

## **Postscript to "Individualism and the Mental"**

'Individualism and the Mental' has been reprinted and anthologized so frequently, and so much more prominently than some of my closely related papers, that its place in my work is often misunderstood. Sometimes misunderstanding has stemmed from superficial reading of the essay itself. Often it has derived from reading only it, and not recognizing the background from which it developed, or the qualifications, supplements, and initiatives that came later. Here I want to reframe some of the key points in the article.

The main idea of the article is that the natures and correct individuation of many of an individual person's intentional, or representational, mental states and events commonly depend in a constitutive way on relations that the individual bears to a wider social environment. In the article, I support this idea by a family of thought experiments. In all these thought experiments, I describe a situation in which an individual has certain thoughts, but has certain misconceptions about the subject matter of the thoughts. Then I describe a counterfactual situation in which another individual is supposed to have substantially the same bodily history—including physical dispositions and proximal stimulations—but in which the social environment with which the individual has normal interactions is different. The second individual's bodily history is described in such a way that any differences from the original individual's body are, in themselves, intuitively irrelevant to the individual's psychology or mental states. The differences in the social environment bear on the meanings of words and the ways words are connected through social chains to their subject matters. This second individual does not have any misconception at all. Finally, I point out that in the counterfactual situation the second individual does not have the same types of thoughts that the first one has in the original situation. This is the structure of the thought experiments. The detailed content is what carries persuasion.

The main idea, again, is that differences in types or natures of thoughts depend on the individuals' different social relations in the two situations. In particular, the different ways in which the social chains connect the individuals to different subject matters bear on the differences in their thoughts. The upshot is that the natures of the individuals' thoughts, as marked by the representational contents of their thoughts, constitutively depend on the social environment. The individuals themselves may not know enough to describe the elements in the social environment or subject matter that constitutively determine the natures of their thoughts.

I believe that these ideas and the lines of thought that support them have held up well in the intervening years. I would like to set them in a wider context.

## WHAT 'INDIVIDUALISM' MEANS

The title of the article contains the term 'individualism'. The term has been used in various ways, by myself and others. I see in retrospect that I changed my construal, though my understanding of the range of phenomena broadly associated with the term remained the same.

The term is introduced on the first page by reference to a contrast between the individual subject and the *social* environment. The last sentence of the article cites the same contrast. The term (or its cousin 'individualistic') is given a rough gloss at the beginning of Section IV. It is said to apply, roughly, to views that 'seek to see a person's intentional mental phenomena ultimately and purely in terms of what happens to the person, what occurs within him, and how he responds to his physical environment, without any essential reference to the social context in which he or the interpreter of his mental phenomena are situated'. The relevance of the term 'individualism' to issues about an individual's relations to a *social* surround is reinforced by the fact that the term has a similar use in discussions of the nature of social science. All of these considerations support interpreting my uses of 'individualism' in 'Individualism and the Mental' as bearing specifically on whether there is ever a constitutive relation between an individual's thoughts and the individual's *social* environment.

On the other hand, I recognized from the beginning that the role of social relations in determining the natures of mental states and events was one part of a larger order. I make this very clear in footnote 2 of 'Individualism and the Mental'. This footnote argues that the natures of many mental states are partly determined by relations to the *physical environment*. I expanded this sort of argument in subsequent work. The footnote emphasizes a point that I developed later in 'Other Bodies' (Ch. 4 above): Putnam did not use his own imaginative arguments about language, 'meaning', and reference to support the view that the natures of most ordinary non-factive *mental* states and events (as ordinarily understood and in addition to their mere referential relations) are partly determined by relations to the physical environment.

Putnam mistakenly took natural kind terms to be indexical. Such a view naturally supports the idea that the mental state and its distinctively representational content or 'meaning' are constant between the actual individual and the counterfactual individual, even as the referents of their shared thought content differ. The *representational* content of the mental states, on this view, remains the same. This idea no doubt played a role in Putnam's missing the import of his twin-earth arguments for mind. In Section IId of 'Individualism and the Mental', I make this point again. The thought experiments cannot be glossed as involving reference shifts in context-dependent thoughts.<sup>1</sup>

<sup>1</sup> These points are discussed in the Introduction. My criticism is also elaborated in greater detail and applied specifically to Putnam in 'Other Bodies' (Ch. 3 above). Putnam's original discussion

At the time, I regarded the physical environment as more fundamental than the social environment in determining the natures of mental states. It is more fundamental psychologically, ontogenetically, and phylogenetically. I focused first on the social environment because I thought that its role was less close to the surface, less easily recognized.

In later work I developed the role of the physical environment—especially in 'Other Bodies', 'Individualism and Psychology', 'Cartesian Error and the Objectivity of Perception', and 'Intellectual Norms and Foundations of Mind' (Chs. 4, 9, 7, 10 in this volume). Each of these articles produced arguments that brought out ways in which non-social factors beyond the cognitive purview of the individual help determine the natures of his or her mental states and events.

In the course of this later development, certainly by the mid-1980s, I came consistently to use the term 'individualism' to apply to any view that takes *the nature of mental states to depend entirely on physical factors in the individual or psychological resources cognitively available to the individual*. On this understanding of the term, individualism is not concerned purely with denying a role for social relations beyond the individual. It is concerned with denying a constitutive role to any factors beyond the individual. Although I see that in 'Individualism and the Mental' my usage and contextual explication is the narrower one, I think that I always understood the general phenomenon in the broader way. My use of the term 'anti-individualism' came firmly to reflect this broader understanding.<sup>2</sup>

occurs in "The Meaning of 'Meaning'" in *Philosophical Papers*, ii (Cambridge: Cambridge University Press, 1975). Putnam's acknowledgment of the correctness of my criticism occurs in Andrew Pessin and Sanford Goldberg (eds.), *The Twin Earth Chronicles* (London: M. E. Sharpe, 1996), p. xxi.

<sup>2</sup> I am taking it for granted that individualism is not the claim of local supervenience of an individual's mental states on the individual's physical states. In the first place, I take a dualism that maintains that mental states do not depend in any way on anything outside what is both internal to the individual's mind and available by reflection to the individual to be individualistic. Such an individualism would reject local supervenience. In the second place, anti-individualism is compatible with maintaining local supervenience of the mental on the physical. It could hold that the individual's bodily states are individuated only through relations to the wider environment. Or it could hold that any difference in the environment that helps determine the mental states will have some impact on the individual's bodily states in such a way as to preserve local supervenience. In the third place (and most importantly), individualism and anti-individualism are not fundamentally about supervenience, but about the natures of mental states, their correct individuation conditions. They are about the explanatory conditions associated with those natures, not about a mere modal relation. Cf. my 'The Indexical Strategy: Reply to Owens', in Martin Hahn and Bjorn Ramberg (eds.), *Reflections and Replies: Essays on the Philosophy of Tyler Burge*, (Cambridge, Mass.; MIT Press, 2003), 371–372. All my explicit, set-piece formulations of what anti-individualism is focused on the natures of mental states, not on supervenience. Some careless writing in my earliest papers mistakenly implies that anti-individualism *is* the rejection of local supervenience. I have, however, long disavowed this identification, and do so again here.

Some of the thought experiments do reject local supervenience. But the main point of the thought experiments is independent. It is to call attention to the relevance of relations to matters beyond the individual in the determination of what representational contents mental states have (and what types of mental states are in play)—regardless of whether these matters vary with differences in the individuals' bodies.

Some authors came to use the term 'internalism' for the broader phenomenon, confining 'individualism' to a claim about social relations. By now, I think, more authors take the terms to be approximately interchangeable, as I do. Usage here is obviously a matter of taste. I have preferred not to use 'internalism' and 'externalism' for a number of reasons. One is that my broader usage of 'individualism' is as early as similar uses of 'internalism'. Individualism in this broad sense rules out relations to a social, physical, or mathematical environment as constitutive factors in determining mental kinds.

A second reason for my preferring 'individualism' is that the terms 'internalism' and 'externalism' are already used in philosophy for a related but quite distinct issue in epistemology.

A third reason is that 'internalism' and 'externalism' are not specific about what constitutes the inside–outside border. The terms have been used to draw this border in many ways, not all of which have to do with a distinction between the individual and a wider reality.<sup>3</sup>

My primary reason is that the term 'externalism' suggests to many that the main issue is essentially concerned with spatial location. It has also suggested to many that mental states and events are themselves 'outside the head' or are relations to something outside the individual. Both suggestions are mistaken.

First, as I understand anti-individualism, the doctrine applies to some cases in which no spatial relations are at issue. I think that the natures of mathematical thoughts are determined by relations to an abstract subject matter that is not only not in the individual, but it is not anywhere. The point is that the mental kinds are not understandable by focusing entirely on the individual—not that the constitutively relevant relations are spatially external to the individual.

As to the second suggestion, anti-individualism certainly does not entail that thoughts are 'outside the head' or are themselves relations to something external. Neither thoughts themselves nor their representational contents are relations to something outside the individual. Their natures constitutively *depend* on relations that are not reducible to matters that concern the individual alone. But the natures are not themselves relations, and their representational contents are not themselves (in general) relational.<sup>4</sup>

Psychological explanations normally do not take mental states or events to be relations to the distal environment. They are psychological kinds that represent that environment. To be the kinds that they are, I claim, there must be an underlying network of relations to the environment. These are constitutive enabling conditions. Referring to those relations occurs in a different sort of explanation—a constitutive or philosophical explanation—than psychological

<sup>3</sup> For a useful discussion of the enormous variation in ways in which an internal–external division has been drawn in biology and psychology, see Peter Godfrey-Smith, *Complexity and the Function of Mind in Nature* (Cambridge: Cambridge University Press, 1996), ch. 2.

