object recognition in computer vision is motivated precisely by this fact, for in normal circumstances such boundaries correspond to salient discontinuities in the depth and brightness of the perceived scene.[9] The very fact that humans, from the time they are infants, tend to reify and quantify over such non-entities as holes and shadows just as easily as they do with regard to material objects, as developmental psychology and the psychology of perception have amply shown,[10] is another proof of the importance of "natural" discontinuities in the segmentation of the visual scene: the possession of a boundary is a sign of objecthood. On the other hand, it is also true that sometimes we parse the visual scene in terms of boundaries that involve the creative contribution of our perceptual apparatus, which,

as we know from Schumann's work on illusory contours, tends to articulate reality in terms of continuous borders even when such borders "are objectively not present" (1900, 14). Kanizsa's triangle (1955) is perhaps the example that best epitomizes this phenomenon. But the same could be said of many other ways in which fiat boundaries emerge from the figure–ground organization of the visual field through the basic factors studied by Gestalt theorists, such as proximity, continuity, closure, color and texture similarity, good form, etc. (Wertheimer 1923). There is no bona fide boundary in a pointillist painting, except perhaps around each individual color spot; yet we see each "figure" as though it possessed a regular contour.

And perception is just the beginning. As Smith has argued since (1994a), similar considerations apply at *any* level of representation or organization of the spatial world around us. We think of a boundary *every* time we think of an object as of something separated from or distinct within its surroundings. There is a boundary (a surface) enclosing this apple. There is a boundary marking off my body from the environment. There is a boundary around every water droplet. In cases such as these, it is intuitive to speak of natural demarcations, as with the boundaries of an island: they are, Smith says, "boundaries in the things themselves" (1995a, 476),[11] which exist and would exist even in the absence of all delineating or conceptualizing activity on our part. Yet in many other cases the demarcations are clearly artificial or human-induced. The boundary delimiting my part of the office from my colleague's, Tibble's tail from the rest of her body, the header from the text area in the page layout—these are boundaries that we draw by fiat in order to partition a larger whole into proper parts, exactly as with the geographic border that separates Lesotho from South Africa or Northern Ireland from the Irish Republic. Conversely, just as certain agglomerations may, in the geographic world, have a principle of unity, as with Benelux or Polynesia, so fiat boundaries are at work whenever we circumclude a number of smaller objects into larger wholes:[12] we represent the world as consisting of trees, bees, and stars but also of forests, swarms, and constellations (and schools of fish, flock of birds, herds of cattle, decks of cards, encyclopedias, bikinis, tokens of the letter 'i', etc.).[13]

Temporal entities, too, such as events and processes, have boundaries, viz. beginnings and endings[14]; and Curzon's distinction appears to apply to this domain equally well. A person's birth and death, the instant when a ball begins to roll, the point in the splitting of an amoeba when one animal suddenly becomes two: these would be temporal boundaries of the bona fide sort. A person's turning 21 years old, by contrast, or the subdivision of baseball games into innings and of innings into frames, are clear examples of fiat discriminations that are driven entirely by human conventions and purposes. Similarly for the boundaries through which a complex of actions and events is singled out and described as a wedding, a conference, a revolution, a war, etc., which is but the temporal analogue of the sort of boundary whereby an agglomeration of smaller spatial entities is circumcluded by fiat into a larger whole. This is a phenomenon that is actually quite common also in relation to the simpler and more private events that make up our normal day-to-day lives. To use one of Smith's favorite examples,[15] whenever we comprehend the apparent contact between two bodies as a kiss or a handshake we rely on our fiat lassos to carve out from a congeries of physical processes (relating to surface tension, fluid exchange, etc.) and associated psychological phenomena (of tactual and emotional feeling, etc.) a conventional and neatly demarcated unit.

Finally, even abstract entities (if such there be) may be said to have boundaries. This is obvious when it comes to the abstract figures studied by geometry. But the same applies, for instance, to such *abstracta* as sets and classes, or concepts, witness Euler's popular method for representing the former by means of simple closed curves "within which all the [elements] are confined" (1768, 98) or Frege's demand that in logic every concept "must have a sharp frontier" (1903, 69).[16] And here, too, the natural/artificial opposition appears to play an important role. Those sets or concepts that are expressed by projectable predicates, substance sortals, or so-called natural-kind terms, such as 'emerald', 'horse', or 'gold', would have genuine bona fide boundaries; those that are expressed by disjunctive predicates such as 'emerose' and 'grue', or by phase sortals such as 'colt' and 'teenager', would by contrast come with artificial, fiat boundaries that do not support law-like generalizations (Goodman 1954). Ditto for the corresponding universals, if such there be. For another example,

literary and musical compositions (construed as abstract types) typically come as bounded entities, and just as we partition them into chapters and movements, or extract quotations, so we collect them by fiat into larger wholes: Kant's *Opus Postumum*, the *Harry Potter* saga, Wagner's *Ring*, etc.

So much, then, for the claim that boundaries are not a prerogative of geography. They definitely aren't. Call them frontiers, borders, edges, contours, margins, surfaces, beginnings and endings, limits, or what have you—it is a fact that boundaries stand out in every map of the world, at any level of representation, and so does the natural/artificial distinction that they elicit across the board. And if things are so, then it is a short step now to see in what sense Curzon's distinction bites much deeper and wider than he himself might have thought, to the point of raising fundamental metaphysical issues. For,

> Lo! Once fiat outer boundaries have been recognized, then it becomes clear that the *genuine–fiat* opposition can be drawn in relation to *objects* also. (Smith 1994a, 17)

If a certain entity is fully enclosed by a natural, self-connected boundary of the appropriate sort, then it is reasonable to suppose that its existence and persistence conditions do not depend on us; it is a bona fide entity in its own right. For Smith this is actually the central mark of genuine substances (1992, §6). By contrast, if its boundaries are, in whole or in part, artificial, then the entity itself is to some degree a fiat entity, a construct, a product of our world-making. Clearly this is a big difference. And the question of which entities are of which sort becomes the fundamental metaphysical question of which entities are there to be discovered and which, by contrast, are created by us.

3 Realism v. Anti-realism

As I mentioned, this way of framing the question takes us straight to the traditional opposition between realism and anti-realism. Smith puts it thus:

> We might distinguish, in the range of possible ontologies, between:
> – *Extreme idealism*: the doctrine that *all* objects are created, or in other words that all objects exist exclusively as the products or figments of human cognition.
> – *Moderate* (or "creationist" or "Ingardenian") *realism*: the doctrine that *some* objects are created, some discovered.
> – *Extreme* (or "platonist" or "Meinongian") *realism*: the doctrine that *all* objects are discovered, or more particular that all objects are found and not made.
>
> I shall dismiss immediately the extreme idealist alternative (or is there really some extreme idealist who believes sincerely that the ground on which he stands, or the meteor speeding towards the building in which he sits, is a mere product of human cognition?). The important debate, I would argue, is that between extreme and moderate realism. (1995b, 192)[17]

There is indeed a good reason why the range of possibilities should in principle include all three alternatives listed by Smith. The opposition between bona fide and fiat boundaries, hence between discovered and created entities, is first and foremost a conceptual distinction; and while instances of both types suggest themselves easily, as in the many examples given above, there is of course room for disagreement and nothing rules out that, upon reflection, one of the two categories will be found empty. As the quotation makes clear, Smith immediately rejects one such possibility, to the effect that there are no bona fide entities whatsoever, as utterly untenable. Eventually he also rejects the opposite extreme—no fiat entities—so in the end he sides with the moderate option, or some particular version of it, recognizing entities of both sorts. This is in line with traditional wisdom. It corresponds to the agenda set out by Plato in the *Phaedrus*, where Socrates famously recommends that we carve the world along its "natural joints", trying "not to splinter any part, as a bad butcher might do" (265d).[18] And Smith would emphasize that this is also the right way to think about science. As he writes elsewhere:

> The very idea of science as a meaningful enterprise—an idea whose validity is made manifest in successful applications—presupposes […] that some, but not all, conceptual distinctions track real divisions in the world. (1999a, 278)

Now, moderate realism is such a broad view, covering all sorts of intermediate positions, that it is hard to deny its overall force *vis-à-vis* its two extreme competitors. It still leaves it open which things belong to which category, the bona fide or the fiat, but so be it: that is precisely the fundamental metaphysical question raised by the distinction, and moderate realists will make it their business to address it with the seriousness it warrants. Nonetheless the two doctrines labeled as "extreme" deserve a hearing, too. Are they really utterly and irredeemably untenable?

Smith is right, I think, in drawing this conclusion with regard to extreme realism. There are several ways of articulating that view. One could, for instance, insist that (i) deep down, fiat entities are mere talk of no genuine ontological significance, or (ii) fiat entities are mere potential entities that do not, as such, enjoy actual existence, or (iii) fiat entities are not strictly speaking created but merely selected from the pre-existing totality of all relevant geometrically determined possibilities. None of these accounts, however, does full justice to the way in which fiat entities are supposed to emerge from the drawing of fiat boundaries in the sense here understood. Option (iii) is in fact the one targeted by Smith, and I agree that it fails insofar as the drawing of fiat boundaries may, in some cases, result in perfectly coinciding entities, as with Hamburg-Stadt and Hamburg-Land (whose non-identity is seen in the fact that the two might in principle diverge, as with the city and state of Bremen).[19] Option (ii) is perhaps best seen as rooted in Aristotle's conception that "no part even exists otherwise than potentially" (*Physics* VII, 5, 250a24–25).[20] Strictly speaking, this would only apply to those fiat entities that are carved out on the surfaces or within the interiors of larger wholes, but it seems plausible to extend the view also to those entities that are obtained by fiat agglomeration of smaller parts.[21] As a general metaphysical theory of parts and wholes, the view is certainly not idle and not one that can be quickly dismissed.[22] Yet, again, it hardly captures the full strength of our fiat practices. As Curzon's geopolitical examples show all too well, the drawing of artificial boundaries may result in entities whose conditions of existence (and persistence) may be weaker in comparison to entities protected by robust, natural boundaries; yet both sorts of entity have full claim to actuality when it comes to our social and political lives, to the point that in each case people are willing to give their lives—and

administrators to spend huge sums of money—to defend them. Perhaps not all (undetached) proper parts exist, and perhaps not all (scattered) agglomerations exist, as some philosophers have argued.[23] But to draw a boundary is not merely to pinpoint a part or a whole; it is to engage in a fully-fledged performative act whose creative force delivers something well outside the pure realm of *possibilia*. This is also why option (i) doesn't seem credible. I can see its strong appeal from a nominalist perspective. But there is a big difference between mere talk and illocutionary speech (in the sense of Austin 1962), and the drawing of fiat boundaries belongs squarely to the latter. In carving out a fiat entity we do not simply re-describe a portion of reality with different words, or just enrich our language with new names for things we already had. We literally bring those entities into being, with all that comes with them. And here, again, the geopolitical examples discussed by Curzon are instructive. As Smith himself concludes,

> If it can be accepted that clear examples of fiat objects are provided by the Jeffersonian entities with which we began, then it will follow that not the least important reason for admitting fiat objects into our general ontology will turn on the fact that *most of us live in one.* (1995a, 478)[24]

What, then, about the opposite extreme doctrine, the doctrine that *all* boundaries are of the fiat sort, hence all entities are created? Is it also as untenable as Smith suggests? To me, it is here that the "important debate" takes place, not between the second and third doctrines listed by Smith but between the first two. For while we can hardly be wrong in classifying a boundary as being of the fiat sort, since such boundaries are drawn *by us*, in some cases we may be under the impression that a boundary is of the bona fide sort when, on closer inspection, it turns out to be a product of our own making. And if this is true in some cases, then it is not obvious why it couldn't be true in *all* cases.

That it is indeed true in some cases is, I think, not only possible, but evident. We are animals of a certain size and all our everyday perceptions and actions take place at the mesoscopic level, which is to say the level at which we and the world are, in Gibson's terms, "comparable" (1966, 22).

But precisely for that reason, precisely because it is *our* level, the boundaries that strike us as "natural" are likely to reflect for the most part our cognitive limitations. Thus, earlier I mentioned the surface of an apple as an instance of a bona fide boundary that exists and would exist even in the absence of all delineating or conceptualizing activity on our part. The example suggests itself. Physically speaking, however, we all know that an apple is not the solid, continuous substance that it seems to be. It is a smudgy crowd of tiny particles frantically dancing in empty space, and speaking of its surface is really like speaking of the surface of a swarm of bees, the outline of a constellation, a figure's contour in a pointillist painting. There are no such boundaries in the bona fide world. All involve a fiat demarcation whereby a plurality of smaller things are circumcluded and assembled by our cognitive system, bridging the gaps and connecting the dots. And what goes for apples goes for human bodies, water droplets, rocks, trees, chairs, and so on—for all sorts of material bodies that to us seem to enjoy a natural boundary of their own. Smith takes it as obvious that meteors are bona fide objects, for no idealist can be so foolish as to pass over the objective, devastating effects a meteor may cause. Yet surely fiat objects can be devastating too, as the one we are living in has been in many a military conflict. Causally speaking, fiat and bona fide entities are on a par. So, physically speaking, meteors may still be like apples, just as moons, planets, and even stars may, in this sense, resemble constellations. In the memorable words of Goodman:

> As we make constellations by picking out and putting together certain stars rather than others, so we make stars by drawing certain boundaries rather than others. (1983, 104)

Of course, this is not by itself enough to conclude that all material bodies are fiat objects. After all, if an apple consists of tiny particles (as a swarm consists of bees), then at least those particles (bees) ought to exist and be what they are independently of our cognitive paraphernalia. Even a hard-core physicalist might therefore concur that at some level, possibly a level way beneath our everyday ken, bona fide objects exist. This is certainly a possibility, and one that would suffice to dismiss the doctrine of "extreme idealism"—not the meteors, but the tiny particles. On the other

hand, even this line of reasoning may be found wanting, for obviously it depends on a naive corpuscularist conception of matter that is just as controversial today as it was in Democritus' time. Surely things are more complex than that. And if it turned out that, on closer look, our apple is gunky, which is to say composite all the way down, and if this were true of all material bodies alike, then one might indeed conclude that all material bodies are, on closer look, fiat all the way down.

This is just one example, and it only concerns boundaries in the domain of material bodies. As I have argued elsewhere (2011), however, similar concerns may be extended to the other domains in which the natural/artificial opposition arises. For instance, above I mentioned a person's birth and death as obvious candidates for bona fide boundaries in the realm of temporal entities. These are examples Smith himself finds emblematic (1994a, 2). But are they really? What we truly have are streams of physical, biological, and psychological processes that do not by themselves determine *when* a person begins to exist, or ceases to exist. That is why philosophers have felt the need to supplement their own theories, which in fact turn out to be quite diverse (theological ensoulment and desoulment doctrines, developmental/metamorphic views, biological life-cycle accounts, "personhood" definitions, etc.) We can base our theories on as many factors we like, including formal–ontological conditions and advanced scientific findings,[25] but theories they are, to the point that even the US Supreme Court had to acknowledge the impossibility of settling the issue.[26] And if things are so, then the relevant boundaries lose their "natural" character and even a person's life may become, to some extent, a fiat business. Similarly for the other cases mentioned above, including the all-important category of "natural kinds". Surely there is a difference between, say, a wholly arbitrary zoological classification, such as Borges's Chinese Encyclopedia,[27] and the sorts of taxonomy that we actually find in the biological sciences. Yet we all know that the latter, too, are the product of theoretical criteria that are constantly in flux, reflecting cultural circumstances and practical concerns of various sort. It is telling, for instance, that less than two centuries ago some zoologists would still attribute taxonomic value to the distinction between "domestic" and "savage" animals[28]; and even today we may wonder, to use Catherine Elgin's example (1995, 297), whether a taxonomy that

draws the line between horses and zebras where we do is truly tracking bona fide worldly differences. No doubt the thought that biological taxa are, on the whole, mere fiat constructs may sound extreme, if not "totally inconsistent" with "the objective reality of evolution" (Stamos 2003, 131, n. 35) But then, again, it is worth recalling that Darwin himself seems to have felt otherwise:

> It will be seen that I look at the term species, as one arbitrarily given for the sake of convenience to a set of individuals closely resembling each other, and that it does not essentially differ from the term variety. (1859, 52)

Indeed, even Curzon's original distinction in the geopolitical sphere is, on closer look, vulnerable to this sort of concerns. For just what, one may ask, are the "features of the earth's surface" that define natural boundaries? There are at least two worries to be registered. One is that even here there is an obvious granularity problem. It is understandable that the British Lord would speak of the glorious sea frontier of Britain. But what is that frontier, exactly? Where exactly is it? There is a big difference between the coastline that we see from an airplane, or that is reproduced on a map of Britain, and the messy seashore that we actually find when we go there, ground-level: except perhaps by the cliffs of Dover, the neat demarcation between land and water turns out to be an abstraction, an idealization, and cartographers need to fix on some artificial criteria to decide where and how to draw the line.[29] The German geographer Friederick Ratzel, whose work on boundaries must have been familiar to Curzon, knew this well: "Der Grenzraum ist das Wirkliche, die Grenzlinie die Abstraktion davon" (1897, 448). Ditto for the rock-hard boundaries afforded by mountain ranges, such as the much extolled Alpine barrier demarcating Italy from the rest of Europe. Giuseppe Mazzini would not hesitate to describe it as "the most sublime, undeniable boundary the Almighty could have given us" (1859, 167); yet as recently as 2008 Italy and Switzerland were still working on a conventional agreement to *define* that boundary and determine its exact location in view of the continual weathering transformations of the crest and watershed lines (rock erosion, glacier melting, etc.).[30] This is not to deny that the mighty Alps offer stronger protection than a frail Jeffersonian border. But it is indicative

of their ontological fragility *qua* bona fide geographic boundaries which exist in complete independence of human collective intentionality.

The second worry is even more important. For as Curzon himself took pains to acknowledge, what counts (and works) as a natural frontier is oftentimes determined by our own attitudes. Surely the sea has repeatedly protected England against the fury of the Continent, as the Alps have shielded the Italians from more than one great and well appointed army; but quite as many instances can be found in which the peoples on two sides of a stretch of water or of a mountain range have been on friendly terms. Surely, we may add, the fact that Ireland is an *island* explains IRA's fierce opposition to its partition into separate national jurisdictions ("Ireland cannot shift her frontiers. The Almighty traced them beyond the cunning of man to modify"[31]); but then, again, the artificial border between Portugal and Spain is the oldest and most resilient one in Europe. What truly matters, it seems, is not just whether the relevant boundaries *are* natural or artificial. It is whether they are *regarded* as being of one type or the other, and whether their status is equally *recognized* by the peoples on both sides. And when it isn't, there is war, as the conflicts in the Middle East illustrate all too well. Curzon tried to account for this phenomenon—and for its huge impact on the history of humanity—by drawing attention to the difference between real and alleged natural boundaries. This occurs towards the end of his lecture:

> There is also a class of so-called Natural Frontiers which I have been obliged to omit, as possessing no valid claim to the title, namely those which are claimed by nations as natural on grounds of ambition, or expediency, or more often sentiment. The attempt to realize Frontiers of this type has been responsible for many of the wars, and some of the most tragical vicissitudes in history. (1907, 54)

It remains to be shown, however, that not *all* frontiers are of this sort. Indeed it is symptomatic that exactly at the time when the Britons were absorbing the natural/artificial dichotomy from Curzon's *Romanes Lecture*, in France the readers of Élisée Reclus's *L'homme et la terre* were invited to ponder precisely this point, questioning the whole notion of a natural frontier along with the sense of "geographic predestination" that

it evokes (Reclus 1907, 307f). And while it is a fact that Curzon's dichotomy, "scientifically the most exact", would soon become standard lore among geographers, it is also true that many historians would rather follow up on Reclus's misgivings and direct their concerns towards its tenability. Lucien Febvre's criticisms of the Ancien Régime rhetoric, retained in Danton's proclamation that the borders of France had been "marquées par la Nature",[32] says it all:

> For, at bottom, the whole problem is, or appears to us to be, a question of boundaries. Within us, so deeply implanted that we no longer notice its hold on us, there is a certain idea of the "natural limits" of the great States which causes us to think of their boundaries as things in themselves, having an actual value, a kind of mechanical virtue, and a compulsory and at the same time creative power. […] A whole philosophy of history [is] comprised in that word "natural". (1922, 360–361)

4 A Fiat World?

To sum up, then, there are many a reason and plenty of evidence to think that in several cases we may be under the impression of dealing with natural boundaries when, on closer inspection, those boundaries are a cognitive or social artifact. Certainly this is not enough to vindicate the extreme idealist view rejected by Smith. Yet the challenge is reasonably serious: if we are wrong in some cases—indeed many cases—might we not be wrong in *all* cases? Is it really so implausible to think that all entities are, at bottom, fiat entities?

I do not intend to engage directly with this question here. The point is primarily meta-philosophical and concerns the force of the question itself: it is not a question that can be quickly dismissed at the outset. As I said, I actually think that the "important debate" takes place right here—not between moderate and extreme realism (which must indeed be rejected), but between moderate realism and extreme idealism. So let me conclude with some remarks on why I think the debate is an open one.[33]

The first remark concerns the very epithet "idealism" with which Smith labels the extreme doctrine in question. I can see why the (moderate)

realist may want to use this language. Strictly speaking, however, the doctrine that all entities are the product of human fiat delineations does not amount to a form of idealism, at least not the sort of subjective idealism according to which the world itself would be an offspring of our *produktive Einbildungskraft*. Perhaps there is a sense in which our world is limited by our language, as Wittgenstein proclaimed (1921, §5.6), but strictly speaking the world as a whole has no boundaries, so its status is not at issue. The debate concerns exclusively the status of its citizens, and whether they come in two sorts. Indeed, not only is the doctrine in question compatible with the existence of an autonomous, mind-independent world; it *presupposes* it. For all fiat boundaries are, in geography as elsewhere, boundaries that we draw on some pre-existing underlying reality. When, for instance, Jefferson called into being the states of the Northwest Ordinance, he did so by tracing lines *on* a map, and the effectiveness of his creating act was crucially dependent on the map being a map *of* the world. His pencil lines were meant to delineate portions of an actually existing territory. Likewise, and more generally, when we create an object, an event, or anything else by fiat, we do not engage in creative magic; we do so by drawing lines on some relevant factual material. Smith himself makes the point as follows:

> The interiors of fiat objects are […] autonomous portions of autonomous reality. Only the respective external boundaries are created by us; it is these which are the products of our mental and linguistic activity, and of associated conventional laws, norms and habits. (1995a, 479)[34]

Of course, Smith also thinks that this sort of creative activity presupposes more than the mere existence of autonomous reality. As he writes elsewhere:

> How would fiat demarcation be possible if there were no genuine landmarks which we (or the first fiat demarcators) were able to discover, and in relation to which fiat demarcation becomes possible and objectively communicable? (1996, 300)

In other words, fiat entities are not, for Smith, carved out arbitrarily by us from an otherwise indistinct totality; they are, rather, "functions of affordances", and this reason alone should convince us that it is "a confusion" to suppose that all objects might be of the fiat type.[35] But this is already to engage in the debate. It is to *argue* against the extreme view. And to resist the argument one need not be an idealist; one only needs to resist the assumption that the relevant affordances—the landmarks—cannot themselves be fiat constructs. This may well be an extreme task, a desperate way to save the picture of reality as an "amorphous lump", as Dummett calls it (1973, 563ff). It may well be an extreme form of constructivism, or conventionalism, or conceptual anti-realism. But it isn't idealism (and even less irrealism, as Goodman 1978, x, would have it[36]).

The second remark I want to make is that this extreme doctrine—let us now call it "constructivism"—does not entail the epistemological nihilism that it might suggest. That all boundaries might be of the fiat type does not mean that "anything goes", as if the difference between knowledge and belief were entirely up for grabs and truth itself became an empty notion. One can see why the realist might press charges. For the realist there is something called fundamental science, and its job is perfectly well defined: it is to move us in the direction of the bona fide "joints of reality" (Smith 2001a, 142). All other inquiry supervenes on this, for "all fiat objects are supervenient on bona fide objects on lower levels" (143). However, there is no room for fundamental science in the world envisaged by the constructivist. If everything were the product of our fiat organization, if the joints along which we "carve" the world were a feature solely of the artificial categories that we employ in drawing up our maps, then all science would pertain only to those maps, "to how we talk and think about things" (Smith 1997b, 122). The world itself would seem to make no objective contributions, except perhaps for some basic mereological truths. And if things are so, then anything goes: no facts, just interpretations. This is obviously a legitimate concern. Yet the conclusion does not follow. And it does not follow precisely because the drawing of fiat boundaries is not an empty activity, a mere play of the imagination. As Frege says in a passage often quoted by Smith[37]:

> The objectivity of the North Sea is not affected by the fact that it is a matter of our arbitrary choice which part of all the water on the earth's surface we mark off and elect to call the 'North Sea'. (1884, §26)

Correspondingly, the truth or falsity of what we say about the North Sea is not affected by its status as a fiat entity:

> If we say "The North Sea is 10,000 square miles in extent" […] we assert something quite objective, which is independent of our ideas and everything of the sort. If we should happen to wish, on another occasion, to draw the boundaries of the North Sea differently or to understand something different by "10,000", that would not make false the content that was previously true. (Ibid.)

None of this depends on the existence of bona fide lower levels, and on their traits sufficing to fix the values of traits at the higher fiat level. Nothing depends on there being some bona fide boundaries somewhere. More simply, as long as constructivism is distinguished from idealism, truth and falsity work in the presence of fiat delineations exactly as they are supposed to work in the presence of bona fide boundaries. Every predicate term has an extension and every singular term has a referent, arbitrarily demarcated as these may be. And a subject–predicate sentence is true if and only if the referent of the subject term falls within the extension of the predicate term. Period.

To put it differently, truth and falsity work the same way in the realm of what Searle (1995) calls "brute facts", which would be fixed entirely by the world, and in the realm of "institutional facts", which require collective intentionality. The realist acknowledges facts of both sorts, and she may want to keep track of the difference by distinguishing between laws of Nature and laws of Right, bona fide laws and fiat laws. But a law is a law no matter where it comes from. If the traffic code sets a certain speed limit, and we drive faster, than it is a fact that we break the law and we deserve a fine. We can't dispute that. It is a fiat law, and as such it is both arbitrary and ephemeral; but a law it is, for the realist and the constructionist alike. The extreme constructionist just says that all laws are of this kind.

Finally, there is something positive, too, to be said on behalf of the extreme conception of reality that this doctrine proffers. For once the specter of epistemological nihilism is dispelled, the idea that it is a matter of our arbitrary choice to draw certain boundaries rather than others shifts sign. Indeed "arbitrary" does not mean "anything goes"; it means that it is entirely up to us—*in arbitrio nostro*—to draw the relevant lines, to affect the articulations that we think are best suited to our needs. Now, this is by no means an easy business. As Curzon knew well, Jefferson's arbitrary "pencil and ruler" method does not always pay:

> It is said in America that many men reside in one State and do their business in another, and there is no reason why so artificial a device should not have even more inconvenient consequences. (1907, 35)

In fact he should have known better. The partition of Africa during the years of New Imperialism, with the European powers literally slicing up the continent like "a magnificent cake" (in the words of Leopold II[38]), is one of the darkest periods in our history. Likewise, and more generally, classifying people on the basis of their skin color, sexual orientation, or IQ scores has produced way more damage than any Borges Encyclopedia. Yet precisely here, in their arbitrary character, lies all the potential of fiat boundaries. If we realize that they work poorly, we can change them. If they fail to measure up to our needs, we can try and replace them with better ones, or get rid of them altogether. It is much more difficult to revise our maps if we think (or pretend) that some boundaries have been drawn by Nature. Here Curzon's passing remark about "so-called natural frontiers", claimed exclusively on grounds of expediency or sentiment, is sadly instructive. For just as the attempt to realize frontiers of this type in the geopolitical world has been responsible for some of the most tragic vicissitudes in history, so has *any* attempt to claim as "natural", as "beyond the cunning of man", boundaries that possess no valid claim to the title. Our history is replete with horrible things that we have done and justified on such grounds. Slavery, the Inquisition, ethnic cleansing, genocides, holy wars, safaris: we have perpetrated discriminations and massacres based on canons of our own choice as though these reflected genuine ontological divisions. We stigmatized and persecuted as

"brute" or "heretic" whoever held views that did not fit into our map of knowledge. Even today one often hears certain forms of conduct, such as the use of contraception, or interracial and homosexual relationships, condemned as being "against nature", and the locution "crime against nature" is still used as a legal term in the statutes of many US states.[39] All of this is disgraceful and there is no need to explain why. But philosophically it is disgraceful precisely because it rests on a fraud: the fraud of pretending that the world is on our side. This is something political geographers eventually came to realize:

> One of the most powerful arguments to make a frontier seem just is to stamp it as a natural frontier. (Broek 1941, p. 8)[40]

We may of course do more than just stamp and pretend. We may buttress our artificial lines with walls, palisades, barbed-wire fences, etc., literally as well as metaphorically. Yet this is just adding to the fraud; such markers can be very robust, even inviolable, but not so inviolable as to turn the artificial into the natural, as shown by the fact that Israel's separation barrier in the West Bank has not been *recognized* by the International Court of Justice.[41] Now, this is not to say that the (moderate) realist is bound to perpetuate the disgrace. Nonetheless it is hard not to feel the strain, especially insofar as the idea of naturalness is, as Febvre put it in the passage quoted earlier, "so deeply implanted" that we may not notice its hold on us. By contrast, in the world of the extreme constructivist the fraud is simply not an option. We are free to draw and fight for the boundaries we find most reasonable, but we know their status and we cannot dismiss the alternatives as unnatural. We are doomed to make mistakes, but we can always try to make amends and revise our maps. Indeed, for the extreme constructivist we must do so, it is our responsibility.

Let me stress that none of these remarks is meant to vouch for the doctrine of extreme constructivism as such. As I mentioned, the point here is primarily meta-philosophical and concerns the *prima facie* tenability of the doctrine. Once properly stripped of all false idealistic and nihilistic connotations, there is, I think, a lot to be learned from the debate that opposes it to the moderate realist option, and it goes to Curzon's and Smith's credit to have shown that so much depends on framing the

debate itself in terms of boundaries. Not only are these the razor's edge on which hang suspended the modern political issues of war and peace, of life and death to nations; they are the razor's edge on which hangs suspended no less than the metaphysical dispute between realism and anti-realism, between the found and the created, between nature and nurture. In the end Smith may be right: this way of resetting the debate may uncover the serious risks of fraud that hide beneath the realist stance, but it also reveals the ultimate challenge that the anti-realist constructivist must face:

> How would the thesis that all objects are fiat objects be applied to the conceptualizers themselves, the demarcating subjects who construct the relevant systems of fiat boundaries? (1996, p. 299f)[42]

Here, however, I prefer to end on a different note, and with a different quotation. For while Smith emphatically refuses to consign everything to the realm of fiat delineations, he has, more than anyone else, explored its width and descended its depths. He has seen it all. And there is, really, no better picture of that vast and prodigious realm than the one we find in his own travel journals.

> Delineation is, be it noted, an immensely powerful faculty of cognition; the scope of delineatory intentionality, the effortlessness with which we can comprehend highly complex wholes—which may be scattered throughout the length and breadth of the universe, in both space and time—with a simple delineatory act ('the legacy of the Renaissance', 'the Austro-Hungarian Empire and its successor states', 'English poetry') is wondrous to behold, and bears comparison with the magic of single-rayed intentionality, whereby, on the basis of a list of entries which might be drawn up entirely at random, we can be directed, in succession, to mountains in Siberia, teapots in Halifax, and black holes in the galaxy of Mog. (1997b, p. 122)

Notes

1. The natural/artificial opposition was fully endorsed by the next two major writers on the topic of geographic frontiers, Holdich (1916) and Fawcett (1918), and soon became standard lore (see Prescott 1965). Curzon himself introduced it as "generally recognized, and scientifically the most exact" (13), and it is indeed present in eminent treatises of his time, most notably Friedrich Ratzel's *Politische Geographie* (1897), §361, "Natürliche und künstliche Grenzen", and Lassa Oppenheim's *International Law* (1905), §198, "Natural and Artificial Boundaries".
2. Among other things, at the end of World War I Curzon was responsible for drawing the eastern frontier of the lands in which the Allies would recognize the right of the newly independent Poland to form an administration. Known as the Curzon Line, the project did not materialize and the Polish–Russian conflict continued until 1921, when the Treaty of Riga settled on a border some 160 miles east of Curzon's proposal. During World War II, however, Stalin insisted on reviving the original project and in 1945 the Curzon Line, only slightly altered, became the permanent border. For a detailed historical reconstruction, see Eberhardt (2012).
3. From Smith (1994a). Smith does not mention Curzon; instead, he notes that the bona fide/fiat opposition is analogous to the one drawn by Frege (1884), §26, between the 'actual' [*wirklich*] and the 'objective' [*objectiv*].
4. Here I rely also on some joint work, particularly Smith and Varzi (2000).
5. See also Smith and Zaibert (2003), 36. The point about collective intentionality refers to Searle's theory of social objects in (1995). On the metaphysical issues underlying the practice of cadastral mapping, see also Zaibert (1999) and Bittner, von Wolff, and Frank (2000).
6. Standardly, ecological niches are defined as abstract "hypervolumes" in a many-dimensional space determined by environmental variables—such as temperature, soil fertility, foliage density, proximity of predators, and so on—pertaining to the survival of organisms of a

given species (Hutchinson 1957). When it comes to individual organisms, however, such niche types can exist only through a corresponding token, viz. the actual physical space that the organisms occupy, and it is tokens of this sort that I have in mind here. See Smith and Varzi (1999) and (2002).

7. Smith himself mentions "the complex and subtle fiat organization" of the visual field in his (1995a). See also (1999c).
8. Kant taught geography at Königsberg from 1756 to 1796 for a total of forty-nine times, more frequently than any of his other subjects except for logic and metaphysics. In his own words upon retiring, such teaching was "aimed at *knowledge of the world*" (1798, xiv), though he thought that a published version of his lectures was "scarcely possible" (his notes were "hardly legible"). A four-volume edition, unauthorized, was nonetheless published very soon as Kant (1801–1805); a separate two-volume edition, authorized, appeared as Kant (1802).
9. For a survey see, e.g., Davies (2005).
10. See, e.g., Giralt and Bloom (2000) and Nelson and Palmer (2001).
11. The phrase returns in (1997b), 120, (1999c), 320, (2001a), 142, and (2001b), 76.
12. This parallel is fully articulated in Smith (1999a).
13. Cf. the literature on scattered objects, beginning with Cartwright (1975).
14. They also have spatial boundaries, even though these are typically affected by a much higher degree of indeterminacy. See Varzi (2002) and Borghini and Varzi (2006).
15. From Smith (1999b), 289, revisited in Smith and Varzi (2000), 404, and Smith (2001a), 135.
16. Today it is also common to speak literally of conceptual spaces, and of the geometry and topology of thought that they represent. See Gärdenfors (2000).
17. See also (1995a), 477. For the rationale behind the reference to Ingarden and to Meiniong in the nomenclature of the last two options, see Smith (1980).
18. Plato's metaphor (which returns in the *Statesman*, 287c) was, of course, just metaphor. But see Franklin-Hall (2009) for a detailed

account and for explicit connections with the bona fide/fiat dichotomy.

19. The example is from Smith (1995a), 480, also in (1999c), 323.
20. See also *Metaphysics*, VII, 16, 1040b10–16: "all the parts must exist only potentially, when they are one and continuous by nature".
21. Smith (1994b), §3.5, treats both cases as equally covered by Aristotle's "mereological potentialism".
22. Ultimately, however, I do find it metaphysically incongruous. See Varzi (2013).
23. See, respectively, van Inwagen (1981) on the "doctrine of arbitrary undetached parts" and the debate on the "special composition question" prompted by van Inwagen (1987). For the record, I subscribe to classical extensional mereology, so I take all parts and wholes to be on equal ontological footing, with no restriction on either side. See Varzi (2014a).
24. The phrase "Jeffersonian entities" refers to the states of the Union established by the Northwest Ordinance, whose boundaries followed in large degree the straight pencil lines in Thomas Jefferson's "Add-a-State" Plan of 1784. This is Smith's main example in (1995a) as well as in several other writings, including (1997a), 398, (1999b), 290, and (2001a), 121.
25. For example, Smith and Brogaard (2003) argue that, in the course of normal fetal development, the conditions for being a person are first satisfied at the end of the gastrulation process, which occurs precisely at sixteen days after fertilization.
26. *Roe v. Wade*, 410 U.S. 113 (1973). More precisely, the judiciary acknowledged the impossibility of determining the beginning of life "at this point in the development of man's knowledge", given that "those trained in the respective fields of medicine, philosophy and theology are unable to arrive at any consensus" (159).
27. Where animals are divided into: (a) belonging to the Emperor, (b) embalmed, (c) domestic, (d) suckling pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in this classification, (i) trembling as if mad, (j) innumerable, (k) drawn with a very fine camelhair brush, (l) *et cetera*, (m) that have just broken the vase, (n) that from a distance

look like flies. See Borges (1942). It is noteworthy that precisely this passage is the starting point of Foucault (1966).

28. See, e.g., Swainson (1835), where certain quadrupeds are classified according to their "innate propensity to live by free choice near the haunts of man, or to submit themselves cheerfully and willingly to his domestication" (137).
29. Ordnance Survey, the national mapping agency for Great Britain, records the coastline of the main island as 11,072.76 miles, calculated as the length of the mean high-water mark line on a digital map; the British Cartographic Society is adamant that the length of the coastline "depends on the scale at which you measure it". See Darkes (2008). It may also be recalled that Mandelbrot (1967) took the question 'How Long Is the Coast of Britain?' as a starting point for the development of fractal geometry.
30. "Ratifica ed esecuzione dello Scambio di Note tra la Repubblica italiana e la Confederazione svizzera relativo ai confini 'mobili' sulla linea di cresta o displuviale, effettuato a Roma il 23 e il 26 maggio 2008", *Gazzetta Ufficiale della Repubblica Italiana*, Serie Generale, n. 143 (June 23, 2009), S.O. n. 97, 18–22.
31. From a pamphlet by Arthur Griffith, founder of the Sinn Féin party (cited in Bowman 1982, 11).
32. In his Convention speech of January 31, 1793, advocating the annexation of Belgium to France (cited also in Smith, 1997a, 399).
33. Here I expand on some remarks I first made in my (2011), §4, and (2014b), §§3–4.
34. Reiterated in Smith (2001a), 143. Cf. also (2004), 230, where the point is made in the context of a more general theory of fiat partitions: "A partition […] is an artifact of our perceiving, judging, classifying or theorizing activity […] The reality partitioned, in contrast, is what and where it is, and it has all its parts and moments, independently of any acts of human fiat."
35. See again Smith (1995a), 479, and (2001a), 142f, from where both phrases in quotation marks are taken. The relevant notion of affordance is Gibson's (1979), on whose relevance see also Smith (2001b) and (2009).

36. I mention this because the earlier quotation on star-making might suggest identifying the view in question with Goodman's. In fact his view is significantly more radical. For Goodman, a "world-version" (or "world-representation", we could even say "world-map") need not be a version *of* the world any more than a "Pickwick-picture" need be a picture of Pickwick (1968, §1.5). Thus, while all we learn about the world is contained in right world-versions, "the underlying world, bereft of these, […] is perhaps on the whole a world well lost" (1978, 4).
37. The passage already occurs in (1994a), 17. See also (1997b), 121, (1999b), 290, (2001a), 134, as well as Smith and Varzi (2000), 403.
38. In an 1876 letter to his Belgian ambassador in London (cited in Pakenham 1991, 22).
39. Idaho (I.C. §18-6605), Louisiana (R.S. 14:89), Massachusetts (MGL 272, §34), Michigan (MCL §750.158), Mississippi (M.C. §97-29-59), North Carolina (G.S. §14-177), Oklahoma (Ok. Stat. §21-886), Rhode Island (§11-10-1), Virginia (Va. Code §18.2-361).
40. I said that Curzon's distinction has become standard lore for geographers, if not for historians. Yet critiques may be found and are numerous also among the former, beginning at least with Ancel (1938). For surveys and discussion, see Fall (2010) and Rankin and Schofield (2004), which ends by quoting Ambrose Bierce's *The Devil's Dictionary*: "Boundary, *n.* In political geography, an imaginary line between two nations, separating the imaginary rights of one from the imaginary rights of the other" (originally in Bierce 1881, 323).
41. 'Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion', July 9, 2004, endorsed by the U.N. General Assembly on July 20, Resolution ES-10/15. For another example, on April 1, 2008, the US Secretary of Homeland Security used congressionally-granted power to "waive in their entirety" the Coastal Zone Management Act, the National Environmental Policy Act, the Endangered Species Act, the Migratory Bird Treaty Act, the Safe Drinking Water Act, the Solid Waste Disposal Act, and thirty other state and federal laws to ensure the

expeditious construction of barriers along the US/Mexico border through the Tijuana River estuary ('Determination Pursuant to Section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996', Fed. Reg. 73 FR 18294, Bill. Code 4410-10-P, effective April 3, 2008); a few months later, the San Diegans were playing volleyball with the Tijuanans using the barrier at the beach border as a net.