<sup>4</sup> These points are often obscured by philosophers who use the term 'intrinsic property'. Some of these writers claim, without explication, that mental contents are intrinsic properties of the mind. This sort of writing tends to be obfuscatory. There are many uses of 'intrinsic'.

explanations. The psychological explanations, in effect, take the natures of mental states for granted. They make reference to kinds that are dependent on relations. But the relations are usually not appealed to in psychological explanations; nor do they enter into psychological laws. I conjecture, with some confidence, that often the relations that constitutively determine or enable a psychological kind to be what it is are not natural or psychological kinds at all.

The idea that a nature or kind depends on relations beyond entities that are of that kind is a relatively modest claim—arguably applicable to most or all physical kinds. A physical body's shape and rest mass, for example, arguably depend on the body's being in space. Space is something beyond the individual. Shape and rest mass are not themselves relations to anything external. Similarly, being the number 3 depends for being what it is on relations to other numbers, but it does not follow that being the number 3 is itself a relation.<sup>5</sup>

Avoiding these suggestions is compatible with using the terms 'internalism' and 'externalism'. Nevertheless, I find these terms less appropriate to the main issue than 'individualism' and 'anti-individualism'. The main issue concerns the role of the individual and the individual's relations to a wider order in the constitutive conditions for the individual's being in specific representational mental states, or engaging in specific representational mental events or acts.

So anti-individualism concerns a variety of ways in which the natures of an individual's mental states and events are determined by relations between the individual and a wider order or environment. The wider order or environment is not in general in the individual's body or mind, or subject to reflective cognitive control by the individual, or explicable purely in terms of the individual's functional, causal, or dispositional capacities. Relations to a *social* environment are a prominent subclass among the relevant relations to a wider order.

## THE NATURE OF MIND AND THE NATURE OF CONTENT

Let me turn to another way in which anti-individualism has been misunderstood. It is common to take anti-individualism as a theory of content. This take is understandable. 'Individualism and the Mental' has a lot to say about content. It derives its conclusions from reflection on what the representational contents of particular mental states and events are. Nevertheless, anti-individualism is not fundamentally about the nature of content. It is about the nature of representational mental states and events. It is about constitutive or essential conditions

<sup>5</sup> I make this point in 'Phenomenality and Reference: Reply to Loar', in Hahn and Ramberg (eds.), *Reflections and Replies*, 435–436. The point can easily be inferred from numerous passages in 'Individualism and the Mental'. The point is fully understood and incisively developed in Robert Stalnaker, 'On What's in the Head', in James Tomberlin (ed.), *Philosophical Perspectives*, iii (Atascadero, Calif.: Ridgeview Publishing Company, 1989), repr. in Pessin and Goldberg (eds.), *Twin Earth Chronicles*.

on an individual's having the kinds of mental states and events that the individual has.

In the thought experiments I maintained that the individuals in the original and counterfactual situations have thoughts with different representational contents. Since representational contents help type-identify thoughts, the thoughts are of different types or kinds. The conclusion is about the thoughts themselves. It is about how *having* certain thoughts constitutively depends on relations to the environment. It is not about the nature of the thought contents themselves.

The talk of representational contents was not strictly necessary to the arguments at all. It served to ward off philosophical misunderstandings—such as assimilating the differences in original and counterfactual situations to differences in the referents of terms or in the subject matter of the thoughts. The arguments center on the point that in the original situation an individual has one set of thoughts, and in the counterfactual situation the individual cannot have those same thoughts. The kinds of mental states and events differ in the two situations. So what kinds of mental states and events the individual has depends essentially on relations to the different environments.

I emphasize that anti-individualism is about the nature of the mental, not about the nature of representational content. The latter subject seems to me to be a relatively *recherché* ontological topic. For me it has substantially fewer interesting philosophical consequences. Moreover, the thought experiments are compatible with the Fregean–Platonic view that the natures of representational contents are completely independent of relations to anything else. On such a view, different thought contents mark different kinds of thought events or mental states in the original and counterfactual situations. Still, the contents themselves are independent of anything in space or time, including social relations. I think that this view, at least in any general form, is implausible. It is not, however, the objective of anti-individualism *per se* to defeat it.<sup>6</sup>

Representational contents and mental states and events are ontologically different topics. Determining constitutive conditions for being a representational content is a different enterprise from determining constitutive conditions for being a particular kind of belief or thought. Nevertheless, representational contents are to this degree central to the natures of mental states and events. Representational contents are aspects of the fundamental or constitutive kinds (natures) of representational mental states and events. Anti-individualism is about the conditions under which mental states and events can have the representational contents that they have, not about the nature of the contents themselves.

This point figures in my argument in Section d of Section IV against material token identity theories of mental events. The first premise in that argument is that a thought event *a* is necessarily distinct from a thought event *b* if *a* and *b* have different representational contents. (This principle is compatible with a

<sup>6</sup> These issues are discussed further in my *Truth, Thought, Reason: Essays on Frege* (Oxford: Oxford University Press, 2005), Introduction, esp. pp. 54–68.

variety of ontologies of representational contents.) I defended this principle by appeal to the centrality of representational contents in the explanatory enterprises in which mentalistic notions fit. I stand by this relatively pragmatic defense. In retrospect, I see it as overly modest. It seems to me that denying the principle is really quite evidently and *a priori* unacceptable. An account of thoughts that allows that a given thought could have either of two different representational contents while remaining the same thought event amounts to changing the subject. Thought events are partly type- or kind-identified by their contents. They are partly individuated by their contents. It seems to me that a philosophy that denies this principle has lost its way in ungrounded ideology.

## LANGUAGE AND MIND

If I were to rewrite 'Individualism and the Mental', what I would change most is some of its emphasis on issues in the philosophy of language.<sup>7</sup> This emphasis was a sign of the times. It was partly necessary for clarifying exactly what I was claiming. Sometimes it did not distinguish issues about natural-language ascriptions of propositional attitudes from issues about the nature of the attitudes as sharply as I now would.

The article is explicitly about the nature of mental states and events—the nature of thoughts, or propositional attitudes. A strategy for reflecting on a subject matter that has yielded some insight, especially over the last century, is to begin by reflecting on aspects of language that we take to describe a subject matter veridically and systematically. By understanding such linguistic aspects, one then gains insight into structures and other large features of the subject matter. Although the language is one level removed from the subject matter, the language's concreteness and structure often enable one to recognize features of the subject matter that would otherwise be missed.<sup>8</sup>

This linguistic approach has special advantages when the subject matter is mind. A good bit of our thinking depends on language, both in the sense that without language we would never have been able to think many of our thoughts and in the sense that many of the structures of thought—for example, logical structures—are also structures of language.

On the other hand, this strategy has obvious limitations. In the first place, it can never supplant direct exploration of the subject matter, whether by science or by common sense. The knowledge about mind that reposes in common sense and in psychology is more extensive and, in a sense, more nearly final than any

<sup>7</sup> For parallel points about 'Belief *De Re*', see the Postscript to that article above.

<sup>8</sup> The methodology derives, of course, from Frege. For fuller explication of the methodology, see Section I of Postscript to 'Belief *De Re*' above. It is clear that the methodology is better suited to some subject matters than to others. Reflecting on language promises much less insight with respect to astronomy and molecular biology than it does with respect to formal logical consequence or the grammar module in the mind.

knowledge gained by reflecting on language. In the second place, language is used for many other purposes besides those of limning the nature of a subject matter. It has metaphorical, rhetorical, emotional, and other broadly communicative functions as well. One cannot simply assume that all aspects of language mirror or correspond to aspects of its subject matters.

In writing 'Individualism and the Mental', I self-consciously followed this strategy and was thoroughly aware of its limitations. I thought that the limitations could be mitigated by acknowledging them and by being sensitive to the various purposes for which language is used. I believed then, and believe now, that commonsense is close enough to psychology, certainly to what is now known in psychology, that one can learn things from reflecting on common sense talk about mental states and events. Although later work of mine reflects on psychology directly, 'Individualism and the Mental' stayed close to ordinary intuitive reflection. As to sensitivity to the different purposes of ordinary language, I think that, for the time at which it was written, the article shows, especially in Sections IIc–d, IIIa–c, a fairly sophisticated sensitivity to different ways in which language can be taken or used. I tried to indicate that the thought experiments in Sections IIa–b avoid depending on uses of language that do not reflect anything significant about the mentalistic subject matter.

Most of the discussion of language in the article was intended to be defensive and clarificatory. I wanted to show that common philosophical assumptions about automatically reinterpreting a person's language and mental states, when the person does not fully understand a term, fail to accord with common practice and fail to issue from any strong rationale. I wanted to distinguish my points about the natures of mental states and events from points that had already been made about the reference of certain terms and concepts. I wanted to show that the thought experiments apply to nearly all mental states, not simply to factive mental phenomena (knowing, seeing, being jealous of) that obviously depend on some relation to the subject matter. And I wanted to distinguish the phenomena that interested me from indexical phenomena that were easily conflated with them. All of these points were facilitated by employing terminology and reasoning from the philosophy of language. I stand by the points that I made then, and I believe that my way of making them was correct.

Still, there are scattered remarks in the article about contributing to a theory of language about propositional attitudes (Sections I, III d). And some of the strategy of argumentation moves back and forth between discussing ascriptions of propositional attitudes and discussing the nature of the attitudes themselves. Some of this shuttling back and forth failed to keep it completely clear that ascriptions are simply evidence or a diagnostic device, not the primary subject matter. In fact, some responses to the article maintained that I had given a reasonable account of ordinary language use, but that ordinary language is simply misleading about the natures of mental states and events. I believe that such responses missed the real force of the thought experiments. I think that some of what I wrote anticipated such responses and did a lot to rebut them in advance.



(Cf. the sections mentioned above: IIc–d, IIIa–c, but also Section b of IV.) There is no question that the article is fundamentally about mind, not fundamentally about mentalistic language. I also believe that the methodology of the thought experiments and of the discussions of language could have been more sharply delineated. I think that the article does contribute to an understanding of language. Nonetheless, I think that this is a secondary contribution.

There are more specific, more technical assumptions about language that enter into the argumentation of the article. In order to show that my thought experiments bear on the natures of mental states, and not merely on ascriptions of mental states that overtly relate the states to aspects of the environment, I emphasized that the points are supported by 'oblique occurrences' in content clauses of mental-state ascriptions. I wanted to bring out that my claims bore not only on 'de re' aspects of mental states and events, but also on 'de dicto' aspects. More accurately, I wanted to bring out that the claims bore not only on demonstrative-like aspects of the content of mental states, but also on constant, non-indexical, non-demonstrative concepts.

We can say 'Alfred believes that that X-ray machine is blocking his way'. If Alfred is a chimp, it is obvious that Alfred has no thoughts about X-ray machines as such. The term 'that X-ray machine' is not used to even suggest anything about *how* Alfred thinks about anything. The ascription is just a loose way of indicating that Alfred has some thought about the physical object that is (or constitutes) the machine, and that the thought is to the effect that that thing is in his way. Any other expression that picked out roughly the same thing—such as 'that big contraption' or 'the biggest artifact in the room' or 'that hunk of metal' (recognizing that these expressions do not really denote the same objects)—would have served communicative purposes about as well, and would have produced a sentence that is roughly true. Any other singular expression that picked out even *roughly* the same object would do as well. The purpose of the ascription is not primarily to indicate the nature of Alfred's mental state, or even exactly what object Alfred has a belief about. It indicates almost nothing about how he is thinking. (Even the predication 'is blocking his way' is pretty loose.) The main point is simply to relate Alfred to some hunk or artifact in the world and say that Alfred believed it to be some sort of obstacle.

I meant to contrast this sort of case with ascriptions that had more the point of indicating something about how an individual is thinking—what the individual's concepts or representational contents are, what kinds of mental states the individual is in. I took it that there are ascriptions of propositional attitudes in which certain expressions in content clauses cannot be exchanged with any old coextensive expression without changing the truth-value of the whole sentence. The reason that they cannot be exchanged is that the expression in the content clause has partly the role of signifying something (perhaps exactly, perhaps approximately) about the individual's way of thinking, or equivalently, about the representational content of his or her thought.

Thus, Bert may believe that mercury is in the thermometer without believing that quicksilver is in the thermometer, even though mercury is quicksilver. Or Cary may believe that Mohammed Ali was a great fighter without believing that Cassius Clay was a great fighter, even though Cassius Clay is Mohammed Ali. Or child Dirk might believe that three-quarters of the milk was spilt without believing that 75 percent of the milk was spilt, even though three-quarters and 75 percent are the same proportion. In each case, the key term—‘mercury’, ‘Mohammed Ali’, ‘three-quarters’—plays a role not only in indicating some kind, property, individual, proportion, or relation. It also signifies a particular way of thinking, or a class of ways of thinking, about the entity. One can think of someone as Mohammed Ali without thinking of him as Cassius Clay. One can think of a material as mercury without realizing that mercury is quicksilver. And so on.

I summed up these sorts of points by saying that the relevant expressions in the content clauses occur obliquely and would not undergo exchange with coextensive expressions without risking affecting the truth-value of the whole sentence. I believe that there are uses of the language according to which these points are correct.

Subsequent to the time when I wrote ‘Individualism and the Mental’, some philosophers of language have maintained that these kinds of point about language are incorrect. They hold that, always, if an individual believes that mercury is in the thermometer, the individual believes that quicksilver is in the thermometer, even if the individual thinks of quicksilver as a kind of silver, or is unsure what quicksilver is. They maintain that there may be a pragmatic implicature in the sentence ‘Bert believes that mercury is in the thermometer’. The implicature would be that the individual uses ‘mercury’ and not ‘quicksilver’, or appropriate cognates. They hold that it might be contextually misleading to say ‘Bert believes that quicksilver is in the thermometer’. They hold that the terms are nevertheless inter-substitutable without risk of change of truth-value of the whole sentence. So they hold, ‘Bert believes that quicksilver is in the thermometer’ is true if and only if ‘Bert believes that mercury is in the thermometer’ is true. And similarly for all the other examples that I cited or gestured at: If one believes that mercury is in the thermometer, one believes that quicksilver is in the thermometer—full stop.

I find this sort of view implausible, or at best incomplete. There are certainly standard uses of these sentences on which coextensive expressions are inter-substitutable *salve veritate*.<sup>9</sup> There are also standard uses on which the exchanges

<sup>9</sup> A *de re* ascription that does not purport to be relevant to how the individual is thinking of the *re* simply specifies a referent and implies that the individual had some *de re* attitude toward it. A *pseudo de re* ascription simply specifies an object that the attributer of the attitude takes to be a denotation of some component in the individual’s thought, without implying that the specification is relevant to how the individual thought of the object, or even to whether the individual’s thought is *de re* at all. There are cases in which even the attributer may not have a *de re* attitude toward the denoted (perhaps merely described) object.

will lead to false sentences, not just misleading ones. There is a systematic point to refusing exchange—that of indicating something about the way an individual is thinking. The fact that this point is systematic, and well understood among language users, indicates that it is not merely a matter of contextual implicature. The fact that it is expressed in systematic structural ways, independently of particular lexical items, indicates that it is not analogous to standard examples of conventional implicature.

The differences in the sentences that derive from such substitutions can bear on differences in the individual thinker's point of view. I think that when we allow free substitution, we are engaging in a standard use in which we do not care about such differences. What proponents of the relevant pragmatic theory count as cancellations of implicatures are in fact switches from one standard usage to the other.

So I stand by my original arguments. In those arguments I pointed out that the thought experiments apply just as much to an ascription 'Al believes that he has arthritis' if 'arthritis' is understood to occur obliquely (in a way that does not admit free interchange of coextensive expressions *salve veritate*) as it does if 'arthritis' is understood to occur transparently (in a way that admits of free interchange with coextensive expressions *salve veritate*). The purpose of this point was, again, to emphasize that the thought experiments bear not just on what the individual's beliefs refer to (or to what *we* refer to in ascribing the beliefs). They bear primarily on the way the individual thinks, what kinds of mental states he has.

This issue about the semantics of natural language is not, however, of central importance for my primary purposes. Whether exchange of what are normally coextensive expressions in ordinary belief ascriptions can yield changes in truth-value is a relatively technical issue in the philosophy of language. I believe that two other points are primary.

One is that the force and purpose of my linguistic argument is unaffected by the outcome of the dispute just described. Even if there is merely a pragmatic difference between the two ascriptions, the pragmatic difference bears on a difference in mental state, or point of view in the individual to whom the mental state is ascribed. This is the point at issue. It does not matter whether the difference is indicated semantically or pragmatically. My argument was supposed to bring out that the thought experiments bear on differences in mental state, not merely differences in mental reference (or reference by the ascriber). That fact stands whether the differences are actually denoted semantically in natural-language ascriptions, or are only pragmatically implicated in such ascriptions. My primary interest lay not in the character of natural-language ascriptions, but in the nature of mental states. The ascriptions played merely the role of clarification and evidence for a conclusion about mind.

I believe that it is obvious that even if the pragmatic account of the natural-language phenomena were correct, we could explain a language of psychological ascription in which the representational contents of mental states, and relevant

differences among them, would be denoted in ascriptions, not merely implicated. I believe that such a language would be useful in psychological description and explanation. In fact, I believe that our natural language closely approximates such a language in *some* of its uses.

The other primary point is really the fundamental one. The thought experiments in 'Individualism and the Mental' do not rely primarily or essentially on argumentation about the nature of *ascriptions* of mental states at all. Although discussion of ascriptions looms large in the article—too large—it is not essential to the force or purpose of the main line of the argument. The fundamental reasoning in 'Individualism and the Mental', and in subsequent thought experiments that support anti-individualism, is not reasoning about language. The fundamental reasoning concerns conditions under which one can be in certain sorts of mental states, or have certain concepts. The intuitions on which the thought experiments rely center on conditions under which it is possible or impossible to have certain thoughts or perceptions.

This approach to the issues is evident in the extensive discussion of incomplete understanding of concepts or notions, where understanding a notion X is explicated roughly as knowing what an X is (Sections I, IIc–d). It is present in the various non-meta-linguistic formulations of the thought experiments, and in such remarks as that it is hard to see how the patient (in the third step of the arthritis thought experiment) 'could have picked up the notion of arthritis' (end of Section IIa). It is present in the persistent reasoning about the subject's viewpoint (Sections IIIc–d) and about the contents of states, which I take to help mark or type-identify the basic mental-state kinds (*passim*).

The arthritis thought experiment is this simple: The first stage illustrates that it is possible for an individual to have thoughts about arthritis as such even if one does not realize that arthritis must occur in joints. Other people on whom the individual partly relies in communication for connection to arthritis do know this. The second stage sets out a possible situation in which a similar individual, is, in ways relevant to understanding his psychology, a duplicate of the original individual, from the skin inwards. The second individual is in a different social situation. In this situation, neither the individual nor anyone else has isolated arthritis as a syndrome of diseases. In this situation, the individual's and community's word form 'arthritis' is standardly used to apply to some syndrome that includes rheumatoidal ailments that occur outside joints. The third stage indicates that in such a situation it is not possible for the individual to have thoughts about arthritis as such. So the first and second individuals have different kinds of thoughts.