42. Smith doesn't like Kant, but it is worth noting that the challenge raised here is in line with Kant's reaction to Hume's idealism in the second edition of the *Critique*: "It must be possible for the 'I think' to accompany all my representations; for otherwise something would be represented in me which could not be thought at all, and that is equivalent to saying that the representation would be impossible, or at least would be nothing to me." (Kant 1787, §16, B131–132).

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5

Social Reality, Law, and Justice

David Koepsell

1 Ontology and Social Reality

Reality is composed of many layers, including what John Searle calls "brute facts" and, superimposed on these, what he calls "social reality". Ontology is the study of reality in its various layers, and involves attempts to describe that reality in ways that are useful and logically consistent. Philosophers and others who attempt to "build" ontologies, must examine the manners in which we can best describe objects, and devise structured vocabularies that can be used consistently, often across disciplines, and now with an eye toward automation such that when people use terms to describe reality, a greater consistency, and thus better understanding, ensues. Any object of intentionality is capable of ontological analysis and greater clarity. Abstract objects composed by collective intentionality, such as the institutions and other objects that comprise "social reality", are

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especially rich domains for ontological analysis, and the rewards for devising structured vocabularies that suit such objects are potentially great. Because social objects are typically abstract, and often created through vague and historical processes, their contours may be ill-defined, poorly understood, or even inconsistent or illogical.

Consider a "war". A war is a complex social object, composed of events and objects, which we could also call occurrents (things that happen over time) and continuants (objects that endure), some of which are documents, some of which are expressions, declarations, mobilizations of people and weapons, all taking place in historical and other contexts that help us to make sense of any particular war, such as legal agreements and treaties. While some wars start by the actions of individuals without any particular status or formal governmental role, only certain types of individuals are empowered to start or end wars. The description of all of the various parts of a "war" involves ontology in application to complex social objects. Doing so in a useful manner can be helpful for any number of reasons and individuals. Wars are significant human events, and avoiding them or conducting them successfully consumes significant resources and occupies the concern of many. Understanding and properly or at least usefully describing the natures of various parts of a war is a philosophical problem, rooted in the relations of objects to each other, and in the logical description of parts of reality.

Ontologists who attempt to understand reality and describe it serve numerous constituents and help to order our world. They must work from a point of view in which various axioms about the world are taken as true, primarily from a realist standpoint in which the existence of an objective, external world is taken as given, and which can be described by various agents in consistent and understandable ways.

The sciences adopt a similar standpoint. Scientific theories attempt to describe the working and objects of nature, assuming that underlying their descriptions are real objects with objective properties about which consistent observations may be made by any properly equipped agent. As theories are refined they come to better reflect the truths of nature, expressing better its objects and processes. Social reality is likewise natural, although the fact of its composition is complicated by countless individual minds whose workings are often difficult to observe. Regardless, the

ways that minds constitute objects, the facts of their operating in certain ways through phenomena that can be described consistently, allows us to delve into the nature of social objects and to describe their forms and relations to each other. While any particular war would be incredibly complex to describe ontologically, we can nonetheless develop general theories about the nature of its constituent objects. A treaty, for instance, or a raid, a combatant, an occupation, or siege, still has necessary and sufficient features, in a certain necessary context, that can each be described and understood ontologically.

Institutional reality, by which we mean the existence of various types of social objects that form contexts for the existence of other social objects, is an important sub-set of our exploration of social reality. For instance, an institution such as an army, a government, or an economy, forms the background for the existence of certain other objects that compose those institutions, and by which objects may be grounded or otherwise deemed to validly exist only in accordance with the rules of those institutions. Within the context of the institution of an economy, a currency plays an important role, as do banks and other elements of that institution. Institutional reality may be composed by fiat, by mutual agreement, by constitutional documents and document-acts, or through evolutionary means.

Law is a significant part of institutional reality, having often developed over time, sometimes in vague ways, both through case law and through legislation, and encompassing many aspects of human conduct. The law is also sometimes a useful starting point for discovering the nature of social objects of all sorts, given that one manner in which the law is used is to describe categories of objects having various necessary and sufficient features and relations with other objects. For instance, if we wish to understand the social object "marriage" we might first start with legal definitions, which, along with religious institutions, have for centuries been the sources for validating such relationships even while a marriage is undoubtedly a social object with components and features not strictly defined nor described by the law or religious institutions. Each plays an important role in the context of the social institutions that have typically made marriage important and recognized as a particular form of social object. The law is also where most conflicts about the nature of social objects play out, publicly and, in general, with some logical rigor.

The law is a structured view on the objects of social reality that can provide what we often consider to be moral categories to social objects and brute objects. For instance, a killing may be a "murder" in a certain legal context, but "self-defense" in another, or a legally justified killing of a combatant in yet another. The law may thus create a context for judging a brute fact to be "right" or "wrong". Of course, because the legal status of an act or object may have consequences, sometimes severe, the law is worth studying as a source and reference for an object's social existence for merely practical purposes, as well as for the sake of science.

2 Legal Ontology

Barry Smith's work in the field of ontology, and especially in social ontology, has inspired and drawn from the work of various legal philosophers who have delved into what we might call "legal ontology". The nature of legal objects, and their relations to other elements of social reality, have touched upon things like property, real estate, murder, intellectual property, and other legally relevant objects. Sometimes, these investigations have been undertaken in order to understand and influence policy or law-making, and sometimes they have been purely investigative. In any case, the examination of legal objects from an ontological point of view poses numerous opportunities for philosophers and others who wish to better understand social reality, find and fix inconsistencies in the law, and bring to bear emerging technologies on legal tools and systems.

Legal ontology may, for instance, delve into the nature of the existence of a particular legal object and compare it with other similar ones, or examine how and why a killing, for instance, becomes a murder, in order to uncover the moral context in which that legal object exists. Or we may examine whether there are contradictory principles at play in or among legal systems, where, for instance, an object might exist in contradictory forms simultaneously. Legal ontology might be employed to provide order and "interoperability" to diverse legal systems that share traits or interact with one another.

I have suggested ways in which legal ontology might be pursued without being merely descriptive, and yet not strictly in a way that would be

normative. Rather, I have focused upon legal objects which are either contradictory with other legal objects in a particular institutional context, or which may end up being self-contradictory due to a faulty set of rules. For instance, intellectual property is a relatively new area of law, and has had issues adapting to the development of new technologies that challenge its categories. The subjects of copyright law and of patent have long been held to be non-overlapping and mutually exclusive. Both have allowed for inventors or authors to gain some sort of monopolistic protection of their creations for limited periods of time in order to encourage innovation, but works of aesthetic use have long been afforded copyright protection, while utilitarian creations were given patent protection. The legal schemes involved with each form of intellectual property (IP) are significantly different, and carry differing burdens and rewards, as well as requiring in the case of patents a bureaucracy whose job it is to act as a transom, whereas copyrights attach automatically without any need for a new or specialized bureaucracy (Koepsell 2003).

The emergence of computerized inventions or creations challenged assumptions about the categories of IP law. Software was originally patented, but then also came to be copyrighted as well. The fact that a new object fits logically into two previously mutually exclusive categories raised some interesting questions regarding the objects of IP law: were the categories and descriptions of the objects of IP law drawn logically? was software a new "hybrid object"? could a new category better account for software? What was IP anyway? In a number of articles and books, I worked through several of these questions, but alongside this inquiry, and similar inquiries by a number of newly minted legal ontologists who have been inspired by or guided by Barry Smith's work, has emerged another related inquiry: what is the connection between law and its objects, and "justice"?

As with software, numerous other important social and political issues turn on correctly and consistently defining objects, both brute and social. For instance, the ongoing debate about the propriety of abortion and its acceptable limits hinges upon defining the nature of human life and personhood. The justice of abortion, by which it may be judged to be morally acceptable, appears to be behind judgments and decisions regarding its legality. Brogaard and Smith explored the ontological issues involved

in their paper "Sixteen Days: The Ontology of Fetal Development". Their analysis addresses the necessary and sufficient features of "human beings" and paves the way for legal analyses of rights and duties that might be owed to "persons", the legal bearers of such rights and duties according to most legal schemes (Smith and Brogaard 2003). A legal ontology of personhood, together with the Brogaard and Smith analysis, would go a long way toward informing policy decisions in a logically consistent and well-founded manner. A person, as a social object superimposed upon human beings (and potentially other beings), is a legal object whose features can be gleaned from numerous legal opinions, constitutions, laws, etc. Describing an ontology of persons that can be used across and among varying legal regimes is a potentially useful project for coordinating among legal regimes, and it is aided by centuries of progress by jurists in the task.

In their paper "The Metaphysics of Real Estate", Smith and Zaibert consider the ontology of the legal and social object superimposed upon the brute facts of land (Smith and Zaibert 2001). Real estate is the legal demarcation of parcels of physical space into various forms and parts, prescribed by long-standing customs and norms, and formalized in various legal schemes. Real estate enjoys features of property not available except for legal and customary regimes that may treat it as divisible, jointly ownable, and transferable upon death, among others. The layer of social reality expressed by legal treatment of real estate is a special sort of social object dealt with by another special social object in the form of institutions. These institutions, comprising bodies, constitutions, laws, courts, decisions, and others, are the sum of legal reality. Legal objects govern society in ways that customs and other less formal elements of social reality cannot, subjecting us sometimes to punishments like incarceration or other formalized penalties, which themselves comprise what we often call "justice".

Zaibert and Smith likewise take on "meta"-issues of normativity in their 2007 paper "Varieties of Normativity: An Essay on Social Ontology" (Zaibert and Smith 2007). One of the ongoing problems of connecting the study of objects with the study of what "ought" to be the case (ethical or moral norms) is posed by the well-known problem often called the "naturalistic fallacy" by which an "is" is assumed not to be able

to imply an "ought". The move from a description of reality, including social objects, toward describing how things should ethically be the case, is a tricky one, as recognized by Searle, Hart, Rawls, and others. Zaibert and Smith examine succinctly the various approaches made by legal and moral scholars, as well as by Searle in his work on speech acts and intentionality, and discover that certain social objects acquire, by virtue of intentionality toward objects, normative values as a matter of course. We can examine this potential link between a description of social objects and normative claims by going back to a major inspiration for Smith's work in social objects: Adolf Reinach.

Reinach's own work on the nature of claims and promises broke ground in discovering a connection between law and right. Reinach, who had both legal and philosophical training, examined the necessary and sufficient conditions surrounding the origin of claims, promises, and obligations in his groundbreaking work *The Apriori Foundations of the Civil Law*, among other works. Reinach explains that valid legal rules are logically dependent upon some natural state of affairs, which he calls "grounding" (Reinach and Crosby 2012). He argues that the law of contracts, for instance, is logically necessary because it is grounded in the simple facts of the genesis of duties out of promises. Prior to law-making, the acts and intentions surrounding the human activity of promising generate claims and obligations. These claims and obligations disappear upon the fulfillment of the promise. Contract law is thus grounded in natural phenomena, and this Reinach equates with the sort of logical necessity that makes the facts of mathematics true. No just enactment, he argues, could invalidate the claims and obligations that naturally arise from promising, just as no valid enactment could make 2 + 2 equal 5.

Reinach and others have since extended the notion of grounding to other types of law, including property law. They argue that our rights to ownership of property arise from the brute facts of possession with the same sort of logical necessity by which duties and claims arise from promises. This same argument is extended by Austrian philosophers in the same vein over the right to autonomy, which is rooted in rights of "self-possession". Zaibert, Brogaard, myself, and others inspired by Barry Smith's work in social ontology, largely inspired by Reinach and Searle, have begun to delve in greater detail into possible connections between

normative claims, the grounding of objects in brute facts, and the larger notion one might call "justice". Justice is the evasive notion attempted to be characterized by Hart, Kelsen, Reinach and others in describing the normativity of laws, and any connection there may be between the law and the "good".

3 Problems of Justice: The Failures of Deontology and Positivism

What are our options in linking law to right? Reinach distinguishes between legal positivism and natural law theories, rejecting both, essentially. Searle does not expressly adopt a theory, but argues against the naturalistic fallacy, and Zaibert and Smith argue for intention as a ground for normativity in social objects. Historically, studies of law were not always so divorced from justice, nor was law likely to be held to be orthogonal to justice as modern, moral relativism more or less demands. There has been a trend, first in legal philosophy, now adopted more or less as the primary model of a legal education, toward what is called *legal positivism*. In the nineteenth and early twentieth centuries, the natural foundations of law began to be challenged, especially in Anglo-Saxon legal scholarship. For more than a thousand years, legal rules were devised by sovereigns who were themselves held to be imbued with moral authority for rule-making by deities. Of course, with the spread of the Enlightenment, and the fall of various sovereigns at the hands of liberal revolutions, the basis for valid, moral rule-making and enforcement began to shift.

With Locke, Hobbes, Rousseau, and other modern liberal political theorists came a new vision of the basis for natural law, one that extended natural law theory beyond the simplistic, sovereign-based dogma of old, to a more consistent set of tenets. Natural law, it was argued, grounded the validity of legal rules in duties and obligations dictated by the fabric of nature (whether or not one accepted some predicate deity), and even sovereigns were subject to the dictates of nature's laws. This shift in thinking reflected a shift in scientific and theological thought, roughly reflecting the move from an involved, acting creator, to a distant, detached, clock-maker creator, who sets the world in motion and then steps back.

The foundations of modern liberalism included a notion of natural law. The revolutions sparked by Locke et al, were legitimized by the violation of subjects' naturally endowed rights to life, liberty, and property, and these natural rights formed the basis for modern liberal democracies, both in their constitutions and in their laws. In a world in which just law derives from nature, there is a solid connection between law and morality. But a new trend emerged in the late Enlightenment, when philosophers and political theorists began to question the foundations of just law, as well as reformulating approaches to ethics and justice themselves.

The British philosopher Jeremy Bentham moved away from natural law theory in arguing against deontology (which accepts the existence of categorical ethical duties) as an ethical foundation. Bentham, seeking the make the study of ethics more scientific, rejected nature as a foundation of duties, and formulated the modern ethical approach we call Utilitarianism. He is well known for calling natural law theory "nonsense upon stilts". His objections to natural law were epistemological, as he argued we can never rightly suppose we know the intentions of a creator, nor can duty-based theories of ethics like those of Immanuel Kant ever trace back sufficiently enough to provide a solid justification for accepting any particular duty *a priori*.

Indeed, a weakness of deontology is the leap from presupposing the existence of a certain duty, and reconciling its existence with contradictory duties, or converse duties that appear to arise in exceptional situations. Utilitarianism does not presuppose the existence of categorical duties, but rather argues that the ethical compulsion lies not in intent or duty, but rather in consequences. The epistemological argument is clear: consequences can be more or less predicted, and measured *post hoc*. Intentions can never be similarly measured. In the scientific vein of the time, Bentham sought to make the pursuit of legal and ethical theory measurable, and viewed a solid, measurable basis for judging an action only in its consequences, namely: the amount of net happiness produced. For Bentham, the good can be judged based solely upon whether it increases net happiness, and duties, intentions, or other epistemologically unapproachable matters need not be consulted. The implications for legal rule-making are obvious, and in the absence of a natural foundation for just laws, legal theorists began to re-imagine the role and scope of legal theory.

According to John Austin, the validity of legal rules can only be judged according to the proper foundation of their enactment by a sovereign. A sovereign is one who is recognized as such by a majority, and *just* laws are merely the sovereign's valid enactments, backed by sanctions. No further inquiry of judgment as to the content of legal rules can be made as there is no extraneous basis by which rules can be judged to be right or wrong, morally speaking. Rule-making is valid so long as the sovereign is the majority-recognized sovereign, and has no higher sovereign, and so long as the rules are backed by the promise of sanctions in case of their violation (Austin 1995). Even while a continental positivism of a sort was being formulated by Hans Kelsen, in which at least some solid basis for recognizing a valid sovereign is posited (a "*grundnorm*": Kelsen 1967), the Anglo-Saxon school of positivism became solidified with the work of H.L.A. Hart.

Hart nicely categorizes types of rules, distinguishing among primary rules (which direct action) and secondary rules (which address procedures). But in direct opposition to Kelsen, Hart rejects the theory of a *grundnorm*, and does nothing to resolve what seems now to be a significant gap in positive legal theory: reconciling rules with a notion of justice. As opposed to the neo-Kantian approach of the twentieth century's most prominent legal scholar outside of the positivist tradition, John Rawls, legal positivists generally do not see inquiring into the just foundations of legal rules, outside of the valid enactments of sovereigns according to established procedures, as being a coherent area of inquiry (Hart 1958).

With legal positivism, we need not concern ourselves with metaphysical questions of right or wrong, but can focus instead on epistemologically approachable questions regarding the results of our actions, and whether they accord with our preferences. Legal positivism is the dominant theoretical paradigm in Anglo-Saxon law schools, and it is bolstered by various trends in politics, including concerns with pluralism and multi-culturalism. Natural law theory is vulnerable to critique where various cultural, religious, ethnic, or philosophical backgrounds confront problems from differing viewpoints. Adopting the natural law justification for a rule that contradicts some religious, ethnic, cultural, or philosophical viewpoint means arguing for the error of someone's point

of view. But as we live in increasingly pluralistic societies, with ever more multi-cultural populations, asserting some particular paradigm to be correct risks eroding what many conceive to be a foundation of liberalism: the freedom of conscience. A basic tenet of our modern liberal democracies is necessarily that people are entitled to their opinions, points of view, and to express their beliefs. Thus, states ought not then to criticize the foundations of those beliefs, or force citizens to subscribe to a particular point of view. Because positive legal theory embraces the notion that a law is valid so long as it is enacted by a sovereign and backed by sanctions, then there is no further basis to question the validity of a validly enacted rule. The freedom of conscience of those who either support or defy the rule is preserved, because no judgment about the underlying justice of that rule may be made. We can only classify people as rule-followers or rule-breakers, not as just or unjust, and the basis of valid rules need not be traced to any natural, immutable principle. Pluralism and multiculturalism are preserved both within nations and among them, as ethics and rules are completely divorced. A rule-breaker cannot be judged to be immoral, and rules we do not like can be changed without reflection upon metaphysical issues of justice or the good. Law-making can be scientifically accomplished by looking at a list of projected consequences, and applying those rules that maximize the consequences we prefer.

Legal positivism is vulnerable to attacks based upon history, and our cultural, national, and international reactions to perceived injustices within sovereign states, as well as among them. These same attacks are consistent with criticisms of utilitarian ethical theory. Namely: if we are only guided by the consequences as a guide to action, then on what moral basis must minorities be protected? In utilitarianism, as in legal positivism, there is no theoretical basis to necessitate the protection of a minority. In classical utilitarianism, the right thing to do is that which increases happiness (maximizes utility) overall. Rule-utilitarianism protects against this possibility to some degree. Positive legal theorists similarly must recognize the validity of an enactment if it is enacted by a valid sovereign (supported by a majority) and backed up with sanctions. Countless examples of potential injustices can be named, both historical and hypothetical.

3.1 Ontology and Justice

As with utilitarianism, or moral relativism, positive legal theory leaves open the difficult problem of determining when a particular action, or intention, is morally wrong. In fact, in none of these theories is the notion of "moral wrongness" even comprehensible. Things may or may not be acceptable in specific contexts, or may be valued for their effect on general utility (inasmuch as it might be measured or measurable), but notions of right or wrong, as the terms are traditionally used in ethical theory, are not *per se* applicable. Although students of ethics are taught about utilitarianism, and ethics scholars, or applied ethicists, must resort at time to the hedonic calculus in resolving ethical dilemmas, the end result of such a calculus will always be some determination about what one should do in order to increase general utility (happiness), and not clearly an ethical judgment about what is right or good in a moral sense. This is because each decision is necessarily contingent, and hypothetical, as opposed to decisions made according to deontological theory, which are categorical and apply to every such action or intention. Some of the weaknesses of utilitarianism in creating systems of justice are noted by John Rawls, and other modern Kantian, or neo-Kantian scholars of law and ethics. These weaknesses make it difficult to argue that positive legal theory, or utilitarianism, can lead a society to a state fairly called *just*. (See, generally, Rawls 1999a, b). The term justice implies some accord with notions of morality. In modern constitutional parlance, there are two forms or aspects of justice: substantive and procedural. Procedural justice means simply that for every person who becomes involved in a criminal or civil judicial matter, the procedures employed are employed equally, and fairly, and their content is transparent, and purposes clear. Substantive justice is more complex, and the notion implies some accord with some higher law. If a law fails to fulfill the requirements of substantive justice, it may justly be struck down. Substantive justice is a measure by which both constitutions and legislation may be judged, and according to which they may fail.

Given the weaknesses of positive legal theory in providing a solid context in which *justice* can be evaluated, or by which just legal systems and their rules could be imposed, why does it continue to thrive in legal

scholarship and political theory? One explanation may be that legal and political scholars have abandoned the quaint, Kantian notions of categorical right and wrong, and have embraced a utilitarian world view. It seems to be that in so doing, and in simultaneously accepting the Rawlsian notion of distributive justice (as indeed some of these same scholars and theorists seem to do), they are trapped in a contradiction. Rawlsian distributive justice depends upon accepting the notion of categorical duties, including the duty to treat everyone as an end, and not merely as a means to an end. Another categorical duty under Rawls is to treat everyone with equal dignity. But Rawls accepts more or less the Kantian explanation for the existence of these duties, arguing that we would arrive at these duties in forming a society if we place ourselves in the "original position" behind his hypothetical "veil of ignorance" from which vantage point we have no idea of whom we might be in a society. As Zaibert and Smith point out, the Rawlsian perspective is built also on Utilitarian foundations. Kant's categorical imperative is arrived at by a different heuristic, but the content is the same: we have to be able to successfully universalize an imperative without contradiction in order for a rule to be moral. Neither Rawls nor Kant judge the morality of a rule according to consequences, and Rawls is thus generally agreed to be a neo-Kantian, as he himself at times contends, despite his Utilitarian bases.

The problem remains that: if justice is hypothetical and contingent, as it must be under a utilitarian/positivist perspective, then rule-making will be similarly contingent, and may even fail to be just. Just as Bentham insisted, the link between law-making and morality must be completely severed, and decisions about the justice of rule-making or rule-makers must be limited to procedural matters. Arguably, no coherent system of substantive justice could be based solely upon utility as a measure or standard by which just laws could be created. The barriers are epistemological (the calculus cannot be carried out to sufficient exactness, either over and across populations, or through time), as well as ontological: the calculus does not tell us what is good or right, but merely what we should do in a certain situation to maximize happiness. One glaring gap in accepting the logic of the latter statement as somehow a coherent foundation for a just system is that it relies upon a categorical rule, one which cannot be adjudged scientifically, namely: that happiness is a sound basis for moral

decision-making. This itself implies a categorical, rather than hypothetical, grounding, which must be taken as an axiom. Because of this and similar logical gaps in utilitarianism, and unacceptable practical consequences of accepting a purely utilitarian basis for ethical decision-making, legal positivism stands on similarly shaky ground. The fact is that neither rule-makers nor ordinary people function as though there is no greater grounding for just rules than utility. There are clear, historical instances both within and among nations where actors (both individuals and states) have done things that appear to us to be clearly unjust, but which they justified to themselves as warranted based upon their perceived effects upon general happiness. Evolutionary psychology may hold the key as to why we consider certain intentional states and actions to be wrong *per se*, but the fact of this acceptance is recognized in constitutions and in courts. It is the impetus behind the slow march toward greater freedom, and more perfect systems of justice. The general recognition that, despite the arguments of legal positivists, there are certain categorically wrong actions and intentions, is what has enabled constitutional change as well as liberal revolutions, and it is what has made these historical moments good.

There appears to be a third way, outlined by Smith, Zaibert and others following the path laid down by Reinach and Searle. We can focus on the objects of justice, things like rights, and discover the intentional states and expressions necessary for their existence. We can examine then in light of the ontology of such objects cases that reveal the application of their ontologies, help discover any lapses or inconsistencies, and even ultimately describe how policies may or may not abide by justice's objects.

4 A Role for Soft Normativity and Social Ontology

Justice is an abstract object central to jurisprudence—the social practice of resolving disputes about law and right. It is a concept referred to repeatedly in jurisprudence, and an ideal for rule-making both within and among nations. That it is a legitimate object of intentionality requires that we take it seriously as an object of study whose central role in a large portion of social reality is universally acknowledged, even while there is a divergence

of views about its nature and workings. Many of those who have inspired and been inspired by Smith's work in social ontology have recognized a connection between the right and legal objects and institutions, and drawn some connections between the two. I am happy to say that my work in the ontology of genes and intellectual property predicted a major shift in the law regarding the patenting of genes such that two high courts have overturned the practice (The United States and Australia), consistent with a clearer ontology of artifact and nature, and more consistently with the underlying ontology of the objects of intellectual property (Koepsell 2015).

Besides clarifying legal objects, noting internal inconsistencies, clarifying the nature of legal objects as they relate to each other and other social objects in general, and building bridges among legal ontologies for internationalization of legal schemes, there remains outstanding the task of understanding the object "Justice" itself, touched upon above in each of the various papers mentioned. Barry Smith and I, along with other researchers, have attempted to point out the need to develop interoperable vocabularies for biomedical ethics, and the ethical concepts underlying the field are intimately connected with issues of Justice (think of the Nuremberg Code).

We can be realists about justice, as we are about other social objects, pursue its necessary and sufficient conditions by looking at discrete portions of social reality, and in relation to specific objects of the law, and perhaps continue the task of understanding its nature even as Smith and his influences and students have begun to do so. In so doing, we may even begin to make an impact on societies in improving the conditions of justice in ways that philosophers have long intended and attempted, grounded in rigorous ontological analyses, and inspiring the institutions of the law to do likewise.

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6

Acts of Terror as Collective Violent Acts

Alessandro Salice

1 Introduction

On March 3, 1972, Idalgo Macchiarini, an executive of a mid-size firm in Milan, was kidnapped by a group of masked persons. He was subjected to an interrogation about the future financial plans of the firm he was employed in, and released after a couple of hours. A black and white photo was shot to document the kidnapping. The photo shows Macchiarini with a tag on which one could read the following words (among others): "Brigate Rosse. Colpiscine uno per educarne cento. [Red Brigades. Strike One to Educate Hundreds.]" This was the first time that the Italian *Brigate Rosse* had targeted a human person and also the first of a long series of actions that endured throughout the 1970s and 1980s and culminated in the kidnap and then murder of the Italian ex-prime minister, Aldo Moro, in 1978.

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The term generally used to denote this kind of action, both in everyday speech as well as in legal and political terminology, is "terrorism", and the usage of this expression, especially in non-scientific contexts, seems to be supported by a certain intuitive understanding, which is perhaps best expressed by the Oxford English Dictionary definition: the "unofficial or unauthorized use of violence and intimidation in the pursuit of political aims". Despite this basic intuition, however, views rapidly diverge when it comes to providing a more precise description of this social phenomenon and, especially, when questions are posed such as who actually performs acts of terror, who are the victims of such acts and what form of violence, if any, is involved in these acts.

Some, from the very outset, would contest the possibility of providing a definition of the concept of terrorism (Weinberg et al. 2004), maybe arguing that "terrorism" expresses an essentially contested concept, i.e. a concept "the proper use of which inevitably involves endless disputes about [its] proper uses on the part of [its] users" (Gallie 1956: 169; cf. Primoratz 2013). Along these lines, some would, for instance, think that *only* actions against civilians are acts of terrorism, while others would deny that and accept that damaging material things, under certain circumstances, could count as an act of terrorism. Accordingly, one and the same event would be described as an instance of terrorism by some and not by others. Yet others would claim that the endless disputes about this concept are not triggered by disagreement about its descriptive content; rather they originate because it is a "thick" concept in Bernard Williams's sense (Williams 2006). On this view, "terrorism" would express a content that includes both descriptive and evaluative features to the effect that, when this term is employed, one is not just *describing* a given event; one is also evaluating it. For instance, while actions performed by freedom fighters may show descriptive similarities with those of terrorists, they cannot be assessed in the same way and, hence, do not count as acts of terrorism.

At the same time, it is not clear whether the notion of terrorism just points to one kind of social phenomenon or, rather, whether there are different kinds of terrorisms: this term, when used to, for example, designate the Jacobins' reign of terror during the French Revolution, could be argued to have a different meaning than when used to refer to the recent

shootings at the Parisian *Charlie Hebdomadaire* or to the actions of the Red Brigades. Hence, it seems that any investigation into this notion that is not sensitive to the differences in kind that characterize the concept of terrorism, will eventually miss the point. And the point would be that the definition of terrorism is informed by historical and contingent factors and especially by the political and social situation of the time. There is no terrorism "as such", but actions are held as instances of terrorism in different senses according to different contexts.

This chapter is certainly not in a position to address all the difficulties that appear to be intrinsic to any attempt to describe this notion. Rather, it will mainly focus on what is a perhaps rather uncontroversial claim in much (although not all, cf. Goodin 2006) of the relevant literature, and this is the idea that terrorism is (or presupposes) violence:[1] since there cannot be terrorism without violence, these two notions are essentially linked. But how should one understand this claim, and what are the forms of violence at stake here? To answer this question, I draw on a notion of a violent act that I have developed in previous work (Salice 2014) and argue that acts of terror are a kind of violent act: they are *collective* acts of violence that have *social groups* as their targets.

This chapter is organized in two parts. In the first section, I discuss two theses that I have argued lie at the core of the idea of violent acts. Roughly, these theses are that violent acts (i) presuppose what could be called "damaging acts" (i.e. acts whose only purpose is to inflict psychological or physical damage) and (ii) need to secure uptake in order to be successful. In the second section, I apply this conceptual framework to acts of terror and contend that, to be successful, acts of terror are required to fulfill the very same conditions. Historical cases of terrorism may be used to illustrate that, indeed, this is the case: not only is the damage of terrorist attacks quickly and easily identifiable as the planned consequence of intentional acts, but usually perpetrators also overtly claim responsibility for their acts. Assuming that this argument is on the right track, I suggest three further features that seem to characterize acts of terror even more precisely.

The *first* feature is that their addressees differ from the addressees of the underlying damaging acts (call the latter addressees "the victims"). Put differently, terrorists exert violence on their addressees by inflicting

damage on the victims: for example, a terrorist may injure random citizens (the victims), while the actual target (or addressee) is a community or a government. This consideration leads to the *second* feature that appears to qualify acts of terror. Despite their difference, a close relation seems to tie victims and addressees together: generally, the victims are related to the addressee insofar as they are *members* of a group, which makes it possible to identify groups as the genuine addressees of violent acts. Finally, I shall present defeasible evidence for a third feature: acts of terror are not performed by individuals, but by groups, i.e. they are instances of group agency. It might be that *individuals* perform the damaging acts on which acts of terror are eventually based, but such individuals, I would contend, act in representation of a group, which is the authentic subject of such acts. In the conclusion, this last claim is problematized in light of recent cases of so-called "lone-wolf terrorism" that seem to invalidate it.

A last remark. The line of reasoning developed in the next sections mainly has in mind those cases of political terrorism that occurred in Europe in the 1970s and 1980s and that are paradigmatically illustrated by the actions of the Red Brigades. The conceptual framework developed in the following sections is intended to capture some traits of those actions, but no claim is put forward about whether or not such a framework applies to *all* kinds of terrorist acts. The reason for focusing on that set of cases is that their structure seems to be less opaque than others: not only did the agents formulate their intentions in a comprehensible and thought-out manner, but the temporal distance from those events may also allow for a better grasp of what happened in that period.

2 Violent and Damaging Acts

What is it to do violence to someone? What are the conditions of satisfaction of such an act? A rather trivial idea is that part of the intention to do violence to someone is about injuring or harming the victim. In a sense, one cannot intend to do violence to someone if one does not intend to injure or harm him. That is, for an act of violence to be satisfied, the concomitant intention to injure or harm the victim must be satisfied, too. This goal can be achieved in many different ways, and it is certainly not

the case that such injury or harm has to be restricted to physical injury; by all means, mental injury, causing distress or negative emotions, can and does fall under our common understanding of what violence is. But one could generalize here and call all the actions that serve the purpose of (mentally or physically) harming someone else "damaging acts".

Said another way, damaging acts are those acts whose only goal is to inflict psychological or physical damage on someone else. A damaging act is satisfied if the victim is harmed in the way the aggressor intended; in a sense, the damage can be seen as the specific result of the act. As an example of an act of this kind, imagine David's hurling a stone from his sling. If he manages to hit Goliath in the center of his forehead as he planned, his act is satisfied, period.

If only *part* of the intention to do violence is about injuring the victim, as I have suggested above, then further conditions need to be added to model violent acts. But, before turning to these conditions, it might be important to address qualms that some might already express at this stage vis à vis the distinction between damaging and violent acts: to accept this distinction, as the objection might go, is to deprive damaging acts of the attribute of being violent. But what do we mean when we use that predicate? The following conditions aim at capturing the idea that, whereas one can certainly damage things or inanimate things, to perform acts of violence requires a certain social and mutual understanding between the aggressor and the victim, which is not present, and is perhaps even excluded, from the very outset in the case of mere damage. And yet, if regimenting the predicate of "being violent" in this sense is perceived as too restrictive, one way to meet this objection could be to enlarge the scope of the predicate so as to accommodate at least two different senses: one sense, call it "violent in the broad sense", that encompasses damaging acts, and another sense, "violent in a narrow sense", that encompasses those acts which presuppose damaging acts and fulfill the conditions spelled out below.

Time now to turn to these conditions. Begin by mentioning another thought that seems to speak in favor of the conceptual distinction between damaging and violent acts. Think of old-fashioned methods of education, cases where children were beaten with educative purposes in mind. The question of whether such methods were efficient and, if yes,

in which sense they were efficient, is left out of consideration here. What seems to be at stake is that it is possible for damaging acts to be steered by an intention, the ultimate goal of which is *not* to damage. Now, suppose you see a teacher slapping a child in the face: you could either describe his action by saying that this is a bad teacher (for he falsely believes that slapping children is a means to educating them), or you could say that, in slapping the child, the teacher is fulfilling his duty, namely, he is educating the child. Put another way, the teacher's intention in injuring the child is not to perform a violent act, but to educate. Similar considerations, it seems, could be put forward in all those cases in which the agent harms another subject, but the action is intended to benefit the harmed party. (And this leaves open two broad possibilities: either the action actually benefits the person, or it does not. In the latter case, the agent could be blamed for being incompetent.)

So it seems that, for an act to be an act of violence and not just an act of damaging, the agent has to not pursue the interests of the victim. I will *not* further characterize what it means for an act to be against the interests of someone else. For the sake of this paper, I will rely on the vague intuition that the addressee is worse off after the action and that this is not just as a matter of fact, but as an intended consequence of the action (this makes violence bad, cf. Bufacchi 2004).

But now consider the following case. Suppose that an aggressor has targeted a victim and that he intends to harm the victim without intending to pursue any further goal in the victim's interest. Eventually, the action is performed: while the victim is walking down a pitch-black street listening to some music through his earphones, the aggressor beats the victim in the head from behind. But what happens is that, because of the circumstances, the victim ends up thinking that a roofing tile has fallen from a roof and hit him, or even that the harm was done totally unintentional—and the agent is aware of the victim's ignorance of the cause of the injury. I guess there are at least two ways of assessing this scenario from the perspective of the agent. Either ignorance of the event is an intended effect of the action, or it isn't. And, if it isn't, it either goes against the agent's intention, or it is considered by the agent to be purely irrelevant.

There are two options that one can use to rationalize the *first* alternative (which sees ignorance of the event as an intended effect of the action). The first is that the aggressor's intention merely *is* to damage the victim and get away with that (for instance, he wants to avoid being sued). If that is the case, then everything suggests that, from the agent's perspective, there is no difference here between damaging a human being and damaging an inanimate thing. This scenario is similar to the case of vandalism wherein things can be damaged in secrecy, leaving open the interpretation that the damage was the result of a natural chain of events. But this, one can argue, is not what is quintessential to acts of violence: violence, it seems, is always directed against conscious creatures (*qua* such creatures), not towards things. One addresses persons with one's actions in a completely different way than one simply deals with things (on this form of basic recognition, cf. Peacocke 2014).[2]

The second way to rationalize the agent's action under the first alternative (according to which, we recall, ignorance of the event is an intended effect of the action) is by appealing to additional intentions had by the agent. Accordingly, the agent intends to reach other goals, the achievement of which is served by the victim's false belief. In this case, the description under which the overall action falls would be identified by the ultimate goal of the agent (cf. Anscombe 2000: 46): the aggressor might want to rob the victim (by distracting his or her attention), or the agent might want the victim to sue the owner of the house from which it is believed the tile has fallen, and so on. And this, one may conclude, can include damaging another person, but not doing violence to him.

If that is on the right track, then the victim's ignorance of the cause of the harm is *not* an intended effect of the action. Here, again, two different readings present themselves: *either* it is not an intended effect in the sense that the agent just does not care about the victim's belief regarding the injury, *or* it is unintended in the sense that it goes against the intentions of the agent. The first option is closely linked to the one suggested above according to which the agent simply has the intention to damage the victim together with the concomitant intention to hide the intentional nature of the damage. It is linked to it, one can argue, for the following reason: if indifference towards the victim's belief is the stance adopted by the agent, then such indifference is compatible with the possibility that

the victim believes her injury to be caused by a natural (non-intentionally caused) event. And this, again, can be seen as demonstrating that the agent merely has the intention to damage some-thing, instead of doing violence to some-one.

We are thereby led to the last option: the victim's ignorance is unintended in the sense that it goes against the intentions of the agent, and this is because the agent *has* the intention to convey relevant information to the victim about what is going on. It seems that this communicative intention (which, on the current interpretation of the example, remains unsatisfied) is what makes the action of the aggressor an instance of an act of violence. That is, and before tackling what specific information it is that the agent intends to convey, violent acts seems to be in need of securing uptake in order to be successful. Put another way, a successful violent act is not only one that manages to produce harm, but also one that secures its uptake in the victim. Accordingly, violent acts *presuppose* damaging acts in the sense that violating a person does presuppose (without reducing to) injuring him or her and that there is an intentional content shared by both damaging and violent acts.

We can now turn to the question of the kind of uptake that the victim has to secure. One element has already been emphasized above: this is the fact that the victim's injury has been produced *intentionally*. Put differently, the relation that links the injury to the agent's intention (to cause that harm) has to be made transparent to the victim, which amounts to saying that the victim has to become aware that the injury is in a relation of satisfaction to the aggressor's intention. But, if this cognitive step has been made, i.e. if the victim becomes aware of that, then he also becomes aware of the fact that there is an aggressor who is targeting him. The victim's understanding of this fact is again intended by the aggressor, and it has to be so if the aggressor intends his or her act to secure uptake in the victim in a way that preserves the victim's understanding of the intentionality of the injury. These considerations can be taken to point to a psychological attitude on the side of the aggressor, which supports the tendency to disclose rather than to hide elements of the agentive scenario. And such elements also include, one might claim, the identity or parts of the identity of the aggressor.

Imagine Odysseus's blinding of Polyphemus. The success of Odysseus's act does not only depend on whether Polyphemus has been blinded. It also does not solely depend on whether Polyphemus correctly recognizes that his harm is being done intentionally. Rather, it also requires that Polyphemus is aware of the identity of *who* has done the harm, and this is contingent upon Odysseus's revealing his identity (true, Odysseus literally means "no one", but Odysseus's utterance already discloses an aspect of his identity, although minimal—as Aristotle also points out: "[…] the poet has well written: 'Say that it was Odysseus, sacker of cities,' implying that Odysseus would not have considered himself avenged unless the Cyclops perceived both by whom and for what he had been blinded" Rhet. B 3.16). This last condition, the aggressor's disclosure of (parts of) his identity, can be contended to constitute Odysseus's act, for this act would not have been considered satisfied had Polyphemus not known the identity of his aggressor. I take this condition to qualify Odysseus's act as a full-blown act of violence.

If considered under this light, acts of vengeance, menace,[3] and sometimes punishment can all count as acts of violence—not only do these acts cause harm, they also do so "out in the open" so as to allow the victim to secure uptake of the action itself. Granted, no conceptual claim has been provided to underpin the idea that the aggressor always and by necessity intends to disclose his identity when issuing acts of violence. However, the psychological tendency highlighted above is conducive to this point, especially if it is considered in connection with the idea that the disclosure of the aggressor's identity comes in grades: Odysseus mentions his first name, but in other cases the victim simply has to identify the person that is the aggressor for the act of violence to be satisfied. Between these two extremes, intermediate cases are plausible, too: verbal threats can be successful if the aggressor reveals elements of his identity that motivate some authority over the addressee (if he is taken to be the consignee of a Mafia boss, for example).

3 Acts of Terror as Collective Violent Acts

I have suggested that the distinction between damaging and violent acts can be useful to model acts of terror as these latter acts can be portrayed as a particular kind of violent act in the sense just sketched. This section is organized in two parts: first, attention goes to the features that make acts of terror acts of violence. In a second step, I zoom in on what I take to be some specific features of such acts.

Two main considerations indicate that acts of terror are acts of violence. The first is a rather uncontroversial observation upon which the second part of the present section elaborates further: if someone engages in an act of terror, then their intention is to inflict harm on someone. The open questions here regard who is acting and who is the victim and, to anticipate the following line of reasoning, the suggestion is that answers to both questions require appeal to collective notions.