#### METHODOLOGY AND EPISTEMIC IMPLICATIONS

The thought experiments center on examples. In philosophy, at least philosophy that is not explicitly philosophy of science, it seems to me that there is commonly

more epistemic power and persuasiveness in examples than in principles. One aim of philosophy is to find principles. Finding them is often surer through reflection on cases than through trying to think up principles directly. The examples test and provide counterexamples for putative principles. They also stimulate discovery. The thought experiments proposed in 'Individualism and the Mental' are intended to be counterexamples to individualist principles. They are also intended to suggest directions for finding positive principles about constitutive factors involved in determining mental states, or in determining what representational contents an individual's mental states can have.

The steps of the thought experiments are not principles, it must be stressed.<sup>10</sup> They are judgments about hypothetical cases. How to generalize from a case is usually not evident. Usually, one has to consider more cases.

My thought experiments suggest some epistemic lessons. One of the broadest lessons is that conceptual and linguistic understanding commonly do not rest on the stable mastery of self-evident principles governing use of concepts or terms. One can master a concept well enough to think with it without understanding constitutive principles that govern its usage. Broadly, the reason for this is that constitutive principles depend on the nature of the subject matter of the concept. Normally, we do not have infallible insight into the nature of the subject matter. Sufficient mastery to think with a concept commonly resides in a know-how ability to apply the concept to cases and in mastery of a few members from a large family of rules of thumb and forms of inference, perhaps in association with some perceptual presentations. The rules of thumb need not be distinctive to the concept or sufficient to fix its range of application. They need not even be veridical. We may be vague as to how to apply a concept even though our concept is not itself vague, or is less vague. The natural commitments of our usage may be fuller than we realize.

In what follows I will be using the terms 'explicational principle', 'conceptual understanding', 'explicational understanding', and 'explicational belief'. I intend these expressions in very broad senses. I do not think that there is a sharp line between what constitutes understanding a concept and what constitutes using a concept while presupposing comprehension of it. Examples of explicational principles are 'Atoms are indivisible particles', 'Atoms are particles with a nucleus of protons and neutrons surrounded by electrons in orbits', 'Genes are the basic biological unit-determiners of heredity', 'Arthritis occurs only in joints', 'Contracts can be oral as well as written', 'Water is H<sub>2</sub>O', 'To be an artifact is to bear some relation to an individual's intention or use', 'Sets are identical if and only if they have the same members', 'A function is an abstract law of correlation which given an input yields a unique output, if any output at all'. Such principles, true or false, purport to bear on what it is to be the sort of

<sup>10</sup> Among my thought experiments, the one exception to this claim is the thought experiment common to 'Cartesian Error and the Objectivity of Perception' and 'Individualism and Psychology' (Chs. 7 and 9 below). See the discussion of this exception in the Introduction.

thing indicated by the concept being explicated. The principles bear both on the nature of the thing—what it is to be that sort of thing—and the nature of the concept. Conceptual understanding is purportedly deepened when one comes to believe such principles. The relevant cases that I discuss are intuitively central to deepening understanding, or making it fuller or more nearly complete. They are relevant to conditions that bear on the nature of the concept by bearing on the nature of the subject matter that it specifies.

I shall be discussing cases in which I believe that concepts are *shared* among individuals some of whom understand the concept better than others. Much of what I say does not depend on this belief. What is important is that the relevant explications provide constitutive conditions on the application of the concept, or concepts, to a shared referent (or range of application). I believe that the stronger description in terms of shared concepts is nevertheless often correct. It is part of the best explanation of the transmission of knowledge. It is also often psychologically, culturally, historically, and epistemically illuminating.

It will be apparent, both from the examples and from what follows, that I do not believe that all explications of concepts are analytic, in any sense of 'analytic'. Many are empirically warranted. Even those beliefs in conceptual explications that are apriori warranted are normally not analytic in any sense. I reject as altogether without application the notion of analyticity that entails that an analytic truth is vacuous or not made true by a subject matter. I also believe that relatively few concepts are best regarded as having any extensive internal conceptual structure, which would allow other concepts to be 'contained' in them. So I think that there are very few analytic truths of containment.<sup>11</sup> Most of the apriori beliefs that I discuss that bear on conceptual understanding are synthetic apriori, in every normal sense of 'synthetic'.

The notions of conceptual understanding and conceptual explication that I employ are meant to be intuitive, relatively non-technical notions. I do not assume that there is, in general, a sharp line between what constitutes an explicational principle and what constitutes a non-constitutive fact about a subject matter. Still, in the cases I discuss, I do assume that it is intuitively correct to regard the identity or nature of a concept to be purportedly illuminated by explicational principles. I also take the notions of conceptual understanding and explicational principle to be illuminated by the cases to which they seem to apply. I do not associate these notions with a worked-through theory. I intend

<sup>11</sup> The rejection of the sort of analyticity that claims that analytic truths are vacuous and not made true by a subject matter derives, of course, from W. V. Quine. Cf. his 'Carnap and Logical Truth' (1954), repr. in *Ways of Paradox* (New York: Random House, 1960). The rejection of all but a few cases of the sort of analyticity that claims that analytic truths enunciate containment relations among concepts derives from Hilary Putnam, 'The Analytic and the Synthetic' (1962), repr. in *Philosophical Papers*, ii (Cambridge: Cambridge University Press, 1975). Discussion of the these different conceptions of analyticity, and one other, occurs in my 'Philosophy of Language and Mind: 1950–1990', *The Philosophical Review*, 100 (1992), 3–51 (Cf. Ch. 20 below); and in my 'Logic and Analyticity', *Grazer Philosophische Studien*, 66 (2003), 199–249, secs. I–II.

the remarks that follow to point toward a better understanding of the terms, and perhaps ultimately toward something resembling theory.

I think that one can distinguish four types of cases that bear on conceptual understanding. These cases delineate conditions under which reflection can or cannot yield fuller understanding of our concepts and conceptual abilities.<sup>12</sup>

In the first type of case, conceptual understanding of an explicational principle is dependent for its warrant on empirical information. The explicational principle can be understood implicitly and brought to explicit consciousness through reflection. Or it can be constructed through providing empirical explanations. The second, third, and fourth types of case involve different forms of apriori explicational understanding.<sup>13</sup> The second type involves apriori implicit understanding of a principle that can be brought to the surface by reflection. The idea is that an apriori warranted implicit belief in an explicational principle guides the individual's employment of a concept even though reflection or dialectic is necessary if the implicitly understood principle is to be brought to consciousness. The third type involves implicit understanding of materials from which the relevant explicational principle can be constructed. But the principle itself is not implicitly believed. It does not implicitly guide the individual's employment of the concept, at least until the individual comes to believe the principle explicitly. Eventual belief in the principle is apriori warranted. In this case, reflection does not simply clarify and make distinct something that is already unconsciously present in the individual's psychology and guiding the individual's judgments about cases. Reflection puts together the explicational principle for the first time within the individual's psychology. The fourth type of case involves coming to recognize, with apriori warrant, a principle that intuitively bears on the correct explication of a concept, at least partly from materials that were *not* all available in earlier uses of the same concept. In this case, at a certain time, reflection alone would not have sufficed for recognition of the principle, for some users of the concept. Further education, perhaps even new concepts, would be necessary.<sup>14</sup>

<sup>12</sup> In this section of the Postscript, I draw on all the thought experiments, not just those in 'Individualism and the Mental'. For further discussion of these methodological and epistemic matters, see my 'The Thought Experiments: Reply to Donnellan' and 'Concepts, Conceptions, Reflective Understanding: Reply to Peacocke', both in Hahn and Ramberg (eds.), *Reflections and Replies*, and my replies to the essays by Martin Davies and Antoni Gomila Benejam in Maria J. Frapolli and Esther Romero (eds.), *Meaning, Basic Self-Knowledge, and Mind: Essays on Tyler Burge* (Stanford, Calif.: CSLI Publications, 2003).

<sup>13</sup> It will be seen that the three types of apriori understanding could be taken to have three counterparts as sub-cases of empirically warranted understanding of explicational beliefs. I give four cases instead of six only because I think that separating the sub-cases is philosophically and historically more illuminating in cases of apriori explicational understanding.

<sup>14</sup> Delicate issues hover over these points. Some kinds of reflection, especially in the third type of case, yield new knowledge for the individual. This can be seen as a sort of self-education. Nevertheless, I think that we have a rough, at least case-based, sense of a distinction between when the individual uses materials already available to work out new knowledge, and when the individual gains further knowledge that is not simply derived from putting things together that he already knew. Sometimes new concepts or techniques are needed. Sometimes communication with others

The last three types of case bear on apriori warranted understanding, and thus on the limited rationalism that I maintain. The last type of case was not recognized by traditional rationalists, and the next to last was not high-lighted. It is therefore, I think, of some interest to mark their possibility.<sup>15</sup>

In all four cases, the principle that is taken to explicate the concept and illuminate its application conditions could be false. This is an important point. All explication is eventually responsible to an objective subject matter to which the concepts purportedly apply. In view of our fallibility, explications can be mistaken, even those that are taken to be definitional. I shall, however, assume in this discussion that the relevant explicative principles are true.

Let me turn to concrete examples of the four types of cases. In the thought experiments that I have given, the most common type of belief that expresses conceptual understanding is empirical.<sup>16</sup> For example, the belief that a contract can be oral as well as written has empirical warrant. The belief that water is H<sub>2</sub>O clearly empirical. The thought experiment from 'Intellectual Norms and Foundations of Mind' (Ch. 10 below) suggests that the belief that sofas are artifacts made or meant for sitting has partly empirical sources of warrant and is vulnerable to empirically based doubt.

Similarly, Dalton's false explicational belief that atoms are indivisible and our (presumably true) explicational belief that atoms have a nucleus surrounded by electrons in orbits are, respectively, empirically disconfirmed and warranted. The empirical explication does not, of course, give conceptual 'definitions' of the empirical concept, conceptually guaranteed to be true, although perhaps Dalton mistakenly thought that his did. It is nevertheless relevant to understanding basic, constitutive matters about the concept's application.

is essential. The distinction between synthetic apriori knowledge gained by reflection and synthetic apriori knowledge gained by other means is delicate. I think, however, that there is no reason simply to ignore the distinction. Rather we should use cases and reflection to try to understand it better.

<sup>15</sup> I believe that Frege had a conception of apriori knowledge that in effect acknowledges these last two sorts of cases. My conception of apriority has been substantially influenced by Frege. Aspects of the ideas that follow, together with their relations to anti-individualism, are discussed in much greater detail in 'Frege on Extensions of Concepts, from 1884 to 1903', 'Frege on Truth', 'Frege on Sense and Linguistic Meaning', 'Frege on Knowing the Foundation', 'Frege on Apriority', collected in Burge, *Truth, Thought, Reason*, the Introduction, *ibid.* 54–68; and 'Logic and Analyticity'.

The key difference between my conception of rationalism and classical rationalism is the main point of an exchange between me and Christopher Peacocke. Peacocke advances a fairly standard, Leibnizian version of the traditional rationalist view. I point to ways in which such a view misses the resources that anti-individualism provides to expand the range of possibilities for understanding the nature of reflection. Cf. Christopher Peacocke, 'Implicit Conceptions, Understanding, and Rationality' and Burge, 'Concepts, Conceptions, Reflective Understanding: Reply to Peacocke' both in Hahn and Ramberg (eds.), *Reflections and Replies*.

<sup>16</sup> The general point about the extreme fallibility and empiricity of most explications of empirically applicable words, in both science and common sense, is a major theme, developed repeatedly and well, in the work of Hilary Putnam. His development of the point is much earlier than my development of the anti-individualistic framework. I think that that framework helps explain several of Putnam's insights. See numerous articles in his *Philosophical Papers*, I and II. See esp. 'An Examination of Grünbaum's Philosophy of Geometry' (1963), 'A Memo on Conventionalism' (1963) (vol. i), and 'The Analytic and the Synthetic' (1962), 'Is Semantics Possible?' (1970) (vol. ii).



There are cases of empirically warranted beliefs or presuppositions that are relevant to conceptual understanding and that are more 'meta'. For example, the fact that having the concept aluminum is constitutively dependent on either theorizing about the structure of aluminum in a way that is approximately correct or bearing some causal relation to something with the chemical structure of aluminum, depends on aluminum's being a natural kind concept and aluminum's being a natural kind. An individual does not have to believe that aluminum is a natural kind, or that aluminum is a natural kind concept, if the individual is to have the concept aluminum. But I think that the individual must have some notion of what a natural kind is, and must not be closed to the possibility that aluminum might be a natural kind. Understanding that aluminum is a natural kind or that aluminum is a natural kind concept is relevant to fully understanding the concept aluminum. Understanding these two truths is warranted only empirically. Similarly, our theoretical meta-knowledge that having the concept aluminum requires bearing some causal or correct theoretical relation to something with the chemical structure of aluminum is warranted only empirically.

The second type of case is the sort emphasized by the classical rationalists—Descartes, Leibniz, Kant. The idea is that embedded in an individual's psychology is an implicit understanding of a principle that explicates the relevant concept. The understanding is implicit in that it is unconscious and available to conscious belief only through reflection. It is present in the individual's psychology in that belief in the principle helps explain the individual's application of the concept to cases, or in other less general applications. The job of reflection is to make one's conceptual understanding consciously explicit, partly by making one's ideas clear and distinct.

My thought experiments have not centered on cases of this sort. But those experiments, and earlier ones by Kripke, Donnellan, and Putnam, brought back to philosophical prominence the classical rationalist view of reflection. They did so because the classical rationalists reflected more on reflection, and had a fuller story about it, than other philosophers in the history of philosophy. And these thought experiments clearly utilize some sort of reflection—even though there are clearly empirical aspects to all of these thought experiments. For example, they make such assumptions as that Jonah, Aristotle, aluminum, arthritis, and so on, exist.

An example that I believe illustrates the classical rationalist view is Zermelo's formulation of the principles of extensionality and grounding for the (iterative) concept of set. These principles, or approximations to them, are fundamental to anyone's understanding of the iterative concept of set. They are so well known now that they do not illustrate implicit knowledge for many of us. However, an intelligent novice in set theory who has been given a few examples of sets and then given the principles might well, on reflection, explicitly recognize the truth of the principles for the first time. It might well be correct that the principles implicitly guided the individual's use of the concept in reasoning about particular sets, before the principles were formulated for him or her.

It is important in understanding the classical rationalist view that one not assume that the concept being explicated, or the concepts used in the explication, must be non-empirical. Some of the applications of the concept of set to cases in pure mathematics are not empirical at all. But not all concepts used in apriori conceptual explications need be of this sort.

For example, the concepts natural kind and chemical structure are empirical in two ways. First, the concepts were probably acquired through empirical experience.<sup>17</sup> Second, all applications of them to instances that they are true of are warranted empirically. Acceptance of certain principles that are part of explicational understanding of the concept natural kind nevertheless seems to be apriori warranted. Consider the principles:

If something is a natural kind concept, an individual could use the concept without being able to tell definitively by correct observation whether something is an instance of the natural kind: instances of natural kinds admit of look-alikes in normal conditions.

If something is a natural kind concept, and the relevant natural kind is individuated by its chemical structure, then an individual could have that natural kind concept without knowing the kind's chemical structure.

It seems to me that belief in these principles is apriori warranted, even though the concepts natural kind and chemical structure are acquired only through experience, and even though any warrants for identifying instances of these kinds are certainly empirical.

As regards the first principle, knowing what a natural kind is requires being open to perception's not determining whether something is an instance of a natural kind. Whether something is an instance of the natural kinds water, gold, fruit, and so on depends on facts that may not be immediately evident to perception. What determines an instance of a natural kind to *be* an instance may be a fact about the thing that is hidden from view, and discoverable only through further investigation. Answers to which things are natural kinds are warranted only empirically. Whether a concept is a natural kind concept is similarly dependent on these empirical matters. But warrant for believing the principle

<sup>17</sup> Probably all concepts are 'acquired' through experience, at least in that they are triggered and become available through perceptual stimulation. Some conceptual development is, however, the result of normal human maturation, rather than the product of being taught through the transmission of history and culture, or dependent on any particular range of experiences for acquisition. It is common in current developmental psychology to consider concepts that are acquired in this weak sense as innate, not learned. So for such concepts, the sense in which their acquisition is empirical is very weak. In fact, there is a spectrum of cases on this issue. The concept natural kind is, at least in Western culture, acquired by human children at a fairly regular time of life, about 3 or 4 years old. Cf. S. A. Gelman and E. M. Markham, 'Young Children's Inductions from Natural Kinds: The Role of Categories and Appearances', *Child Development*, 58 (1987), 1532–1541. It would be interesting to know whether the concept is universal among human beings. It would also be interesting to know whether particular sorts of experiences, and if so which, are necessary to its being acquired. The same questions arise for the concept chemical structure.

itself seems to me to be apriori. Understanding the principle, or some dumbed-down approximation to it, is part of distinguishing natural kind concepts from observational concepts. Similar remarks apply to the second principle.

Lower-order versions of these principles can, and probably often do, implicitly guide an individual's application of natural kind concepts. To have the concept natural kind, much less to have natural kind concepts, an individual need not have the concept natural kind concept. So only lower-order analogs of these principles are likely to be psychologically in play in early uses of natural kind concepts. But once the individual believes, on empirical grounds, that something is a natural kind, or uses a natural kind concept, the individual will be open to allowing that whether something is an instance of the kind can be determined by more than meets the eye. If an individual has the concept natural kind concept, and the other concepts in the principles, the individual will probably also be guided in applications of his or her natural kind concepts by something like the principles. Of course, even so, the individual might fail to assent to them. The individual might require dialectic or reflection to make the principles explicit and convincing. And of course, individuals, not excluding philosophers(!), can mistakenly deny the principles, because of bias or interference in their understanding.

Similarly, acquisition of a concept like arthritis depends on experience. Application of the concept to cases rests on empirical warrant. An appreciation of the ways that people depend on one another in language use derives from experience of specializations, differences of positioning, and differences in background knowledge among people within a culture. Consider the principle:

If an individual relies on others in certain ways for acquisition of the concept arthritis and for correction in its use and application, the referent (or range of correct application) of the individual's concept can depend partly on what others count as arthritis, and on others' connecting the individual to the referent (or denotation) of the concept through causally mediated chains.

I think that this principle, like an analogous principle for the referents of proper names, is apriori warranted. It is apriori warranted even though acquisition of concepts in the principle is empirical. This principle may guide recognition of examples of reference for a concept of arthritis, even though an individual may not recognize the principle immediately when presented with it—and even though an individual may deny the principle when presented with it.<sup>18</sup>

The third type of case is also relevant to understanding apriori conceptual understanding. This type of case is incompatible with doctrines of classical rationalists. Or at least those doctrines commonly neglect such cases. Some explicational principles whose recognition derives from reflection make use only

<sup>18</sup> It was part of classical rationalism to hold that apriori knowable principles may not be known, even on reflection, because some prejudice may block clear and distinct understanding of principles that implicitly guide usage.

of matters that are already known or are at least implicitly available to reflection. Yet some of those principles are in no sense implicit in the psychology of the individual before reflection. They are not part of the explanation of the individual's previous uses of the concept. Implicit belief in them does not guide the individual's application of the concept. The principle is arrived at synthetically, through apriori theory building. It goes beyond anything that the individual implicitly knew, believed, or had 'as a unit' in his or her psychology prior to reflection. It yields new conceptual understanding.<sup>19</sup>

Many cases may be indeterminate, or at least difficult to determine. I believe it plausible and certainly coherent to take Newton's notion of limit to be what Weierstrass's definition of limit explicates. Weierstrass's explication gives the best unifying explication of Newton's primary uses of a concept of limit in his calculus. It gives a constitutive explication of what Newton's concept applies to. The explication plausibly provides deeper understanding of a concept that was used prior to its recognition. Acceptance of the explication is apriori warranted. Newton's actual uses need not have been guided by unconscious belief in the explication. I think it plausible that they were not. Newton's uses were, or might have been, guided only by a grab-bag of applications to cases, rules of thumb, partial explications, idealized geometrical diagrams, and so on. Nevertheless, Newton could have understood Weierstrass's explication and could have recognized it to be true. The main point here is that this description of the case is coherent and possible.<sup>20</sup>

<sup>19</sup> I develop these points for empirical as well as apriori cases in 'Concepts, Conceptions, Reflective Understanding: Reply to Peacocke'.