The second consideration that reveals a close proximity between acts of violence and acts of terror is that both seem to be in need of securing uptake. Historical cases of terrorism clearly illustrate this: not only is damage quickly and easily identifiable as the planned effect of intentional acts, but generally the perpetrators overtly claim responsibility for their acts. To illustrate this, think of how journalists present the news once it has been ascertained that a given injury is not an accident, but the consequence of an intentional action. Here is one among many examples—after a bomb exploded in front of the French Embassy in Tripoli on April 23, 2013, the *Telegraph* reported: "A car bomb has hit the French Embassy in the Libyan capital Tripoli, seriously injuring a security guard in the first major attack on a diplomatic mission in the city. […] No-one claimed responsibility, but suspicion will fall on […]".[4] News of this kind is generally broadcast right after the terrorist event and before credit for the attack has been claimed. Already the mere fact that such news conveys the expectation that at some point responsibility for the event will be claimed indicates that the acts performed are not purely about causing damage or harm. There is something more to this kind of act—and, indeed, it is not only the case that, eventually, responsibility is claimed, but it can also happen that *different* terrorist organizations try to

capitalize on the event by claiming credit for it. So, it seems that, for an act of terror to be properly and completely performed, the agents have to put their (readable) signature on it, as it were.

Why does the claim for responsibility appear to be so important? A consideration analogous to those developed in the first section might shed some light on this point: imagine a scenario in which a group intentionally attempts to injure someone, but without the concomitant intention to reveal its identity or without the intention to let the aggressed know that the harm incurred is the effect of a planned action. That is, imagine a group that, while harming someone, is perfectly fine with the possibility that all parties involved will believe the action's effect to be an accident. It seems plausible to contend that in this scenario the group is merely concerned with the damage as such and that it has no further interest extending over and above purely harming someone.

However, the fact that the intentionality of acts of terror stretches far beyond the mere injury is exactly what one could contend characterizes terrorism as what it is: injuring individuals in order to send a message, however vague or specific, to an entire community. In this respect, the phrase that the *Red Brigades* were careful to capture in the photo of Macchiarini (and in many other photos as well) is fairly illuminating: "Strike One to Educate Hundreds." Against this background, the conditions for such acts to be satisfied do not reduce to the seclusion of Macchiarini or to the physical elimination of Moro. Nor did the terrorists of September 11 crash the airplanes into the Twin Towers just to destroy the buildings and kill people. More is done by inflicting that harm.

Let us recap. If the line of thinking is so far on the right track, then one may conclude that acts of terror are violent acts. Indeed, they seem to presuppose damaging acts and to strive to secure uptake. That is, the victim has to apprehend that the damage has been intentionally generated by an act of terror and, by apprehending that, the victim also apprehends that he has been targeted by an aggressor. And, as seen, this also coheres with the aggressor's claiming responsibility for the act and, hence, revealing (at least part of his) identity. All this can hence be taken to illustrate that one way to model acts of terror is by using the conceptual framework sketched above for acts of violence. However, there are also important differences between these two acts. In particular, I would argue that acts

of terror display three further aspects that make them elements of a specific sub-class within the class of acts of violence.

The *first* significant aspect has to do with the target of such acts. When introducing the distinction between damaging acts and violent acts, the silent assumption was made that the targets of both acts were one and the same. The question of whether it has to be so can be left untouched for acts of violence, but it becomes salient when it comes to acts of terror, for it seems that the addressee of an act of terror has to differ from the addressee of the underlying damaging acts (call the latter "the victim"). Put another way, terrorists exert violence on their addressee by inflicting damage on the victim(s) (cf. Primoratz 2013). To substantiate this point, one could again appeal to the idea that the intentional horizon of acts of terror is not restricted to the causation of certain damage: by producing that damage, terrorists intend to send a message, the aimed recipient of which is the proper target of the act. If correct, this conduces to a further idea: since the victims are the target of damaging acts and since damaging acts per se do not require that uptake be secured, it is irrelevant for the perpetrators whether the *victims* become aware of the damaging act and its actor. *They* could be persuaded that they have been involved in a natural event or in a tragic accident. By contrast, it is required for the success of the act of terror that *this latter act* secures uptake in its addressees. But then, is there anything sensible that can be said about the addressees of acts of terror? Who has to secure uptake of the act for this act to be successful? Certainly, acts of terror have had different targets throughout history, but they all appear to have something in common, namely the fact that such targets are not individuals, but social groups like governments, nations, social classes, religious communities, and so on.

This idea can be underscored by another observation: the victim(s) differ(s) from the addressee, but both—addressee and victim—are significantly connected to each other through group membership or through relations cognate to group membership. It exceeds the purposes of this chapter to define what group membership is; suffice it to say that the notion of membership employed here refers to the idea that, for an individual to be member of a group, he or she has to act on behalf of the group (or "have the group in mind", as some social psychologists would say; cf. Hogg and Abrams 1998). So, for instance, Aldo Moro was a member of

the Italian government and had been the highest representative of the Italian Republic. In this case, the relation between victim and addressee is that of (robust, if you wish) group membership, i.e. the victim is the *member* of a group and consciously acts as a group's member. However, the robustness of such a relationship might be weakened as the victim may merely share the economic interests or the religious or political views of the addressee (without explicitly conceiving of himself as a member of that group). Or even the victims might merely *represent* a given group in the sense in which, for example, the marathoners that were killed in the 2013 attack in Boston were just representatives of American, middle-class society. But what if the victims are not related in *any* relevant way to the target? This opens the possibility of assessing the competence of the terrorists for, in such a case, they arguably prove to be incompetent (given the provided notion of acts of terror). But, if correct, this observation just means: for the act to be an act of terror, the perpetrators have to believe that such a relation obtains (independently of whether or not it actually does).

This leads to the *second* feature that, I maintain, qualifies acts of terror: their addressees are social groups. They are groups to which the victim is related either by membership or by means of another relevant relationship. One could hence conclude that it is the group that is asked to understand the act (for this to be successful). The elicitation of negative emotions, and, especially, of fear and terror, in the targeted group could be seen as a direct consequence of such understanding (rather than as its primary effect)—this is the understanding of being the target of actions performed by a hostile group that are able to produce sensible damage. As there are different kinds of groups with cognitive architectures that largely diverge from each other (corporations or governments, for instance, differ from large-scale communities, cf. Huebner 2014), the question of what it means for groups to understand the act would be answered differently with respect to the kind of targeted group. Brute and massive exercise of force might be needed for the message to reach loosely articulated groups, whereas the seclusion of an individual for some hours could very well serve the same purpose in the case of complexly organized groups, which are able to retrieve more fine-grained information from the environment.

Finally, who are the perpetrators? Just as in the case of the acts' addressees, it seems that collective notions also have to be introduced into the picture in the case of the perpetrators. Defeasible evidence for the claim that acts of terror are collective actions and, hence, that their subjects are collective subjects or groups is provided below. But it might be important to begin with a clarification of the claim itself. It is an established idea within the literature on collective intentionality that agency can be shared (cf. Schweikard and Schmid 2012). Disagreement begins, however, when it comes to the question of whether the idea of shared agency has to be understood in distributive or in collective terms. In the first case, shared agency has to be cashed out as an action that is brought about by a *distributed we*, i.e. by *several individuals* who join their forces, coordinate and collaborate towards a common purpose. In the second case, the proper agent is a *collective we* or even an entity that supervenes on the individual members (on this distinction, cf. List and Pettit 2011, 194). Despite the importance of this debate, the current purposes do not require taking an articulated stance towards it: theories of both kinds could be plugged in in the account offered of acts of terror.

One point deserves attention, though. The claim about the collective nature of acts of terror can be controverted by historical events where independent sub-groups or even single *individuals* have performed the damaging acts on which acts of terror are eventually based. However, such cases could be accommodated if the claim is aptly relaxed: actions, one may contend, can also be performed by proxy by individuals (or by independent subgroups) who act in representation of a group that is eventually the authentic subject of acts of terror. This implies a further consideration: for it has been noted that the proxy agent must receive authorization to act on behalf of the person or group for which he or she acts (Ludwig 2014). And this suggests that it is not sufficient for the agent to simply believe that he or she acts by proxy: he or she must *know* that. And knowledge is factive, which has obvious consequences for this issue. Under the assumption that acts of terror are either collective or are performed in representation of a group, if a group has not bestowed the agent with the authority to act by proxy, then an action does not qualify as an act of terror (and this is regardless of the agent's beliefs on the matter).[5]

Before drawing this conclusion, however, the reason is urged for the claim that groups are subjects of acts of terror. Admittedly, the reason I present here is defeasible. It is defeasible because it imposes constraints on the motivational structure that leads agents to perform acts of terrorism and because such constraints could be claimed to represent merely sufficient, but not necessary, features of those acts. What are these constraints?

The suggestion is that there is a strong connection between acts of terror and ideologies. By "ideologies" I roughly mean shared systems of philosophical, political, or religious ideas, which, together with more primitive dispositions and habits, enact social practices (cf. Haslanger 2012). Keeping this notion in mind, an act of terror seems to be motivated by an ideology in the sense in which it can be said that terrorists "serve a cause", that is, the cause which one serves or the ideology behind an act of terror is a shared system of ideas (and note—this would be an ideology that considers terror as a viable means of promoting the cause). But if this is a system of *collective* ideas that enables certain social practices, then the genuine subjects of those ideas are groups, not individuals: an individual could initiate or contribute to the development of a system of ideas that eventually flourishes into an ideology, but the notion of ideology per se is intrinsically collective (on this, cf. Gramsci 2000: 199).

Now, if to perform acts of terror is to serve a cause or an ideology, and if ideologies are systems of beliefs had by groups, then it appears plausible to conclude that groups are the genuine subjects of acts of terror (because only groups are the kinds of subjects that can be motivated by that specific kind of motivation). Relatedly, if individuals perform acts of terror, then they do so *qua* group members—namely as members of that group which has such and such an ideology.

4 Conclusion

Introducing such ideological reasons for action into the picture adds a further level of complexity to the analysis. On the one hand, this suggests that an individual who fulfills all the above-mentioned conditions, but acts based on private and non-ideological reasons, is not performing an act of terror. But, on the other hand, it might be used to challenge the

claim that acts of terror are collective (or are performed in representation of a group): when Anders Behring Breivik killed 77 persons in 2011 in a twofold attack on Oslo and the island of Utøya, he contended that his brutal action was motivated by political considerations—considerations that have been developed in a thousand-pages long political manifesto (cf. Gardell 2014). Breivik's mental health was the object of much controversy (cf. Nilsson et al. 2015) and, after having been diagnosed with narcissistic personality disorder with antisocial traits (the first diagnosis was paranoid schizophrenia), he was eventually convicted of mass murder and terrorism.

It certainly lies beyond the scope and purposes of this paper to assess Breivik's acts—especially given the whole spectrum of interpretations to which these actions can be subjected. However, it is only under the (admittedly simplistic) assumption that Breivik's criminal hand was moved solely by the motives he stated in his manifesto that this case gains relevance for the claims of this article. Assuming this were so, then it is the relation between ideology, intentional action, and the notions of group and group membership that this case brings to the fore. In this respect, it appears significant that it was only Breivik who claimed responsibility for those actions and that his efforts to associate himself with other political subjects largely failed (Fekete 2012).

Granted, those crimes were performed against the background of an aberrant ideology (and one could argue that sharing this ideology makes Breivik a member of the group propagating it). But the isolation in which those crimes were brought about could be taken as a sign that the intentions (and the corresponding plans and strategies) that led to Breivik's actions were purely individual in form—in other words, if all political subjects dissociated themselves from the crimes (and if they were not lying in doing so), then this testifies to the fact that, after all, it was *not* part of their ideology to serve the perverse cause by means of mass murder. This would invalidate (or at least moderate) the judgment about Breivik's acting on an ideological basis—his motivation was not ideological, because it was not shared by a group.

Certainly, the agent could have genuinely thought that there was a collective endeavor to which the crime was supposed to contribute, but it has been convincingly argued that, when it comes to collective atti-

tudes, one can always fall prey to the radical mistake of considering one's individual attitudes to be collective (cf. Searle 1990). How to settle these questions in the case of the Breivik's massacre is largely an empirical matter, but the fact that these are sensible questions to be asked shows the peculiarity of this event and maybe even also the complexity of the message that terrorism is able to send.

Notes

1. The idea of this article goes back to an email that Barry Smith sent me right after I published a paper on the notion of violence back in 2014. In this email, Barry suggested some ways of applying the analysis of that paper to acts of terror, and I am now very glad to be able to contribute to a volume in his honour with a paper that he actually inspired (and this, despite every possible disagreement!). A previous version of this paper was presented at the third workshop of the European Network on Social Ontology (Helsinki 2013). My gratitude goes to that audience, but also to Vittorio Bufacchi, Felipe Léon, and Matthew Rachar who have read and commented upon previous drafts.
2. This is *not* to say that one cannot inflict harm on a person by adopting a totally dehumanizing stance (cf. Gallagher and Varga 2014): genocides have shown to which tragic consequences such an attitude can lead human beings.
3. If threats are acts of violence, one might wonder what damage they presuppose, given that they seem to involve the intimation of future damage. But one should not overlook the fact that words can be used to do many different things, including the infliction of harm. In other words, the mental distress of being under threat is a cogent and intended effect of the threat itself (on this, see Salice 2014).
4. Retrieved from http://www.telegraph.co.uk/news/worldnews/africaandindianocean/libya/10011812/French-embassy-in-Tripoli-hit-by-car-bomb.html (accessed September 10, 2015).
5. This, one can claim, holds *a fortiori* if the group does not even exist. At the end of the 1990s, the Austrian bomber, Franz Fuchs, sent letter bombs to many figures of Austrian political, cultural and intellectual

society claiming to have done so in the name of an alleged "Bajuwarische Befreiungsarmee [Bajuvarian Liberation Army]". But, since no such army has ever existed, no relation of representation could have been in place here—regardless of whether Fuchs was lying or was delusional.

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7

Letter of Pharisaism

Maurizio Ferraris

1 Coming Out

Apparently, in his later years, Heidegger confessed to his assistant: "I still haven't let the cats out of the bag" ("die Katze noch gar nicht aus dem Sack gelassen"). The saying is linked to another common manner of speaking in Germany: "ich kaufe doch nicht die Katze im Sack", that is, "Surely I won't buy the cat in the bag" (i.e. without seeing it), which refers to the times when people would pass off cats as rabbits at the market. In short, "I will not buy a pig in a poke." Heidegger's statement can be understood as follows: the situation is still unclear, there is still something in store. And maybe: "I have not spilled the beans yet."

In the light of the *Black Notebooks*, published—with a coming-out that is the most revealing fact in this whole affair—by Heidegger's explicit wish, everything has become clearer: Heidegger had not spilled the beans, and the philosophical world had bought his philosophy sight unseen. One

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would be tempted to be ironic, like Bernhard in *Wittgenstein's Nephew*, where Wittgenstein's Austrian relatives claim that Ludwig's thinking is all a bluff although he managed to convince the British that he was a great philosopher, but it is not so simple.

Heidegger's secret is not Nazism: for decades we have known that Heidegger's adhesion to the movement was anything but an accident or a "hogwash" (*eine Dummheit*), as he claimed after the war without much conviction (basically, he almost defined it as "a prank"). On the contrary, it lasted at least until Stalingrad, and in fact even after, as evidenced by the decision to publish these books. This, in my opinion, is the real big news. At the beginning of the debate following the publication of the notebooks, people wrote that they had been "discovered" as a regrettable revelation. However, this is a mistake and more accurately a rationalization, arising from the fact that it appears inconceivable that Heidegger actually prepared the publication of these writings, which mix Nazism, anti-Semitism, and a paranoid cult of secrecy.

2 Hermeticism

Hence, in my opinion, the fundamental question: how is it possible that a man who had already been prosecuted, and forced to give up teaching for a few years because of his affiliation with Nazism, gave the disposition to release these notebooks of darkness after the publication of his complete works? This is even weirder when you think that these notebooks hold, so to speak, the cipher to decode (as we shall see) many of his hermetic statements. It looks like a gesture of parrhesia that does not seem to be like Heidegger ("he lies as much as he can", Hannah Arendt said of him). A gesture of self-denunciation, a voluntary self-abasement that definitely jeopardizes the attempts to rehabilitate him and to see Nazism as extrinsic to his philosophy. So why? In my opinion for two reasons, one political-historical and the other philosophical.

Politically, Heidegger was convinced that Bonn Germany would not have a longer life than Weimar Germany, and that when the notebooks came out the wind of history would have already returned to blow in the right direction (for him). After all, that's what Hitler said in his political

testament: when the great Jewish conspiracy that had decreed the catastrophe of his project had been finally eradicated, the world would understand his greatness.

The historical-political reason is the premise of the philosophical reason. Heidegger has always been hermetic, and deliberately so, to the delight of his interpreters but also for a more substantial reason. After the war he wrote: "It was not in 1927, the publication date of *Being and Time*, that I began to observe silence in thought, but in *Being and Time*, and even before, and always." And in the *Black Notebooks* he explains that his message was "never, and for good reason, communicated in an immediate way", and that "we stand in the invisible front of secret spiritual Germany". This was Hitler's principle as we find it in *Mein Kampf* (read and annotated by Heidegger): "German, learn to keep quiet." This secrecy in the intentions of Heidegger responded to another secret: the "secret spiritual warfare" conducted by Judaism, which one must respond to with another mystical and philosophical war.

Now everything is clearer: Heidegger's insistence on *polemos* as the essence of the world; his mystical definition of truth as *alètheia,* i.e. unconcealment (which is to say: we live in a world of shadows and deceits, where only the seer can grasp the truth); the idea that the history of metaphysics was a destiny of decay to which Germany was called to react—all of this belonged to his strategy. Completely blinded by the syndrome of the Jewish conspiracy, Heidegger made up his own conspiracy: he wrote mysterious texts, published them mostly after his death (Heidegger did not publish much while he was alive, as in youth he preferred to be considered the *secret* king of German philosophy) and, finally, once the great hermetic corpus had seen the light in a post-catastrophe Germany, he would release the hermeneutic key, the Rosetta stone that would allow us to decipher the true meaning of his difficult (and, I think, futile) meditation on the Last God, The Event, Abandonment, *Gestell*, *Geviert*, *Lichtung* and Being that is not the being's being.

I admit that this interpretation seems to be inspired by the theses of "magical Nazism". However, on the one hand it is historically proven that Nazism had a mystical element very much in line with Heidegger's spirit— he was fascinated by secret Germany, Angelus Silesius's spiritual and sensual mannerism, and Meister Eckhart's obscure sermons. On the

other hand, without postulating this mystical component, some of his statements would be incomprehensible: for instance, in *What is Called Thinking?* he says that "we haven't started thinking yet", as if all of history up until that moment had been nothing but a cover, a misunderstanding, a plot. And why is it so important that the lack of *Heimat* can become a global destiny, as we read in the *Letter on Humanism*? Because it would mean that "Semite nomads" have won.

"Brief über den Humanismus" is a 1946 letter to Jean Beaufret that has led to Heidegger's post-war recovery in France and by the Left. If you think about it, there is a sort of farcical element to this tragedy: Beaufret rehabilitates Heidegger and translates his texts, which inspire a great Jewish philosopher like Derrida and a great Jewish poet like Celan. Also, Frédéric de Towarnicki, allied fighter, goes to Freiburg in 1945 with Alain Resnais bringing Heidegger a sign of cultural solidarity at the moment of greatest political disgrace, and Heidegger still continues to allude to the Jewish conspiracy.

It reads like a book by Gide. But now everything is, if not clear, at least understandable, starting from the seemingly absurd decision to arrange for the publication of these notebooks. They would come out at a time when, perhaps, the "calculating thought" that Heidegger attributed essentially to Judaism would be replaced by a "meditating thought". Until that day, secrecy was absolutely necessary. In the light of all this, it is rather strange to think of Pietro Chiodi, a *Giustizia e Libertà* partisan, translating *Being and Time* and dealing with a prose that, as we have seen, Heidegger defines as deliberately contrived to "observe silence in thought". Really strange indeed—a left-wing ironical touch that is even more paradoxical if we think that, as we read in the notebooks, Husserl did not understand *Being and Time* because he was Jewish, i.e. homeland-less, *Heimat*-less and even *Hütte*-less.

3 Anti-Semitism

It has been said that Heidegger's was a metaphysical anti-Semitism. This expression has something odd about it. First of all, even if anti-Semitism is metaphysical it is still sheer anti-Semitism (each had their own: Goering's

was an aeronautical anti-Semitism, Goebbels's a media anti-Semitism and Heidegger's a metaphysical anti-Semitism). As such this statement is the caricature of another, much more serious statement made by Derrida in *Of Spirit* (1987). Here Derrida notes that Nazism does not represent the irruption of a foreign body into the world of spirit—on the contrary, it is rooted in the highest peaks of European culture.

Nazism was not born in the desert. We all know this, but it has to be constantly recalled. And even if, far from any desert, it had grown like a mushroom in the silence of a European forest, it would have done so in the shadow of big trees, in the shelter of their silence or their indifference but in the same soil. I will not list these trees which in Europe people an immense black forest, I will not count the species. For essential reasons, the presentation of them defies tabular layout. In their bushy taxonomy, they would bear the names of religions, philosophies, political regimes, economic structures, religious or academic institutions. In short, what is just as confusedly called culture, or the world of spirit (Derrida 1989).

So far, so good. But if in fact we move from theory to its caricature, that of "metaphysical anti-Semitism", things change. Insisting that anti-Semitism has a cultural root means introducing a kind of determinism: if you're an intellectual, with some training, and maybe if you're German, you can't help being anti-Semitic and pro-Nazi. I would add that insisting on metaphysical anti-Semitism involves dwelling on Heidegger's lengthy and uninteresting production after *Being and Time* and the immediately surrounding texts, such as *The Basic Problems of Phenomenology* or *Kant and the Problem of Metaphysics*, which add nothing to the 1927 book.

4 Politics

On Heidegger's anti-Semitism—metaphysical or not—I think I have said it all. However, I would like to open a chapter that I think people haven't thought about enough. No one has ever thought of making Thomas Mann a hero of the Left, while the Nazi rector of Freiburg was considered

one, at least in France and Italy. How is it possible? Before the publication of the *Black Notebooks*, Gianni Vattimo (*La Stampa*, June 2, 2012) argued that Heidegger was a Nazi but not a racist. One cannot help wondering: provided that there can be such a thing as a non-racist Nazi, is it not bad enough to be and keep on being a Nazi? Vattimo himself recognizes this when he approvingly notes that Heidegger did not want to be a "democratic" (in quotation marks) and "disciplined Atlantic" philosopher? One would say that it is bad, very bad.

Yet precisely those quotation marks around "democratic" and "disciplined Atlantic" suggest not only why Heidegger's Nazism was underestimated but why he was also read as an author of the Left. How is it that Heidegger has achieved—as a kind of reverted Lili Marleen, and without lifting a finger—the singular task of taking to the postmodern Left slogans, terms, and concepts that belonged to the Nazi worldview? How is it that the ultimate success of what a contemporary (Levinas) called "the philosophy of Hitlerism" took place in the Left and not in the Right, after the war? The mystery is revealed quite easily.

On the one hand, in post-war Germany, to talk about Nazi authors such as Heidegger, Jünger, Schmitt (and their common reference, Nietzsche) seemed undesirable, when German culture was understandably trying to turn the page. Things were different in France and Italy, and this explains the Colli and Montinari edition of Nietzsche's works, as well as the revival of Heidegger, first in France (often in anti-Sartre way, starting from the *Letter on Humanism*), then in Italy. This clearance (the term is appropriate, as it involves a change of borders and then a return to Germany via France and the United States) aroused the ironic remarks of a man of spirit like Jünger, who observed that he found all his works in the library of Mitterrand, but after all they could all be already found in Hitler's library.

However, in my opinion, there is a second, more decisive reason. After the war, it was as if the Left had taken upon itself the monopoly of politics. Politics and the Left were coextensive, therefore every political thinker, including Hitler's jurist, Schmitt, became a reference for the Left. The main merit of Faye's analysis in *Heidegger: The Introduction of Nazism into Philosophy* (which differs from previous studies on Heidegger's Nazism) lies in illustrating with clarity and depth the intimate political structure

of Heidegger's thought, which made him particularly recyclable, in a hyper-political time like the 1960s. History and decision are the only reality (which was in tune with Hitler's deadly anti-realism, but also with the most well-meaning anti-realists proclaiming the necessity of imagination in power), we should fight objectivity in the name of solidarity and cold intellectualism in the name of the community of people: "*That question*, through which our people rides out its historical destiny, enduring it through danger, holding it high in the greatness of its mission—that question is *its philosophizing, its philosophy*" (quoted in Faye 2011: 92).

This philosophical "movementism" appears very clearly in a 1934 seminar omitted from the *Collected Works* (which, therefore, rightly observes Faye, are not really complete) as well as in a seminar on Hegel of the same period: here Heidegger's fundamental intent is to politicize his thought so that, in order to illustrate the thesis of the identity of rational and real, he states that the Treaty of Versailles is not real. The insistence on historicity, understood as the becoming that can justify anything, is the keystone of Heidegger's constructivism—which amounts, in essence, to a triumph of the will to power. When postmodernists argued that any thesis and any truth must be indexed in the time they did it with emancipatory intentions, but were really repeating Heidegger's argument in defense of the *Führerprinzip*. Eager to move to Monaco to be closer to Hitler (as stated in his correspondence with Blochman), and perhaps acting on one occasion as the Führer's ghost writer, Heidegger transposed the present into eternity, politics into metaphysics, and vice versa.

5 Metaphysics

In yet another ironical circumstance related to Heidegger's reception, the deconstruction of the history of being which the philosopher engages in after *Being and Time* becomes a way for him and his followers to keep talking without the interruption of metaphysics. The reversal of Platonism is a way to talk about Plato and to revive the idea of the philosopher-king and the enlightened; the being that is not the being's being and which does not identify with the supreme entity becomes a way to talk about the Ultimate God; talking about *polemos* means giving an ancient Greek

touch to Jünger's total mobilization. The complexity and perversity of the strategy is twofold. On the one hand, overcoming metaphysics is rather a way to make it ubiquitous, as when Heidegger argues that Aristotle is involved in the functioning of the diesel engine. On the other hand, the eternalizing wind blowing on the philosophical Olympus hides contingent political references that are anything but metaphysical.

So, on stage we have Heraclitus and Plato, Aristotle and Descartes, Kant and Hegel, and behind the scenes or in the dressing room Dostoevsky, Jünger, Spengler and who knows who else: the story of being outlined by Heidegger in the 1930s and 1940s seminars on Nietzsche recovers the latter's fatalistic and titanic ontology, except for the reference to science. Indeed, what is being proposed is anything but scientific: Nietzsche is a lone eagle in secret dialogue with other great thinkers, a sacrificial victim like Hölderlin, awaiting redemption by the new historical contingency. As for the rest, there is a fusion of Nietzsche and Jünger in an accentuation of dynamism: it comes to overcoming metaphysics, which is characterized as forgetfulness of being, confused under beings and with beings, to prevail against nihilism and really think being.

Heidegger proposes the question of being in terms both political and theological. On the one hand, there is the theme of heroic nihilism and the resolute acceptance of the end of the gods. Caught between East and West, between the United States and Russia (as Heidegger wrote in the *Introduction to Metaphysics*, 1935), the metaphysical people *par excellence* is preparing for a heroic nihilism. As recalled by Farias, this comparison was later used, *mutatis mutandis*, by the Iranian premier Mahmud Ahmadinejād, a former disciple of Ahmad Fardid (1909–1994), who proclaimed himself a "fellow traveler" of Heidegger. On the other, there is the expectation of the last God: a new being who returns to lead a secularized world with the decisiveness of a Führer.

It is no coincidence that the seminars on Nietzsche go hand in hand with the drafts for his *Beiträge*, in which he speaks of being as an event, mysteriously alluding to a final God destined to save the earth from nihilism, and mentions (a little surprisingly, but confirming the suspicions about the historical identity of the last God) Junger's total mobilization (§ 74). In fact, in Heidegger the short circuit between the eternal and the present is always on the horizon. For example, the Greek temple of

which Heidegger speaks in another writing of 1935, *The Origin Of The Artwork*, was, in the first public versions of the conference, the Zeppelin Field in Nuremberg, constructed in Classical style (it was inspired by the altar of Pergamon) to accommodate Hitler's speech—whom even here Heidegger identifies with the divine. This, closing the circle, casts a sinister light on his 1966 statement that "now only a god can save us".

The distinctive feature of this dynamic ontology in which, under the sign of the event, being and nothingness coincide, is, as it were, its military and militating character. The tone is strictly vintage, so much so that it is found in another great nihilistic doctrine: Gentile's *The General Theory of the Mind as Pure Act*, conceived in 1916 in the wake of war enthusiasm. The same enthusiasm we find in Heidegger's classes on nihilism, when he celebrates the collapse of France under the blows of the Panzers of General Guderian: "These days we are witnessing a mysterious law of history, that is, that one day a people no longer lives up to the metaphysics triggered by its own history, and this happens just at the moment when this metaphysics has changed into the 'unconditioned'." Later, with an argument that recalls Goebbels when reporting the terrorism of Anglo-American bombing, he states: "If today, for example, the British destroy the units of the French fleet at anchor in the port of Oran, from the point of view of their power this is completely 'right'; in fact it is only what is useful to the strengthening of their power. This means, at the same time, that we never have to justify this approach; every power, from the metaphysical point of view, has its reason. And if it is wrong it is only by impotence."

6 Hermeneutics

No wonder that, long before Heidegger spilled the beans, his interpreters had to engage in a process of de-Nazification, which happened in many ways. First the historical-grammatical way: if you read Heidegger properly, understanding him and putting him in context, all misunderstandings would be solved. In this line of thought, consider François Fédier in Heidegger's *Political Writings.* When commenting on the closing lines of the allocution dated May 17, 1933 where Heidegger wrote: "to our great *Führer* Adolf Hitler a German Sieg Heil", the editor's comment is:

"Today the expression "Ski Heil" is still used—with no political connotation whatsoever—by skiers to wish one another a good ski" (p. 329 of the Italian translation, Casale Monferrato, Piemme 1998). This transformation of the Sieg Heil in Ski Heil is disturbing, especially when you consider that the Wink, the "gesture" or "nod" by which the Ultimate God, in the *Contributions to Philosophy*, announces the possibility of "another beginning" and the overcoming of nihilism is, in all likelihood, the Nazi salute.

But there also was—and continues to be, strange as it may seem—a mystical-allegorical way, which translated Heidegger's jargon so incomprehensibly that it achieved de-Nazification by confusion. Take the case of passage reported above, that has been rendered (not thirty years ago, but last year) as follows: "*That question*, through which our people stands to its springing being, that is, holds it alert for temptation and makes it rise up in the *extraneum* of the nobility of its mission—that question is *its philosophizing, its philosophy*" (*Che cos'è la verità?* Italian edition edited by Carlo Götz, Milano, Christian Marinotti Edizioni, 2011). With this hermeneutics even the orders of a *Sonderkommando* on the Eastern Front can be transformed into symbolist poems or recipes.

And what about the Rectorial Address, usually translated with a plain and unequivocal *The Self-Assertion of the German University*, which was re-translated as *The Self-Administration of the German University*? The text contains, among others, a passage where the only (maybe) understandable thing is the desire to fight, or, alternatively, to cut the budget? "Battle alone keeps this opposition open and implants in the entire body of teachers and students that basic attitude that allows self-limiting self-assertion empower resolute self-examination to come to genuine self-administration."

Admiration can be blinding, and this doesn't only hold for Heidegger. For example Baudelaire, in *My Heart Laid Bare*, writes as follows: "A pretty conspiracy to organize for the extermination of the Jewish Race./ The Jews, Librarians and witnesses of Redemption" (Baudelaire 1975). To say that these words were underestimated is a euphemism: Benjamin, commenting on the passage, calls it a "*gauloiserie*", (*Passagen-Werk*, J40, 1), while Claude Pichois, the editor of the works of Baudelaire by Gallimard, writes that the passage "is difficult to interpret," but that "any anti-Semitism is to be excluded".

7 Philosophy

Obviously at this point, and in conclusion, one may ask: what does all of this have to do with philosophy? Are we tackling the anti-Semitism of a twentieth century German man, or the thought of a great philosopher? I know that many believe that Heidegger is not a great philosopher, and that anti-Semitism, Nazism, and all in all the philosophical inconsistency we find in his 1930s works on the history of being are already present in *Being and Time*. I am not of this opinion. If we recognize that philosophy does not go through good intentions, we must also recognize that it doesn't go through bad intentions either, and that the work, in the end, is what counts. As dark, questionable, and ultimately kitsch as the category of "great philosopher" may be, the fact remains that a book is more than enough to achieve such status, and Heidegger wrote that book. Or, as it may displease (which is legitimate) to give the title of "great philosopher" to a Nazi, we can say that *Being and Time* is a great book, while the author can very well board the last train to Nuremberg.

As an Italian, I find myself in an advantageous position to understand a *vir unius libri* (i.e., a man of one book): this obsesses Heidegger in the *Notebooks*, where this expression appears literally and the problem of the continuation of *Being and Time* keeps presenting itself. Our greatest novelist, Alessandro Manzoni, only wrote one novel, and this does not make him any less great—and his taking interest in Longobard history and Catholic morals, instead of writing Nazi speeches or anti-Semitic notes, definitely makes him a nicer person. Back to Heidegger: let us leave anti-Semitism in the *Black Notebooks*, and keep metaphysics where we find it: in *Being and Time.* Everything else is an anguished wandering through the history of Being which mirrors private affairs, and often goes as far as sheer nonsense—as once said Franco Volpi who, being a person of interest, at some point intended to write a book called *Goodbye Heidegger!* If that is the case, wanting to blacklist *Being and Time* reminds one of a reverse book burning. However, I do not agree with those who say it would be like burning *Emile* because Rousseau sent his children to an orphanage. Rousseau preached one thing and did the other: he said that nobody could replace maternal love and then he sent his children to an orphanage, maybe on the pretext that he was not the mother anyway.

Heidegger's case is different: he did practice what he preached, playing the Nazi rhetorician and writing that the Jews had asked for it.

From this point of view, the *Black Notebooks* testify to the personal and speculative background of "the second Heidegger", and are important because they give an explanation of the "adventurous wandering" (Gadamer) around the history of Being. What Heidegger did was run in circles around his own obsessions, consolidated in the concept of "history of Being". What did Bouvard and Pécuchet say? "Ce qu'il y a d'important, c'est la philosophie de l'histoire" ("What is important is the philosophy of history"), and that's what Heidegger offered after *Being and Time*, through the concepts of thinking beyond metaphysics, *Destruktion* and *Abbau* (literally, "destruction" and "de-building"). As we know, philosophy of history is a branch of moral philosophy: an account of facts that has a moral goal. Its origin can be found in the *De Civitate Dei* (The City of God): Pagans are punished for their lack of faith, and history will progressively show the City of Man approaching the City of God. In Heidegger, instead, history is a downfall, a progressive oblivion of Being in which technology, metaphysics and the Jews have precise responsibilities. *They* are the culprits.

8 Pharisaism

The second Heidegger—the Heidegger of the history of Being, of the *Notebooks*, of the *Beiträge* (Contributions to Philosophy)—deals with morality in a wrong way. He compares the extermination of the Jews to mechanized agriculture and declares himself in favor of mercilessness beyond good and evil, and at the same time he maintains that questioning is the piety of thinking—so he calls himself extremely compassionate, but only in thought. In short, he preaches a theoretical moralism and a practical immoralism. What I would like to focus on is not his anti-Semitism or Nazism (which are not theoretically interesting, but morally repugnant), but something that has a Jewish name and universal validity: Pharisaism. It is an intellectual evil to which my attention has recently been brought by Kevin Mulligan's memorable conference, "Kant et le pharisaisme" ("Kant and Pharisaism"). The basis of Pharisaism is the idea

that one's moral value is determined by the beliefs one professes, rather than one's actions. If in Rousseau what predominates is hypocrisy (even more disconcertingly, as it pretends to be absolutely sincere, thus confirming Gide's saying that nothing is more premeditated than sincerity), Heidegger elaborates a theory of thinking according to which thoughts are the true, most intense and radical actions. This makes the statements in the *Black Notebooks* even heavier, since their author intended to act, not simply to theorize. As mentioned earlier, at the same time he maintained that the true piety is that of thinking, which expresses itself through questioning; a questioning that exempted him from any kind of common piety, and from actually doing something for those nomads who were subjected to a mechanized-agricultural treatment.

Heidegger is not the first who took this path, but he does embody the mainstream of modern philosophy. In the end, if we consider how light-heartedly over the last two centuries philosophers thought that the world depends on mankind, it becomes clear that this dependence, never proved and purely imaginary, hides a Pharisaic goal. Things only exist for subjects, who therefore are responsible for them on multiple levels, from the Kantian moralist to the Heideggerian shepherd of Being, from the Schmittian decisionist to the existentialist who thinks that the world is affected by the crises of their own conscience. This (largely imaginary and little practiced) enormous responsibility set the tone of philosophy in the last two centuries, when the correlation between humans and Being was considered evidence of the philosopher's political engagement—which, coherently with its premises, developed solely in the realm of ideas. Pharisaism creates what I would suggest calling "hermeneutical fallacy", the confusion between the axiological relevance of something (language is important, history and the subject are important, and it is even more important to have a roof over one's head and to manage to scrape together something to eat) and its ontological relevance.

The crucial aspect of Pharisaism is its non-falsifiability. Pharisees do not maintain that thoughts build reality; they just say they have an influence over reality that acts as a strange hidden quality. This quality bears the generic name of "interpretation" and can fit multiple occurrences: when it comes to claiming the importance of interpretation, Pharisees state that there are no facts, only interpretations, thus attributing full ontological

relevance to interpretation. But when it comes to defending themselves from the objection that interpretations are only valid in the case of a half-full or half-empty glass, not in the case of a full or empty one, and—more seriously—that to state there are no facts, only interpretations means to erase the past, responsibility, good and evil… this is when Pharisees declare they never negated the external world or the Holocaust. That is, they admit they have only been jabbering. In fact, the dependence they claim to support is purely nomenclatorial, and consists in asserting that the *names* of the objects known depend on the knowing subjects. Only a sacrifice of the intellect would make it possible to consider this dependence real. On the contrary, in exchange for this sacrifice, Pharisees obtain the ambiguous gift of omnipotence, though only on their computer desk. Among the precursors of Pharisaism one can find great, minor and small figures; however, and luckily, even among the Heidegger's heirs one can find differences in value which must not be underestimated.

9 Heidegger's Heirs

The most creative interpreters of Heidegger during the second half of the twentieth century (Derrida, Vattimo, and Rorty) always interpreted him from a left-wing standpoint, and in no way did they share Heidegger's political and ideological views. This distance, which is also cultural and linguistic (none of them is German), has surely helped. Maybe Rousseau's children preferred being sent to an orphanage to living with that paranoiac, and certainly postmodern thinkers were lucky not to have dealt with Heidegger personally, but only with his books, and often not with the worst ones (Derrida and Rorty were spared the confrontation with the *Black Notebooks* because they died before they were published). It is really hard to see how the Black Forest Nazi, a liberal New Yorker like Rorty, a Parisian Sephardi teacher like Derrida, and an Italian communist Member of Parliament like Vattimo could possibly live side by side.

It is truly a miracle that this cohabitation, impossible in reality, was instead entirely possible on paper, and led to a radicalization of Heidegger's opinions. Heidegger saw metaphysics as oblivion and truth as a downfall, whereas his successors turned metaphysics, truth,

and objectivity into evil gods living in a vindictive and terrible Walhalla. Again, morality is dealt with in the wrong way. Wrong enough to reach the conclusion, as Rorty and Vattimo did, that to promote solidarity it is necessary to get rid of objectivity and truth (an epistemological concept) and that the fight against the metaphysical tradition, which takes place in libraries, is comparable to the fight between British miners and Margaret Thatcher. This is a profound difference between Heidegger and his successors, and it obviously benefits the latter. While Heidegger, and Hitler, maintain that those who die deserve to die, their heirs (with what looks like a Benjaminian ethos) side with the victims. But even great interpreters have different opinions. For the sake of brevity I will only compare Derrida and Vattimo, who represent two different ways of being left-wing Heideggerians.

Derrida always criticized Heidegger, from his early works (for example, he accused Heidegger of idealism in *Ousìa et grammè*) to his mature ones (*Geschlecht—Heidegger's Hand* is possibly one of the most anti-Heideggerian texts ever written), to the late ones; the issue of animality, which is a key concept precisely in Derrida's last works, originates from a strong philosophical criticism of Heidegger's theory that animals cannot die, they can only decease. *De l'Esprit* (Of the Spirit) is also unforgiving towards Heidegger, but (together with the text in defense of Paul de Man, *Like the Sound of the Sea Deep within a Shell: Paul de Man's War*) it is one of the least successful, because his judgment of Heidegger's and de Man's anti-Semitism gets mixed up with cultural politics, since at the same time Derrida had to defend himself from attacks against deconstruction. Either way, it remains unquestionable that if there is one reader of Heidegger who shares none of the most controversial aspects of his philosophy, that is Derrida. Moreover, he also does not share Heidegger's anti-realism. The crucial thesis of the later Derrida's—that "justice is the undeconstructable"—in my opinion implies that "reality is the unamendable". It means there is a limit to deconstruction, which in particular cannot go as far as saying that unfair is fair. Also, it means that in order to be fair towards something one must operate in a real space: the fact that the Holocaust could never be morally just depends on our set of values, but it equally depends on what the Holocaust actually was in the real world, in which facts cannot be reduced to interpretations.

The case of Vattimo is entirely different, because *he never criticized Heidegger*, he just developed his thinking and made it actual. He does not even criticize the *Black Notebooks*: after asserting that Heidegger was a Nazi, but not an anti-Semite (which is impossible), he affirmed that anti-Semitism is part of Heidegger's radicalism, which is always left-wing anyway. In parallel, Vattimo openly took a stand against Israel, and stated that had it not been for his age, he would have gone fight with the Palestinians. It seems legitimate to recognize in Vattimo a strong component of traditional Catholic anti-Semitism. But his peculiarity is the anti-realism that characterized his final works. On the theoretical side, anti-realism means to adopt the imaginary constructionism of idealism, while on the political side it means to adopt the same radical anti-realism which lay at the roots of Hitler's political activity—it is anti-realism that we see in the attack to the Ardennes, in the vain Hungarian resistance and, quite representatively, in the fact that in April 1945 Hitler had a plan for the post-bellic rebuilding of Linz brought to him. Instead of reality, a moralistic view of politics and history prevails. Blessed be the last, for they will be deconstructed: at the core of the postmodern vision of Pharisaism, in line with a course of action that repeats itself on several occasions, we have to deal with a clash between good and evil in which the good systematically seems to be represented by the losing party. This implicitly means that, should the losing party prevail, it would immediately cease to be good and become evil. As Vattimo says: "from weak thought to the thought of the weak", which would be like saying from a philosophy of misery to the misery of philosophy. There's nothing bad about it; on the contrary, there can even be something good here, provided one does not forget that among the weak were also, for example, German people scared by the cold and humiliated by the defeat, ready to respond to terror with terror: that is, the Nazis.

10 "Can You Still Be a Heideggerian?"

As in Hugo's *Châtiments*, the real punishment that God inflicts upon Napoleon is not the 1812 catastrophe or the 1815 defeat, but rather Louis Bonaparte's coup many years later—an event that Marx also described as a farce. Consider these three quotations:

> Denied or claimed non-reading is a form of intellectual dishonesty. But it is not the only one. A related and more serious form of it is plagiarism: the thoughtless and relentless theft of ideas, insights, observations. New technologies are not enough to explain it. It is, again, the absence of any ethics in the relationship with the text and with the author. Take a book, or an essay, and plunder it with copy-and-paste; so, without much hesitation, you pass it off for your stuff. What is the point of quotation marks? (Donatella Di Cesare, *Heidegger & Sons*, Turin, Bollati Boringhieri 2015, p. 41.)
>
> The disciple's consciousness, even more so if she is female, grateful to the master, is an unhappy consciousness. For when she starts to speak, or better, when she resumes the interminable and silent dialogue with the master, his questions, his answers, although the master didn't want to have the last word, she feels herself indefinitely challenged, or rejected or accused by the voice of the master that speaks within her and before her, to reproach her for making this challenge and to reject it in advance, having elaborated it before her, after all. She would then be forced to remain an "infant", that is, not to speak—only, this unhappiness stems from the fact that she hides from herself that—in academia as in real life—that the master, like the father, is always absent. (Donatella Di Cesare, *Heidegger & Sons*, Turin, Bollati Boringhieri 2015, p. 49.)
>
> The disciple's consciousness, when he starts, I would not say to dispute, but to engage in dialogue with the master or, better, to articulate the interminable and silent dialogue which made him into a disciple—this disciple's consciousness is an unhappy consciousness. Starting to enter into dialogue in the world, that is, starting to answer back, he always feels "caught in the act," like the "infant" who, by definition and as his name indicates, cannot speak and above all must not answer back. (…) He feels himself indefinitely challenged, or rejected or accused; (…) by the master who speaks within him and before him, to reproach him for making this challenge and to reject it in advance, having elaborated it before him; (…) This interminable unhappiness of the disciple perhaps stems from the fact that he does not yet know—or is still concealing from himself—that the master, like real life, may always be absent. (Jacques Derrida, *Writing and Difference*, London, Routledge 1978, pp. 36–37.)

Pharisaism means placing one's moral value in the ideas that one professes rather than one's actions. Therefore, the condemnation of plagiarism at page 41 is more than enough to justify plagiarism at page 49.

"Can you still be a Heideggerian?" wondered *Charlie Hebdo* in December 2015. Would a student today specialize in Heidegger? And how can one quote—say, in post-colonial studies or women studies—someone who hailed Hitler not by mistake but by inner rooted conviction? Kierkegaard said he'd had enough of Schelling when the latter was still alive and pontificating in Berlin in the 1840s—we have a lot of nerve to still worship Heidegger 40 years after his death. And yet, are we still doing it? Isn't it profoundly wrong to see philosophy as a family heritage?

And yet the answer to the question "Can you still be Heideggerian?" is: of course you can. *Tant qu'il y aura des hommes* … Or, more exactly, as Bayle put it, no sect can be defeated enough for it not to reappear elsewhere. Heidegger's left-wing luck began in 1945, while he was being processed for Nazism—of course Heideggerians will not think much of these bagatelles for a massacre! Of course, there are worse things than Heideggerism, which had the merit of showing the nature of Pharisaism at its best, warning us about our weakness as vain intellectuals.

De Maistre wrote a letter to his daughter, saying: what if, instead of giving birth to your brother, your mother had written a novel? Would it be better or worse? In fact, it is not enough to give birth to someone: you must educate them, make them a gentleman and a good soldier who wouldn't flee the battle. I am familiar with this objection: that's conservatism's, and it's very easy to condemn the phallogocentrism of someone who reduces the role women to householders and writes to daughters speaking of sons. However, this can be translated in positive terms: in the demand that actions be coherent with thoughts and, even more, that actions have an exemplary value—that is, that they can imitated as actions and not contemplated as theories.

Spielberg's heroes—Schindler and now Donovan from *Bridge of Spies*—are characterized by this exemplarity. And the real alternative (not only moral, but theoretical) to Heidegger's "metaphysical anti-Semitism" is Dimitar Peshev, man without qualities and second-order politician of a small nation (vice-president of the Bulgarian parliament) who accepted without a flinch the anti-Semitic laws introduced in his country. And yet on March 7, 1943, when he learned that deportation was about to actually take place, he wrote to the prime minister denouncing the fact and obtained the signature of 43 other members of parliament, provoking

a scandal that made deportation impossible. Eight hundred thousand Bulgarian Jews owe him their lives, and if there had been a Peshev in Italy, France, Poland, the Netherlands, things would have been different for the Jews of those countries.

What if Peshev had written that thought is the highest form of action? What if, instead of a letter to the Prime Minister, he'd written a novel or taken note of his thoughts in a Black Notebook?

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8

Just Organic Wholes

Leo Zaibert

The age-old problem of the justification of punishment has classically opposed two remarkably different schools of thought. On the one hand we have the school of thought that justifies punishment by (some of) the alleged consequences that punishment is supposed to generate—consequentialism. And on the other hand we have the school of thought that justifies punishment by the fact that punishment is deserved—retributivism. While the debate is as old as society itself, in its contemporary incarnation, the debate is typically seen, for obvious reasons, as opposing utilitarianism and Kantianism. In a sense, then, this specific debate is part and parcel of the more or less recent history of ideas. That is, insofar as modern utilitarianism is properly seen as the British (or the Anglo-American, perhaps; or as the analytic) approach, and Kant is evidently properly seen as the German (or continental) approach, the debate may seem as one manifestation of this binary general distinction.

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Barry Smith has complicated this perhaps over-simplified picture by systematically arguing for the usefulness of recognizing the existence of a school of thought properly termed Austrian philosophy—a philosophical tradition which although by and large written in German, ought to be seen as importantly different from German philosophy (Smith 1994). In a way, Austrian philosophy, Smith argues, shares more with analytic philosophy than with German philosophy, insofar as it exhibits "a sympathy towards and in many cases a rootedness in British empiricist philosophy" (Smith 1994, 3). To a great extent, this affinity with Anglo-American philosophy is inseparable from Austrian philosophy's rejection of Kantian philosophy, and of the latter's towering influence over German philosophy proper.

Here I wish to show how the specific case of punishment, too, displays a certain oversimplification of the territory. It is neither accurate nor helpful to see the debate over the justification of punishment as neatly breaking down into the consequentialists and the retributivists, into the (Anglo-American) utilitarians and the (German) Kantians. There exist, I will argue, profoundly anti-Kantian thinkers who nonetheless embrace retributivism. Not surprisingly, some of these thinkers happen to be emblematic figures of the tradition of Austrian philosophy with which Smith has been concerned, above all Franz Brentano.

While it may be tempting to conceive of Austrian philosophy in purely geographic terms, Smith seeks to identify some central non-geographic characteristics that allow us to identify Austrian philosophy as such. One of these central characteristics is particularly helpful in explaining how one could be an anti-Kantian retributivist. Smith tells us that Austrian philosophy displays "a concern with ontological structure, and more especially with the issue as to how the parts of things fit together to form structured wholes" (Smith 1994, 4). For reasons I shall explain in due course, an important sub-set of these wholes is comprised of *organic* wholes—wholes whose value is not necessarily identical to the sum of the value of their parts.

1 Franz Brentano and G. E. Moore

In the very first sentence of his review of Brentano's *The Origin of Our Knowledge of Right and Wrong*, Moore claimed that it contained "a far better discussion of the most fundamental principles of ethics than any

other with which [he was] acquainted" (Moore 1903a, 115). Although he detects a certain arrogance in Brentano's "confidence in the originality and in the value of his own work", Moore nonetheless admits that such self-confidence is "completely justified" for "it would be difficult to exaggerate the importance" of Brentano's work (Moore 1903a, 115). Alas, Moore's reasons for such an extraordinary assessment—particularly against the backdrop of the rich tradition of superb British moralists with which Moore was evidently acquainted—remain, even among those familiar with Moore's review of Brentano, under-investigated. The most notable exception has been Roderick M. Chisholm, whose *Brentano and Intrinsic Value* is not only the best presentation of Brentano's ethics in the English language, but also the best study of its connection to Moore's views (Chisholm 1986).

As Chisholm reminds us, "Brentano's theory is a theory of intrinsic value. It is concerned with that which is 'good and bad in itself' or 'good or bad as an end' and not with that which is merely good or bad as a means" (Chisholm 1986, 3). Moreover, Chisholm also points out that Brentano's theory ought to be sharply distinguished from

> the theories of Bentham, Mill, and Sidgwick, who had held that pleasure alone is intrinsically good. Some pleasure is not intrinsically good, according to Brentano, and some displeasure is not intrinsically bad. Moreover, some things other than pleasure are intrinsically good, and some things other than displeasure are intrinsically bad. (Chisholm 1986, 4)

Brentano's theory, then, is not just concerned above all with intrinsic value; but it is also evidently "pluralistic", in the sense that it allows a variety of things other than pleasure to be intrinsically valuable (Chisholm 1986). These two characteristics are also conspicuously present in Moore's ethics: Moore is above all concerned with intrinsic value, and his views are pluralistic. These shared characteristics explain why some have pointed out that "Brentano's ethical theory was an ideal utilitarianism that had yet to acquire the name"—an ideal utilitarianism *avant la lettre* (Welsh Jordan 1992, 221). After all, it is Moore himself who is generally regarded as the most influential exponent of ideal utilitarianism.[1]

For my purposes here, there is a crucial distinction between ideal utilitarianism and *the* version of utilitarianism that has overwhelmingly

commonly operated within the context of punishment theory: classical (i.e., Benthamite) utilitarianism. Classical utilitarianism is both hedonistic and non-pluralistic whereas ideal utilitarianism is emphatically neither. Brentano denies that there exists "one sort of thing that would be under all circumstances the best thing attainable". Neither the maximal augmentation of pleasure nor the maximal diminution of suffering would be necessarily the best thing to do: "for Brentano's ideal consequentialism, there is no concrete, non-formal end the pursuit of which would always be a positive value" Welsh Jordan 1992, 222). And exactly the same can be said of Moore's ideal utilitarianism.

While evidently pluralistic and non-hedonistic, ideal utilitarianism is still utilitarianism in the sense that its adherents believe that the right thing to do is to maximize the amount of intrinsic goodness in the world, however variegated and indeed plural the contours and the constitutive elements of such goodness may turn out to be. Ideal utilitarianism represents an obvious advantage over classical utilitarianism: because of its pluralism, because of its allowing many—potentially infinite—things to be valuable in themselves, ideal utilitarianism assumes and is able to engage with—and in much less simple-minded way—a much richer moral universe than does classical utilitarianism. The classical utilitarian is simple-minded in the sense that, in the final analysis, she has only one goal in life: to seek pleasure (or to avoid suffering), and only one simple formula for establishing value: the more pleasure (or the less suffering) the more value. And since this is the only goal, she hardly has space for moral conflicts in her worldview, and in fact, she hardly has space for *really difficult* choices (that is, choices where the difficulty goes beyond computation).

I think that even the most cursory reflection on our moral lives, on "what experience makes evident to us" (Brentano 1969, 31), lends all the support that is needed to the view that a richer axiology does a better job of capturing the moral universe as it really is than does an impoverished one. We value all sorts of things: knowledge, love, friendship, art, sports, food, and so on; and we do not think that we could easily—if at all—express the value of some of these things in terms of anything else without thereby caricaturizing it, as classical utilitarians seem committed to doing. Recall Brentano's famous example:

> Consider how ridiculous it would be if someone said that the amount of pleasure he has in smoking a good cigar is such that, if it were multiplied by 127, or say by 1077, it would be precisely equal to the amount of pleasure he has in listening to a symphony of Beethoven or in viewing one of Raphael's madonnas. (Brentano 1969, 31)

And it is precisely this sort of fungibility that classical utilitarians require—everything has to be expressible in the homogenizing terms of the amount of pleasure it generates—that pluralists reject.

As a way to further bolster axiological pluralism, consider also the way in which one the most ingenious contemporary defenders of the axiological monism enshrined in classical utilitarianism deals with Brentano's powerful objection, and with two other even more famous—and in my opinion even more damaging—objections to hedonism. Fred Feldman links Brentano's point to a similar point made by John Rawls in *A Theory of Justice*:

> there are different sorts of agreeable feelings themselves incomparable, as well as the quantitative dimensions of pleasure, intensity and duration. How are we to choose a brief but intense pleasant experience of one kind of feeling over a less intense pleasant experience of another? (Feldman 2004, 45–46; cf. Rawls 1999, 488)

Immediately, however, Feldman claims that "the general drift of the passages [Brentano's and Rawls] is fairly clear, but the details of the argument remain obscure". In light of this alleged obscurity, what Feldman offers in response is rather humble: in his own words, "really just a suggestion" (Feldman 2004, 46).

Feldman's suggestion is to offer three different detailed interpretations of what Brentano and Rawls may be after in these passages. Feldman's first interpretation sees the passages as "just an application of the principle that 'ought' implies 'can'" (Feldman 2004, 46). The passages may be read as offering the following objection: sometimes we are under an obligation to determine the relative pleasantness of two experiences, and we cannot do this in cases such as Brentano's cigar. Feldman's second interpretation is that Brentano and Rawls are in fact suggesting that hedonistic utilitarians cannot admit that different pleasant experiences can indeed

be phenomenologically different. Finally, Feldman's third interpretation posits that the passages seek to question the possibility that pleasant episodes "come in precise amounts" Feldman 2004, 48), so that the passages may merely seek to challenge the computational accountancy of classical utilitarianism.

Although I think that the passages, in any of Feldman's interpretations, pose serious and obvious problems for hedonism, in the end Feldman concludes that they do *not* pose too serious problems after all. For, in his view, the hedonistic utilitarian may, addressing each of these three possible objections in order, admit that (1) she may in fact be unable to "calculate accurately the number of hedons in any episode of pleasure" (Feldman 2004, 47), that (2) she needs to endorse a more complicated ontology whereby in addition to any experiences we have (which could be phenomenologically very different from each other) we also have "the feeling of pleasure itself" which is always phenomenologically identical (Feldman 2004, 48), and that (3) pleasure and pains cannot be measured anyhow.

These are not inconsequential admissions, and, unlike Feldman, I do not think that hedonistic utilitarianism can survive unscathed after its proponents make any of these admissions. Rather than digressing on why these are problems for hedonistic utilitarians, I want to suggest that Feldman misses the essential point of the objection in these passages, what he calls their "drift". The gist of the objection is that hedonistic utilitarianism is *reductive*: more precisely, that it reduces the complexity of our moral life to an impoverished monism. In other words, the gist of the objection is that there is more to life than pleasure.

Brentano's project is predicated on the view that one thing being better than another sometimes has "nothing to do with [the] comparative intensity" of the bare pleasures each generates, but rather with the "peculiar type of phenomenon … of preferring"—a phenomenon linked to the idea of it being *correct* to value one thing more than another, independently of any consideration regarding pleasure (Brentano 1969, 26). One reason why we may be correct in preferring one thing over another is that that thing *deserves* to be so preferred. Neither Brentano nor Rawls (though for different reasons) was at all concerned in these passages with the problem of quantifying pleasures or suffering as such, but rather with exposing the simple-minded monism of classical utilitarianism.

Let us then turn to Feldman's reaction to two other famous objections which Feldman seems to think pose more serious problems to hedonistic utilitarianism and to the impoverished axiology it presupposes: Moore's "Heap of Filth" thought experiment and W. D. Ross's "Two Worlds" thought experiment. Feldman groups together these two objections in what is effectively the last chapter of his book, entitled "Problems about Beauty and Justice".[2] I think that this reveals the importance that Feldman, rightly, attaches to these objections. But, again, I do not think that Feldman is in the end convincing—I think that these objections do reveal insurmountable difficulties for the reductionist axiology of hedonistic utilitarianism. This is Moore's famous thought experiment:

> Let us imagine one world exceedingly beautiful. Imagine it as beautiful as you can; put into it whatever on this earth you most admire—mountains, rivers, the sea; trees, and sunsets, stars and moon. Imagine all these combined in the most exquisite proportions, so that no one thing jars against another, but each contributes to increase the beauty of the whole. And then imagine the ugliest world you can possibly conceive. Imagine it simply one heap of filth, containing everything that is most disgusting to us, for whatever reason, as far as may be, without one redeeming feature. Such a pair of worlds we are entitled to compare. […] The only thing we are not entitled to imagine is that any human being ever has or ever, by any possibility, can, live in either, can ever see and enjoy the beauty of the one or hate the foulness of the other.

And Moore's no less famous reaction to this comparison was this:

> Well, even so, supposing them quite apart from any possible contemplation by human beings; still, is it irrational to hold that it is better that the beautiful world should exist, than the one which is ugly? Would it not be well, in any case, to do what we could to produce it rather than the other? Certainly I cannot help thinking that it would; and I hope that some may agree with me in this extreme instance. (Moore 1903b, 135)

This constitutes a problem for classical utilitarianism in the sense that, if one agrees with Moore, there exists, then, something more valuable than something else and this is completely independent from considerations

regarding pleasure or suffering, since after all neither of Moore's two worlds contains any of either. Feldman, however, disagrees: "when considered in itself, devoid of population as it is stipulated to be, the beautiful world is intrinsically no better than the ugly one" (Feldman 2004, 192). I find it difficult to agree with Feldman on this. But it could be argued that this is one of those cases in which we have reached a point of disagreement about bedrock intuitions and that is that. The hedonistic utilitarian's claim that the beautiful world is better *only* insofar as this world "has the capacity (if only it could be populated!) to produce pleasure in those who contemplate it" (Feldman 2004, 192) is evidently not absurd. And this is a position that could, moreover, in the final analysis be correct. But we can, I think, avoid this sort of stalemate of intuitions by considering the next objection to hedonistic utilitarianism, in which the stalemate does not obtain.

Ross writes:

> If we compare two imaginary states of the universe, alike in the total amounts of virtue and vice and of pleasure and pain present in the two, but in one of which the virtuous were all happy and the vicious miserable, while in the other the virtuous were miserable and the vicious happy, very few people would hesitate to say that the first was a much better state of the universe than the second. (Ross 1930, 138)

Feldman begins his reply by admitting that "Ross's objection is a tougher nut to crack [than is Moore's]". And he immediately adds: "whereas we can reasonably say that in itself the beautiful world is no better than the ugly one, it may seem somewhat unreasonable to say that the just world is no better than the unjust one". In spite of a certain air of evasiveness in Feldman's "may seem somewhat unreasonable" rider, he does more or less straightforwardly admit that he is "prepared to acknowledge that the more fitting allocation of pleasures and pains in [the just world] makes it better in itself than [the unjust world]". Moreover, Feldman recognizes that scenarios such as Ross's two worlds, unlike Moore's, do call "for further refinements in [his] formulation of hedonism" (all from Feldman 2004, 192)—a project to which he turns, however, only on page 192 of a 196-page long book, and which thus unfortunately remains woefully inchoate.

The reason why Feldman thinks that replying to Ross's objection is harder than to Moore's should by now be clear. Even if perhaps this could be seen as stubbornly refusing to engage with the objections at hand, it really is not absurd to react to Moore's example by protesting that the very talk of worlds which no one could ever experience is fancifully improbable, or otherwise unrealistic. Maybe really the only way in which the beautiful and the ugly universes can be said to differ is by somehow smuggling sentient beings into the picture—either as (potential) inhabitants of those worlds, or simply as a result of having been asked Moore's questions about these worlds. Ross's objection, in contrast, does not permit this move: his two worlds *are* supposed to be populated by ordinary sentient beings like ourselves. Moreover, while modifications to Moore's example so as to suggest instances that we could actually experience are necessarily impossible—since the example requires the absence of sentient beings—examples such as Ross's are perfectly familiar in our everyday life. We commonly experience wrongdoers getting away with it (i.e., vicious people enjoying pleasures), as well as deserving people not getting recognized (i.e., virtuous people suffering)—and when we witness these sorts of cases we are, understandably, affected. Other things being equal, we prefer (i.e., we think it is better, more valuable)—and we are *correct* in so preferring—justice to injustice. To deny this strikes me not only as utterly implausible, but as downright perverse—as Feldman himself may be taken to have conceded. This preference has something to do with the idea of organic wholes, as I shall argue next.

2 Harmonies and Values

Despite his many agreements with Brentano, Moore criticized him for not giving enough importance to "the principle of organic unities"—a principle for which Moore himself is conspicuously famous (Moore 1903a, passim). Chisholm admits that "the principle of summation [Brentano] had offered [in *The Origin of Our Knowledge of Right and Wrong*] is inconsistent with the principle of organic unities", as Moore alleges (Chisholm 1986, 69–70). But Chisholm also points out more than one way in which Brentano's view therein "presupposes Moore's principle [of organic

wholes]" and that in fact many a remark by Brentano "enables us better to understand the concept of organic unity" (Chisholm 1986, 70). Chisholm also refers to passages contained in Brentano's unpublished manuscripts that clearly reveal that he was operating with something very much like the framework of organic wholes in mind. And I think that the usefulness of this framework for understanding the morality of punishment continues to be regrettably under-researched. The question in front of us now is: What exactly about the framework of organic wholes is it that is so helpful for understanding punishment? The answer is somewhat circuitous.

The most salient—and most famous—characteristic of organic wholes is that their value is additively independent from the value of their parts. Imagine a whole formed by, say, three parts, *a*, *b*, and *c*, and assume that the values of these parts—in isolation—is, in order, 2, 3, and 5. The theory of organic wholes states that it is not necessary that the value of a whole containing *a*, *b*, and *c*, be 10—it could be more or less than 10. Initially, perhaps, this may appear mysterious: what could possibly be the source of this differential value? The mystery can, however, be dispelled—and much more easily than usually assumed.

Consider the examples offered by another important philosopher who, like Moore, spoke in superlative terms of Brentano's seminal work on axiology (even though, also like Moore, he thought that Brentano's treatment of organic wholes was too "preliminary"). As he sought to develop Brentano's views, Edmund Husserl offered as perfectly non-mysterious examples of organic wholes "any melodic or color harmony whatsoever" (Husserl 1988, 96). I can, for example, gather together in my own way the same piano *parts* that form Mussorgsky's *Pictures at an Exhibition*, and what I will thereby produce will be unfathomably less valuable than Mussorgsky's original masterpiece. Independently of the *parts* of any whole themselves, the specific *ordering* of these parts generates—or fails to generate—value in different degrees. The value of these orderings in examples such as the one contrasting my arrangement of notes to Mussorgsky's arrangement is so great that it actually tilts the scale in the opposite direction from the prima-facie skepticism with which we began: What, *other than this ordering*, could possibly be the source of the differential value of values containing the same parts? Needless to say, to

deny that there are differential values in these cases is to admit that all melodic (or color) harmonies are equally valuable—not really a serious proposition.

The skeptic may perhaps insist, suggesting that Husserl's examples are unpersuasive in that musical notes, by themselves, or colors, by themselves, are valueless: the color green is as valueless as is the note G. But I think that this skeptical effort risks proving the opposite of what it wants: if the notes that make up a musical composition (or the colors that make up a certain painting, etc.) are indeed taken to be valueless, then it would seem that the value of any musical (or color, etc.) composition does after all flow *entirely form the ordering* of notes (or colors, etc.) itself—since *ex hypothesi* there would simply be nothing else from where it could flow. So, I find hard to avoid the conclusion that Husserl's examples do dispel any mystery regarding Brentano's point that "the value of a whole is not a function merely of the value of the parts of the whole. 'Goodness also lies in the relations which are exhibited within the whole'",[3] or Moore's point that an organic whole "has an intrinsic value different in amount from the sum of the values of its parts" (Moore 1903b, 87).

Given my purposes, Husserl's examples are helpful mainly in the explanatory sense: they help explain what organic wholes are and how they can indeed exist. But I wish to turn our attention back to examples of organic wholes in contexts that are closer to the axiological evaluation of punishment. For a few years I have been pointing out how significant I find the fact that a utilitarian (albeit an ideal one), like Moore, could endorse retributivism.[4] I still find this fact significant (and not sufficiently discussed by contemporary punishment theorists), and I want to explore here how this is possible and what is its significance. And that explanation is also the answer as to what exactly is so helpful about the framework of organic wholes for the debate concerning the justification of punishment.

The beginning of wisdom is to heed the distinction between the axiological and the deontic: Moore's retributivism is purely axiological. There is value in deserved punishment, in the sense that deserved punishment can add value by belonging to this or that organic whole. This admission is not at odds with his utilitarianism, even though it indeed is anathema for *classical* utilitarianism. Furthermore, by deploying the framework of

organic wholes, he avoids the evidently inappropriate moral mathematics of simple-minded accountancy. An organic whole in which a deserving wrongdoer suffers to the extent that she deserves may be more intrinsically valuable than one in which all remains the same except that this deserving wrongdoer does not suffer.

As Moore turned his attention to organic wholes "exclusively composed of two great positive evils—wickedness and pain", he suggested that:

> quite apart from *consequences* or any value which an evil may have as a mere means, it may, supposing one evil already exists, be worth while to create another, since, by the mere creation of this second, there may be constituted a whole less bad than if the original evil had been left to exist by itself. […] [W]here an evil already exists, as in this world evils do exist, the existence of the other part of these wholes will constitute a thing desirable *for its own sake*—that is to say, not merely a means to future goods, but one of the *ends* which must be taken into account in estimating what that best possible state of things is, to which every right action must be a means. (Moore 1903b, 264. Italics in the original.)

In other words, Moore believes that an organic whole in which wrongdoers enjoy impunity could, other things being equal, be less valuable than an organic whole in which these very same wrongdoers suffer (to the extent that they deserve)—even if the former organic whole contains less suffering than the latter, and even though suffering, considered in isolation, is a very bad thing indeed.

The other seminal (*avant la lettre*) ideal utilitarian thinker we have been discussing, Brentano, was interested in exactly this sort of case—and reacted in a way very similar to Moore's. Brentano identified three different general types of organic wholes "(1) the *bonum variationis*; (2) the *bonum progressionis*; and (3) the value of retribution or requital" (Chisholm 1986, 70). I will here ignore the first two types, but would like to note that Chisholm helpfully reminds us that it was precisely regarding the third type of organic whole, involving the case of retributivism in particular, why Brentano "had revised his original views" (Chisholm 1986, 71). Chisholm further calls our attention to Brentano's view whereby

> if at the Last Judgment a greater amount of bliss were given to a person who actually deserved it less, then he would have a greater amount of good than he otherwise would have, but the good in the universe considered as a whole would be less. (Brentano 1969, 149; cf. Chisholm 1986, 72)

And Chisholm reports that in an unpublished fragment titled "On the Good that There is in Order or Arrangement" Brentano defended the view that "wickedness accompanied by sorrow is better than wickedness accompanied by pleasure", and that this fact "may justify the sorrow that is involved in repentance and the pain that is involved in vindictive punishment". Chisholm ascribes to Brentano the following view: "If A is a wicked deed and if B is the suffering involved in the sinner's remorse or in his retribution, then the two evils, A and B, may be preferable to A without B" (Chisholm 1986, 72).

Neither Moore nor Brentano mentions the term 'desert', but it is evident that their concern with "retribution" and "retributive punishment" is a concern with *deserved* punishment. By linking the notion of desert to the discussion of organic wholes it becomes clear that the reason why our authors agree that deserved punishment can, other things being equal, be better than impunity is that desert gives a certain *order*—a certain *meaning*—to the whole in which it appears, and this in turn generates intrinsic, non-instrumental, value. In Brentano's Last Judgment example the whole he had in mind was, presumably, the world as such. What is at stake in Brentano's example is evidently the question as to what bestows meaning to the world.

This order is not meant to be mere temporal sequence, though it could be just that. Consider two organic wholes, whose parts are stipulated to have the same exact values *qua* parts. The first organic whole contains a person who after raping and burning someone, has a car accident, suffering injuries that amount to a certain amount of pain. In the second organic whole, someone witnessed the crimes, and then decided to beat up the rapist murderer, causing exactly the same amount of pain as the car accident in the previous case. In principle, the value of these two organic wholes, even though the chronology of events is assumed to be the same, could be different.

Consider a third organic whole: someone is hit by lightning when he is 25-years-old, and this event causes the same amount of pain as in the two previous examples; later, when he is 30-years-old, unrelatedly, he rapes and murders someone (causing the same amount of pain as in the previous examples, etc.). The consequentialist will again have difficulty explaining why any difference between these three cases—all assumed to generate the exact same amount of pain—should be admitted. The order, the plot, is in principle (excluding consequentialist considerations, which we are in these examples excluding) irrelevant: what matters to the consequentialist is the bottom line—and in all these examples the bottom line is assumed to be numerically the same.

None of this should be taken to entail that the intrinsic value that desert generates cannot be defeated by other values. Rather, it is to say that that value is not as mysterious as many thinkers have claimed it is.[5] The value of desert is the result of it being a form of order, an arrangement, or an emplotment. The very imposition of this order adds value to the organic whole whose parts have been so ordered. Just consider how different the following sequence of numbers—1, 1, 2, 3, 5, 8, 13, 21, 34, …—must be for someone who knows of Fibonacci and for someone who does not. And even if one imagines two people, neither of whom familiar with Fibonacci's sequence, the difference between the one who recognizes a pattern and the one sees this as utterly random is significant: the former has recognized much more meaning than the latter.

Granting, *arguendo*, that the "problem of beauty" captured by Moore's heap of filth thought experiment is less devastating for monistic axiologies than the "problem of justice" captured by Ross's two worlds thought experiment is not to deny the structural similarities between them. We can now also see structural similarities between them and cases of deserved punishment. Beauty is the result of imposing a certain order (arrangement, structure, etc.) upon a group of entities—and therein lies part of its value. Justice, too, is the result of imposing a certain order (arrangement, structure, etc.) upon a group of entities. And to give someone what she deserves—even when what she deserves is suffering—is to impose a certain order (arrangement, structure, etc.). All these orderings, arrangements and structuring convey *meaning* to a given situation and to our lives in general.

3 To Each His Own

One need only recall the age-old views whereby justice is a matter of *harmony* in the soul, and of rendering to each his due—views which are nothing short of cornerstones of our intellectual tradition going at least as far back as Plato, if not cornerstones of our very fabric as human beings. To take but one example amongst many, consider how Francis Ellingwood Abbot put it, when he described justice as "the one absolute and all-inclusive word in ethics", and he suggested that justice is "grounded in reciprocity of ends and means as organic harmony", and that "its ethical formula is, perhaps, the ancient *cuique suum*—'to each his own', 'give every man his due'" (Abbot 1895, 216). There can be no harmony in these contexts without desert: the "due" just mentioned, what each person is "due", does not refer, evidently, to what by this or that convention or positive law she is *entitled* to—it refers to what she *deserves*. The sense in which there is justice in my receiving the money I won in a raffle—to which I am no doubt *entitled*—is too humble to be the sense which has exercised every thinker ever to care about this topic. The sense of the "*cuique suum*" maxim has always related to people getting what they *deserve*. And this applies not only to "retributive justice" (understood here not as connected to retributivism as such, but to the ways in which we respond to wrongdoing generally) but also to distributive justice. That is why it is so common to quote Aristotle: "all men agree that what is just in distribution must be according to desert in some sense" (Olsaretti (2003), 1; see also Cupit 1996).

It is important to underscore that invoking these venerable conceptions of justice here is meant to illustrate the thread connecting desert to justice, to organicity, and eventually to value. The point is to indicate where the value of giving people what they deserve comes form—not to endorse any particular deontic policy or any particular view of distributive or retributive justice. Throughout history the *cuique suum* maxim has been invoked in order to support all sorts of different political agendas—and perversions of the principle are no doubt possible: say, the Nazis cynically invoking the maxim (*Jedem das Seine*) at the gates of the Buchenwald concentration camp. None of these aberrations, however, affects the purely axiological point being made here.

Consider the typical classical, non-pluralist approach: if, say, a crime has already been committed, that crime has brought about some suffering—and suffering is always, undifferentiatedly, bad; to now punish the criminal is simply to add more suffering to the world. So, the non-pluralist hedonist concludes that, unless there would be some good consequences in inflicting this additional suffering, some likelihood that this additional suffering that is concomitant to punishment will actually tend to reduce suffering down the road (via prevention, rehabilitation, deterrence, etc.), there is nothing valuable in inflicting "deserved" punishment in itself. But this is simply to refuse to recognize the value that the very arrangement or order that desert imposes on some organic wholes. It is to assume that the axiological significance of the connection between the different episodes of pain in the world is identical to the axiological significance of entirely *random* collections of said episodes.

In her exaggerated desire to see one single source of value, "one single end for all moral deliberation", to adapt to axiological concerns Rawls's more deliberative-oriented way of putting it, the non-pluralist hedonist would claim not to see the value in any ordering *qua* ordering. She would see the moral universe as perfectly, and uninspiringly, *commutative*. Consider *R*, who rapes *V*, and who thereby causes great suffering to *V*, and who, let us assume, does not himself suffer at all. If *R* were to be made to suffer, the non-pluralistic hedonist would think that this state of affairs is worse than the first one, since the only difference she will see is that now there is more suffering (unless, of course, if by making *R* suffer we could reasonably—consequentially—expect overall suffering to diminish, but we continue to exclude these considerations in these thought experiments). *Who* gets to suffer and *why*, are irrelevant considerations for the non-pluralistic hedonist. So, the state of affairs in which *R* rapes *V*, and then *B* (a random bystander utterly unrelated to *R* and *V*) is made to suffer exactly the same amount as *R* may have been made to suffer via punishment would appear *equally* bad to our hedonistic non-pluralist. Moreover, if, after *R* rapes *V*, it turns out that by making *V* suffer far and beyond what she already suffered as result of having been raped, we could reasonably expect overall suffering to diminish, then the non-pluralist hedonist would find value in instrumentally making *V* suffer.

Of course, the last scenario is a variation on the famous objection to utilitarianism whereby it can recommend "punishing" an innocent person. It is, admittedly, a particularly perverse variation (in that it scapegoats the very victim), but one that the classical utilitarian just cannot avoid: without access to the idea that there is an axiological significance to desert, she may have trouble even explaining what exactly is *perverse* about this variation. Classical utilitarians have typically defended themselves by pointing out that in real life it is extraordinarily unlikely that scapegoating innocent people (or, in my version, scapegoating the very victims) would really reduce suffering in the world. Perhaps this is true. But such a defense is evidently an evasion of the theoretical point at hand: even if true that, say, in "real life" it would not be optimific to scapegoat, the classical utilitarian cannot deny that this is an implication of her theory). And my discussion of axiology here is theoretical: the classical utilitarian needs to deny that there is value in the distribution of suffering as such, and so is (other things being equal) committed to seeing the additional suffering of *R* to be neither less nor more deplorable than the suffering of any other random person (including *V*).

I find these sorts of considerations sufficient to show that the order that desert adds to an organic whole matters. But it is still not clear that it is specifically the order that desert imposes that is valuable and not some other order. Imagine a whole whose parts are three random human beings, and imagine that someone arranges these three people according to the order in which she will murder them. I do not believe that this organic whole is, in the final analysis, made more intrinsically valuable by having been given this particular order. Orderings can be themselves evaluated, and some are more intrinsically valuable than others.[6]

But then it could seem as if to introduce organic wholes and the values of orderings, arrangement, and structures is merely to re-launch the traditional debates regarding the justification of punishment, only now within a somehow different framework. I think that this would be a misunderstanding of what the discussion of organic wholes in fact accomplishes. First, this discussion adds a concern with intrinsic value that is often absent from the traditional discussion amongst punishment theorists: an organic whole with a certain order has more intrinsic value than the same whole without any ordering. Second, admitting that a given

ordering may be better or worse than another ordering(s) is not to deny that the mere fact that an ordering is imposed on an organic whole adds *eo ipso* some value. Of course, perhaps the order is in itself so repugnant that the overall value of the organic whole actually diminishes—but the ordering adds some value. In other words, giving people the suffering that they deserve adds *eo ipso* some value, even if so doing, and given the additive independence of the value of the whole and the value of its parts or the value of its order, could also make the organic whole less valuable. It is important to emphasize, moreover, that the non-pluralistic classical utilitarian we have been considering does not have an alternative ordering to offer instead of the ordering created by considerations related to desert. The whole axiological discussion of orderings and their values has to necessarily strike her as *pointless*. She simply wants as little suffering in the world as possible and that is that.

Third, and perhaps most importantly, recognizing the axiological significance of order does not only stave off flatfooted commutative axiologies, but it is also to further argue for the recognition of pluralism. Mobilizing organic wholes allows us to see how many types of factors can affect the overall value of any state of affairs, and how this is as true of instances of punishment as of any other states of affairs. Only a superficial reading would see the discussion of the axiology of organic wholes as a mere euphemistic move. Turning to organic wholes allows us to see how pluralism is both possible and important, how an ideal utilitarian can be a retributivist, and how complicated the axiology of punishment is. And it does this without introducing the more than a little bewildering Hegelian talk of punishment being "the negation of the negation [i.e., the negation of *crime*, which itself is the negation of right]" (see Hegel 1991, 123 ff).

In fact, discussing these axiological dimensions of organic wholes highlights some of the perplexing oddities of the overly deontic approaches that dominate the specialized literature on punishment. For example, consider a common move in this literature: to suggest that if any of the essential components of justified punishment is missing, then the organic whole constituted by said punishment loses the *entirety* of whatever value it originally had. So, to inflict suffering on, say, a rapist, may be admitted to be of some value if done by someone with the authority to do so, but

(implausibly) suggested to be *completely* devoid of value (and barbaric, etc.) if done by someone without said authority.[7] There are excellent, typically over-riding reasons to prevent vigilantism, but this is not to say that what a vigilante does is *completely* valueless—particularly if it is very similar to what an authority would have done.

The best way of avoiding these deeply counterintuitive implications is to recognize the axiological importance of both organic wholes and of the orderings of their parts. Furthermore, to turn to the axiological flexibility and pluralism of organic wholes is, to echo Bernard Williams's pithy take on G.E. Moore, a way of managing to "reject at once the stuffiness of duty and the vulgarity of utilitarianism" (Williams 2006, 8). Interestingly, the tradition of Austrian Philosophy, exemplified here above all by Brentano's work, may be in a much better position to do this not only than its German counterpart, but than other philosophical traditions as well.

Notes

1. Even if the term itself was coined by Hastings Rashdall in *The Theory of Good and Evil: A Treatise on Moral Philosophy*, Oxford: Oxford University Press (1907). And even if some central aspects of ideal utilitarianism can be seen as developments of Henry Sidgwick's views in *The Methods of Ethics*, Indianapolis: Hackett 1981).
2. Strictly speaking, this is the penultimate chapter, but the actual last chapter, "Themes and Puzzles", is just a relatively brief summation of sundry matters yet to be done.
3. Chisholm 1986, 70, citing an unpublished manuscript Brentano wrote "probably in the 1890s".
4. The last section of my *Punishment and Retribution* (2006) is devoted to this very topic. See pp. 208 ff.
5. It is a well-worn trope of the specialized literature on punishment that retributivism is somehow "mysterious". Any list of authors who believe this would be idiosyncratic, but some influential exemplars include: Cottingham (1979); Honderich (2005); and Mackie (2000). For a defense of the view that organic wholes (in particular those *Gestalten*

of *Gestalt* psychology) can be placed within a fully naturalistic ontology see Johansson (2013).
6. This is not to say that orderings are to be seen as additional "parts" of organic wholes—for otherwise an infinite regress would obtain.
7. This is one of the typical gambits in distinguishing (retributive) punishment from revenge: the former is done by an authority and of some value, the latter (insofar as not done by an authority) is completely valueless.