<sup>20</sup> The historical cases that I discuss are meant to be illustrative of epistemic possibilities. I recognize that a full treatment of cases, and making them plausible to historians, would require much more development. This particular case is especially complex. Newton also had the concept of limits as infinitesimals. This idea is, however, more central to Leibniz's treatment of the calculus. (See the discussion of Leibniz below.) As I understand the history, from the early 1670s onward, Newton came to think that his use of the concept of motion in his application of the calculus was in some tension with the more static/geometrical notion of infinitesimal. He tried to develop his theory of 'fluxions' in a way that freed it from reliance on the notion of infinitesimal. In an unpublished treatise *De Methodis* (probably 1671–2), he wrote of quotients of affected equations extended in an infinite series that they 'ever more closely approach the root till finally they differ from it by less than any given quantity and so, when they are infinitely extended, differ from it not at all.' Newton developed this conception during the next fifteen years, into the work of *Principia*. This way of thinking is different from thinking of limits in terms of infinitesimals. Although in later published work he mixes talk of infinitesimals with this idea of approaching a root, there are unpublished passages in which he scorns the idea of infinitesimals and takes his fluxion method to be superior. Newton was clearly aware that he had (at least) two concepts. I take the latter fluxion concept to be dominant in guiding Newton's main conception and use of the calculus. I take the quoted passage to be suggestive of Weierstrass's intuitive idea, and quite different from Leibniz's (and Newton's own) infinitesimal conception. Of course, Newton probably saw the idea of approaching a limit literally in dynamical terms, and in this respect his view differs from Weierstrass's. I regard this aspect of Newton's position as a mistaken conflation of dynamical ideas with an underlying, partially understood, purely mathematical concept. Of course, we now understand Weierstrass's conception of limit in terms of the notions of function and operator. Newton had only a partial understanding of these notions. They too did not become clarified until centuries later. As with Weierstrass's definition of limit, Newton had the conceptual materials to understand the later explications, even though

Similarly, pre-Fregean nineteenth-century logicians made judgments about one proposition or thought following, as a logical consequence, from others. Such logicians could have understood, with minimal explanation, the general explications that were given of logical consequence by Tarski and others. It is extremely implausible to think that the earlier logicians' judgments about cases were guided by an implicit understanding of the general explications. They were guided in their judgments by particular understandings of logical constants in particular arguments, and perhaps by vague middle-level principles. It is not, however, plausible that the generalizations that are required to yield a systematic account of logical consequence were embedded in their psychologies—even though such generalizations were both comprehensible to the nineteenth-century logicians and correct general meta-logical explications of their intuitive concept of logical consequence.<sup>21</sup>

Although the third principle that I blocked off in discussing the second case of conceptual understanding may often implicitly guide individuals' judgments about instances, I think that this need not be so. An individual can be persuaded by the principle because it accounts well for remembered cases. For example, an individual can remember particular cases in which he or she did not know enough about arthritis to determine its range of application by description, but in which he or she was thinking about arthritis. Then it could be noticed that the thinking must have succeeded through reliance on others who knew more and who could better distinguish arthritis from other possible or actual diseases. The individual need not, even unconsciously, have put together the generalization. But the individual can understand the principle and recognize its truth, at least arguably with apriori warrant, once given a few cases to reflect upon.

I turn now to a fourth case of conceptual explication. Here again belief in the explication can be apriori warranted. The case differs from the third case in that an individual may not be in a position, even in principle, to put together the explication and recognize its truth without very substantial additional education. Some apriori warranted belief can constitute fuller understanding of a concept than employers of the concept had before, even though the explicating principle does not derive fully from material accessible to those who had thought with the concept.

almost surely they had not been put together as a unit in his psychology, in a way that implicitly guided his own understanding. Still, it seems plausible to say that he had a concept of limit that Weierstrass explicated, and a concept of function, or one concept of function, that later became clarified. I hope to write more fully on these cases. For material on Newton's mathematical views on which I have drawn, see D. T. Whiteside (ed.), *The Mathematical Works of Isaac Newton*, 2 vols. (New York: Johnson Reprint Corporation, 1964), Introduction; D. T. Whiteside, *The Mathematical Principles Underlying Newton's Principia* (Glasgow: University of Glasgow Press, 1970); Richard S. Westfall, *Never at Rest: A Biography of Isaac Newton* (Cambridge: Cambridge University Press, 1980); the quote is from page 228 of this work.

<sup>21</sup> Cf. my 'Logic and Analyticity', esp. secs. IV–VI.

In the third case, we assumed that a correct explicational principle of an individual's concept had not coalesced and had not been put together at any level of the individual's psychology. So the principle did not implicitly guide his or her usage. Still, the individual could in principle have come to recognize the truth of the principle by putting together materials already at his or her disposal. Thus, although it would have been too much to expect, Newton could in principle have thought up Weierstrass's definition of limit, from conceptual materials and mathematical principles already available to him. Such thinking-up may have required putting together conceptual materials that Newton had not put together in his uses of his concept limit. Newton nevertheless had the background knowledge and conceptual wherewithal to have understood the definition, and to have even produced it, if he had exercised sufficient reflection.

In this fourth case, an individual whose concept is explicated in a constitutively relevant way might not be in a position to recognize the truth of the principle, no matter how much reflection he or she exercised on available material. A plausible example of this sort of case is Leibniz's use of a notion of infinitesimal in his development of the calculus. The notion received a rigorous and stable explication by Abraham Robinson three centuries later. Robinson used mathematical concepts and techniques that simply were not available to Leibniz. Yet Robinson's account through non-standard analysis plausibly gives a mathematically correct explication of the concept that Leibniz employed. The explication bears on constitutive application conditions of the concept. Robinson was apriori warranted in his acceptance of the explication. And Leibniz might have been warranted if he had been brought to understand it. But he could not have understood it without substantial further education and new mathematical concepts. Reflection on what he already knew and understood could not have sufficed to give Leibniz an adequate understanding of the constitutively relevant explication of his own concept.<sup>22</sup>

<sup>22</sup> Although Leibniz and his followers on the Continent tended to employ the notion of infinitesimal in their use of the calculus, complications in Leibniz's work parallel those noted in Newton's. (Cf. note 20.) Leibniz was aware of metaphysical doubts about his notion of infinitesimal. In a letter to Varignon, 1702, he cites a work of his own in which he claims: 'my intention was to point out that it is unnecessary to make mathematical analysis depend on metaphysical controversies or to make sure that there are lines in nature which are infinitely small in a rigorous sense in contrast to ordinary lines.' He continues: 'it would suffice here to explain the infinite through the incomparable, that is, to think of quantities incomparably greater or smaller than ours.' He seems to mean these incomparable quantities to be finite. For he claims further: 'we must consider that these incomparable magnitudes themselves, as commonly understood, are not at all fixed or determined but can be taken to be as small as we wish.' Leibniz remarks that infinitesimals may be taken as ideal concepts which shorten reasoning in the same way that imaginary numbers do. Although imprecisely stated, the remarks about taking magnitudes to be incomparable and as small as one wishes seem to be in the direction of the limit concept. Both Newton and Leibniz knew that they had (at least) two concepts that could be used in differentiation. Newton's dominant concept is on track toward Weierstrass's explication of limits. Leibniz's dominant concept is on track toward Robinson's explication of infinitesimals. But each had at least some approximation to the other's dominant concept. Cf. G. W. Leibniz, *Philosophical Papers and Letters*, trans. and ed. L. Loemker (Chicago: University of

A humbler instance of this same sort of case is present in the thought experiments about arthritis and brisket. The individual AI is in no position to recognize through reflection that arthritis is a disease that can only occur in joints. AI cannot recognize through reflection alone that brisket is a cut from the breast, or lower part of the chest, of certain quadrupeds. AI must learn new information to be in a position to obtain full explicational understanding of the implications of his own conceptual usage. The information might be obtained through empirical experience.<sup>23</sup> Belief in the relevant explicational principle is nevertheless apriori knowable. AI's own acceptance of it can be apriori warranted once he is apprised of his own incomplete understanding. Here again we see the importance of distinguishing dependence on experience to *acquire the means to understand* a concept, or to think an explicational principle, from dependence on experience for being *warranted in believing* an explicational principle.

Sometimes arthritis is called a 'deferential concept'. This phrase seems to me very misleading. Nearly any concept can be employed in such a way that the employer depends on others for the range of the concept's application, and even for instruction on explicational principles and other norms governing the concept. Our reliance on others places us under standards and norms that we may not have fully mastered. Moreover, we cannot in general tell by simple reflection whether and how we depend on others. The dependence commonly is buried in the history of one's usage and in dispositions not all of which are open to reflective recognition. The main issue has to do with what objective reality we are connected to and what standards for full understanding apply to those aspects of our usage that rely on such connection.