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9

‘Pain’ in SNOMED CT: Is There an Anesthetic?

Werner Ceusters and Jonathan P. Bona

1 Introduction

For sure, an unpleasant odor of feet may be categorized as an unpleasant odor. Though foot fetishists (De Block and Adriaens 2013), podiatrists and manufacturers of washing machines might disagree (Question Everything 2015), most people would contend such odor to be classified as an offensive odor. No clinician would have qualms in classifying an unpleasant odor of feet as an odor of feet nor as a foot finding. Perhaps some, in particular the ontology-savvy ones who are therefore able to detect ambiguities in natural language phrases, might doubt a foot odor

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to be a limb finding or a body odor. But who would argue it to be a finding of sense of smell, i.e. a neurological finding, or a duplicate, and therefore, inactive concept? This question smells of *The Systematized Nomenclature of Medicine—Clinical Terms* (*SNOMED CT*) (Donnelly 2006) all over, does it not? Indeed, the former is what its authors argued to be the case until 2003 when they discovered that there are actually two different sorts of smelly feet: "duplicate concept" ones and "offensive body odor" ones. What this discovery means for patients about whom SNOMED CT-based smelly feet assertions were made in their electronic healthcare records (EHR) is rather unclear. Some might, upon chart inspection, be surprised to find their smelly feet to have changed from a neurological finding to an offensive body odor. Others might find their smelly feet to have become inactive concepts and perhaps therefore conclude they are documented as being successfully treated. But in both cases their feet themselves are as stinky as before.

The problem we are dealing with here is the underestimated complexity of representing the evolution of terminologies and ontologies over time, in this case, of SNOMED CT. SNOMED CT is developed by the International Health Terminology Standards Development Organization (IHTSDO) and is the largest healthcare terminology currently available. It is supported by a concept-based ontology which can formally be represented by means of a description logic. It is worthwhile pointing out that SNOMED CT's authors have thus far not satisfactorily acted upon the confusions around what the word "concept" might denote (Smith 2004). Although "concept" in the SNOMED CT documentation is defined as "a clinical idea to which a unique concept identifier has been assigned", the term is also homonym for the concept identifier as well as for "the real-world referent(s) of the concept identifier, that is, the class of entities in reality that the concept identifier represents" (IHTSDO 2015, 725). To avoid any confusion, we will perceive for the purposes of this paper a version of SNOMED CT as an information content entity (ICE) of which concretizations exist as information artifacts in the form of, for example, data structures that can be rendered as tables on a computer screen by using appropriate software. We will use the term "SNOMED CT concept"—or "concept" for short—exclusively to denote any smaller information artifact which is part of such concretization and in which

inheres an information quality which is about or intended to be about some portion of reality (Smith and Ceusters 2015).

Roughly 400,000 SNOMED CT concepts are classified under several hierarchies, of which the top classes roughly correspond either to the types of entities clinicians encounter instances of during their work (body parts, organisms, diseases, substances, procedures, etc.) or to types instantiated by descriptive components of SNOMED CT as an ICE itself, for example those denoted by the terms "inactive concept", "navigational concept", and "metadata".

SNOMED CT is regularly updated (Ceusters 2011), not only to correct mistakes (Geller et al. 2012; Ochs et al. 2015), but also to represent better and in more detail how the entities in reality denoted by SNOMED CT concepts relate to each other. Updates are also made to account for changes in biomedical reality itself as well as in our scientific knowledge about biomedical reality (Ceusters 2010).

The work described here is part of a larger endeavor intended to find out whether it would be possible to use the growing number of historic relationships and other changes documented in SNOMED CT release files as an information source to detect mistakes that have not been discovered thus far. Since neither author of this paper suffers from smelly feet, but rather of an occasional headache while dealing with biomedical and other ontologies, we were interested to see how SNOMED CT concepts related to *pain* evolved throughout different versions and whether certain patterns of errors could be detected.

2 The Distribution of SNOMED CT Versions

International versions of SNOMED CT are biannually distributed by the IHTSDO in January and July as a set of release files designed to be loaded into healthcare software applications such as electronic healthcare record systems. Certain countries endorsing the use of SNOMED CT transform the international version into local adaptations. In the USA, it is the National Library of Medicine (NLM) that develops US versions as an extension of the international versions usually within 3 months of the international releases. The NLM makes both the international and

US versions available to authorized users as part of the Unified Medical Language System (UMLS) (Fung et al. 2005).

Whereas prior to July 2011 all releases were in a format now known as "Release Format 1 (RF1)" current releases are also available in the newer RF2-format. Core files included in both formats are (1) the *concepts table*, (2) the *descriptions table* containing terms associated with concepts, and (3) the *relationships table* which contains information on how the concepts relate to each other. Entries, i.e. rows, in each of these tables are called "*components*".

RF1 releases include also a *component history table* in which any changes such as additions and inactivations introduced in the concepts and descriptions tables—but not the relationships table!—over subsequent versions are logged. Since July 2008 RF1 releases come also with a *references table* which contains references from inactive components to other equivalent or related components that were current in the release version in which that component was inactivated.

In the RF2 format these changes are tracked in a uniform manner in the core files themselves, including the relationships table, but not for changes that occurred prior to 2002. A more extensive change history can only be computed on the basis of the original RF1 releases prior to July 2011 in addition to the RF1 (or with no additional advantage for the work described here, RF2) releases since July 2011.

RF1 versions consist of several tables, five of which are important for the work described here.

The *concepts table* of any version in RF1 includes for each concept (1) a SNOMED CT internally unique concept identifier, (2) whether it is in active use in the current version and, if not, the reason for withdrawal, and (3) whether the concept is primitive or fully defined in terms of the description logic used. Examples of two distinct concepts are "60932006: Buttock pain (finding)" and "279043006: Pain in buttock (finding)".

The *descriptions table* contains for each concept a varying number of description records each of which consists of the following data elements:

1. a unique identifier for the description,
2. a status marker indicating whether it is in active use and, if not, the reason for withdrawal from current use,

3. the unique identifier of the associated concept,
4. a term used to describe the associated concept and,
5. an indication of whether this specific term for the concept to which this description applies is:

   - the Fully Specified Name (FSN), e.g. "Backache (finding)",
   - the preferred term, e.g. "Backache", or
   - a synonym, e.g. "Back pain" and "Pain in back".

Each FSN term ends with a "semantic tag" in parentheses "which indicates the semantic category to which the concept belongs" (e.g. clinical finding, disorder, etc.) and which "helps to disambiguate the different concepts which may be referred to by the same commonly used word or phrase' (IHTSDO 2015, 41). Examples of semantic tags are provided in Table 9.1. Although most semantic tags correspond each to some unique SNOMED CT concept, their taxonomic structure does not follow the taxonomic structure of the concepts.

The *relationships table* contains relations that obtain between SNOMED CT concepts. These relationships are expressed by means of existentially restricted triples of the form "source concept–relationship–target concept"—note that in the citation that follows "concept" is to be understood in the SNOMED sense—whereby each triple "implies that there is some instance of that relationship from each instance of the source concept to any instance of the target concept" (IHTSDO 2015, 678). For example, a triple of the form "*x* partOf *y*" is to be understood as: forall *x*: instance-of (*x, X*) ➞ exists *y*: instance-of (*y, Y*) and partOf(*x,y*).

Two types of such relationships are included in the release files. The first ones are called "*stated relationships*" and are relationships that are directly edited in the formal terminology management system by SNOMED CT's authors. Examples, leaving out the concept unique identifiers, are:

No genitourinary pain (situation): (E1)
  Is a (attribute) = Clinical finding absent (situation),
  Temporal context (attribute) = Current or specified time (qualifier value),
  Associated finding (attribute) = Genitourinary pain (finding),
  Finding context (attribute) = Known absent (qualifier value),
  Subject relationship context (attribute) = Subject of record (person)

Table 9.1 Examples of SNOMED CT concepts related to pain

Semantic tag[a]	Leaf example[b]	Non-leaf example
Disorder	Phantom pain following amputation of penis	Disorder characterized by pain
Finding	Complaining of a headache	Pain
Situation	Pain behavior present	No genitourinary pain
Procedure	Pain relief	Pain management
Observable entity	Brief pain coping inventory score	Characteristic of pain at anatomical site
Product	Aromatic analgesic	Drugs used in neuropathic pain
Regime/therapy	Back pain prevention education	—[c]
Navigational concept	Analgesics and non-steroidal anti-inflammatory drug allergy	Additional pain and sensation observations
Substance	—	Analgesic
Physical object	Pain management medication delivery system pump	Anesthesia equipment
Qualifier value	Painless	Pain management service
Assessment scale	Pain coping strategies questionnaire	—
Environment	Pain clinic	—
Occupation	Pain management specialist	—
Attribute	Character of pain	—
Context-dependent category	On examination—in pain	—
Event	[X] Pain due to internal orthopedic prosthesis	Analgesic and/or antipyretic and anti-rheumatic drug poisoning
Staging scale	Chest pain rating	—

Notes

[a]The semantic tags are ranked in descending order of occurrence of pain-related SNOMED CT concepts.

[b]The column "Leaf examples", in contradistinction to "non-Leaf examples", exhibits SNOMED CT concepts that do not subsume other concepts.

[c]Empty slots indicate that for this category no occurrences were found in any of the versions studied

and,

Adnexal tenderness absent (situation): (E2)
Is a (attribute) = Clinical finding absent (situation)
Associated finding (attribute) = Adnexal tenderness (finding),
Temporal context (attribute) = Current or specified time (qualifier value),
Finding context (attribute) = Known absent (qualifier value),
Subject relationship context (attribute) = Subject of record (person)

The second type of relationships—"*inferred relationships*"—are obtained through inference by applying the EL++ description logic classifier which is part of SNOMED CT's ontology authoring system on the stated relationships (Dentler et al. 2011). An example is (E3) which is obtained by inference on the basis of (E1) and (E2):

Adnexal tenderness absent (situation): (E3)
Is a (attribute) = No abdominal pain (situation)
Is a (attribute) = No genitourinary pain (situation)
Is a (attribute) = Tenderness absent (situation)
Associated finding (attribute) = Adnexal tenderness (finding),
Temporal context (attribute) = Current or specified time (qualifier value),
Finding context (attribute) = Known absent (qualifier value),
Subject relationship context (attribute) = Subject of record (person)

Additional so called "*historic relationships*" are found in the *references table* where each such reference indicates the nature of the relationship between the inactive and persistent component.

Examples (E4)–(E14) in Table 9.2 indicate that in versions prior to and including the version in which these historic relationships appeared, there were five distinct SNOMED CT concepts that represented one or more types of entities in reality that clinicians colloquially would refer to by means of the words "back pain" or "backache". Three of these concepts—the ones with the identifiers 373644009, 399079008, and 419258005—were named "Back pain (finding)"; a fourth one—16986008—carried the FSN "Back pain (disorder)"—and the fifth one—161891005—was

Table 9.2 Examples of historic relationships

373644009: Back pain (finding): SAME AS (attribute) = 399079008: Back pain (finding)	(E4)
161891005: Backache (finding): SAME AS (attribute) = 399079008: Back pain (finding)	(E5)
161891005: Backache (finding): SAME AS (attribute) = 373644009: Back pain (finding)	(E6)
419258005: Back pain (finding): SAME AS (attribute) = 161891005: Backache (finding)	(E7)
399079008: Back pain (finding): MAY BE A (attribute) = 419258005: Back pain (finding)	(E8)
399079008: Back pain (finding): MAY BE A (attribute) = 161891005: Backache (finding)	(E9)
16986008: Back pain (disorder): MAY BE A (attribute) = 398997008: Vertebrogenic pain syndrome (disorder)	(E10)
16986008: Back pain (disorder): MAY BE A (attribute) = 399194009: Disorder characterized by back pain (disorder)	(E11)
16986008: Back pain (disorder): MAY BE A (attribute) = 419258005: Back pain (finding)	(E12)
16986008: Back pain (disorder): MAY BE A (attribute) = 399079008: Back pain (finding)	(E13)
16986008: Back pain (disorder): MAY BE A (attribute) = 161891005: Backache (finding)	(E14)
267984001: Backache, unspecified (finding): WAS A (attribute) = 161891005: Backache (finding)	(E15)
15941001: Brachialgia (disorder): REPLACED BY (attribute) = 102556003: Pain in upper limb (finding)	(E16)

named "Backache (finding)". A series of relational assertions were then made for various purposes:

1. to eliminate redundancies—"*x* SAME AS *y*" asserts that the SNOMED CT concepts *x* and *y* denote the same entity in reality, whereby starting with the version in which this relationship appears y would not anymore be used as an active SNOMED CT concept;
2. to eliminate erroneous or ill-defined concepts while keeping track of how they were classified in previous versions (*x* WAS A *y*) and what they were replaced by (*x* REPLACED BY *y*), if by anything at all, and,
3. to indicate which concepts were found to be ambiguous and, whenever they would have been used to annotate patient data, which concepts should be considered as unambiguous alternatives (*x* MAYBE A *y*).

The *component history table* contains for each changed description or concept (1) the unique identifier for the changed component, (2) the version of SNOMED CT in which this change was made, each version being represented using the format YYYMMDD, e.g. "20040731", (3) an indication of the nature of the change such as "added" or "status change", and (4) the status of the component after the change examples being "current", "retired", "duplicate", etc.

The RF1 tables contain more information than described above, though not relevant for the work reported on here.

3 Methodology

For our analysis, we used the concepts, descriptions, component history and references tables in the RF1 release of the US adaptation released March 31, 2015, which includes the international version released by the IHTSDO January 31, 2015. These files allowed us to compute changes that occurred at the level of concepts and descriptions. To track changes in the relationships, we used the RF1 relationship files of *all* international versions from January 2002 to January 2015, as well as all US adaptations since 2011.

3.1 Generation of Intermediate Tables

Several intermediate tables had to be constructed for the intended analyses. As a first step, a *Historic Relationships Table* (HISREL) was constructed which provides a complete history for each relationship that has appeared in any SNOMED CT release, one per row. It was created by merging the relationships tables of each SNOMED CT version into a single table wherein the existing columns were preserved and an additional column for each release date added. Each row represents a single relationship, and is marked in each date column to indicate whether that relationship was part of the release on that date.

HISREL was further reduced into the *Historic Subsumption Table* (HST) by retaining only those rows containing one of the following relationships: Is a (SNOMED CT's formal subsumption relation), ISA (mapping), MAY BE A, REPLACED BY, SAME AS, and WAS A. We will use the term "historically subsumed" as in "*x* is historically subsumed by *y*" whenever we refer to any of these relations holding between *x* and *y*.

The *Pain Terms Table* (PTT) is a manually curated list of SNOMED CT concepts that are about or mention pain in one or other form. An initial version was generated from a search for descriptions in SNOMED CT's description table containing any of the following substrings: "dynia", "algesia", "algaesia", "dolor", "algia", "algic", "esthesia", "esthaesia", "hyperpathia", "hyperpathic", "hypopathia", "hypopathic", "pain", "nocicept", "noxious", "hurt", "ache", "aching", "sore", "soring", "tender", and "throb". This list of terms was then manually filtered through several passes to exclude false matches such as "Paint (substance)". We also filtered it to exclude entries that were causing the subsumer table to be polluted because of (apparent) cycles caused by collapsing the history (e.g. rheumatism).

The *PTT Subsumer Table* (PTTST) is a list of all the concepts which historically subsume at least one of the concepts in the PTT. That is, it contains every concept "taxonomically above" any concept in the PTT. This table was further reduced to a *Leaf Nodes Table* (LEAFS) containing all and only leaf nodes from PTTST, i.e. those concepts in PTTST that do not relate to any other concepts via one of the selected relations for inclusion in HST.

A *DATES* table was constructed to capture all release version dates used in SNOMED CT, 37 in total, including 11 release dates that preceded SNOMED CT's first official release (January 31, 2002) and of which traces were found in SNOMED CT's component history table. Indeed, SNOMED CT was created in 2001 by merging what was then known as "SNOMED RT" with the UK Clinical Terms project (Wang et al. 2001). To keep track of which terms came from where, including which were already active or retired *before the* merger and which were duplicates in the first release *because of* the merger, two dates—20020129 and 20020130, corresponding respectively to the 10th and 11th date in the DATES table—were artificially created without actually corresponding to a physical release.

The *Pain Graph Nodes Table* (PGN) contains a taxonomy constructed from the bottom up, starting with the concepts in LEAFS. PGN includes every concept in LEAFS, as well as every concept that historically subsumed any of those concepts. That is, it contains every concept that lies along a path from a concept in LEAFS to the SNOMED root concept via any of the historic subsumption relations in HST, collapsing the relations from all release versions into a single graph. It also accounts for concepts that were replaced or considered as alternatives for inactivated versions by making use of "Replaced By" and "Alternative" entries as collected from SNOMED CT's references tables. PGN was then used as a filter on the concept table of SNOMED CT's last version used in this endeavor thereby copying into a new table (PCONC) only those records about concepts which were are also in PGN.

Similarly, PGN was used to filter the *Pain Historic Subsumption Table* (PHST) out of HST and the *Pain Descriptions Table* (PDT) out of the most recent SNOMED CT Descriptions table. For PHST this was achieved by retaining all and only records from HST expressing a relationship in which one or both of the relata are in the PGN table. To capture "Replaced by" and "Alternative" relations between concepts, PHST also includes additional entries for each concept in PGN that is the subject of a historic reference entry in the references tables.

The *Historic Pain Concept Table* (HPCONC) is built from the concept tables of each processed release. For each concept in PCONC, HPCONC contains one row for each release in which that concept was included in

the concept table. For instance, a pain concept in PCONC that appears only in the US National concept tables for releases 20140301, 20140901, and 20150301, would have three rows in the HPCONC table, one per release. HPCONC has columns for the concept ID, primitiveness, and release date in which the concept appears. Although one could argue that there is no need to combine the concept tables of each version as the last version should contain the total history, we preferred to take the safe way in light of the IHTSDO's motivations to develop RF2 because of several inconsistencies in RF1 releases (IHTSDO 2015, 663–664).

The *Pain Component Table* (PCT) contains all records from SNOMED CT's most recent Component History table for which the component identifier corresponds either to a concept identifier in PGN or PDT, or to a relationship identifier in PHST.

The *Pain History Table* (PHIS), finally, brings together information contained in the tables described above into a single structure with historic and taxonomic information about pain concepts and related concepts.

Table 9.3 contains the historic information about three concepts with the FSN "Pain (finding)". Two of them (367206007 and 366981002) are annotated as being retired in the (fictitious) 11th version as a result of the merger. The other one (22253000) existed in SNOMED RT prior to the merger as indicated by the "1" in the CUR field which corresponds with the earliest date of which a trace was found: January 1, 1994. The table shows also the various SNOMED CT concepts that subsume—see the "Is a (attribute)" in the INFOTYPE column—this concept, including one with the FSN "Pain finding (finding)" during the period covered by the first four versions.

3.2 Data Analysis

Several types of analysis have been—and are still being—carried out. The ones we report on here involve the changes in and evolution of the semantic tags in the FSNs. To that end we retrieved from PHIS all records indicating a change in the FSN, whether or not including a change in the semantic tag. For example, the following four records from PHIS show that in the 17th version the semantic tag for "Pain in lumbar spine" was

Table 9.3 Historic information about three SNOMED CT concepts for "pain" accumulated in the PHIS table

Concept ID	L[a]	Infotype	Component	Label	CIN[b]	CUR[c]	DUP[d]	RET[e]	Relation present in version[f]
22253000	0	Concept status	22253000			1			
22253000	0	Is primitive	22253000			1			
22253000	0	Synonym	2162242017	Pain observations		12			
22253000	0	Preferred term	37361011	Pain		12			
22253000	0	Synonym	37362016	Pain, NOS				12	
22253000	0	Synonym	37363014	Dolor		12			
22253000	0	Synonym	481278012	Painful		12			
22253000	0	Synonym	481279016	Part hurts		12			
22253000	0	FSN	751640015	**Pain (finding)**		12			
22253000	0	Is a (attribute)	19019007	Symptom (finding)					111111110000000000000000000000000000
22253000	0	Is a (attribute)	279075009	Pain finding (finding)					111100000000000000000000000000000000
22253000	0	Is a (attribute)	421833007	Finding of pain sense (finding)					000000000111000000000000000000000000
22253000	0	Is a (attribute)	106147001	Sensory nervous system finding (finding)					111100000000000000000000000000000000
22253000	0	Is a (attribute)	276435006	Pain / sensation finding (finding)					000011111000111111111111111111111111
367206007	1	Concept status	367206007			10	11		
367206007	1	Is primitive	367206007			10			
367206007	1	FSN	2744729017	**Pain (finding)**	25				

(*continued*)

Table 9.3 (continued)

Concept ID	L[a]	Infotype	Component	Label	CIN[b]	CUR[c]	DUP[d]	RET[e]	Relation present in version[f]
367206007	1	Synonym	490781010	Pain	25				
367206007	1	Preferred term	773821016	Pain				25	
367206007	1	SAME AS (attribute)	22253000	Pain (finding)					011111111111111111111111111111111111
367206007	1	Is a (attribute)	363662004	Duplicate concept (inactive concept)					111111111111111111111111111111111111
366981002	1	Concept status	366981002			10	11		
366981002	1	Is primitive	366981002			10			
366981002	1	FSN	2734046010	**Pain (finding)**	25				
366981002	1	Synonym	490539018	Pain	25				
366981002	1	Preferred term	773572019	Pain				25	
366981002	1	Is a (attribute)	363662004	Duplicate concept (inactive concept)					111111111111111111111111111111111111
366981002	1	SAME AS (attribute)	22253000	Pain (finding)					011111111111111111111111111111111111

Notes

[a]**L**: whether the concept is present (1) or not (0) in the *LEAFS* table

[b]**CIN**: Concept Inactivated

[c]**CUR**: CURrent

[d]**DUP**: DUPlicated

[e]**RET**=RETired. Numericals in CIN, CUR, DUP and RET stand for the version in which the component obtained the status.

[f]**Relation present in version**: indicates whether the relationship was present (1) or not (0) in the SNOMED CT versions, starting with date 20020131 (12th data in the *DATES* table), each version represented by one digit, organized chronologically.

changed from "disorder" to "finding", as indicated by "17" in both the RET(ired) column and CUR(rent) column.

Concept ID	Label	CUR	RET
267982002	Pain in lumbar spine (disorder)		17
267982002	Pain in lumbar spine (finding)	17	
43116000	Eczema (disorder)	13	
43116000	Eczema [Ambiguous] (disorder)		13

Similarly, for the SNOMED CT concept denoting eczema, an FSN name change was introduced in the 13th version by dropping the modifier "[Ambiguous]" without changing, however, the semantic tag.

We then annotated changes for these concepts as "disorder → finding" and "disorder → disorder" respectively. An exploratory statistical analysis was conducted to assess the extent to which changes of this sort were distributed significantly differently over concepts which directly mention "pain" or a lexical variant thereof as collected in the PTT table (all of which are also included in the PHIS table), versus those concepts in the PHIS table which are not in PTT. As a result of the methodology described in the section "Generation of Intermediate Tables" above, these concepts are either historical subsumers of the PTT concepts themselves, or descendants of PTT concepts with their historical subsumers. As an example, Figure ure 9.1 shows the historical subsumption taxonomy of the concept "405154001: Level of suffering (observable entity)". This concept is included in PHIS because it is historically subsumed by the concept "405161002: Pain level (observable entity)", i.e. from January 2004 until July 2005. As a consequence, also all other concepts displayed in Figure ure 9.1 are contained in PHIS.

3.3 Results

The historical subgraph of SNOMED CT extracted for our research includes 7,673 concepts (1.83 %) out of a total of 420,221 concepts that ever have been introduced up to the US national version of March 2015. They have been extracted on the basis of 2,164 concepts (28 % of 7,673) which directly mention "pain" in one or other form. They are historically

related by means of 26,511 relationships, 4,028 of which (15.2 %) being based on "was a", "maybe a", etc.

These 7,673 concepts were annotated by a total of 8,829 FSNs which include a semantic tag. Semantic tags were not always used in SNOMED CT's predecessors, so there are FSNs of inactivated concepts that do not have one, where, obviously, some concepts have more than one FSN.

Table 9.4 provides an overview of the various semantic tags that were initially assigned to the concepts in our extracted graph. It makes clear that the majority of the tags were not changed: only 809 FSNs, in comparison to 4,974 that remained active throughout SNOMED CT's history without any change, or that were inactivated without involving any change. Within the group of FSNs whose semantic tag was changed, nearly half (49.5 %) involved those annotated as "disorder" while another 31.8 % is accounted for by what originally was qualified as "finding". Three categories disappeared completely: "context-dependent category", "environment/location" and "function". An important number of changes—inactivations and semantic tag changes—can be noted for the large groups of "situation" (90.7 % of the 248 "situation" FSNs), "procedures" (31.6 % of 291 FSNs) as well as for "disorder" (31.4 %) and "finding" (30.4 %).

Table 9.5 gives an insight in what specific semantic tags were changed into, thereby excluding from the counts in Table 9.4 those changes with less than five occurrences in order to keep the table readable. Target tags excluded include "environment", "environment/location", "event", "linkage concept", "physical object", "qualifier value", and "substance". As a result of this elimination, some original tags were to be removed, resulting in a more compact table. What Table 9.5 tells us is that changes occurred in certain clusters. Notable are the reciprocal switches between "procedure" and "regime/therapy", and "disorder" and "finding". FSNs with semantic tag "context-dependent entity" were later in the first place classified under "finding" (67.8 %) and for the remainder mainly under "situation".

Table 9.6, finally, demonstrates that for almost all semantic tag changes, the FSNs directly mentioning "pain" in one or other lexical form as collected in the PTT table changed in different ways than in the FSNs of concepts that are not directly related to pain. Significantly more

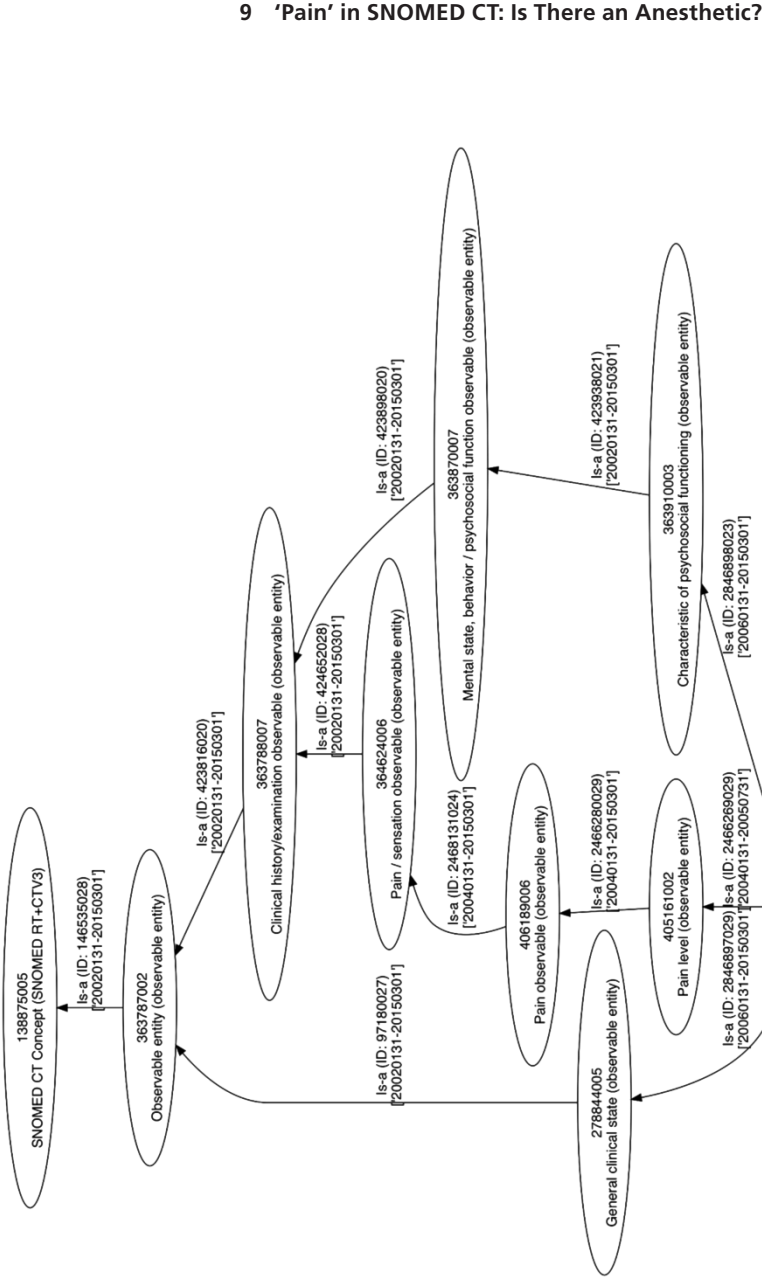

Figure 9.1 Historical subsumption hierarchy of the SNOMED CT concept "405154001: level of suffering (observable entity)". Relationships are annotated with the period during which they were active

Table 9.4 Changes in semantic tags over different SNOMED CT versions

	Unchanged active	Inactivated	Type change	Total	% of total	% changed	% type changes
	A	*B*	*C*	*D = A+B+C*	*E = D/* SUM(*D*)	*F = (B+C)/D*	*G =C/(B+C)*
Assessment scale	22	3	7	32	0.4	31.3	70.0
Attribute	11	0	2	13	0.2	15.4	100.0
Context-dependent category	0	163	273	436	5.5	100.0	62.6
Disorder	2,697	940	292	3,929	49.5	31.4	23.7
Environment	14	0	1	15	0.2	6.7	100.0
Environment/location	0	0	1	1	0.0	100.0	100.0
Event	2	2	1	5	0.1	60.0	33.3
Finding	1,754	678	89	2,521	31.8	30.4	11.6
Function	0	16	8	24	0.3	100.0	33.3
Observable entity	154	29	7	190	2.4	18.9	19.4
Physical object	31	1	3	35	0.4	11.4	75.0
Procedure	199	45	47	291	3.7	31.6	51.1
Product	21	11	2	34	0.4	38.2	15.4
Qualifier value	17	19	15	51	0.6	66.7	44.1
Regime/therapy	2	13	20	35	0.4	94.3	60.6
Situation	23	215	10	248	3.1	90.7	4.4
Social concept	1	0	1	2	0.0	50.0	100.0
Substance	26	16	30	72	0.9	63.9	65.2
Totals	**4,974**	**2,151**	**809**	**7,934**	**100.0**	**37.3**	**27.3**

Table 9.5 Evolution of semantic tags over different SNOMED CT versions

	Semantic tag							
TO:	Disorder	Finding	Navigational concept	Observable entity	Procedure	Product	Regime/ therapy	Situation
FROM:								
Assessment scale			10.0					
Attribute			5.0					
Context-dependent category	3.7	67.8	0.4	0.7	0.4			27.1
Disorder	75.7	15.8	8.2					0.3
Finding	32.6	50.6	6.7	1.1				9.0
Function				10.0				
Observable entity			14.3	71.4				
Procedure			2.1		19.1		76.6	
Product						10.0		
Qualifier value			6.7	53.3				
Regime/therapy					65.0		35.0	
Situation								10.0
Substance			3.3			86.7		
TOTAL FRACTION	32.1	34.1	5.3	3.0	2.8	3.5	5.3	11.5

Note

TOTAL FRACTION indicates the percentage of FSNs of which the semantic tag changed to the semantic tag in the corresponding 'TO' column, irrespective of what the original semantic tag was. Changes FROM semantic tag *x* TO semantic tag *y* are quantified as the percentage of $x \rightarrow y$ changes over the totality of all $x \rightarrow$ changes. For example: of all the changes that occurred for SNOMED CT concepts that had the original semantic tag of "context-dependent category", 67.8 % were changed to "finding". Changes from $x \rightarrow x$ indicate FSN name changes without change in the semantic tag.

Table 9.6 Semantic tag changes in SNOMED CT concepts in whose FSN a pain term (or lexical variant thereof) is directly used, compared to semantic tag changes in the SNOMED CT concepts contained in the PHIS table *not* directly related to pain

Semantic tag change		Observed in PHIS[a]			Expected in PHIS		Chi square		Chi test
FROM	TO	+PTT	–PTT	Total	+PTT	–PTT	+PTT	–PTT	"p"
Context-dependent category	Disorder	3	7	10	2.26	7.74	0.24	0.07	0.5738
	Finding	**64**	**121**	**185**	**41.74**	**143.26**	**11.86**	**3.46**	**0.0001**
	Situation	**45**	**29**	**74**	**16.70**	**57.30**	**47.97**	**13.98**	**0.0000**
Disorder	*Disorder*	*4*	*217*	*221*	*49.87*	*171.13*	*42.19*	*12.29*	*0.0000*
	Finding	**29**	**17**	**46**	**10.38**	**35.62**	**33.40**	**9.73**	**0.0000**
	Navigational concept	*0*	*24*	*24*	*5.42*	*18.58*	*5.42*	*1.58*	*0.0082*
Finding	*Disorder*	*1*	*28*	*29*	*6.54*	*22.46*	*4.70*	*1.37*	*0.0138*
	Finding	**18**	**27**	**45**	**10.15**	**34.85**	**6.06**	**1.77**	**0.0051**
Procedure	*Regime/ therapy*	*3*	*33*	*36*	*8.12*	*27.88*	*3.23*	*0.94*	*0.0411*
Regime/therapy	Procedure	1	12	13	2.93	10.07	1.27	0.37	0.1996
Situation	Situation	3	7	10	2.26	7.74	0.24	0.07	0.5738
Substance	*Product*	*0*	*26*	*26*	*5.87*	*20.13*	*5.87*	*1.71*	*0.0059*
Other changes[b]		**12**	**80**	**92**	**20.76**	**71.24**	**3.70**	**1.08**	**0.0289**

Notes

[a] "Observed in PHIS": actual counts of changes observed in relation to concepts in the PHIS table, thereby differentiating between concepts directly mentioning "pain" in one or other lexical form as collected in the PTT table (+PTT), versus those in PHIS not in the PTT table (–PTT).

[b] "Other changes" include all changes for which the total count in PHIS was <10.

Bold: statistically significant; *italics*: significant "with caution" because <5 occurrences in observed cells.

"pain terms" than statistically expected became classified as "findings" where they used to be under "context-dependent category" or "disorder". On the other hand, significantly more "pain terms" remained classified as "finding" in comparison to "non-pain terms" that were classified as "findings" but were then reclassified as "disorder". Remarkable also is that nearly three times more than expected (45 observed versus 16.7 expected) "pain terms" that were tagged as "context-dependent category" became later tagged as "situation". The differences are undoubtedly statistically significant for those changes printed bold in Table 9.6, while some statisticians prefer to remain cautious when individual counts are lower than 5, despite a Chi test result < 0.05. We have indicated these cases in italics.

4 Discussion

Many efforts have been made to measure the amount and type of changes occurring between SNOMED versions. Spackman (2005) categorized changes and measured the rate of changes in SNOMED over a three-year span (2002–2005), finding that the most change activity during that span was occurring among relationships, and in particular subsumption relationships, and concluding that implementers must "carefully examine mechanisms for handling this degree of change". Lee et al. (2011) examined changes in SNOMED over three years as recorded in the Component History and Concept Model, with a focus on the sub-set of concepts in the NLM CORE Problem List. Mortensen et al. (2014) identified errors and patterns of errors in the CORE Problem List sub-set of a single version of SNOMED by focusing on inferred "Is a" relations. Of the studied relations 19.5 % exhibited errors, many of which were not caught on the first pass by human domain experts. Tao et al. (2015) present an approach and analysis, using it to identify relation reversals (a particularly dramatic type of structural change) in the evolution of SNOMED, finding 48 such reversals since 2009.

To our best knowledge, no research has thus far been done on SNOMED CT's semantic tags. Semantic tags are claimed to have been introduced in SNOMED CT "to help disambiguate different concepts which may be referred to by the same commonly used word or phrase".

For example, "Hematoma (morphologic abnormality)" is "the FSN of the concept that represents the hematoma that a pathologist sees at the tissue level. In contrast, 'Hematoma (disorder)' is the FSN of the concept that represents the clinical diagnosis that a clinician makes when they decide that a person has a hematoma" (IHTSDO 2015, 41). Semantic tags are not part of the formal taxonomic structure of SNOMED CT, although most of them are closely related to one or other taxonomic category. The tag "finding", for instance, appears prominently—perhaps exclusively, we did not investigate this thus far—in the FSN of concepts subsumed by the concept "Clinical finding (finding)". So, is the tag "situation" part of the FSNs of concepts subsumed by the concept "Situation with explicit context (situation)"? The concept "Clinical finding (finding)" subsumes, inter alia, the concepts "Disease (disorder)" and "Deformity (finding)" which in its turn subsumes, inter alia, the concepts "Deformed pupil (finding)", "Corneal deformity (disorder)", and, astonishingly, also "Complaining of a deformity (finding)" thereby thus implying that complaining of a deformity is a special kind of deformity in its own right. Also amazing is that not all concepts with the semantic tag "disorder" are subsumed by the concept "Disease (disorder)".

If, at this point, it becomes hard to understand, then that is because, in our opinion, it is not understandable at all. One could indeed wonder why there is not a taxonomic category "Disorder (disorder)" which subsumes all "Disease (disorders)" plus those under other hierarchies. The absence of such a category is even more astonishing in light of some reflections we find in IHTSDO (2015, 275–276):

> Clinical findings have been defined as observations, judgments or assessments about patients. The problem with the terms finding and observation is that they seem to refer to the judgment of the observer rather than to the actual state of the body. Examples of clinical findings include: difficulty swallowing, nose bleed, diabetes, headache, and so forth. More precise and reproducible definitions of clinical findings, and the precise boundaries between findings and events, between findings and observables, between findings and situations, and the distinction between finding and disorder, remain ongoing challenges at the margins. The distinction between a disorder and an observation has proven to be difficult to define in a reproduc-

> ible manner across the tens of thousands of concepts included under clinical findings. *Nevertheless, there are several reliable characteristics of each sub-category (disorders and findings)*. [emphasis added]

Yet, there are no subcategory disorders at all, there is only the semantic tag "disorder"!

It is clear that SNOMED CT suffered—and still does suffer—dramatically from the adherence to concepts such as "Clinical finding (finding)" and "Observable entity (observable entity)". Clinical findings are stated "to represent the result of a clinical observation, assessment or judgment, and include both normal and abnormal clinical states" (IHTSDO 2015, 275). Observable entities, so we are told, "can be thought of as representing a question or procedure which can produce an answer or a result". Observables are considered to be partial observation results, where there is a defined part of the observation missing. In many cases, what is missing is a numeric value, or a numeric value with units. "In other cases, the observable is like a question, and what is missing can be regarded as the answer" (IHTSDO 2015, 316). This explains why, for example, "Pain threshold (observable entity)" carries the semantic tag "observable entity" and "Decreased pain threshold (finding)" the tag "finding". It fails to explain why "Threshold (qualifier value)" does not carry the tag "observable entity".

5 Conclusion

SNOMED CT has undoubtedly come a very long way since its original conception as a mere nomenclature for pathology (Major et al. 1978; Sommers 1967). The IHTSDO has been working very hard on developing editorial and technical principles for updating SNOMED CT and on training its terminologists in applying the principles faithfully. The significantly larger number of changes introduced in pain-related terms compared to non-pain terms as observed in our research are most likely the result of bringing order in what once was chaos; chaos not only created because of the inherent complexity of pain as a clinical entity—pain indicates that some abnormality is present, yet it is not necessarily abnor-

mal itself—(Smith et al. 2011) from which other terminologies than SNOMED CT are suffering as well (Ceusters 2014), but also because of the misplaced focus on observations and findings, thereby confusing existing entities on the side of the patient on the one hand, with processes of observing these entities and representations/communications about what is believed to be observed on the other hand.

In this light it is encouraging to read that slowly, very slowly, some principles of the Open Biomedical Ontology Foundry (Smith et al. 2007) and ontological categories from the Basic Formal Ontology (Arp et al. 2015; Smith et al. 2005) are trickling down into SNOMED CT's concept model (IHTSDO 2015, 322). It would be even better if this model were to be based on the Ontology of General Medical Science (OGMS) (Scheuermann et al. 2009) which separates first-order entities (e.g. diseases, disorders, bodily features, processes of measuring and observing) clearly from second-order entities (diagnoses, representations).

So is there an anesthetic for the pains caused by SNOMED CT's concept model? We believe there is: the OGMS. Whether IHTSDO will believe there is a need for an anesthetic remains doubtful. After all, from stated relationship (E1), see the section "The Distribution of SNOMED CT Versions", the SNOMED CT's description logic infers:

No pain (situation):
Temporal context (attribute) = Current or specified time (qualifier value),
Associated finding (attribute) = Genitourinary pain (finding),
Finding context (attribute) = Known absent (qualifier value),
Subject relationship context (attribute) = Subject of record (person)

Thus when "no genitourinary pain" is the case, there is supposed to be no pain at all. Since neither author of this paper suffers either from stinky feet or genitourinary pain, it is according to SNOMED CT not possible that we would suffer from headache. If it were all that simple!