Other instances of this fourth case may be present in standard philosophical explications. It may be that the correct account of justice, for example, requires knowledge of matters that will emerge only with experience of a variety of communities and institutions. Such information may be needed to indicate certain possibilities that the concept must accommodate. Perhaps a given individual can think about justice as such without having the experience, or even the concepts, necessary for giving a fully adequate explication of the notion. The eventual explication might nonetheless be apriori warranted.

The fourth case brings out that coming to fuller understanding of one's concepts and their constitutive application conditions may require obtaining new information, or new concepts. This point is fairly obvious in the case of empirically warranted constitutive explications. It is of some interest that it can apply to apriori warranted constitutive explications as well.

Chicago Press, 1956), ii, 881–883 I am indebted to Sheldon Smith for finding this passage and for general discussion on these issues in the history of the calculus.

<sup>23</sup> In my view, warrant for believing the information is usually empirical. But it need not be. Cf. my 'Content Preservation', *The Philosophical Review*, 103 (1993), 457–488.

Anti-individualism indicates that the conditions that determine what concepts one has are not fully determined by definitions that the individual has mastered, or by any other set of conditions immediately available to the individual's reflection. Conceptual abilities are not in general, or even often, made what they are by mastery of explicational principles. They are determined partly by perception and dispositions that we may not have fully conceptualized or understood. They are determined by relations to a wider order, the objective subject matter, about which our knowledge and understanding may be quite limited. The thought experiments awake us to the limits of our conceptual mastery.

This point holds even in cases of apriori knowable conditions. Anti-individualism leads one to expect that finding principles that govern conditions for having thoughts will not be easy. Of course, traditional rationalists emphasized the difficulty of successful reflection. Anti-individualism demonstrates that the dependence on empirical conditions that determine what concept an individual has may vastly outrun the individual's own awareness of those conditions. And it shows that even where reflection is an appropriate method for gaining explicational knowledge relevant to the individuation of one's concepts and mental states, and even where the resulting knowledge is apriori, the individual doing the reflecting may not have the principles or all their components, explicitly or implicitly, within his psychology. The individual may lack the resources, informational or conceptual, to gain apriori warranted understanding of apriori knowable principles governing conditions on *having* the concepts that he or she has. This situation is possible because the natures of an individual's thoughts are determined by matters that need not be cognitively available, implicitly or explicitly, to the individual.

We still have much to learn about basic anti-individualist principles themselves. Some learning may be open to present reflection, pushed further. There is, however, no guarantee that we are in a position even now to learn by reflection all general principles, even apriori principles, governing conditions of having the representational content that we have. New knowledge may be necessary. Here philosophy has led to an improved explanation of why it is so difficult.

#### INCOMPLETE UNDERSTANDING

Early in Section IIc, I write: 'the thought experiment does appear to depend on the possibility of someone's having a propositional attitude despite an incomplete mastery of some notion in its content.' The relevant incomplete understanding need not be a failure to know the sort of explication codified in a dictionary. As I point out near the end of Section IIb, incomplete understanding of observation concepts, such as color concepts, or of concepts like contract, can yield thought experiments analogous to the arthritis thought experiment, without centering on failure to comprehend dictionary meaning. Incomplete understanding can



involve any failure to understand some condition that is constitutively necessary to the application range of a concept.

Incomplete understanding is not the key to all the thought experiments that support anti-individualism. The thought experiments that center on perception, on natural kind concepts, and on questioning of fundamental explicational beliefs do not require any incomplete understanding—in any ordinary sense of the phrase—on the part of the protagonists. In those cases, certain limitations of perspective or failures of omniscience suffice.

Incomplete understanding is, however, the pivot on which the particular thought experiments of 'Individualism and the Mental' turn. Reflection on incomplete understanding seems to me valuable in eliciting, through the thought experiments, a social factor in the determination of an individual's mental states. Having concepts can depend partly on reliance on others for possible correction of explications. The corrections make reference to facts about the subject matter to which the concepts apply.

Incomplete understanding is also a key element in understanding such historical cases as those of Newton and Leibniz. In those cases, the incomplete understanding is not a matter of knowing less than other experts in the community. Their explications of their concepts failed to accord with their applications of the concepts and with the nature of the reality to which they applied their concepts. Their explications were corrected only later.

What explains their having the relevant concepts is their ability to apply them veridically to cases, and their having paradigms and rules of thumb that were approximately veridical. This partial understanding—this inadequacy of understanding both to usage and to subject matter—motivated explications by subsequent thinkers. The subsequent explications clarified and unified the usage. In these respects, the cases of Newton and Leibniz are similar to the case of Dalton.

Reading 'Individualism and the Mental' again, I was struck by my insistent emphasis on the idea that one can have thoughts that one incompletely understands. This emphasis had an autobiographical root. A primary impetus for my discovering the thought experiments was recognizing how many words or concepts I went around using which I found, on pressing myself, that I did not fully understand. I came to realize that this was not just a personal weakness. It was part of the human condition, at least in complex societies.

In the article, I paid special attention to criticizing a near-automatic response to the first stage of the thought experiments. The near-automatic response was that if an individual incompletely understands a word, the individual's word meaning—and the concept that the individual associates with the word—must be reconstrued. If a foreigner uses one of our words without understanding it, we reconstrue the foreigner's word. We take the foreigner to be using a concept different from any concept that we would express if we used the word. A readiness to invoke reconstrual to interpret incomplete understanding was part of the elementary toolkit of every mainstream philosopher of the time. Automatic

reinterpretation is certainly less widely taken as gospel nowadays. Yet it is still fairly common.<sup>24</sup>

Of course, there are many situations in which reconstrual is appropriate. But neither reconstrual nor 'homophonic' interpretation is automatically correct. Reconstrual is correct in many fewer instances than the common philosophical wisdom maintained three decades ago.

Reinterpretation picks up on something in ordinary practice. Misuses or failures of understanding exemplified by malapropisms, tongue slips, extreme 'category' misuses, the first uses of words by very young children, and the fumbling of foreigners, all normally and rightly occasion reinterpretation. Most other cases are more complex.

Individuals can fashion idiosyncratic uses of communal words. If their usage corresponds to their own understanding, and they do not rely in unconscious ways on others for fixing the applications of their words or concepts, individuals can cut themselves off from communal usage. It is no part of my view that just because a person is using the same word forms as others in a given social network, the person's words express the same concepts that his fellows' words do. Any dependence on others for linguistic or psychological content derives from reliance on others through certain types of causal relations to them.

Neither reconstrual nor standard construal is automatic. The relevant conditions governing each are extremely complex and varied. As the thought experiments suggest, however, reinterpretation is less often correct than was commonly supposed when the article was written.

The motivations for invoking automatic reconstrual are varied. Some lie deeply embedded in certain forms of individualism. If one thinks that the constitutive conditions for being in a mental state are limited to what is in the individual, one might take this 'being in' to be *being in the individual's understanding, or at least available to it*. The various views according to which having a concept is being able to give a definition, or a criterion for application, are ways of expressing this idea. A more sophisticated expression is an over-generalization of the insight that an individual's representational content depends (partly) on a web of inferential connections with other representational contents. The idea is that the constitutive conditions for understanding a concept cannot outrun the network of inferences that the individual can draw.

<sup>24</sup> Two esteemed former colleagues, Keith Donnellan and Donald Davidson, appealed to it right to the ends of their careers. Cf. Keith Donnellan, 'Burge Thought Experiments' in Hahn and Ramberg (eds.), *Reflections and Replies*; Donald Davidson, 'Knowing One's Own Mind' and 'Epistemology Externalized', collected in his *Subjective, Intersubjective, Objective* (Oxford: Oxford University Press, 2001). These responses to my work by Davidson and Donnellan seem to me to be vulnerable to replies that amount to repeating Sec. IIIb–d. Cf. also parts of Sec. V. My response to Donnellan is in 'The Thought Experiments: Reply to Donnellan', in Hahn and Ramberg (eds.), *Reflections and Replies*. My response to Davidson is in 'Social Anti-Individualism, Objective Reference' (Ch. 13 below).

A psychological state's representational content cannot be explained fully in terms of confirmation procedures, or any other transitions among psychological states. The errors of these views are clear from reflecting on the anti-individualist thought experiments, and not just those experiments that invoke incomplete understanding. Representational content is determined partly by causal relations to actual aspects of the environment. Sometimes these relations run through other people. In either case, they run beyond what must show up in the individual's inferences.

The still broader idea that meaning is use is sometimes invoked to motivate automatic reconstrual. There are two difficulties with such invocation. There is no evident reason why an individual cannot fail to understand his or her own use. And use cannot be separated from relations to kinds, properties, and relations in a subject matter. One can fail to understand the subject matter in a way that limits one's understanding of one's use.

The programmatic character of these doctrines leaves them vulnerable to over-generalization. The cases that I discuss in 'Individualism and the Mental' show that ordinary practice simply does not accord with automatic reconstrual in the face of a person's incomplete understanding. There is a complex terrain here. Automatic reconstrual is a revisionist position, not a piece of common sense or philosophical wisdom.

I want to discuss one other rationale for automatic reconstrual in the face of incomplete understanding. The idea is that individuals with psychologies must be guided by rules and principles in their representational processes. To be guided by a rule or principle (goes the reasoning), an individual must be capable of accessing it. Any difference in rule must be accessible to the individual. So incomplete understanding not remediable by reflection is impossible. So any supposed incomplete understanding that depends for completion on matters inaccessible to the individual must be illusory. Supposed incomplete understanding of rule or principle is really understanding of some other rule or principle.