6 Epilogue

One can still wonder what smelly feet have to do with pain other than being emotionally painful when it is pointed out by one's environment. Figure 9.2 explains how the SNOMED CT concepts "unpleasant odor of feet" became part of the intermediate files that were constructed to arrive at our final collection for inspection. Before releasing the January 2004 version of SNOMED CT, it was discovered that the bodily feature of foot odor was represented twice: once by means of the SNOMED concept 102597005 and once by 394643003. During the entire period covered by the analysis presented here, at least one of these SNOMED concepts was subsumed by "Body odor finding" which itself was subsumed by "Finding of sense of smell" from January 2002 until (and including) January 2003. It is after that version, that "Finding of smell" became, in two versions, subsumed by "Pain/sensation finding", one of the "*x* or *y*" type of classes by which many biomedical classification systems, terminologies and ontologies are infested. Although this SNOMED concept—unfortunately—still exists, there is no version in which it actually subsumes either "unpleasant odor of feet" concept. These were pulled in in our analysis sets to be able to draw graphs such as partially drawn in Figure 9.2, which provides a view on the evolution of SNOMED CT concepts in a historical context.

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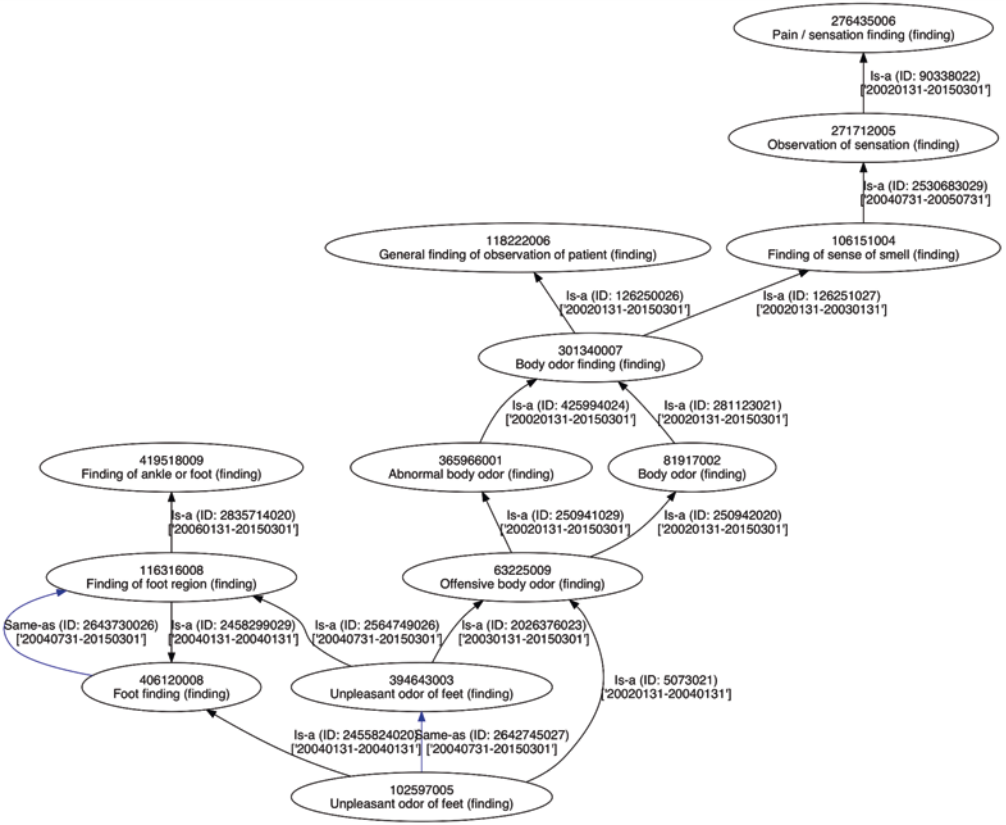

Figure 9.2 Partial historical subsumption hierarchy of the SNOMED CT concept "102597005: unpleasant odor of feet (finding)"

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10

The Structure of Standard Music Notation

Roberto Casati

Western musicians and musically educated people acquire most of their repertoire through reading musical scores. Learning to read music is a long and time-consuming process. Some crucial conventions must be mastered, and implemented according to sensorimotor patterns that are specific to the instruments one plays. This chapter explores some aspects of these conventions related to time representation. It presents a syntactic characterization of a fragment of Standard Music Notation, and discusses some cognitive consequences of principles that govern the syntax. A preliminary hypothesis about obstacles to reading is put forward. A consequence of the hypothesis is that certain musical styles appear to be very much in synch with Standard Music Notation, whereas others do not find an easy representation within it.

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The chapter has two parts. In the first part I provide a characterization of the temporal fragment of Standard Music Notation (SMN). I treat SMN like a formal language and describe its syntax and semantics. The main theoretical notion is that of an invisible "raster" whose abstract properties make the notation possible. Some principles governing the notation are spelled out. In the second part I draw some considerations of cognitive import about the peculiarities of the notation.

1 The Temporal Fragment

Standard Music Notation (SMN) is a notation that primarily represents the evolution of pitch in time. In its present forms, pitches are represented as locations on a five-line staff. Here I present a characterization of the time representation dimension only. This is meant to be a fragment of the complete set of SMN notation symbols. As such, the fragment abstracts not only from the pitch dimension, but also from many notational peculiarities and, in particular, redundancies. We shall start from a simplified version of the fragment, and then add a few principles that capture many of the idiosyncrasies of SMN.

The simplified fragment includes a set of primitive symbols, notes and ties.

Notes, such as

and a functional expression, the tie

Notes are aligned on what we shall call a *raster*. A time signature (3/4, 6/8, etc.) is provided, so that notes aligned in the appropriate way on a time-signed raster constitute a music *score.*

The notion of a raster is central for the possibility of using the system of Standard Music Notation (as well as many other systems, as we shall see) to represent time. A raster is an abstract organization of locations on the score. It is characterized in terms of its spatially relevant features. A raster *R* is an ordered set of linearly arranged discrete *spatial* locations

$s_1, s_2, \ldots, s_n$

such that s_1 is the leftmost element on the raster, and each s_{m+1} location is to the immediate right of its predecessor s_m.

A *connected segment* of the raster is a set of positions of the raster such that if s_m is the leftmost element of the set and s_n is its rightmost element, all s_i such that $m \leq i \leq n$ are part of the set.

An *initial connected segment* is any connected segment which includes the first location of the raster, s_1.

Given a raster R, a *score* on R is the result of filling every location in a given connected initial segment of R by a note.

Let us pause and see what happens here. First, some observations on the "spatial" structure of the raster and the shape of symbols. Right-to-left orientation (customary in SMN) is actually immaterial to the organization of the raster; the notation could be otherwise oriented. But nothing of importance hinges on it being oriented the way current practice has it, so let it be. Spacewise, the raster could unfold in a spiral; again, nothing depends on this—so let it be visually arranged on a straight line. Notes could have triangular or pentagonal shape, or different colors to differentiate them; nothing depends on this, hence let us use symbols that are sufficiently similar to those used in current practice. Second, we need a characterization of the raster structure because we want it to represent time. What can a raster represent? The representation provided by the raster is topological only: the simple semantics of the raster is the following:

> if a location s_m is to the left of a location s_n, then the symbol placed on s_m denotes an event that precedes the event denoted by the symbol placed on s_n.

Figuratively, a raster is a kind of sequence of locations:

$x\ x\ x\ x\ x\ x\ x\ x\ x\ x\ x\ \ldots$

Given that the only relevant properties are order properties, the raster is not to be read as a implying a *pace*. In particular, the referents of the locations on the raster are not requested to be equally spaced in time.

Third, the raster structure is *discrete*. Locations in a raster are atomic; there is no such thing as a half location, or as the leftmost part of a location.

Raster structures are little noted but important structures. They underlie other types of notation. Alphabetic writing systems, for instance, are in part a representation of the unfolding of phonetic events in time. In some, particularly transparent writing systems, if a letter symbol is placed to the left (or the right) of another symbol, then the referent of the former must be pronounced before (or after, respectively) the referent of the latter symbol. The raster for writing in most Western alphabets:

x x x x x x x x x x …

can be filled in by replacing empty position by letters:

d x x x x x x x x x …
d o x x x x x x x x …
d o g x x x x x x x …
d o g s _ a n d _ m i c e …[1]

Here, too, the order is purely topological. A character count (including spaces) of a written text does not tell how long it will take to pronounce the text. As it happens, the pronounced length depends on the particular assignments of lengths to the referents of the letter as well as on many other factors. Some vowels in given contexts take more time to pronounce than others. The spacing of locations on the raster does not make one pronounce the letters at any pace. Here as in the case of musical notation, the raster is necessary to represent the unfolding in time; it is discrete; and the only relevant spatial structure is topological structure.

2 Molecular Expressions

An important feature of SMN is that it allows for molecular expressions. Using the primitive symbols opportunely placed on a raster, one builds molecular expressions by the use of ties connecting symbols at adjacent locations.

If note *a* occupies position s_m and note *b* occupies position s_{m+1}, say that *a* is *adjacent* to *b*.

A *dyadic molecular expression* is constituted by two adjacent notes connected by a tie.

Now, stipulate that ties can take as their argument both atomic and molecular expressions. Thus a molecular expression can be constituted by a note *a* at s_m linked by a tie to a molecular expression in turn composed by note *b* at s_{m+1} and note *c* at s_{m+2}.

However, we do not have any reason to distinguish the molecular expression constituted by a note *a* at s_m linked by a tie to a molecular expression composed by note *b* at s_{m+1} and note *c* at s_{m+2}, from the molecular expression constituted by a molecular expression composed by a note *a* at s_m linked by a note *b* at s_{m+1}, and note *c* at s_{m+2}.

Graphically:

Hence, by convention, a *n*-ary *molecular expression* is constituted of pairwise adjacent *n* notes connected by *n*-1 ties.[2]

Call a *concatenation* any set of notes and/or molecular expressions that is such that it occupies a connected area of the raster. A *music formula* is any concatenation of notes and/or molecular expressions. Thus, music formulae can overlap (share constituents).

Not all music formulae of the temporal fragment are well-formed from the point of view of SMN. SMN gives preeminence to temporal units and introduces a number of notational abbreviations. In order to appreciate the rationale for the idiosyncrasies of SMN, let us now turn to the semantics of our fragment.

3 Semantics of the Temporal Fragment

3.1 Lexicon

SMN distinguishes between pauses and "sounding notes". The distinction is irrelevant for the purposes of the present discussion and will not be observed in the discussion of the fragment. We shall talk about the referents of notes generically as "events", be they silences or sounds.

The temporal fragment represents the unfolding of events in time. The asymmetry of time is mapped into a reading direction. As we observed, the only intuitive temporal significance of spatial features of the raster is ordinal: the event denoted by a note at a location s_m precedes any event denoted by a note at a location s_{m+n}. The raster is only used for writing down formulae; it does not represent a beat. In the fragment, information about temporal measure is completely deferred to notes.

Notes come in a structured, open-ended lexicon. They represent events and assign them a duration. Current convention has it that starting from the unit note, which is assigned an arbitrary time value, notes can express any of the 1/2n values of the unit note.[3]

 the unit note,

One-half of the unit note, ...

one-quarter, one-eighth, ... one$1/2^n$th... of the unit note.

3.2 Molecular Expressions

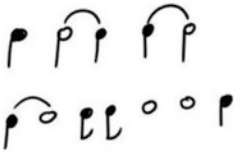
A molecular expression composed of notes or of molecular expressions *a* and *b* and a tie between them denotes a single *whole* (temporally connected) event whose duration is the sum of the durations of *a* and *b*.

In the example, the denoted event's length is 3/4 of a unit.

3.3 Music Formulae

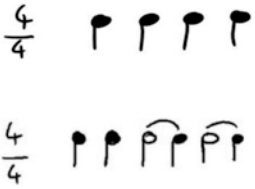
Music formulae are concatenations of notes and/or music expressions. They denote sequences of events of various durations.

The following are two examples of music formulae:



3.4 Music Pieces

We have seen that a *score* on R is the result of filling every location in a connected initial segment of R by a note. Some notes may be connected with ties, thereby giving rise to molecular expressions. Scores in SMN come with a meter indication. Paced music scores are music scores preceded by a meter indication.



A music score denotes a *music piece,* i.e. the set of events that are the referent of atomic or molecular expressions, and that unfold in time as the score indicates.

Some principles govern the interpretation of scores: fullness and non-overlap.

3.5 Fullness

The temporal fragment is constrained by *fullness*. A music formula has no temporal gaps. Between the events denoted by any two adjacent expressions in a formula there is no room for a third event.

3.6 Non-overlap

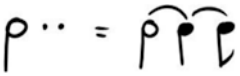
The temporal fragment is constrained by *non-overlap*. The temporal endpoint of the event denoted by the leftmost note in a couple of adjacent notes is always earlier than the temporal starting point of the event denoted by the rightmost note in the couple.

Taken together, fullness and non-overlap endow the temporal fragment with the possibility of using notes and molecular expressions so as to systematically follow to a rhythmic pattern. If the notation was not full, one would not know the starting point of a given event once the previous event is terminated. And if the notation allowed for overlap, one may have multiple events running at the same time, with no systematic way to determine the relative start and endpoint of any of them.

Fullness also blocks incomplete bars, such as the following:

4 The Temporal Fragment and SMN

In SMN conventions are used for rendering some molecular expressions, for instance one half note followed by two dots is definitionally equivalent to a molecular expression composed of a half note, a quarter note and an eighth note.



In general, each dot written to the right of a note or of another dot corresponds to a length that is half of the length of the note or the preceding dot (the dot to its left). Dots are explained away by the definition (but see below for exceptions to the generalized use of the abbreviation). More interestingly, SMN uses explicit indications of *bars,* i.e. *temporal units for a rhythm.* These are *redundant* in the temporal fragment, as the temporal unit is specified by the time signature. However, explicit bars allegedly facilitate reading. Related to bar units are rules of well-formedness for SMN. In fact, not every formula of our simplified temporal fragment is a formula of SMN. Indeed, SMN adds to the elements of the temporal fragment so far described the Bar Limit Principle.

Bar limit principle: Notes (i.e., atomic expressions) cannot straddle bars.

This is an example of a well-formed formula according to the bar limit principle:

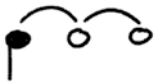
And this is an example of a non-wff:

The bar limit principle does not forbid suitable *molecular* expressions to straddle bars. Thus, although the two following formulas are semantically equivalent, only the first is a wwf in SMN:

Some conventions forbid certain ways to concatenate notes in a molecular expression whenever the bar limit is not trespassed.

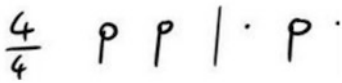
For instance,

or



are not allowed if the events denoted by these molecular expressions are totally contained within the temporal unit of a single bar. The very same expressions may, however, be allowed if the denoted events straddle bars at suitable points.

We observed that in general dots are definitionally explained away by the use of ties. However, the definitional equivalence does not allow for uniform substitution. Dotted notes cannot cross a bar limit. The following, for instance, is not allowed:



where the first dot is assumed to be related to the second note in the score.

This completes the characterization of the most salient features of the temporal fragment of SMN. The characterization shows that distinct representational time aspects are assigned to the raster structure (a purely topological, discrete and ordered structure), and to the temporal values of notes. The raster structure is used to express temporal order. Notes are used to temporally measure events. Some principles (Fullness and Non-overlap) regulate the interplay between order and length of the represented events. Finally, meter indications subtly interact with the rules for using molecular expressions through the Bar Limit Principle.

By way of comparison, fullness and non-overlap are not general requirements of the semantics of natural language. "Napoleon run and Nelson run" does not require the two runs (i.e. the semantic values of the two event sentences) to be adjacent and disjoint events. It may be asked whether the items of SMN obeys a stronger principle, Fodor's Picture

Principle, according to which if *a* is a picture of *b*, then parts of *a* are pictures of parts of *b* (Fodor 2008). The principle is meant to distinguish linguistic representations from iconic representations (as such it does not distinguish between pictures and diagrams, but this is not important for our present purposes). Music scores indeed comply with the principle, but only modulo the raster structure that individuates legitimate parts of a score. The only parts of a score that have meaning are either atomic or molecular expressions. "Areas" of a score that straddle the right half of a note and the left half of the subsequent note are not meaningful. Indeed, they are not syntactically individuated parts. However, once the restriction to formulae is accepted, the parthood structure of formulae mimics the parthood structure of the events that are their values.

According to the present characterizations, SMN is akin to a formalized language. It is formal also insofar as it is a human artifact, and it obeys stipulative rules.

I highlighted what appear to be important analogies with *writing*. Writing, too, as used to represent the phonetic aspect of spoken language, is a kind of formalized language, whose rules are of course proprietary and different from those for music notation. Writing, too, complies with the Picture Principle, modulo the restrictions to parthood imposed by the raster structure.

Music notation and writing are thus iconic *discrete* formal systems. Thus characterized, they also come close to *maps*, whose logical structure is underscored by the exploitation of some topological regularities (Casati and Varzi 1999).

5 Remarks about Readability: The Double Computation Hypothesis

This section addresses a cognitive point, related to some consequences of the particularities of SMN as captured in the fragment here described. The interesting idiosyncrasies of the temporal fragment of SMN depend upon the historical development of the notation. They have cognitive

import at different levels. The main result of the preceding discussion is that SMN cannot "see" beyond the single bar without the help of molecular expressions. The rationale of allowing only molecular expressions to straddle bars is that it is thereby clear at which point, in the unfolding of the event denoted by the molecular expression, a bar is over and a new bar commences. Thus, in the case of the following non-wff,

one cannot *visually* catch the beginning of the new bar.

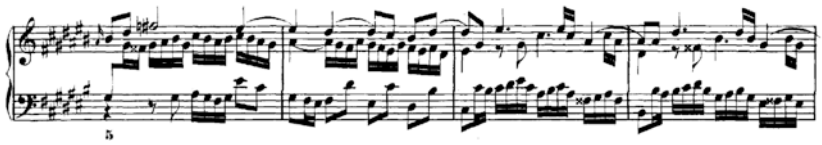
This facilitation comes with an attached cost, though. In the following example two bars are represented:

It appears that the molecular expression *A* is easier to read than its visual clone *B*. The difference can be explained by the hypothesis that *B* requires both a computation on the length of *A* and a parallel computation on the length of the bars. Call this the Double Computation Hypothesis.

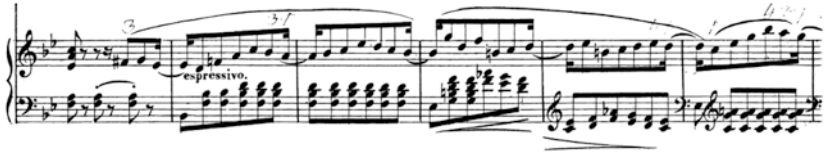
Some consequences of the double computation hypothesis is that there is a subtle interplay between music style, readability, and SMN, insofar as the relevant constraints of the temporal fragment are concerned (as per the Bar Limit Principle). A much-syncopated music such as jazz, or music in which retardation plays an important and sustained role, are challenging to the music reader who uses SMN because of the double computation requested by the bar limit principle. Call these "temporal reading challenges".

Here are two examples of temporal reading challenges (chosen from relatively simple scores, in order to highlight the challenges).

J.S. Bach, *Das Wohltemperierte Klavier,* Bach-Gesellschaft Ausgabe, Leipzig: Breitkopf u. Härtel, 1886, Band 14, Fugue 3 in C# major, BWV 848, bars 5–8:



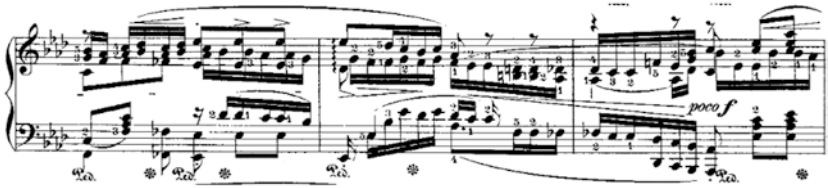
R. Schumann, *Piano Quartet op. 47,* Robert Schumanns Werke Serie V: Für Pianoforte und andere Instrumente, Leipzig, Breitkopf u. Härtel, 1881, Andante Cantabile, bars 33–37 (the piano part):



Within-bars reading is easy for the experienced reader, but transitions at bars are somewhat harder.

These examples are *reading* challenges *because* of the bar limit principle. It may be surmised that polyphonic retardations are in general harder to process than notes that are in synch. Here on the other hand the challenge consists in the fact that it is easier to read inside each bar than across bars.

A more ambitious hypothesis concerns aesthetics. Arguably, certain styles are pushing the expressive power of SMN to their cognitive limits. (Maurizio Giri, personal communication) That is, they make it possible for a music *reader* to proceed unchallenged. Authors such as Chopin appear to have fully integrated the bar limit principle. The structure of a typical Chopin work tends to be orderly in that sense, i.e. aligned with bars (even though, as in the following example, it may otherwise not be an easy read because of the polyphonic density.)



Chopin, Ballade n. 4, op. 52, Oeuvres complètes de Frédéric Chopin, Berlin, Bote & Bock, 1880. Bars 60–62

6 Conclusions

The chapter has provided a first syntactic and semantic characterization of the temporal fragment of Standard Music Notation. It stressed the role played by the theoretical notion of a raster. The raster is an "invisible" grid of discrete locations that can host symbols according to some rules and principles (fullness and non-overlap). The grid itself has a simple topological structure. Importantly, items in the grid are atomic locations; sub-atomic locations would not be vehicles for representation. Modulo this structure, raster based notations are iconic, insofar as they obey the Picture Principle.

Raster-based iconic representations—whereby elements of the raster are atomic—include also written language as a means of representing the temporal unfolding of spoken language. These forms of iconic representation are half-way between (paradigm) diagrams and (paradigm) pictures; they are akin to maps and formal languages such as the ones used in logic.

Notes

1. We are making abstraction here from the many complex temporal properties of phonology. Just imagine someone spelling the words slowly so as to articulate the various phonemes.
2. This is related to Schoenfinkel's theorem, according to which *n*-ary functors can be reduced to *n* unary functors.
3. A minimal usable lexicon would use a single type of note to indicate a unit duration, and the tie to bind together notes. Here as before we opt for a system that, although simplified relative to SMN, does not depart too much from SMN. This choice allows us explore some aspects of SMN. It is to be noted that the minimal lexicon would be rather different from SMN, whose class of symbols is open-ended—

there is no shortest describable unit in SMN, as the represented durations are ever-decreasing fractions of the unit note.

Acknowledgements Barry Smith made many things possible; in my early career, and then over decades of intellectual challenges and exchanges. This paper is a small tribute to the discipline of thinking in logico-ontogical terms that he champions and fosters. I would also like to thank Maurizio Giri, Richard Carter, John Kulvicki, Catherine Elgin, and Achille Varzi for inspiring comments on this paper.

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11

Attitude: How We Learn to Inhabit the Future

Mariam Thalos

1 Introduction

It is common knowledge that young persons are different from older ones, and not just in the ways they look and behave. They also differ in how they think. This is not simply a matter of being more or less expert at intellectual tasks; often such differences are negligible. Adulthood is a matter of being differently cognitively organized and motivated, especially in relation to time. It's surprising how little these differences have been studied scientifically. This essay is about the fundamentally cognitive ways that older people differ from their younger selves. It's about being grown up.

Social scientists have recently emerged with the finding that older people are different from younger ones in being happier, more positive, less self-focused and more focused on their communities. Researchers

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put these differences down to differences in time horizons—awareness of how long one has left to live (Carstensen 2006). I don't think there's one simple variable that explains the fundamental cognitive differences between young and old. But I will focus on an aspect of their differences that renders some of the other differences more explicable. It concerns the difference between old and young in respect of how they inhabit the arc of their timeline in the world.

The topic of how people experience time has recently been in the news because studies have revealed age-related declines in *neural processing speed* (Eckert et al. 2010). This difference in processing speed has been hypothesized to explain the old adage that time seems to clip by at a much faster rate for the old than for the young. The processing-speed hypothesis pits itself against the contender hypothesis that time perception is purely a function of memory structures. While tangentially related, and the only study on time phenomenology within miles, the topic of "time flies for the old" is not my topic. I mention it to distinguish my topic from it. I'm looking instead at two facets of difference between young and old: first, in how time figures in the practical phenomenology of those making choices; and second, in how that aspect of practical phenomenology itself changes over time. On these topics I have been unable to find substantive scientific studies.

My own methodology of analysis is largely phenomenological—largely (though not entirely) an examination of experience, and the features of human cognition (in this case, an ontology regarding time) that it brings to light. But because I'm doing philosophy, I will be sensitive also to normative dimensions of the topic—issues of what is commendable, and the basis (however undetailed I will have to leave it) for commendation. I will also appeal to evolutionary principles as a reality check in connection with the normative questions.

One moral of my tale will be a cautionary one: I will be arguing that the postures toward time that are prescribed to us in modern, formal decision theories (for example, in the Theory of Expected Utility and its more recent offshoots), are the postures of youth—indeed, the least mature ones—and not the postures of adulthood.

2 Why the Subject Is Important

It is believed that a normative theory of decision—a theory of how correctly to proceed in making decisions, such as, for instance, the much-celebrated Theory of Expected Utility (EU)—can be entirely non-committal as to the structure of the entities for whom it is meant as a guide, its intended consumers. It is believed that such a theory can be entirely non-committal even on the *procedure* by which to implement those guidelines and imperatives directed at its intended consumers. In his influential book *The Foundations of Causal Decision Theory*, the prominent decision theorist James Joyce writes:

> No sensible person should ever propose expected utility maximization as a *decision procedure*, nor should he suggest that rational agents must have the maximization of utility as their *goal*… The expected utility hypothesis is a theory of "right-making characteristics" rather than a guide to rational deliberation. It in no way requires an agent *consciously* to assign probabilities to states of the world or utilities to outcomes, or to actually calculate anything. The decision maker does not need to have a concept of utility at all, and she certainly does not have to see herself as an expected utility maximizer. The demand is merely that her desires and beliefs, however arrived at, should be *compatible* with the expected utility hypothesis in the sense that it should be possible for a third party who knows her preference ranking to represent it in the way described … [t]he direct obligation that the theory imposes is not that of maximizing expected utility, but that of conforming one's preferences to the axioms. A representation theorem will show that a person who meets her obligations in this regard will succeed in having beliefs and desires that are consistent with the global requirement of expected utility maximization. (Joyce 1999, 80, all emphasis original)

This is a mistake. No theory of the normative can ever be so thoroughly non-committal. In explication of this idea, I shall begin our investigation by showing that not even EU is thoroughly non-committal, and indeed that its commitments take the shape of a reductionism—something that I shall argue we need to resist. The central aim of this paper is to introduce an alternative framework for thinking about decision-making, one that takes seriously the unavoidable realities of decision-making for a

reasonably long stretch of life. Long-term considerations matter. I will insist upon models in which the agent's relationship to the future is quite different from that prescribed by EU. It begins from the observation that, at least over the developmental period, human decision-makers can eventually learn increasingly to "inhabit" both past and future so as not to "discount" either. Moreover, they can learn to plan in ways that defy the EU model. And this is a very good thing indeed.

Decision theory pioneer Leonard Savage exhorted decision scientists to be more cognizant of the decision-maker's relationship to time horizons when he contrasted "small worlds" and "grand worlds". Savage maintained that EU was a theory for small worlds; I am very much in agreement, and will explain the importance of this point at greater length. The point is important to appreciate because a theory for grand worlds is now very much overdue.[1]

3 Committal (Reductionistic) EU

So why do I say that EU is committal? The very criterion that Joyce himself proposes in support of EU's non-committality, exposes it as in fact committal. EU embodies a certain conception—in fact a *mis*-apprehension—that there is just one (and so obviously it is a single and coherent) ideal of decision-making, one that every human being is on a developmental path towards (though some will reach it more expeditiously, more efficiently or simply sooner than others, while others still never move in the right direction). In other words, the criterion Joyce proposes postulates a single ideal—in normative language, a single imperative—which serves a (single) criterion of assessment: an *expected value computation*. Everything that fails to satisfy the ideal has to be treated as defective or erroneous—better or worse, if we want to get fancy—at hewing to the ideal. (This model of assessment is associated with a bell curve over a set of single scores with a central tendency, hence an obvious choice, if an incorrect one, when it comes to modeling performance.) There are thus two categories of achievement in the model proposed: the Ideal and the Defective. Defect mitigation is all there can be to a corrective.

This single-function model, which results in assessments involving only a simple comparative of single values (the actual and ideal), does not make good sense from an evolutionary developmental perspective. How does evolution produce an entity with a rudimentary form of something that in its development dispenses with that something in favor of something else, something different? Where can a wholly new (and presumably better) function come from? Origins matter. V.S. Ramachandran writes: "[I]n biological systems, there is a deep unity between structure, function, and origin" (Ramachandran 2011, xiv).

In the biological world, the way of development is via an incremental building up of larger functionality via accumulations and/or repurposings of existing functionalities piecemeal, rather than wholesale replacement of one functionality by another one that is different. This means that there must be multiple functionalities, very probably acquired over an appreciable time interval (in ontogeny reflected in phylogeny), that "add up" in some way to a larger functionality that might not be coherent in the way that the single function proposed in EU is coherent. "Incoherence" is not the same thing as fallacious or otherwise flawed: it is instead the condition of being such as to have its parts in some possible tension or competition—a condition that relentlessly prevails in all biological organisms.[2]

One might complain at this point, in defense of Joyce, insisting that the single-function model, leading to simple comparisons of Ideal/Defective, is simply not meant as a model at all. It is meant as an ideal at which to aim with whatever sort of procedure one is employing. The truth, however, is that EU must in fact be interpreted as embodying a modeling assumption—the assumption that the function to aim at (the Ideal) is a single function, rather than a suite of scope-restricted functionalities, loosely conjoined and so potentially at odds in any given decision context; where deviations from this function must be construed as errors. Why do I say that EU must be so interpreted? Simply because it offers this single standard, applicable to absolutely all contexts, rather than a manifold or suite of partial assessments, *without* addressing questions as to whether the single function might be inferior to a foliation of more scope-restricted functionalities.[3] The single-standard model short-circuits postulations of any multiple-functionalities model as itself an ideal. But

it is quite possible that a plurality of narrow-scope assessments, though perhaps not coherent in the way that a single assessment can be, is nonetheless the best that one can do given the range of tasks that must be performed in service of making decisions. I believe that this is in fact the case.

Consider the simple fact that ordering tasks by importance is quite a different task from ordering them in the time queue, hence might well be pursued according to different principles. Assessing tasks by priority can therefore result in a different ordering from assessing them by principles of ordering in the "outbox", especially if their performance must involve travel to different points in space. The fact that the assessments might result in different orderings is obviously not a defect in the respective assessments; just a reality when the number of tasks that one needs to perform in service of life are multiple rather than singular, and that circumstances or resources might render some of these assessments more critical for decision purposes than others. It is therefore no defect in a hypothetical model of (say) long-term planning that it proposes a suite of functionalities rather than a single one, prioritizing some over others for certain purposes and reversing the priorities when circumstances demand it. It is simply a fact associated with the complexity of the undertaking. And a single-assessment model will tend to paper over this fact rather than wrestle honestly with the complexity. A single-assessment model is a form of reductionism.

This chapter is an exercise in exploring the space of nonreductive options, preliminary to developing a more complex model as an ideal for decision-making. It is an exercise that takes notice, first of all, of the fact that human development is a matter of accumulating a variety of scope-restricted functionalities over time. And that a suite of scope-restricted functionalities might have advantages.

What I wish to argue is that we change vis-à-vis our capacities for decision as we develop—no surprise there. But not by throwing off youthful ways, or incrementally (or otherwise) modifying them in the direction of "better approximation" of an expected utility ideal. Instead, we change, we grow up, by acquiring completely new ways of coping ("grown-up" postures) that have to live alongside, and interlocking with, the youthful postures. The postures we take are quite diverse, and they serve different

ends that ultimately all need serving. So we end up having to manage a large repertoire of postures. Being grown up, ultimately, is not so much a matter of having acquired a posture sufficiently advanced or improved over that of youth. Rather, being grown up is learning to develop managerial characteristics of moving between various postures (some completely unknown to the young) that we acquire in the arc of experience. Managerial characteristics constitute distinctive patterns of inhabiting the different postures by turns. These patterns are emblematic of personality and character traits that distinguish us from other members of the tribe.

4 Postures in Focus

Children can perform tasks very well indeed, in certain respects better than adults can—their focus can be more singular, less divided. So it is obvious that one should not hold that a posture is a task competency. Rather than being merely the decision-relevant task itself, what I mean by *posture* includes also the way of being oriented towards the task such that you are sensitized to certain things as reasons for your performance (for instance, as a reason for performing better or worse, quickly or leisurely, on the associated task) and *de*sensitized towards other things. Thus it involves also a kind of stance towards the decision-relevant task that you're performing. In fact, I am using the terms "stance" and "posture" interchangeably. As a human being, one accumulates more and more such stances towards performance of one's tasks, including one's decisions.

I have written (Thalos [under review]) about three stances that together comprise an approximation of EU—although not an equivalence because conflicts between functionalities are not always resolvable. But I will argue here that these render an individual only as grown up as a fully paid-up teenager. In other words, not fully grown up. To be fully grown up one requires also the development of a suite of postures that attune one in more sophisticated ways to (1) the future; (2) other agents; and finally (3) risk; though nowise do I mean to imply there are only three grown-up stances. Here I will discuss what I refer to as the *future stance*—the first of the trio I just named. The details of (2) and (3)—the bulk of the larger project—have yet to be worked out, although I will have occasion to talk

specifically about (2). We will ultimately also require an account of how these attitudes work together, in spite of often coming into conflict.

One more preliminary remark before proceeding to discussion of what I am calling the *future stance*: the fundamental logic of stances is that one cannot be operating in more than one at any given time. Correlatively, it's not possible to make errors associated with different stances at the same time. Thus it is not possible to commit an error of prioritization of tasks whilst conducting an assessment as to their proper time queuing; this would be analogous to committing a baseball error while playing basketball. The fact that we cannot commit errors associated with different assessments simultaneously is due to the reality that we cannot (for instance) apply standards appropriate to assessing how well a certain person is prioritizing, if that person is doing something completely different.

5 The Future Stance Part I: The Reactive Self

When we are young we respond to the world with our hearts; we are *reactive*. In other words, we look out at the world and allow our behavior to become captive to some of its features: we are *captivate-able*. We are in a relationship with the world where it is giver (of good gifts, hopefully; but all too often of bad things) and we are receiver. Our agency is in a certain respect invisible to us because it is still dormant. We respond to the world very much like non-agentic beings—without engaging the features of us that are (or more precisely, will be) agentic. We allow the world simply to appeal directly to our needs and appetites. We have not yet learned to operate in self-management mode. When one is operating in this largely non-agentic way, the future is practically invisible, completely out of sight. Practicality is focused entirely on the now.

Growing up involves learning to respond to the world differently—not always and immediately with our hearts, but (dare I say it) with an attitude of mastery, not necessarily over the world, but over ourselves. This does not necessitate that the reactive self must disappear. It does not. It can be submerged or obscured in what will come later; but it is never completely absent.

There's a very good reason why that reactive self has to precede a more grownup self. Our existence as living things, either as individuals, or as a

species is marked by what I like to call the *tyranny of the present*: in order to exist one year from today, I, who begins existing let's say today, must exist every single day from today until one year hence. This is true of living things, of species of living things, and possibly even of cultural communities and certain works of art.[4] There's a bare minimum of existence that they have to pass, each and every moment, in order to proceed to existing in subsequent moments in time. We say of these things that they have life histories (narratives). This results in a kind of existential fragility.[5] Thus concern for the present must be elemental—justifiable as most primal in view of our existential fragility. No wonder then that it appears first in ontogeny.

There is something else that favors the reactive self in childhood. Children experience pure unbridled joy in engagements with the moment. It makes them good partners to their parents, who are obliged to have them in tow while they are in pursuit of more grown-up ambitions. Thus the lives of children can mesh easily with those of their parents—something that a teenager's life does nowhere near as well. It's thus quite fortunate for many parents that the developments in an offspring's ambitions and scope of concerns is accompanied by a larger capacity for pursuing them on their own. Thus, they stop being good companions to their parents just when they start being capable of taking on more things on their own. This cannot be a coincidence.

If concern for the present were all a person ever had, by way of navigating the world, much of what we do by way of reasoning practically would be unintelligible. For example, aspiring would be unintelligible, since aspiring involves a hope for changing oneself or a hope for what one is not-yet. Relatedly, making decisions that are liable to completely change one's priorities is unintelligible if a person could only serve as steward for their present concerns (cf. Paul 2015).

6 The Future Stance Part II: Reaping What We Sow

The first thing we learn is to stop letting everything wash over us as patients in life—to stop behaving as consumers of fate only. We learn to become, in our own minds, producers of it as well. There are two

fundamental ways of being a producer of fate. The first (in time as well as in principle) is an attitude of trying to control as much as possible of the proceedings—let's refer to this as the *dictator mode*. I dare say that we all start the process of leaving behind the reactive phase in the dictator mode. But very soon thereafter most of us learn that not everything should be related to in dictator mode, because some aspects of the world are like us—self-moving. Seeking to control these Others is not an appropriate goal. While almost all of us develop all the way in regards to treating Others as like unto ourselves by young adulthood, a sizeable portion of us make only small advances—they are on the autism spectrum. Or, worse, certain of those among us find themselves with no intrinsic motivation to respond with a regard for Others—they are sociopaths.

Still, whether we think of Others as things to be controlled, or instead as partners in whatever projects are undertaken, we are in this growing-up phase also learning to think of the future as a new playground in which to harvest what we sow, as well as at the same time learning to take responsibility for what transpires in the meantime and beyond. We learn that the future holds consequences for things we do in the past and present. The animals we can train—dogs are an especially good case—can appreciate associations between things in the extended now (the duration of their short-term memories) but they have no consciousness of cause and effect as such. This larger capacity requires a serious appreciation of what no-longer-is and what is not-yet; and this requires "having feet" in the past and the future. It requires taking up residence in the arc of time.

We colloquially appreciate that growing up is in part learning to take responsibility. What is not often appreciated is that this amounts to being able to view the future as a place in which to act, as well as a place for enjoying the fruits of one's labor. It's a place to *inhabit*. This is something that one does not appreciate in one's youth. In young adulthood, one begins (and practices) taking longer and longer views on the future. Young adulthood is a time in which many people (if they're sufficiently fortunate in life, which obviously means not everyone) buoyantly endeavor. They explode in an overabundance of thinking about what can be—both what one can experience when grown up and what one can *be* and *accom-*

plish there, by way of leaving one's mark as an individual. Some people prioritize accomplishment; others may be less accomplishment-oriented. Whether or not one is accomplishment-oriented, there is the question of companions on the journey as well as accomplices in one's life projects. To have companions and/or accomplices, one has to learn to work and plan with others. This is no small skill. In fact, to work with one's own future self is itself a major skill, and importantly intertwined with the skills needed for working with others. Here is what I mean.

In the reactive phase of development, the present moment is where action takes place. Past and future are both different countries. Now is all the time there is for action. This is fundamentally the perspective taken by EU: there is only one calculation to make, one view of what is desirable, and it is to be performed now. Even when EU considers a "policy" choice, it assumes that the choice is made now. Even if the existence of the future is acknowledged, it is acknowledged as a place simply for reaping the rewards of the choices taken now. I have a phrase for this picture: the space of decision is *isotropic*—it's the same everywhere you look, whether forwards or backwards. This is depicted in Fig. 11.1a.

The future stance, by contrast, is depicted in Fig. 11.1b: this is the grown-up way of being oriented to time, and future time specifically. The grown-up's vision of the time field is, by contrast with that of a youth, is one that admits of more than one locus of agency for oneself as well as for Others. The space is therefore not the same in every direction you look: there is no locus of agency in the past, only the in the future. These are copies of me. What's more, the more nuanced grown-up vision—the vision that one grows into if one is *not* autistic or sociopathic—is one where there is not only me, but also Others. I practice working with the Me of the future by working with Others in the now. This is how the future stance is intertwined with what we might wish to call the *We stance*.

Part of what we mean when we say that something is more grown-up, is that it is at least in some contexts, the right way of proceeding—it is to be preferred, or to be prescribed, over the less grown-up. We would like in some way to shine a light of approval upon it. At least part of what we have to do to represent growing up in its fullest, is to give an account of how grown-up stances are in some sense deserving of approval. That

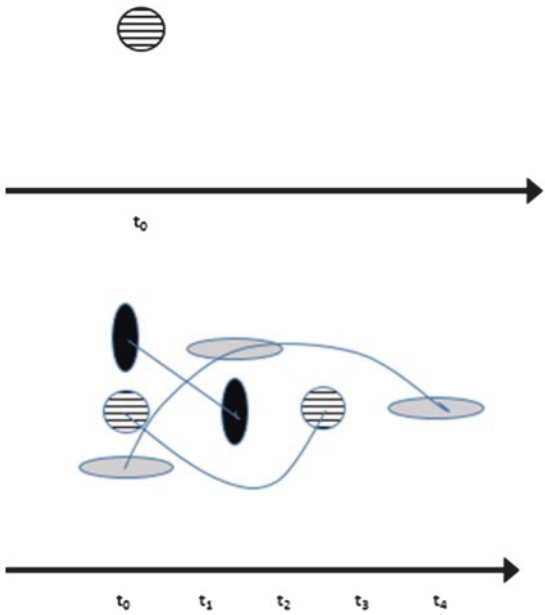

Fig. 11.1 (a) Phase 1, the "I" in isotropic time; (b) grown-up phase, "I" and others tracing arcs in anisotropic time

means we have to appreciate the standards of assessment associated with the stances, as well as with progress through them. And that locates study of the future stance at least partly in the sphere of philosophy, just as it is located partly in the spheres of psychology and biology.