This reasoning informs not only views that try to block the thought experiments. It also informs some views that nominally accept them, but use the reasoning to motivate an underlying level of content that is common to the twins in the thought experiments and that guides our intuitions about the cases. The idea is that only by being guided by rules or principles that explain how content is established (perhaps by reference to a social or physical environment) can an individual have the environment-dependent content that the thought experiments postulate. So a level of 'narrow content' must underlie and supplement the level of 'wide' or 'broad' content.<sup>25</sup>

<sup>25</sup> For further, brief discussion of other aspects or versions of such a distinction, see the Introduction. The presumption that any principle that guides intuitions about the thought experiments is made up of concepts that can be 'narrowly' individuated is itself without foundation. An individual's having notions like cause, environment, social, physical, natural kind, and so on is itself constitutively dependent on the individual's relations to a wider order beyond him-or herself. There are other

Regardless of whether the reasoning is used to resist the thought experiments or to motivate a new layer of representational content, I believe that this line of reasoning constitutes a fundamental misunderstanding of the implications of all the thought experiments, not just those of 'Individualism and the Mental'. The individuating principles that govern relations between representational activity and the environment are not in general implicit in the psychologies of individuals governed by the principles. Moreover, such principles need not be and often are not accessible to the individual. Relevant individuals need not be able to understand or follow the thought experiments. A very young language user might not be able to follow the thought experiment of 'Individualism and the Mental'. An animal perceiver need not be able to understand the considerations that support anti-individualism about perception. Even for adult sophisticates whose judgments regarding the thought experiments are presumably partly guided by an implicit understanding of some principles, not all details of the principles need be accessible. An individual may have to obtain new information about social or physical matters to see the truth of some constitutive principles.

The thought experiments in 'Individualism and the Mental' elicit the intuitive point that partial understanding need not be fully remediable by reflection, and need not be merely a matter of not having brought to consciousness an implicit full understanding. It begs the question against the thought experiments simply to invoke the negation of this point in motivating some contrary or supplemental view.

In 'Individualism and the Mental' I several times indicate in passing that a requirement of infallible and indubitable explicational understanding—even implicit understanding—is surely odd. I want to emphasize this point here. The view that incomplete understanding requires reconstrual really rests on such a requirement. A little reflection shows the requirement to be wildly implausible. Representational content is, broadly speaking, fixed by usage. Regardless of how usage is specified, it is surely a hyper-intellectualized conceit to think that the user *must* have (implicitly) an understanding that exactly reflects the nature of this usage—in such a way as to be able to have an infallible general explicational mastery.<sup>26</sup>

The main upshot of the thought experiments in 'Individualism and the Mental' is that individuals have far less cognitive control over discursive accounts of the natures of their mental states and the contents of those states than it has been common to concede in philosophy. The prevalence of incomplete understanding, even incomplete understanding that cannot be remedied by mere reflection, is one significant sign of this limitation. This limitation on cognitive omnipotence

difficulties with the view. For example, the conception of 'wide' content commonly misconstrues what width amounts to.

<sup>26</sup> Belief in simple mathematical or logical truths and belief in the purest cases of *cogito* can perhaps count as infallible and indubitable. Sufficient misunderstanding to yield apparent disbelief perhaps requires reconstrual in these cases. But explicational understanding of the sort that my discussions have centered upon seems to me clearly very different.

over one's own mind is in retrospect not so surprising. I believe that it puts us in a better position to understand the sorts of cognitive control and insight that we do have.

#### NORMS AS NATURAL STANDARDS

In Section V of 'Individualism and the Mental' I discuss certain models for understanding the representational content of mental states. The model I outline is that of the set of key relationships set up by a composition's tonic key. The model was meant to bring out ways in which standards of evaluation allow for quite a lot of individual variation but are independent of the individual's attitudes toward those standards, once the individual has the competence to write music or make sounds that establish a set of key relationships.

This metaphor was, of course, never meant to be more than suggestive. I would like to comment on it a bit further, however, partly to reinforce its main points, partly to highlight ways in which the metaphor is deficient.

The system of key relationships is like the logical relations among representational contents, and the semantical relations between such contents and the world, in one respect. Both are what they are independently of the individual's particular attitudes or understanding regarding what they are. Both allow for a lot of individual variation even as the system applies equally to all. This is the basic point of the metaphor.

The metaphor's main deficiency lies in there being no analog in the musical case to the representationality of representational content. Representational content entails or sets conditions for veridicality—truth or correctness. In helping to type-identify mental states, it entails certain fundamental goods of those states. Veridicality is a representational good, a type of representational success. Representational content sets conditions for the representational success of mental states. The system of key relations has no implications for representational correctness or success.

Although the point is obvious, some of its implications are perhaps less so. There are two sorts of doing well or badly in the making of sounds. First, animals can do well or badly insofar as making the sounds fulfills a biological function. The bird's singing loudly enough and according to some appropriate template enables it to attract a mate. Success normally has nothing to do with according with key relationships *per se*. All the bird needs is some distinctive sequence of sounds that can yield an uptake appropriate to the bird's needs. By contrast, representational contents set veridicality conditions, and veridicality is a type of representational success.

Second, human makers of music can do well or badly insofar as the sounds that they make or compose fulfill their intentions, or meet some historical and partly conventional standard of beauty, ingenuity, or coherence with respect to key relationships. Issues of genuine evaluation arise for these sound makers only

insofar as they intend to make music. Good music making may be an objective matter, but it depends on some combination of individual intention and historical norms. By contrast, veridicality as a standard of representational success is not set by social activity or historical conventions. Nor does its being a standard of representational success depend on the individual's aiming to achieve it. Veridicality is set as a standard for representational success necessarily and a priori. It is a standard constitutively present in the very having of representational content. Given that a creature has states with representational content, in particular those like perception or belief, it follows that a type of success (representational success!) is inherent in being veridical; and a kind of failure resides in being non-veridical.

Further standards for *achieving* representational success—including epistemic norms—are also set by the psychological capacities and informational resources of the individual, not by any aim to meet the norms. Thus some standards governing how well an individual or representational system is doing at achieving veridicality are natural norms. They are part of the terms of being in the psychological states.<sup>27</sup> The terms for achieving harmonically successful compositions are not set purely by the terms of being a composer. They depend on the composer's aims and on historical-conventional understandings of what count as better or worse harmonic figurations, given those aims.

In both musical composition and representational state cases, meeting standards for success can depend on relations to others: in composition, through intended relations to the examples set by predecessors and contemporaries; in thought, through reliance on others for connection to the subject matter. The terms of this reliance differ greatly, however. As noted, the composer's intentions help to set what standards apply. By contrast, the veridicality conditions and content of an individual's psychological states mostly depend on factors over which the individual has very little control. So what counts as representational success and what norms apply are much less under the control of intentional activity by the individual.

## RETROSPECTIVE

I think that 'Individualism and the Mental' made four main contributions in its historical context. One is the shift of focus in understanding reference and 'meaning' from language to mind. The article takes mind to be a distinct subject matter for which issues of reference, dependence on causal chains, sharing and transmitting of cognition, arise. I believe that the roots of linguistic representation—reference and meaning—lie at least initially in perceptual and conceptual representation. Language and mind inevitably become intertwined at relatively sophisticated levels. At that point, aspects of each depend psychologically, and

<sup>27</sup> For more on these points, see 'Perceptual Entitlement', *Philosophy and Phenomenological Research*, 67 (2003), Secs. I and II, pp. 503–548.

perhaps even constitutively, on aspects of the other. But at primitive levels, including primitive perception and perceptual belief, mental representation precedes and helps explain language, both idiolectic and public. The role of perception and perceptual belief in accounts of linguistic reference is partly independent of anything about the role of linguistic reference in perception and perceptual belief. So the shift in focus is toward part of the ground underlying the work on linguistic representation. 'Individualism and the Mental' started this shift, although only later did I center on perceptual aspects of mental representation.

A second contribution is the concentration not primarily on reference (linguistic or mental), or on *de re* aspects of mental states, but on the nature of representational states, and on how their *representational* content is determined. Reference plays a role in the article insofar as it helps illumine constitutive conditions that determine the nature of mental states themselves.<sup>28</sup> The arguments of the article show that the natures of certain mental states and events, understood as centering on the explanatory kind and epistemic perspective associated with the mental state, constitutively depend on relations to a broader environment.

A third contribution is to show that the mental states and events whose natures depend on relations to an environment constitute a much wider range than the conceptual counterparts of demonstratives, proper names, and natural kind terms, which the revolutionary theory of linguistic reference had centered upon. This is the main point of Section IIb. I later extended the range of application of anti-individualism yet further—particularly to perceptions and perception-based thoughts. I also showed later that the width of the range does not depend purely on reliance on others in a linguistic community.

A fourth contribution, the one most often recognized, is that of showing how the natures of an individual's representational states can depend on the individual's relation to a *social* environment. Our dependence on others to connect our words to a subject matter and to correct our beliefs about the subject matter helps constitutively to determine what attitudes we have. Certain representational and epistemic norms derive from these socially determined relations.

'Individualism and the Mental' was the first modern work to formulate anti-individualism clearly and to give specific convincing arguments for it. Anti-individualism is, however, very old—almost a commonplace in the history of philosophy. There remains much to be understood by reflecting on this old idea, developing it, and exploring its consequences. Fuller understanding of it would enrich understanding of many other philosophical matters.

<sup>28</sup> Many philosophers still do not appreciate the importance and distinctiveness of this point. Many still run together referential 'content'—the referents of linguistic terms, or mental states—with representational content. Different types of mental state can make reference to the same objects and properties. The differences are differences of perspective in a broad sense. They are differences in psychological and epistemic point of view. These differences are fundamental to epistemic evaluation and psychological explanation. They are not merely differences in reference. They are fundamental to both common sense and scientific understanding, to explanation, to epistemology, and to other evaluation of mental states and events.