It bears emphasizing that, as Fig. 11.1 makes clear, the future stance is nowise about *predicting* the future—about being able in some way, however approximate or tentative, to foresee it. It's not about having theoretical knowledge regarding things that enable you to predict how they will tick, so that you can outwit them. (That kind of knowledge, even if it were available, would only make you as canny as a psychopath.) Because neither the future stance nor the We stance involves employing knowledge of alleged law-like regularities to calculate the future from information about the past and present. Each stance is involved with *inhabiting* the still-absent future much as we inhabit the present. Obviously I don't mean time travel. So what do I mean?

You might think that you as an adult are always inhabiting only the here-and-now. But that's not true. Look around you and the past comes alive: a cup evokes a shared conversation, a book an important development in your thought, a photograph an entire lifetime with someone you once loved. And of course we are (as I like to think) surrounded by the triumphs of our predecessors—for example this page of text, written or virtual, is a testament to the ingenuity of generations of language-loving and technology-creating human beings. We can no longer move an inch without falling into the orbit of some dead person's legacy. Jean-Paul Sartre puts this well:

> When knowledge and feeling are oriented toward something real, actually perceived, the thing, like a reflector, returns the light it has received. As a result of this continual interaction, meaning is continually enriched at the same time as the object soaks up affective qualities. The object thus obtains its own particular depth and richness.

Objects and places themselves take us into the past. Keith Basso writes about how the Apache take their children to certain places in their landscape to tell them stories about what happened there—tales of both heroism and folly; the children's lessons, like the Apache wisdom, inhabit those very places. The moral is that familiar objects and places are not inert: our interactions with them take us into the past. The life of an adult is one that is enlivened by and intertwined with objects that are themselves intertwined with the past. We think that being so alive to things is actually being alive simpliciter, or alive in the present—and for good reason: if you're not alive to the meanings of things around you, you're really not alive at all. But we should also appreciate that what these objects do is help us inhabit the past.

I maintain that to be alive, as an adult, also means being oriented towards the future in the same way. Yes, once more you're not literally time traveling. But your cognition has to encompass the future in a certain way, indeed to hold *multiple* possible futures, and to navigate your way in the here-and-now around those possible futures, all without being entirely sure which of the alternative possibilities is in fact the actual future—the one that will one day be your past. We comfortably move

among alternative futures—they're the furniture of our lives as much as the objects wrought by the past.

Indeed it's impossible to predict the future to any significant degree unless you're able to think in a grown-up way about how other human beings genuinely figure in it—how they contribute to bringing the future about even as they move through the here and now. That includes yourself: you cannot predict the future unless you're able to appreciate how you figure in it as an entity who moves through the here and now as you reach for that future. This means that the future is best coped with via treating it as if it were a very long present—very long indeed—and one in which things may turn on a dime.

EU asks us to proceed as though we were still in the reactive phase in relation to time, and not developed into more grown-up stances. It asks of adults that they deny themselves the complex ways of embedding themselves in time. It asks us to take a very simplistic perspective on ourselves (and Others) in time. It might seem reasonable to "discount" the future from this simplistic perspective, but discounting is something that would be completely irrational from the perspective of someone who inhabits the future as well as the present, and so triangulating their behavior in the now from that more complex perspective.

The point I'm seeking to make about EU was made a long time ago by Leonard Savage. He distinguished between "small worlds" and "grand worlds". He said that that EU is appropriate to "small worlds"—worlds where you can effectively localize the consequences as well as the entirety of the actions themselves that you are now contemplating. (And we could agree with Macbeth: "If it were done when 'tis done, then 'twere well/ It were done quickly.") In small worlds, the following slogan is appropriate: "Look before you leap"—which is effectively the slogan of EU. In the grand world, by contrast, you have to work more piecemeal, the more applicable slogan is: "You can cross that bridge when you come to it"—meaning: "these considerations can wait a while; more decisions are coming relating to the things you are considering here-and-now, so proceed accordingly, mindful of that fact."

Here are some further remarks that Savage makes in this context:

> Though the "Look before you leap" principle is preposterous if carried to extremes, I would none the less argue that it is the proper subject of our

> further discussion, because to cross one's bridges when one comes to them means to attack relatively simple problems of decision by artificially confining attention to so small a world that the "Look before you leap" principle can be applied there.

I read Savage here as imagining (falsely, I believe) that one can, without loss, always proceed by "artificially confining attentions" to relatively simple decision problems. However, those who've come after Savage simply didn't even recognize the concerns he had, and have ridden fairly roughshod over the careful points he was trying to make—namely, that we can't use the sort of decision theory we currently have (and for which we have Savage, among others to thank) for contexts in which one cannot break the decision problem down without loss. Savage, in the end, was wrong that we could turn grand worlds into small ones by simple acts of decision engineering.

Unfortunately those who have come after Savage have not had so much as a second thought about the subject of the relation between small and grand worlds. We have done nothing but employ EU absolutely everywhere. Because we seem to have nothing else to use. If we don't use EU, what shall we use instead? That's a substantial philosophical question. My answer here is that we simply haven't done enough work on the theory of decision; we have not even begun to examine the differences between young and old in relation to how they approach decision-making. And when it comes to the normative, we absolutely require a theory of how possibly to put off crossing bridges, but to do it in a rational way, mindful of the fact that we cannot always (or perhaps ever) take all relevant consequences and considerations before taking our first steps toward an outcome; we absolutely require a theory of how to this in a way that doesn't undermine aims—not only those we currently embrace, but aims we will or simply might come to embrace later. And this is at least partly what it takes to look after your future self, never mind those Others who will come after you and those who walk alongside.

So what sort of hard intellectual work is required to appreciate and apply the reasoning "You can cross that bridge when you come to it"? Let's look a bit more closely at what adults can actually do.

7 The Next Stance

An adult's vision of the time field is, by contrast with that of a youth, a stance that admits more than one locus on the map of decision-making. The adult acknowledges multiple loci of action, and treats them as such. In some instances, the sites of agency are contemporaneous—others with whom I am coordinating or collaborating or vying. In other instances, it is myself at different points in time whose (alien) concerns I am anticipating. In yet other instances, both types of sites are important to treat as such. The topic of multiple sites of agency is the province of *game theory*. And the form decision-making takes there is *strategic*—it involves taking into consideration the deliberations of Others as one proceeds to settle one's own. What I am saying here is that grown-up decision-making—decision-making for a grand world—is always strategic, because of the pervasive reality of multiple sites of agency.

But appreciating one's timeline as one with multiple sites of agency is not simply about courting (any way one can) and ultimately enlisting the aid of others for the sake of one's own ends and ambitions. Rather, the adult's vision of the future includes other people because an adult can see the point of joining in collaborative projects as well. Thus, the adult's goals themselves, and not only the means to them, are often shared and collective. Adults join projects already underway, as well as seeking to organize others to advance their own projects. In an adult's mind, other people's very participation renders the achievement of individual goals that are part of a larger collaborative system of interaction genuinely satisfying—and valuable in ways that the individual goals, if they did not cohere in a larger system of collaborations, could never be. Science, Art, and Philosophy are just a few of these larger systems of collaborative undertaking that one joins already underway, systems that would be drained of their richness if the goal-oriented participation of others were scrubbed from them. This is the insight encapsulated in Samuel Scheffler's brilliant book (Scheffler 2013). He shows us that we need future generations—most of whom we will not be related to either by birth or acquaintance—to exist and carry torches for undertakings we value today, just as we need those who have already gone before us in

history; we would be profoundly diminished if those future people were not to exist. Philosophy, for instance, would be much diminished today, if we knew the world as we know it would end in a month's time—for whatever reason. To inhabit the present as an adult is at least partly to inhabit it as a member of a community with a wide variety of projects, many of which will outlast any one of our own short lives. Vast stretches of grown-up life, like grown-up decision-making itself, are thoroughgoing collaborative, even if on reflection we think of ourselves as doing it all by our lonesome. And to appreciate this fact requires distinguishing between predicting (forecasting) what others will do, on the one hand, and anticipating them as either collaborators or opponents, on the other. This distinction is crucial in contexts of decision-making.

The contrast between predicting and anticipating is important. Agents, as game theory itself appreciates, are never subject to prediction: they cannot be predicted but might be anticipated, whereas the non-agentic world might (if we're lucky) be subject to forecast or partial forecast. When all is forecast-susceptible, the action space is isotropic—there is only me acting in the now. When it also includes that which is only to be anticipated, the action space is anisotropic.

One important developmental fact to emphasize is that a youth can learn how to work with a future self, by working with others in the present (the latter is simpler in many ways than working with future agents, oneself included). Only then can one begin contemplating working with others in the future. And, as is now obvious, the capacity for working with one's future self is very much dependent upon and intertwined with that for working with others. Because your future self can be as alien as another person. (It is well known that sociopaths have difficulty with long-term life plans, and generally with living time-coherent lives.)

8 Conclusion: Human Agency

Human agency is much more than a matter of causing one's limbs to move in service of current ambitions.[6] Human agency is fundamentally distributed in time, as well as across the boundaries of "I". *We* has a special role in human life—a role that grows over a person's lifetime. Like

the development of a stance on the future, the ability to think *We* (like the ability to think *will*) is pervasive and transformative of a wide spectrum of our practical operations in life, intellectual and motivational alike. They are not merely transformations of "cool" reason—of our capacities for knowledge—but also of our ways of inhabiting the world with the fullness of our entire suite of cognitive functions. We require a theory of decision-making that can do full justice to this reality. Many features of decision and game theories as we know them today are not up to the task.

Notes

1. Ken Binmore (2006) agrees. But his way with it is quite different from mine, and reductionistic in the same way that EU is.
2. One argument that might be made here by an opponent is that feedback or training of some sort might improve performance of a function without the multiplicities I am about to propose. This might well be the case for some sorts of functionalities, but not the sorts of functionalities that are as transformative as the ones I will be discussing.
3. You may perhaps be wondering if it's unfair to refer to EU's stance as an "assumption"—after all, it might seem as though EU's modeling choices rest on solid normative ground. While this is not the place to pursue the argument at any length, I would simply point out here that the proofs offered for the fundamental Expected Utility Theorem include many assumptions about preference that go proxy for the idea that there must be a single "answer" to the question of what to pick in a decision context, and these are simply assumed to cohere into a single function with certain mathematical characteristics.
4. Nations may not be subject to this tyranny. Barry Smith has argued (1997) that throughout history some nations have popped in and out of existence—for example, Poland. But as Leo Zaibert notes (private correspondence), his point may apply only to Poland the country and not Poland the nation (nor to Poland the cultural community).
5. This is the basis of our ordinary exercises of caution. More sophisticated management of cautionary strategies belongs to a larger stance

that is oriented towards judicious activities in the face of risks of all kinds. There is no space here to discuss that stance.

6. In fact, I believe that the familiar conception of action itself as a matter of a coupling of a belief and a desire, that results in a bodily movement of some sort, is implausible and simplistic in the extreme. See Thalos (2016).

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12

Parental Love and the Meaning of Life

Berit Brogaard

1 Introduction

"The art of motherhood involves much silent, unobtrusive self-denial, an hourly devotion which finds no detail too minute", wrote Honoré de Balzac (1996). De Balzac has a point. Life changes after you have a child. Hormones rage, chores and burdens multiply and social roles change. Losing the freedom you used to have is a major life-altering event. A hindrance. An encumbrance. An obstruction of happiness and justice.

It can be a full-blown soul-draining, tear-inducing experience. Donna Wick, mother of three and co-producer of the documentary *Bringing Up Baby* explains:

> You feel alone and think you're crazy. We want women to be able to say it's O.K. to dislike parts of being a mother. It's boring, lonely, not valued and not paid. It's mindless and repetitive and no one ever says to you, "It looks like you're having a tough day, go for a cup of coffee" like they do at the office.[1]

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Having a kid is soul-draining for fathers too. One dad, who is in his thirties and has three young children, confesses to Reddit that he regrets his decision to have kids[2]: "The major problem is the loss of freedom. And the financial costs," he writes,

> I barely see my friends anymore. I hate coming home from work and having to watch the kids by myself ... I hate never being able to travel. I hate that I don't have my weekends off anymore. I actually look forward to Mondays because of how much work it is to watch the kids ... I hate that I had to move to a city I don't like because we needed help from my parents. I hate being stuck in a job I don't enjoy because of our financial situation. … There are nice moments, but overall it's just pure stress. I just feel like I've given up my entire life and I've barely gotten anything out of it.

The question I wish to address is: How can parental love, devotion and commitment overcome what appears to be a loss of personal autonomy and life satisfaction? And I will argue that the special ontological structure of parental love makes it unique in a way that can add value to a life, despite its costs.

2 Parenting and the Loss of Autonomy

When you make decisions and act on those decisions, your decisions and actions are more or less autonomous. When fully based on what *you* value and identify with, we say that your decisions and choices are fully autonomous. Say you value your romantic relationship. Deciding to act lovingly toward your beloved is based on what you value, beating him or her senseless is not. Personal autonomy is itself valued cross-culturally, as it is universally taken to be crucial to the possibility of leading a satisfying life. People need to feel autonomous to feel satisfied. As Walt Whitman put it in *Leaves of Grass*:

> Not I, not any one else can travel that road for you,
> You must travel it for yourself.
> …
> It is not far, it is within reach,

> Perhaps you have been on it since you were born and did not know,
> Perhaps it is every where on water and on land.
> But what exactly is it about autonomy that makes it so important?

According to Stephen Darwall, when we (paternalistically) limit someone's autonomy for their own best interest, we are acting wrongly (Darwall 2006). The wrongness of this paternalism is the result of our not respecting this person as an *equal* person, or as a fellow rational agent who, like us, can make her own decisions. We all have the same dignity: "Every life deserves a certain amount of dignity, no matter how poor or damaged the shell that carries it" (Rick Bragg), "All human beings are born free and equal in dignity and rights" (Universal Declaration of Human Rights), "Without dignity, identity is erased (Laura Hillenbrand), "Any man or institution that tries to rob me of my dignity will lose" (Nelson Mandela), "One's dignity may be assaulted, vandalized and cruelly mocked, but it cannot be taken away unless it is surrendered" (Morton Kondrake).

Respect is not the only source of the value of autonomy. A person has a *right* to demand autonomy, but as Darwall (2006) points out, autonomy is also valuable as a *benefit*. Autonomy preserves personal value and contributes to what we might call flourishing in an agent-relative sense. Eating broccoli may be something that is objectively good for me, just as it is good for you, but if I genuinely dislike broccoli, eating broccoli is not of personal value to me. The reason we should care about whether an activity contributes to our personal values also turns on the equal dignity of people. Because we have equal dignity, we have a right to value one thing but not another and act accordingly. When we lose autonomy, we lose that right to decide what we want to do.

The problem with activities that imply a loss of autonomy, then, is that people need to feel autonomous to flourish *as people* and avoid losing their dignity. We need to feel we are the authors of our own behavior rather than feeling that our behavior is controlled by external forces that are not truly a part of our self. Because autonomy is a basic human need, it can be a traumatic experience to see it diminished. In extreme cases it can result in a loss of a person's identity, or what is also known as "mental death" (Ebert and Dyck 2004), which occurs in contexts of entrapment and totalitarian control that seriously limit one's choices, such as torture.

Of course, the pressures that normally come along with parenthood are quite unlike torture. But there are similarities. One classical form of torture is to keep people awake. Keeping someone awake intermittently or for long periods of time is a highly effective way to break the will of a person and for that reason it has often been used in military interrogations. Sleep deprivation radically increases stress levels, increasing the chances the tortured might divulge important information. Over longer periods of time, sleep deprivation can cause cognitive impairment, psychosis, and a malfunctioning immune system. US military personnel were ordered to keep prisoners awake by blasting ear-splittingly loud music at them—for days, weeks or even months on end—at prisons in Iraq, Afghanistan and Guantánamo Bay.[3]

For many parents, minding an infant is not unlike having loud music blasting in their ears, preventing them from sleeping. It's estimated that up to 40 % of all infants have colic, a condition associated with inconsolable fussiness and screaming that can go on for hours on end.[4] Colicky babies' senseless crying, screaming in fact, can be incredibly difficult to endure. As one parent of a colicky baby puts it:

> On top of the regular newborn workload, i.e. feeding and changing him a dozen times a day while trying to squeeze in small increments of sleep around his day/night confusion, my wife and I were in a constant state of staving off crying. I remember experiencing such hopelessness that I told my wife, "I feel like I have nothing to look forward to." … We'd fight, of course. You can't fight with the baby, even though you pretty much want to throw him out the window. So who else can you blame but your spouse? Or your mother, or her mother. "You're holding him wrong!" "I'm trying!"[5]

But even for those 60 % of parents who do not have to deal with colicky babies, sleep deprivation takes its toll. A poll by the National Sleep Foundation found that 76 % of parents have frequent sleep problems.[6]

Sleep, of course, is but one of the countless things you do not get enough of during the first years of becoming a parent. Even worse: verbal, psychological, and emotional abuse in relationships are forms of mistreatment that can resemble many parental scenarios.

Psychological, emotional, or verbal maltreatment causes a person to lose her ability to react normally and can result in a mental numbing,

or mental death. A psychologically, emotionally, or verbally abused person might never realize that she is abused. Psychological, emotional, and verbal abuse can lead to feelings of guilt, shame, ineffectiveness, despair, hopelessness, distrust, and being on the edge, attachment problems, long-term personality changes, and changes in core beliefs and assumptions.

While some parents, regrettably, abuse their children, the parent–child relationship is frequently abusive in the opposite direction. Who has not put up with their children shouting "I hate you", "I will kill you", or "you're an idiot"? Temper tantrums, eye-rolling, feet stomping, doors slamming and heavy sighs are genuine cases of psychological abuse that can have the same psychological consequences as psychological abuse in romantic relationships.

But it's not just torture-like scenarios and psychological abuse that makes parenting a case par excellence of a long-term situation that deeply threatens personal autonomy. On top of that, there are the gazillion things you would never have chosen to do or possess, if you had not had babies. After having a child, you are suddenly forced to plan your life around hours of screaming, midnight breast feedings, diaper changes, afternoon naps, proper bedtimes, ear infections, children's sick days, hurricane days, play dates, soccer games, bullying, winter school concerts, science projects, Spanish homework, final exams, puberty mood swings, little punk breakups, broken hearts, teens talking back to you, bathrooms being invaded for hours.

Having a child means giving up on basic needs that sustain you as a human being, and it means losing a bit of your dignity as a person. Occasionally one wonders how the human species has survived.

3 Parenting and Life Satisfaction

It may seem self-evident that parenting involves a loss of autonomy. But things are a bit more complicated than that. It is not simply a conclusion we can come to by thinking hard enough about it while sipping green tea in an armchair. This is because not everything that is stressful and involves sacrifices implies a loss of autonomy. Sometimes hard work and encumbrances are a means to an end. Taking an abominable and

mind-numbing yet required course in college may be demanding and deeply displeasing and yet, for most people, it is not the sort of thing that subtracts from their autonomy.

But the sacrifices that come along with parenting are not merely a means to an end, the way that taking dreadful college courses is a means to a college degree. Empirical studies of life satisfaction, happiness, and meaning suggest that we do not value raising children to nearly the same extent that we value other routine activities. Most surveys use a common format to measure happiness and life-satisfaction. The main question about happiness asks people to rate their psychological state on a three-step scale. It is stated as follows: "Taken all together, how would you say things are these days–would you say that you are very happy, pretty happy or not too happy?" Life-satisfaction is frequently measured on a four-step scale that includes the question. "On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the life you lead?" The answers from these surveys are then correlated with numerous demographic and personal data, such as country of residence, income, highest level of education, number of children, and marital status. The World Database of Happiness, which is publicly available, summarizes the result of these measures of life-satisfaction and happiness in more than 100 countries.[7] In the majority of countries, including the United States, the data indicate that life satisfaction is lower among people with children. In poorer countries with higher fertility rates than in wealthy countries like the US, being a parent is consistently associated with lower life satisfaction.

The data from the World Database are consistent with a 2006 study published in the *Journal of Health and Social Behavior*. Using data from the National Survey of Families and Households, Robin Simon, a sociologist at Florida State University, and his co-author found that parents are more likely to be depressed than people without children (Evenson and Simon, 2005). Another study published in 2011 in the journal *Psychological Science* points out that even apparently happy parents may be covering up their true feelings. On average, parents exaggerate how happy their kids make them in spite of financial and physical stressors.

Although most empirical studies point toward a loss of life satisfaction as a result of parenting, there are two rather surprising results in

this arena. Research published in the January 2013 issue of *Psychological Science* appeared to demonstrate for the first time in years that parenting really is associated with more happiness and meaning in life (Nelson et al. 2013). Psychologist Elizabeth Dunn and her colleagues conducted three studies that explored whether parents are happier, more satisfied and think more about meaning than their child-free peers, while also looking at whether age and the parents' sex matter to their feelings about parenting.

The first study aimed at determining whether parents evaluated their lives more positively than non-parents, collecting data using the World Values Survey, a widely used survey of well-being. Participants completed single-item measures of happiness, life satisfaction, and thoughts about meaning in life. They were asked how happy they were, "taking all things together" (1= very happy, 2 = quite happy, 3 = not very happy, 4 = not at all happy), how satisfied they were with their lives "these days", with responses ranging from 1 = dissatisfied to 10 = satisfied, and how often, if at all, they thought about the meaning and purpose of life, on a scale ranging from 1 (often) to 4 (never).

The second study looked at whether parents feel better than non-parents on a day-to-day basis. Participants were given an electronic pager and were instructed to complete a response sheet each time they were paged. The response sheet asked them to determine how much they were feeling each of 19 emotions on a scale from 1 (not at all) to 7 (extremely). The 19 emotions included were happiness, joy, contentment, excitement, pride, accomplishment, interest, and amusement (positive) and anger, sadness, fear, disgust, guilt, embarrassment, shame, anxiety, irritation, frustration, and boredom (negative). During the following week participants were randomly paged five times a day during waking hours.

The third study examined whether parents experience more positive feelings when taking care of children than during the rest of their day. Participants who had at least one child 18 years old or younger at home were asked to report what they did on the previous day for a predetermined set of eight episodes. Participants could choose from a list of five common daily activities (e.g., taking care of children, watching TV, cooking). Participants were furthermore asked to rate the extent to which they felt "happy", "warm-friendly", or "enjoying myself" and the extent to

which they felt "a sense of meaning and purpose in life" during the episode, in both cases on a scale from 0 (not at all) to 6 (very much).

In the first study the researchers found that parents are happier and more satisfied with their lives than their child-free peers. When controlling for the sex of the parent, however, it turned out that only fathers experienced greater overall happiness and life satisfaction compared to their child-free peers. Both mothers and father had more frequent thoughts about meaning. Married parents were found to be significantly happier than unmarried parents, although the researchers did not find any significant difference in the frequency of thoughts about meaning. Younger parents between the ages of 17 and 25 were found to be significantly less satisfied with their lives than their child-free counterparts. Mid-range parents between the ages of 26 and 62 were significantly more satisfied with their lives than their child-free peers. Older parents (63 or older) scored the same as older non-parents on the life-satisfaction measure.

In the second study it was found that parents experienced positive emotions and fewer negative emotions than their child-free counterparts. As in the first study, parenthood was more consistently linked to increased positive emotions for fathers compared to their child-free peers, but there was no significant increase in positive emotions for mothers.[8] Mothers did report slightly fewer depressive symptoms.[9]

In the third study, the researchers found that parents reported more positive emotions and a stronger sense of meaning in life when they were taking care of their children than when they were not. They did not find that the sex of the parent mattered in this study but they note that the sample size of this study was small and that this effect therefore cannot be ruled out.

The title of the article is "In Defense of Parenthood: Children are Associated with More Joy than Misery." This title, however, is misleading. The study does not predict that a parent, regardless of biological sex, will be more satisfied with their lives than non-parents. One of its main findings was that fathers gain in happiness and life satisfaction from being parents, whereas mothers do not. No big surprises here: there are fathers who change the diaper of their "baby girl" for the first time, and after being showered down by a yellow sprinkler discovers that "she" is a boy.[10]

Societal expectations for mothers and fathers remain firmly rooted in the traditional. Accordingly, the majority of fathers do not partake in parenting to nearly the same extent as mothers. It is still considered the woman's job to make sure the children thrive, get fed, arrive at their extra-curricular activities on time and get to their yearly check-ups with their pediatrician. Still living in the unplanned world of their college years, many men shun scheduled activities. I have male colleagues who upon discovering their watch is three hours behind would rather make a spontaneous relocation to L.A. than schedule an appointment at a store that can fix it (well, not really).

If mothers do most of the chores associated with parenting, it's no wonder that fathers find parenting awesome. A lot of things become magnificent when you do not need to do the work to make them happen. Owning a house is particularly awesome if you have staff doing the yard work, cleaning, and maintenance. Being the president of an association is awesome if all you need to do is include the fancy title in your email signature and give a presidential address at an annual meeting, while program chairs and secretaries put together the program, make plans with the caterers, inquire with local hotels, and book the rooms.

The other apparent challenge to the finding that parenting does not make people happy came from German sociologist Matthias Pollmann-Schult (2014). He conducted a longitudinal study of how much life satisfaction parenting adds to people's lives lasting from 1994 to 2010. He reports on the basis of his findings that "parenthood by itself has a substantial and enduring positive effect on life satisfaction". The conclusion, however, cannot be taken at face value. The reported data revealed that non-single parents and non-parents reported similar levels of life satisfaction throughout the observation period, whereas single parents reported less life satisfaction than non-parents. The reported conclusion of the study is based on a fairly common way of controlling for various factors before reporting the results of data collection. In this study Pollmann-Schult controlled for the cost and time it takes to rear a child. Basically, the conclusion, then, is that if it did not cost anything and did not take any extra time to raise children, then raising children would add significantly to people's life satisfaction.

It is not clear, however, that controlling for these factors gives us any interesting insight into the life-satisfaction of parents. If being a parent did not cost anything and were not accompanied by significant chores, then there would be no issue concerning the feelings associated with *parenting* as opposed to simply *being a parent*. The teen sitcom *Jessie*, starring Debby Ryan as Jessie Prescott, depicts a case in which a small town Texas girl becomes a nanny to a high profile couple's four multicultural children. The mother is a business magnate and the father a movie director. Both are on the road during most of the episodes.

Clearly, if you have enough money to hire a 24 hour/day nanny, along the lines of what is depicted in *Jessie*, standing in the parent relation to four children, three of which are adopted, may add significantly to your life-satisfaction. But in these extreme cases we are not really evaluating *parenting* but rather the role of being a parent—the role without the hard work and the financial burden. The fact is that parenting costs a lot of money and involves a considerable number of fairly unpleasant chores. As French psychoanalyst Corinne Maier puts it,

> Children cost a fortune. They are among the most expensive purchases the average customer can make in a lifetime. In monetary terms alone, they cost more than a high-end luxury car, or a world cruise, or a two-room apartment in Paris. Even worse, the cost goes up as time goes by. (Maier 2007, 49).

In a study published in the November 2012 issue of the *Journal of Experimental Social Psychology*, social psychologist Kostadin Kushlev and his colleagues found that even just thinking about money can negatively affect people's otherwise positive experiences while taking care of their children (Kushlev et al. 2012). When they implicitly encouraged people to think about money and productivity while filling out a questionnaire at a festival with their children, parents reported less positive experiences than parents who were not encouraged to think about money and productivity (in fact, people who were asked to think about money reported that taking care of their children was less *meaningful* than people who were encouraged to think about child-minding. The effect was most profound in women. This is not surprising, given that women usually make the greatest career sacrifices when having children.

Parenting that takes no time and costs nothing is not really parenting. If you control for the cost and time it takes to rear a child, the results you end up with do not reflect the life satisfaction of parenting but rather the life satisfaction of parents who have other care-givers raise their children. The natural conclusion to draw on the basis of these considerations is that the extra chores and additional financial stress that comes along with parenting takes away from the positive experience of being a parent.

Parenting is stressful. Period. And constant worry, stress, and anger are strong contributing factors to the loss of life-satisfaction. Adrian White conducted a meta-analysis of previous happiness surveys published by UNESCO, the CIA, the New Economics Foundation, the WHO, the Veenhoven Database, the Latinbarometer, the Afrobarometer, and the UNHDR. In the original studies participants were asked to rate their own happiness and satisfaction with life. The meta-analysis looks at further factors, including population density, health, wealth, access to education and the effects of war, famine, and national success on happiness. The meta-analysis indicates that a nation's level of happiness is closely correlated with health levels (correlation of 0.62), wealth (0.52), and access to education (0.51).

If stress and life satisfaction are incompatible, it is to be expected that stressful parenting lowers life satisfaction. The added stress easily leads to independent problems that add further stress to life. For example, parenting can be the cause of marital problems. As Jennifer Senior, contributing editor to the *New York Times Magazine*, argues in her book *All Joy and No Fun: The Paradox of Modern Parenthood*, children are far more likely to break up marriages than to repair them or leave them in the condition they were in before having children. It is not hard to imagine that arguments about dividing up chores and distributing finances as well as persistent subtle resentment when one parent does more than their fair share of the childcare and housework might escalate the loss of life satisfaction.

That the added stress that comes along with parenting is stealing away parent's life satisfaction was confirmed by Katherine Nelson and colleagues of the University of California, Riverside in a meta-analysis published in the January 2014 issue of *Psychological Science* (Nelson et al. 2014). They reviewed more than 100 studies of parenting and life-satisfaction; people with financial problems, sleep disturbance, and troubled marriages have

the greatest negative experiences in the role as parents, whereas affluent people and people in stable, well-functioning marriages experience the greatest joy as parents.

These meta-analyses of parental satisfaction suggest that life-satisfaction partially consists in the lack of negative factors, such as a failure to have one's basic needs met (such as sleep), untreatable disease, and financial hardship. This insight concerning the underlying nature of life satisfaction is consistent with recent brain research. Richard Davidson suggests that happiness, or life satisfaction, arises when there is a relatively low activation of the fear center in the emotional brain (the amygdala) and the right prefrontal cortex, and high activation of the left prefrontal cortex, which is associated with reasoning, decision-making, and logical thought.[11] In other words, feeling happy, or being satisfied with one's life, mostly amounts to a lack of stress factors.

4 The Ontological Structure of Parental Love

Absentee-parenting and helicoptering can partially preserve your life satisfaction and personal autonomy after you have kids. In the former case, it preserves it by avoiding parenting, in the latter, it preserves it by making the child an extension of yourself. For the rest of us: we lose part of our personal autonomy. So, what's in it for us? I think the answer lies in the very special ontological structure of parental love.

In the case of romantic love, there can be no rational requirements to love one particular person rather than another, although there can be other kinds of requirements, such as those raised by promises and contracts. Parental love is different. When becoming a parent, you stand in a unique relation to the child. There no doubt are parents who continue to love their dead children and people who imagine being parents who love their non-existing children. So, parental love cannot *be* a union consisting of a parent and a child. Like romantic love, parental love is a complex emotion but one that differs in important ways from romantic love and not just in terms of how it feels.

In the case of parental love, a particular relationship obtains between parents and children. It needn't be a relationship definable by the idea of a union, rather it's a relationship that involves a mental attitude toward a relationship of this type. I take the following uniqueness constraint to obtain for parental love: parental love requires a belief to the effect that you stand in a parenthood relation to a child, and that that relation in part makes your love appropriate.

This view is fairly similar to the relationship view defended by Niko Kolodny (2003). However, while a uniqueness constraint cannot realistically obtain for all cases of romantic love (Brogaard 2015), it seems to accurately capture an important aspect of parental love.

There has been much debate in the literature on love about how our theories of love can accommodate the feeling that our loved ones are irreplaceable. Elsewhere I have argued that they cannot and should not explain that feeling (Brogaard 2015, 2016). Despite what Kolodny maintains, his view is committed to the replaceability of our loved ones. On his view, you love another person only if you believe that a particular love relationship exists between you and your beloved. As this sort of belief could persist even if your beloved were replaced by a doppelganger, Kolodny's view does not imply irreplaceability.

Now, this does not mean that your loving feelings could not change if you were to learn that your loved one had been replaced by a perfect replica. Over time, your affectionate response toward your beloved may come to be in part a response to your memories of the history you have had together. This would in many cases suffice for explaining why you would not love the replica (who after all has all the same contingent features as your beloved). But even if love can come to be partially a response to such memories, it could also easily be the case that your love would persist, even if your beloved were replaced by a doppelganger. After all, you might not know about the swap.

Parental love, as formulated, does not imply irreplaceability for exactly the same reasons than romantic love does not. We can add, however, that in most circumstances, parental love goes beyond a mere belief that a unique relation exists between you and a child. In most cases a unique relation actually *does* exist between you and a child. A union is like a set.

Its existence depends on the existence of its members. If one is replaced, the union is dissolved. In actuality, then, parental love often implies irreplaceability, even though the real explanation of our loving feelings in all likelihood is more complicated than a mere feeling of not wanting your children replaced.

5 Parenting and the Meaning of Life

The difficult question that remains is that of how a belief in a unique relation that makes parental, loving feelings appropriate could somehow positively make up for the loss of life satisfaction and personal autonomy that accompany having a child. The short answer is that the relationship that ordinarily obtains between you and your child always makes it the case that you have obligations to do what is in your child's best interest (this is a claim I cannot defend here, so let us treat it as an assumption). Typically what is in your child's best interest is that you organize your and their lives in a way that happens to contribute to the meaning of your life.

To illustrate this I will draw on the theory of the meaning of life defended by Barry Smith and myself in "On Luck, Responsibility and the Meaning of Life" (2005). On our view, if you want to lead a meaningful life, then you will need to decide how to shape your life, and the world in which you live, and set goals accordingly. These goals must be effective in giving rise to corresponding actions on your part, and they must culminate in a shape or pattern that is non-trivial.

The realization of the goals you set must further represent what is for you a genuine achievement. Your goals must match (or challenge) your mental and physical abilities. The sorts of achievements here relevant go hand in hand further with a willingness to sacrifice one goal for the sake of other, less trivial goals and to delay immediate gratification for the sake of the realization of long-term plans. They involve the sort of making and realizing of plans which rests on the use of reason, and thus on knowledge or one's own capacities and features of your physical and social environment.

The effort in question must furthermore be directed and calibrated in relation to some independent standards of success and failure, standards

which are "objective" in the sense that they could be applied by some disinterested observer. There exist genuine, public measures of success and therefore also the risk of failure.

Activities closely associated in our minds with the possibility of leading a meaningful life—medicine, chess, athletics, opera-singing, natural science, exploration, invention, house-building—are characteristically those activities for which there are standards of the sort described, standards which can be easily applied in the public light of day and which are calibrated against the amount of care, effort and skill that is invested in the realization of the corresponding achievements.

To engage in these activities is to discover what the relevant standards of achievement are. Daydreaming, in contrast, which is calibrated against nothing in external reality, is an activity which is characteristic of a quite different sort of life—where there are no standards of better and worse and no widely disseminated culture of honest admiration. Activities which have to be practiced in the dark, in secret (petty crime, for instance), are lacking such public measures of success, and thus they, too, are associated in our minds with meaninglessness.

Some activities, such as genocide and gratuitous torture, cause problems for this criterion. However, we suspect that, upon further scrutiny, these activities also will be found to be such that they need at least to some extent to be practiced in the dark. Hitler, Stalin and Mao did not, after all, openly advertise what was happening to the victims in their concentration camps.

Whether a person leads a meaningful life depends in every case not on that person's, or other people's, beliefs or feelings, but on what the person did as a consequence of his or her own decisions, as evaluated (actually or potentially) against the relevant public measures of success.

Our account requires that people must be responsible for their achievements in order for their life to be meaningful. The Forrest Gump figure, whose actions affect the world positively but who is not responsible for his achievements, does not lead a meaningful life. This raises the question of how the factor of responsibility contributes to the meaning of a life. Notice that simple causal responsibility is not what matters here. One can be responsible in a causal sense, just as a short circuit can be a cause of a fire. Even if Forrest Gump is a cause of the positive outcomes

of his actions, he is still not responsible for his actions in the sense that is relevant here. A person is responsible for an achievement roughly insofar as (1) it is caused by the person, and (2) it is reflective of his character. In order for an action to be reflective of a person's character, this character—roughly a constellation of dispositions—must be such as to lead the person to produce similar actions under a broad enough range of alternative conditions.

In this objective sense, it seems quite clear that raising a child can be an activity that can contribute to the meaning of your life. Empirical studies do not quite confirm that. A study published in the January 2013 issue of *Psychological Science* allegedly showed that parents experience more meaning in life associated with parenting than non-parents (Nelson et al. 2013). The researchers claimed to have found that parents reported "a stronger sense of meaning in life". "Having children really has made my life more meaningful", is indeed a common party line. But was that in fact what the researchers showed?

It wasn't. One of the main conclusions of the study was that parents are "thinking more about meaning in life than non-parents do". This strongly suggests that parents are more desperately searching for meaning in life compared to non-parents, but not that they experience more meaning in life than non-parents.

The lack of determinate results here, however, is unsurprising. Meaning is associated with longer-term gratification, not short-term gratification. So, if parents really did find that care-giving gave rise to a significant amount of additional meaning in life, it would be something that could only be experienced following long stretches of parenting—once the care-givers see what comes of their parenting and in particular their parental love. The fictional character Eva in *We Need to Talk about Kevin*, who is unable to bond with her son and who ends up feeling responsible for a Columbine-style massacre at her son's school, would hardly sincerely claim that her parenting has contributed a significant amount of meaning to her life. Quite the contrary. The world would have been a better place to be had she chosen not to have any children. Her parenting job simply wasn't a meaningful activity, however you look at it. But, of course, she had no way of knowing this at the early stages of child-rearing.

In more fortunate cases, however, it seems that parenting can be a meaningful activity in part because it involves the sort of making and realizing of plans that rests on the use of reason, and thus on knowledge of your own capacities and the standards of your physical and social environment.

What makes parenting special compared to being in a partnership is that it is so damn hard to get right; it requires enormous amounts of planning and exploits people's capacities to the fullest. If you succeed, parenting can contribute to the meaning of your life. But it takes willpower and sacrifices that few other activities can measure up to.

Notes

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8. The p-value was higher than 0.05, which means that there was no significant correlation.
9. The p-value was 0.04, which is just below the cutoff for significance.
10. This anecdote was relayed to me by my colleague Michael Slote.
11. Lab for Affective Neuroscience http://psyphz.psych.wisc.edu/ Accessed on November 11, 2014.

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13

Foolishness and the Value of Knowledge

Kevin Mulligan

1 Foolishness

What is foolishness (*sottise*, *Torheit*, *stultitia*)? Foolishness and stupidity are by no means the same thing. Stupidity is opposed to intelligence. Someone who cannot calculate in his head, who stumbles in her native language, or cannot spot an opportunity, or….—the list is very long—is sometimes said to be stupid or, slightly less stupidly, to be more stupid than some mean. Perhaps intelligence is what intelligence tests measure. Perhaps it is the ability to grasp a variety of internal relations without experiments. Whatever stupidity is, it is no vice, unlike foolishness. In

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order to see what the vice consists in, let us consider some traditional examples of foolishness.

Vanity is a form of foolishness. The vain man wants to be applauded and admired. But not everyone who seeks admiration and applause is vain. Some (hope that they) prefer admiration, applause, and approbation which are justified to their unjustified cousins. But the vain are indifferent to the distinction between justified and unjustified admiration and applause. "The vain man," says Nietzsche, "rejoices in *every* good opinion he hears about himself (quite apart from all considerations of usefulness and quite apart from truth and falsity.")[1]

Consider Sam. An old, rich man, he behaves as though he really believes that his mistress, poor, young Maria, really loves him rather than his large apartment. "As though" because although Sam regularly asserts to his aging male friends, that Maria loves him, apparently quite sincerely, and uses this apparent conviction as a premise for practical and non-practical inferences, he carefully avoids the company of Maria's young friends, who would be more than happy to shatter Sam's illusions. Sam does not mention his relationship to Maria when he finds himself in the company of her young friends who, although they are not exactly lovers of truth, fully appreciate the usefulness of certain types of knowledge when it comes to cruelly puncturing the illusions of someone like Sam. Sam, as his ex-wife puts it, is an old fool.[2]

The fox in the fable of the sour grapes is also a fool. He knows that the grapes are ripe and so good to eat. He discovers that he is incapable of getting his claws on the grapes and so changes his evaluation of the grapes: they are suddenly no longer ripe and good but sour and bad. Abelard gives a similar example. A young student comes to see that logic is the heart of philosophy and therefore the most valuable part of philosophy. After discovering his inability to do logic, he declares, apparently quite sincerely, that in philosophy rhetoric is more important than logic. The fox and the student are victims of the mechanism of *ressentiment* and to that extent fools.

The frequent resource to clichés, platitudes, tautologies, trivialities, and stereotypes—"Women will be women", "Business is business"—is the mark of one type of fool in the writings of Flaubert, Bloy, and their successors, in the literary tradition which has perhaps

devoted more attention to foolishness (*bêtise*) than any other literary tradition.[3]

The four simple examples have some properties in common. The extensive appeal to clichés and platitudes is a very good indicator of a desire not to think or reflect. The vain man does not care whether the praise and admiration he seeks and gets is justified or not. Sam does not want to confront what he seems to believe with reality. The man of *ressentiment* does not modify his evaluations on the basis of new information about the objects of his evaluations. No new information about the grapes justifies the fox's change of heart. No new information about the place of logic and rhetoric in philosophy justifies the student's evaluation that rhetoric is more important than logic. It is true that the vain man has a reason for doing whatever is necessary to be on the receiving end of admiration and praise—they are pleasant and agreeable. Since his reason is a reason to do something, it is a practical reason. The fox, too, has a practical reason to do whatever is necessary to change his beliefs and preferences about the grapes—to leave his beliefs and preferences unchanged is to be confronted with his own impotence and its (and his) disvalue. Sam's life is much sweeter so long as he avoids putting his beliefs about Maria to the test. But a reason to do something, a practical reason, is not a reason to believe something. Indeed it is not always a reason to feel or desire either.

The four examples, and many other similar examples, such as bullshit, the susceptibility to ideology, what was once called "enthusiasm" (*Schwärmerei*), cant, and many forms of snobbery,[4] suggest a simple generalization. If foolishness is a vice and if, at the heart of a vice, one finds one or more affective attitudes or attachments to a value,[5] then the affective attitudes at the heart of foolishness are hostility and indifference to cognitive values, an indifference which may or not be rooted in blindness to cognitive values. In what follows, I examine the different components of this suggestion. But before looking at these it is worth considering another putative example of foolishness, an example which is of a different kind than the examples already given. Our first four examples belong to ordinary life. But philosophies, too, may exemplify an indifference or hostility to cognitive values. If Barry Smith is to be believed, that part of twentieth century philosophy which its friends have baptized "Continental Philosophy", and in particular the movement called

"Postmodernism", contain striking illustrations of indifference or hostility to cognitive values. As he has also memorably argued, this claim is itself a development of Brentano's diagnosis of a recurrent tendency throughout the history of philosophy.[6] If indifference to cognitive values is indeed tantamount to foolishness, then Continental Philosophy and Postmodernism are often foolish. This, it may be thought, is a pleasing consequence of the present account of foolishness. But it would be foolish to draw the pleasing consequence before making any attempt to understand the very idea of indifference or hostility to cognitive values and the relation of this idea to foolishness. It is also true that it is possible to *argue* for indifference to cognitive values or for the view that the very idea of value is an empty or confused idea. This is not the place to undertake an evaluation of such arguments. But it is worth noting the existence of an apparent inconsistency in *arguing* for hostility to cognitive values.[7] For the attempt to provide such arguments is surely a manifestation of epistemic virtue.

2 Cognitive Values

What are the cognitive or epistemic values? What is it to be a cognitive value? Before answering these questions, it will be useful to draw two distinctions which belong to the theory of value. First, being a value is one thing, being a value-property another thing. Injustice is a negative value, being unjust is a value-property, for example, a property of an action or a person. Secondly, expressions of the form "the value of *x*" do not always function in the same way. Expressions such as "the value of justice" and "the value of the sublime" function in appositive fashion, like "the number 2" and "singleton Socrates". Justice and the sublime *are* values. But in expressions such as "the value of pleasure" and "the disvalue of unpleasure" the expression "the value of" takes "pleasure", and yields "the value of pleasure". What is this value? One answer is that the value of pleasure is pleasantness. The expression "the value of pleasantness" itself functions in appositive fashion. When expressions of the form "the value of *x*" do not function appositively, they are often terms for values for which no

names exist. We often speak of the value of freedom. But if freedom can be characterized in non-axiological terms, for example, as the absence of constraint, then freedom itself is no value but is valuable. The value it has has no name. Aristotle pointed out that there are nameless virtues. The same seems to be true of values.

Let us return to our question. What are the cognitive values? The two most common answers are: truth is or has a cognitive value; knowledge is or has a cognitive value. But there are many other plausible candidates—the values of clarity, distinctness, exactness, justification, and intellectual modesty and the disvalues of illusion, error, bullshit, obscurity, obscurantism, and nonsense.[8] It may seem plausible to think that the values of clarity, distinctness etc. are derivative or consecutive values with respect to the values of truth or knowledge or of the values that truth and knowledge are. But Wittgenstein, for one, claimed to be interested in clarity for its own sake. In what follows, I shall nevertheless assume that the value of truth or of knowledge explains the value of clarity, distinctness etc. It may well be thought that this assumption oversimplifies matters. Perhaps because the value and virtue of frankness or candor and the disvalue of insincerity and accommodation, unlike the values clarity and distinctness, have a distinctly ethical dimension.[9]

Is truth a value? Is being true a value-property? The main types of truth talk are:

It is true that *p*
That *p* is true
The proposition that *p* is true
There is a Catholic dogma which is true
The belief that *p* is true

Instances of the first three claims do not entail any axiological claims unless what is substituted for the variable has axiological content. As to instances of the fifth claim, as Husserl pointed out, to call a belief true is to use the term improperly. Beliefs are correct or incorrect. Of course, if the belief that *p* is correct, it is true that *p*. Furthermore, correctness is often thought to be a deontic property: to believe correctly is to

believe as one ought. Not only is truth not a value, it is hard to believe that for a proposition or dogma to be true is for it thereby to possess a value-property. Some propositions perhaps exemplify aesthetic values. But the truth of a proposition is not any sort of value property. And although it may well be the case that it is better to have correct beliefs than incorrect beliefs, correctness itself is no value-property for there are no degrees of correctness.

Is knowledge a value? Does it have a value? It clearly often has extrinsic value. It is very useful. But is knowledge itself something which has intrinsic axiological features? A theory of knowledge which takes knowledge-that to be the result of the exercise of cognitive virtues must presumably take knowledge to be something which cannot be characterized without referring to values or goods. But if knowledge is a mental relation to facts[10] it is as little plausible to say that it is an axiological relation as it would be to say that perceptual relations to facts are axiological phenomena. On the other hand, according to many popular accounts of knowledge, justification is constitutive of knowledge and the relation of justification is taken to be a normative relation.

But in what follows, I shall assume that truth, once distinguished from correctness, is no value or norm and is not intrinsically valuable, and that at least some kinds of knowledge are valuable in a non-extrinsic way, and that their value is an example of what I have called nameless values.

One candidate for the role of intrinsically valuable knowledge will be given in the following section. One candidate about which there is little agreement is the value of systematic, theoretical knowledge, empirical and non-empirical. One very large part of culture, the part consisting of universities and scientific institutions and their members, has, some of us say, a value which derives from the intrinsic value of certain kinds of knowledge, in the optimal case, systematic, theoretical knowledge. A similar claim is that the value of another part of culture, the part which consists of theatres and concert halls, poets and conductors, derives in part from the intrinsic aesthetic values of works of art.[11]

The view that some kinds of knowledge are intrinsically valuable is, of course, congenial to those who think that the best candidates for the role of bearers of intrinsic value are mental, psychological, vital and sensory states.

3 Interest, Epistemic Desire, Curiosity, and Questions

I suggested that at the heart of the vice of foolishness we find affective attitudes towards cognitive values, and so, too, certain desires and projects. The acts, states and attitudes which are most closely connected to cognitive values and their bearers form a family with many distinctive features. It comprises phenomena such as interest, attention, curiosity, enjoyment, the desire or will to know, wonder, surprise and questions.

What does the fool want or desire? She desires above all not to know, more precisely, she desires not to know certain things in certain contexts, to avoid questions of justification, confrontations with reality, clarity and distinctness. What, then, is the desire or will to know or not to know? How, if at all, do epistemic desires differ from other desires, in particular, practical desires, for example, the desire to smoke, own a Porsche or be successful? How, if at all, does the will to know differ from practical willing?

Ordinary language sometimes compares epistemic desires to hunger, thirst, and to urges (*Wissensbegier*, *Wissensgier*, *Wissensdurst*, *Wissenshunger*). But one difference between epistemic and practical desires is that one desires to smoke but desires to know *whether* this or that is the case (or *who* killed the nanny…). The desire to smoke is satisfied only if one smokes. The desire to know whether *p* is satisfied either by the discovery that *p* or by the discovery that not-*p*. A second difference between epistemic and practical desires was pointed out by Meinong and his students. According to Meinong, to desire to smoke is to desire that one smokes, a desire founded on the representation of the state of affairs in which one smokes. To desire to smoke is to represent a certain state of affairs in a conative way. But in the case of epistemic desires (*Wissensbegehrungen*) what exactly, asked Meinong and his pupils, do we represent in a desiring way? Meinong quotes and endorses Frankl's view:

> Whoever asks a question, certainly thinks of the object of the question, but it is by no means obvious that she also thinks of knowledge of this object, and thus one may even wonder about the desire character of questions. (Meinong 1977)

Frankl here assumes that asking whether expresses or manifests a desire to know, in the same way in which assertions are said to express belief or knowledge. We shall return to questions. Another pupil of Meinong's, Tumlirz, makes a similar point without any reference to questions:

> The desire to know is directed towards a piece of knowledge, but knowledge is not what is really desired, as being is desired in the case of other desires, for in normal circumstances, the desirer does not think of knowledge of (*Wissen um*) the desired objective but of the objective itself. (Tumlirz 1919, 26).

An "objective" is what Husserl more influentially called a state of affairs (*Sachverhalt*). In the case of desires other than epistemic desires, argues Tumlirz, one desires the *being* or *obtaining* of a certain state of affairs. One might, of course, object that to desire to know *whether p* is just to desire *that* (one knows that *p*, if *p*) and (one knows that not-*p*, if not-*p*).[12] But is the object of a typical, epistemic desire really as complex as this? If Meinong is right, the desire to know *whether* is not typically a desire *that*.

Nietzche and those who follow him, for example, Foucault, speak of the *will* (not) to know. To desire is not to will. One may give in to a desire but not to one's will. One may be overcome, even unmanned, by a desire, but not by one's intentions. Thus willing cannot be understood in terms of desire, not even in terms of second-order desires, desires which bear on first-order desires. Many philosophers seem to have concluded that the category of willing is an empty folk-psychological category, although some of them make an exception for intentions or decisions. If willing is a mental (*geistig*) phenomenon, and desire a psychological phenomenon, then a common contemporary view seems to be that we can do without the former. An alternative explanation for the disappearance of the will is the absence in English of a fully-fledged verb "to will". But the upshot is the same. The will to know just is the desire to know.

Whether or not this is the case, willing and desiring come in a positive and a negative form. Positive willing and desiring stand opposed to negative willing and desiring, much as joy is opposed to sadness and being pleased to being displeased. This claim has not been very popular in recent philosophy either. But aversion seems to be the name for one

central type of negative desire and we strive *for* or *against* this or that (cf. *nolo*, *Widerstreben, unwilling,* and Dante's *disvogio*). If this is correct, then there is not only the desire not to know whether *p* but also a negative desire to know whether *p*. And the same is true of the will to know. Thus we may distinguish:

x wants/desires to get up
x wants/desires not to get up
x is averse to getting up
x wants/desires to know whether *p*
x wants/desires not to know whether *p*
x is averse to knowing whether *p*

Since, as we have seen, the desire or will to know can be understood in two different ways, as involving a representation of, a thinking of knowledge or, as Meinong suggests, not involving any such thought, there are two ways of understanding each of the last three cases. Desiring, willing not to know, and shunning knowledge are the main forms of what has been called cognophobia (David Stove). Sam, the fox, and the vain woman, we may assume, sometimes desire very strongly not to know, and at other times are averse to knowledge.

If Meinong is right about the desire or will to know when he says that they involve no thought of knowledge, what positive account of epistemic desires and the will to know should be given? One possibility is that desiring to know should be understood not as desiring that one knows but rather as desiring-to-know. In terms of the distinction introduced by Brentano and his students between the modes, the contents and the objects of mental acts, in the phenomenon of desiring to know, it is not the case that the mode is desire and the object knowledge. Rather, the mode is desiring-to-know. Clearly, an analogous account of the will to know might also be given. Against the suggestion that there is a mode of desiring-to-know is the fact that it is not clear that it can tell us what the object of the desire-to-know could possibly be. But perhaps it is the common view that desires, beliefs and other propositional attitudes have *propositions* or *states of affairs* as objects which is the source of the problem here. This view, which goes back to James and Meinong, parses

x believes/desires that *p*

as

x believes/desires that-*p*

and takes the that-clause to specify a proposition or state of affairs. But if Prior is right, the correct form of ascriptions of belief and desire is "*x* believes/desires-that *p*". "Desire that" is a hybrid connective or prenective which takes a name and a sentence to make a sentence. If the desire that Mary be happy has an object, its object is Mary and not any proposition or state of affairs. One possible extension of Prior's view of "that" is to "whether": to desire to know whether *p* is to desire-to-know-whether *p*.[13]

In favor of this suggestion is the fact that it allows us put forward an independently plausible account of curiosity and related phenomena. Curiosity, language suggests, is a distinctive, intentional mode, in particular, an attitude. And the same is true of the attitudes ascribed by such translations of "curiosity" as "*Wissbegier*" and "*Neugier*". Is it not the mode of desiring-to-know, of the urge-to-know? If there is a mode of desiring-to-know, then it would follow that whoever desires-to-know need not think of knowledge, have an impression of knowledge or even possess the concept of knowledge.[14] In addition to the view that in the desire to know the mode is desire and the view that the mode is a desire-to-know, there is also a third view, that epistemic desire differs from practical desire without being a desire-to-know.

If curiosity is a desire to know and the desire to know is not the will to know, is there any reason to think of the will to know as a will-to-know? In order to outline a positive answer to this question, we must first consider another phenomenon which is intimately linked to cognitive values—the question.

"Question" may means at least four very different things. There is the speech (social) act of asking a question, of putting a question to someone. There is the episode of wondering or asking oneself whether, who, when… There is also the question we ask, the question whether *p* or the question who did this or that, and when, and where. The question we ask is something many different people may ask at different times. It is an

impersonal question. It behaves in many respects like what is often called a declarative proposition, something which, it is said, may be judged believed or disbelieved by different people at different times. (Friends of the view already mentioned that the objects of desires and beliefs are propositions may well think that questions conceived of in this way are the objects of some acts and states.[15]) Questions as social acts or mental episodes and questions as what is asked differ from what Reinach called the *interrogative stance* (*Frageeinstellung*).[16] The social act of asking a question, like the social act of promising or ordering, has to be expressed. The interrogative stance, like judging and wondering whether at a time, need not be expressed, although it typically manifests itself in putting questions to those likely to have answers, in wondering, in deliberation and theoretical activity. To be the bearer of an interrogative stance is to wonder whether, who, what over time. The category of the interrogative stance is rarely accorded much importance in contemporary philosophy. In this respect, it resembles the categories of willing and judging. But if Reinach is right, it is what explains the unity over time of deliberations, practical and theoretical.

Here we see a possible rôle for the distinction between the desire and the will to know. Is the constancy of an interrogative stance over time not a form of the constancy of the will over time? After all, asking someone whether *p* is a form of the will in action, if anything is. There is, however, one reason for thinking that none of the three types of personal question distinguished so far should be understood in conative terms. Desires and the will, unlike questions, come in polarly opposed kinds. So personal questions are not conative phenomena. But perhaps not *all* forms of the will come in polarly opposed kinds. Edith Stein points out that intentions and intendings do not have a polar opposite (Stein 1970, 311). And the same is true of decisions and decidings, choices and choosings. Thus, provided the distinction between the will and desire is accepted, the view that all three types of personal questions are forms of the will has much to recommend it. It is also consistent with the view that although desire is always positive or negative, willing is invariably positive. Of the three main theories of personal questions, the voluntarist and the intellectualist views, and the view that they are forms of desire, the voluntarist view is the least implausible.

Wonder, according to a long tradition, is an epistemic emotion. So is interest. Interest, like wonder, lacks a negative polar opposite. It is not opposed to boredom, as sadness is to joy. For boredom is the unpleasant awareness that nothing is of any interest. It is a meta-state. Interest and its modalities such as taking an interest in, fascination, absorption, being intrigued by, the greater or lesser liveliness it has, motivate, other things being equal, a desire or will to know, and personal questions, as do practical desires. But interest motivates not only the desire to know *whether*, *who,* or *what*. It motivates, above all, the desire to know *more* about its object and so to know new facts. The epistemic desires motivated by practical desires are not *open-ended* as are the epistemic desires motivated by interest. Someone who desires to be treated for a disease desires to know who the best doctor is, where she is to be found. His desires are satisfied when he has discovered whatever is relevant to his treatment and what his prospects are. "Curiosity" is sometimes used to refer simply to a desire to know. But it is also used to refer to interest-driven desires to know.[17]

Interest, the episodic emotion and the disposition thereto, motivates not only epistemic desires but also, according to a view which is again popular, attention, both active and passive. Attention is not an emotion but an intellectual phenomenon. And absorption in a task or being absorbed by another person are perhaps best characterized as interest-driven active attention. Active attention, the attention we pay to something, admits of degrees, unlike passive attention. Each type of attention lacks a polar opposite. On one view, this is because it is an intellectual phenomenon. But one paradigm intellectual attitude, belief-that, has a polar opposite, disbelief-that, as certainty is opposed to uncertainty.

Curiosity, understood as the interest-driven desire or will to know, as well as the interrogative stance, interest, wonder and attention, then, unlike the will and the desire to know, lack polar opposites. This seems to be a distinguishing feature of the acts, states, and attitudes most closely bound up with cognitive values and their bearers. There are emotions other than interest and wonder which lack negative opposites, for example, anger. But the epistemic emotions and attitudes seem to be the only family of emotions and attitudes in which polar opposites play such a small role.

4 Cognitive Values, Motivation and Interest

We have considered very sketchily what the cognitive values are and, in a little more detail, the structure of the acts, states, and attitudes most closely bound up with knowledge and its value. In order to better understand hostility, indifference, and blindness to cognitive values, let us look, first, at the relation between values and motivation.

There are, of course, many philosophies of value and motivation, in particular the view that nothing could possibly exemplify a value-property and the view that value-ascriptions have no truth values. In what follows, I shall simply presuppose an account of values and motivation which was endorsed by some of the heirs of Brentano I have already referred to and consider its applications to the cases we are here interested in.

The view of value and motivation to be presupposed here runs as follows.[18] There are many different types of value—sensory or hedonic, vital, aesthetic, economic, epistemic, legal, political, religious, prudential and ethical. Emotions and sentiments, desires and the will are motivated by (apparent) knowledge of actual or possible exemplification of value. One view of such knowledge of value, defended by both Husserl and Meinong, is that emotions, correct emotions, reveal the exemplification of value.[19] On this sort of view, admiration of a person may reveal his charm and this may in turn motivate the desire to spend more time with the charmer. Similarly, indignation may reveal the injustice of a situation and so motivate the desire to remedy the injustice. Another, rival, view is that the exemplification of value is first grasped, for example, felt, and that emotions are reactions to such prior grasp of value. On this sort of view, one is first struck (or seems to be struck) by the charm of a person and this motivates admiration and then a variety of desires.[20] Each view can allow for correctness-makers and correctness-conditions for emotions: admiration is correct only if what is admired is admirable, e.g. charming; indignation about a situation is correct only if it is unjust; a person's charm makes admiration of him correct, the injustice of a situation or action makes indignation about it correct. But from the point of view of the second view, the first view fails to respect the general structure of motivation or wants to make an exception to it in the particular

case of the emotions. For if *x* motivates *y*, *x* and *y* are different and *x* is not a part of *y*. If perception that *p* motivates the conviction that *p*, the perception is one thing and the conviction another and the conviction does not contain the perception. Similarly, according to the second view, what motivates an emotion must be distinct from the emotion. The view that emotions reveal what motivates them, what they are a reaction to, is encouraged by the view that emotions are in some sense about values. But fear of a dog is about the dog, and not about its danger; indignation about a situation is about the situation, not about its injustice. Fear presupposes some knowledge or impression of danger but this knowledge or impression is not itself any sort of emotion. In what follows, I shall presuppose the second view.[21]

It is a view which is easily applied to a great variety of cases, as the examples of danger, injustice and charm indicate. In particular, it immediately allows us to make sense of the phenomena of hostility, indifference and blindness to values. One is blind to a particular value if one is incapable of being struck by it, if, as it used to be said, one has no "sense for" or "of" injustice, charm, elegance, grace, the sublime, the disvalue of bullshit etc. And as the phenomenologists point out, in/sensibility to certain values, in general, or in certain situations, need not be in harmony with one's axiological beliefs. Indifference to a certain value is simply the absence of whatever reactions are appropriate to exemplification of the value. Hostility to a certain value presupposes a certain sense for the value in question and consists either in an intellectual refusal to allow that it is really a value or a rejection of its real relations to other values. The puritan or moral rigorist who is hostile to elegance or charm is not blind to these qualities but denies that they are really value qualities or that they have any importance. The aesthete who is hostile to cognitive or economic or ethical values denies that they are really value qualities or denies that justice is more important than elegance.

Does this sort of view readily apply to cognitive values and the emotions, desires, projects, and stances bound up with these values? I think not. There is an asymmetry between cognitive and other values. That this is the case is suggested by Meinong's point that our epistemic desires do not typically contain a thought or representation of knowledge, that the desire to know *whether* is not typically a desire *that*. To the extent that

we do not think of ourselves or others as possible knowers, discoverers, understanders etc. to that extent we are not aware of the value of knowledge. Husserl seems to have arrived at a similar conclusion:

> If all willing which results in external acting is grounded in striving which values (*wertenden Streben*), in striving for possession of a good as something useful, pleasant etc., here [in the case of the striving for knowledge] there is no such striving which values but rather the manifestation (*Auswirkung*) of a mere tendency towards self-givenness: the self does not live in the act of valuing and in the desiring striving grounded in it, it lives rather in the act of objectifying (*Objektivierung*). (Husserl 1954, 235–236).

Valuing an object as pleasant may motivate the desire for possession of the object. Practical striving, Husserl thinks, always presupposes some valuing. But, he also thinks, cognizing striving, the goal of which is knowledge (Husserl 1954, 237), does not presuppose any valuing. In the most basic cases, the value of knowledge does not seem to play a rôle in bringing about the striving for knowledge.

There are of course cases where cognitive values do play such a rôle. There is the "*amour violent pour la vérité*" which Baillet famously ascribed to Descartes (Baillet 1946, 285). And the very similar passion Russell ascribes to himself and to his most influential pupil: "[Wittgenstein] even has the same similes I have—a wall parting him from the truth which he must pull down somehow".[22] But if Meinong is right, the desire to know and, we may add, the interrogative attitude and interest, are not typically motivated by the value of knowledge because they often involve no thought or impression of knowledge.

What, then, motivates the desire or will to know and the interrogative stance when the value of knowledge does not play this rôle? Interest, taking an interest, on the one hand, and practical desires and projects, seem to be the best candidates. And, as we have seen, it is the first candidate which motivates the desire or will to know *more* about something and also enduring, interrogative stances.

But what motivates interest? An old answer, which is again popular, is that many emotions and sentiments, but not, for example, shame and many forms of disgust, motivate interest in their objects.[23] Just as wonder

has been supposed to motivate the will to know and, in particular, to know more, so, too, both love and hate motivate interest, the desire and the will to know, as well as interrogative stances. Augustine formulates an interesting version of this idea:

> One does not love what one does not in any way know. But if one loves what one knows only a little, love brings it about that one knows it better and more completely. (Augustine 1998, 286).[24]

Interest, we said, like the desire and will to know and interrogative stances need involve no awareness of any knowledge. Meinong makes a related point about the positive emotions due to the acquisition of knowledge, which he calls "knowledge feelings" (*Wissensgefühl*). His example is a historian who is interested in the authenticity of a document and, after inquiry, rejoices in the successful result of his inquiries. What exactly is the object of his joy? "The aspect of knowledge," Meinong plausibly replies, "is not an obligatory aspect of the matter of such an emotion" (Meinong 1968, 378). Meinong contrasts the joy of the inquirer with that of someone who discovers that a document whose authenticity is required if he is to win a court case is in fact authentic. In this case, the joy is a knowledge value feeling (*Wissenswertgefühl*). Meinong's claim about the historian is a plausible consequence of his rejection of the reduction of the desire to know *whether* to a desire to know *that.* If the object of joy on the occasion of a discovery is not knowledge, the joy cannot be motivated by the value of such knowledge. But Meinong unfortunately does not give a positive account of the relation between the two modes which are the historian's joy and his discovery or coming to know. He simply asserts that the historian's joy involves no representation of any discovery.

Similarly, I suggest, interest is not typically motivated by the value of knowledge but rather by the non-epistemic values of its objects, which are also what motivate the emotions and sentiments which give rise to the interest in the first place. Admiration of a handbag based on awareness of its elegance leads to interest in the handbag, in how it is made, and so to a desire to know more about it. In this sequence, and in all similar cases, the value of knowledge need play no role at all. The interest-worthiness of objects, like such categories as trust-worthiness, and admirableness, is

an axiological place-holder rather than a value. The values which make objects interest-worthy are typically not the values of knowledge.

If interest plays the rôles I have ascribed to it, it is plausible to think it must play an important part in cognitive vice and virtue. In what follows, I sketch one possible rôle for interest in the development of cognitive virtue.

The motivational chains of the form sentiments/emotions → impression of interest-worthiness → interest → desire/will to know are typically interrupted or blocked, when sentiments and emotions involving what is *in one's interest* come into play. For what is in one's interest is a source of practical reasons for and against *doing* this or that. Sam's love of Maria motivates a certain degree of interest and certain epistemic desires. But Sam's interest is limited. He avoids all epistemic desires which might lead to painful knowledge, the unpleasant revelation of his illusions. To the extent that the avoidance of such unpleasantness is *in his interest*, the latter is the enemy of his *interest in* Maria.

In the epistemically virtuous, what is of interest does not lose out to avoidance of what is unpleasant, and so to what, in this sense, is not in in one's interest. The education and development of interest, I suggest, play a rôle in the development of epistemic virtue which is comparable to the education and development of animal spirits and anger (*thumos*) in the development of the virtue of courage or of fellow-feeling in the development of the virtue of generosity.

What is the relation between epistemic virtue so conceived and awareness of cognitive values? A similar question arises in the case of the different non-epistemic virtues and non-epistemic values. At some time in the acquisition of a virtue a grasp of value and a mastery of axiological concepts must begin to play a rôle. At some time, one has to make one's own the platitude that cowardice is a bad thing. At some time, the axiological platitude that it a bad thing to put forward an assertion for which one has no justification has to be dinned into one.[25] An *epistemic hero* or *saint* is presumably someone who has a grasp of the fact that correct beliefs are better than incorrect beliefs, that correct emotions and desires are better than their incorrect counterparts, that it is better to do what one may do than to do what one may not do. Reason is not merely theoretical and practical but also affective. There are reasons to—and not to—believe,

feel, desire and act.[26] One reason for thinking that affective reason wears the trousers with respect to theoretical and practical reason is that an epistemic hero will not merely have a *grasp* of the facts just mentioned he will also *prefer* correct beliefs to incorrect beliefs, correct emotions to incorrect ones etc. And he will prefer correct preferences to incorrect preferences and knowledge—axiological and non-axiological—to illusion and error. Finally, he prefers correct attitudes which are based on knowledge of what makes his attitudes correct to correct attitudes which are not so based. The life of an epistemic hero is thus not an easy one. Fortunately, heroism is supererogatory.

If it is plausible to say that a grasp of the different varieties of the value of courage and of the disvalue of cowardice builds on the education of animal spirits and anger, an analogous claim about the roots of a grasp of the variety of cognitive values and values is surely also plausible. The axiological knowledge and the preferences of our epistemic hero build on an education and development of interest (and the training this requires). Then, just as an epistemic hero or saint may be said to have a sense for cognitive value, and to prefer cognitive values to cognitive disvalues, so, too, an epistemic sinner may be said to be blind to cognitive value, indifferent or hostile to such values. And the root of such blindness, hostility, or indifference, cognophobia, misology (Kant) and "alethophobia" (or rather, fear of correct beliefs), is a past in which interest, interest-driven epistemic desires and interrogative stances have regularly lost out to a variety of practical considerations in particular to fear of unpleasant discoveries.

Since our topic is cognitive virtue in everyday life, our hero is no theoretician or theory-builder. His epistemic desires, projects and interrogative attitudes do not aim at systematic theories. However much one wants to know about an enemy or loved one, one does not typically aim to construct a theory about him or a theory which applies to her. But the existence of theorists and theory, of scientific institutions and science and the ideal of an epistemic, *theoretical* hero presumably interact in complex ways with the structures of epistemic virtue and vice in ordinary life, for good and bad (sour grapes about science). The explicit theoretical attacks on traditional conceptions of cognitive values since Nietzsche and in contemporary postmodernism, as is often the case with philosophical views, enjoy great popularity outside the academy.

In everyday life, as opposed to the pursuit of systematic knowledge, what are the main objects of interest and so of interests which may be thwarted by cognitive vice? One is the persons who are the objects of our attachments, preferences and dislikes. Another comprehends all the political questions which face a citizen or subject. One type of person, which is particularly important in the case of political options, is the collective or fictitious person called a state, for example a nation-state, to which one belongs. Yet another is the sort of person one really is and would like to become. Self-love, as opposed to *amour propre*, motivates a degree of interest in what sort of a life is the life for me, the life one should (not) lead. The value to a person of knowledge about the sort of life she should lead is an example of intrinsically valuable knowledge, if anything is.[27] If such knowledge is intrinsically valuable for a person, it is valuable because a certain way of life is intrinsically valuable for that person, is her "vocation". Here, cognitive value is determined by non-cognitive value. Its "valifier" is a non-cognitive value. The value of knowledge of this type contrasts strikingly with the value to a person of the knowledge required to realize more or less transient desires and projects.[28]

The present account of epistemic virtue consists of two strands, first, the development and education of interest and of the capacity to resist the enemies of interest in what is interest-worthy, and, secondly, the inculcation of an appreciation of the different platitudes about cognitive values. The first requires no awareness of knowledge or of its value. Just what the relation between these two strands is and could be is an empirical matter. Until more is known about this relation, many normative questions about the relation must remain unanswered. But one such question deserves mention here. What is the proper rôle of platitudes about epistemic value?

Pharisaism, it has been said, is ethics in the wrong place. The contemporary obsession with "ethical" banking, coffee, hacking, and foreign policy is sometimes accused of pharisaism,[29] as is the habit of (ethical) virtue-signaling. The pharisee in matters ethical has a counterpart, the epistemic or cognitive pharisee (Mulligan 2003, 277–278). For example, the Victorian Sage who regularly asks himself what his Duty to Truth is. Epistemic virtue, it may be thought, should not be so loud. Someone who has learnt to develop strong interests rarely needs to ask the question

of the Victorian Sage. (According to the most extreme account of ethical pharisaism, virtue and value, that given by Max Scheler, it is *always* immoral to ask what one's ethical duty is or what ethical goodness requires; it is our relation to the different non-ethical values which determines our ethical status).[30] The grotesque contemporary alternative to the epistemic pharisee is the postmodernist who loudly proclaims his indifference or hostility to cognitive values.

5 Foolishness—Thick or Thin?

Is foolishness a vice at the center of which we find a blindness, indifference, or hostility to the value of knowledge? We have now examined all the components of the right hand side of the proposed analysis. Should foolishness be analyzed in this way?

Different values and disvalues trigger different sorts of reactions. Examples are the couples awe or reverence and the sublime, feelings of shame and shamefulness, feelings of guilt and objective guilt, as well as the already mentioned couples fear and danger, indignation and injustice. Foolishness is a bad thing. Is there, then, a typical reaction to foolishness? And if so, is it triggered by the features which, according to the present account, constitute foolishness?

The examples of Erasmus, Swift, Stendhal, Flaubert, and Musil point the way to an answer. Foolishness provokes irony.[31] As Rougier says: "faced with universal foolishness, the reply of the *homme d'esprit* is irony" (Rougier 1965, 25). Irony stands to foolishness as satire to political and ethical disvalues.[32] The satirist wants to condemn non-intellectual vice and improve the world. The ironist's target is foolishness but, other things being equal, the ironist does not want to improve the world or even persuade. She is not angry and she does not laugh. At most, she smiles, imperceptibly. In her most sublime forms, she cares little about whether her ironies are recognized. Cognitive vice and disvalues excite much less than ethical and political vices and disvalues. Cowardice and corruption attract condemnation more readily than unclarity. Bullshit and insincerity irritate more than blethering and obscurantism.

> Many ironic utterances, I suggest, can be paraphrased as exclamations of the form
>
> "How foolish of *x* to think, assert, claim, feel this or that!"

The ironist's victim is foolish, the ironist thinks, because unreasonable. If he cared more about being reasonable, he would not think, feel or act as he does. The ironist merely pretends to share his victim's unreasonable beliefs and attitudes in order to exhibit their unreasonableness. Of course, irony is a tool which has many uses. Persons are not always the objects of irony. Sometimes an absurd claim rather than its author is the object of irony. But the favorite targets of irony about another person are just the examples with which we began, self-deception, vanity, sour grapes, the attachment to platitudes, and bullshit. Another form of irony about a person, the most innocent, and perhaps the rarest, is self-irony, the appropriate indeed correct reaction to one's own foolishness and follies. This is the form of irony which seems to irritate less than other forms those who disapprove of irony.[33]

The relation between irony and foolishness, then, provides some support for the view proposed here.

Postmodernists claim to understand and appreciate irony. Examples of postmodern irony are mentions of words such as *truth*, *clarity*, *objectivity*, *justification* within quotation marks, written, spoken, or mimicked. Everyone familiar with the contemporary academy has heard sneering mentions of such words enclosed within "scare quotes". The speaker does not take seriously uses of such words and indicates that to do is to be guilty of foolishness. One predecessor of the postmodernist way of talking are the speech habits of communists in the 1930s.[34] If the present account is correct, postmodern ironists intend to condemn foolishness but do so by mocking the very idea of reasonableness. Are postmodernists aware of this? Is the ironic postmodernist not, in fact, someone who lives a practical inconsistency?

Traditional accounts of foolishness and wisdom have three features which the proposed account does not have. First, wisdom has traditionally been characterized in terms of certain types of knowledge—knowledge of the last things, of first principles and causes, of God, of happiness, of many different types of value and their relations, and much else.

Secondly, foolishness or folly are often understood as the absence of such knowledge.[35] Thus, traditional accounts of foolishness are *thick* accounts: there is a lot you have to know in order to be to be wise, and foolishness is the absence of such knowledge.[36]

The present account is a *thin* or minimal account of foolishness and wisdom. Suppose the epistemic hero described above is invariably guided by and acts on his very demanding preferences and is therefore epistemically virtuous. He prefers knowledge to error and illusion because he knows that the former is better than the former. He is not, for all that, necessarily very knowledgeable about life, politics, art, science, the last things, God, non-epistemic values, or indeed about anything very much. Indeed, he may not even be very intelligent. A second respect in which the present account is a thin account is that it respects only partially the received view according to which foolishness is the absence of wisdom. One of two strands in the present account does indeed ascribe to the epistemically virtuous an appreciation of all the platitudes about cognitive values and the habit of acting on the basis of this appreciation; one who lacks this appreciation is therefore foolish. But the other strand in the present account is the idea that at bottom and to a large extent epistemic virtue consists in not allowing the development of one's interests in what is worthy of interest to be thwarted by one's attitudes towards other types of value. In this respect, wisdom has no positive content. It is merely the absence of foolishness in someone who is essentially capable of foolishness. Here the relation between foolishness and wisdom resembles that between justice and injustice (according to the liberal), and health and illness, according to a once traditional view. Just as to behave justly is to avoid behaving unjustly, and to be healthy is not to be ill, so too, wisdom, at least to begin with, is merely the avoidance of folly.

The final difference between the present account of foolishness and traditional accounts is that where "foolish" and its translations have not been used to mean simply stupidity, they have often connoted simply the opposite of practical wisdom (*Klugheit*).[37] But the failures of practical reason, it may be thought, are often simply failures to appreciate the importance of cognitive values.[38]

Notes

1. Nietzsche *Jenseits von Gut und Böse*, §261; cf. Lovejoy (1961, 262–264).
2. Figures like Sam loom large in many accounts of self-deception. These accounts often pay little attention to cognitive values.
3. Cf. Adam (2004, 207ff.), Roger (2008).
4. On bullshit, cf. Frankfurt (2005) and McGinn (2008); on ideology, cf McGinn (2008); on cant, cf Mulligan (2003). On these and other examples, cf. Engel (2016).
5. Cf. "[T]here belongs to the virtue of justice the readiness to fight for justice as well as to observe its laws; and there belongs to truthfulness not only the avoidance of lying but also that other kind of attachment to truth which has to do with its preservation and pursuit. A man of virtue must be a lover of justice and a lover of truth. Furthermore he will seek the special good of his family and friends" (Foot 1985, 207).
6. Cf. Mezei & Smith (1998, 37–74). Many of the ideas discussed in what follows were first put forward by the earliest heirs of Franz Brentano, in particular by the realist phenomenologists. This is, I am sure, appropriate in a tribute to Barry Smith, who played a central rôle in bringing the work of these philosophers to the attention of the wider world. This is now well-known. Less well-known is the fact that when Smith began his pioneering explorations, early realist phenomenology was completely unknown to or ignored by the large and influential phenomenological communities dominating philosophy in Germany, France, and Italy, simply because the early realist phenomenologists wrote much more clearly than later phenomenologists and were realists.
7. Inconsistency of this type is what Husserl called "noetic absurdity". More recently, it has been called "operational self-refutation".
8. Cf. Cooper (1994).
9. On accommodation, cf. Morley (1923). On the variety of intellectual vice, cf. Cassam (2016), Engel (2016), Haack (2013), Mulligan (2014, 2016).

10. Cf. Smith (1984), Williamson (2000), Mulligan (2007).
11. Cf. Scheler (1966, 125).
12. Cf. Mulligan (2003, 277–278, 285).
13. It may be thought that such an extension is not possible in the case of desiring to know who or when.
14. Cfr. Whitcomb (2010a); Kvanvig (2003), Mulligan (2003). For the view that curiosity is an emotion, cf. Brady (2009). For the view that the object of curiosity is the truth, cf. Kvanvig (2003).
15. For the view that impersonal questions are the *objects* of some atttitudes, cf. Tumlirz (1919); for the view that such questions are the *contents* of certain attitudes, cf. Löw (1928), Whitcomb (2010a). Cf. also Mulligan (2017, forthcoming).
16. Reinach (1989), 282 ff … The seminal paper on the pioneering philosophy of questions in early phenomenology is Schuhmann and Smith (1987).
17. On interest, cf White (1964), Silvia (2006, 2008). On interest and curiosity, cf Inan (2012).
18. Cf. Mulligan (2008b).
19. Cf. Tappolet (2000), Johnston (2001), Teroni 2007.
20. Cf. Mulligan & Scherer (2012).
21. Cf. Mulligan (2007).
22. Quoted by Monk (1990, 43). On clarity and clarification in Wittgenstein and his hero, Weininger, cf. Mulligan (2016).
23. Cf. Wells and Matthew (1994), Faucher & Tappolet (2002), Brady (2007), Tappolet (2009).
24. Scheler quotes this passage (1976, 257) and calls Augustine's claim a "law of the progress of knowledge". That love and hate always involve taking an interest and that interest determines attention are claims Scheler often repeats.
25. *This* aspect of the acquisition of intellectual virtues, like the rôles of training and what Barry Smith likes to call drill, is invariably missing in pedagogical theories which attach great importance to interest and its cultivation.
26. Cf. Mulligan (2007).
27. On personal value, goodness for someone, cf. Ronnow-Rasmussen (2011).

28. On what is known about the psychology of vocations and long-standing interests, cf. Silvia (2006).
29. Cf. Minogue (2010).
30. Cf. Scheler (1966, 186–192).
31. Cf. Mulligan (2008a).
32. Byron disagrees: "Fools are my theme, let satire be my song" (*English Bards and Scotch Reviewers*).
33. On pretence and irony, cf. Jancke (1929), Currie (2006), Mulligan (2008a). Jancke also gives the beginnings of an account of self-irony.
34. "[I]rony was a desirable method in polemics, but its application was restricted to the use of inverted commas; e.g.: the 'revolutionary' past of Trotsky; the 'progressive` measures of the 'Socialist' government …" (Koestler 1956, 27).
35. Cf. Gent (1966).
36. Whitcomb's recent, carefully argued account of wisdom, a view he calls "two-fold consequentialism", is a thick account: "To be practically wise is to know how to live well. To be theoretically wise is to have deep understanding" (Whitcomb 2010b).
37. Cf. Bollnow (1958, 99–114), Whitcomb (2010b).
38. This tribute to Barry Smith has touched on a only a few of the topics he has illuminated over a long and extraordinarily productive career, a career driven by an unusually large range of strong interests pursued in a very determined fashion. Barry Smith, his friends and admirers all agree, is in many ways an epistemic hero.

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