Postscript to "Belief *De Re*"

Although some earlier papers contain elements that became integral to anti-individualism, 'Belief *De Re*' is the main predecessor of 'Individualism and the Mental' and 'Other Bodies' in my work. It begins a shift in my focus of attention. It is also the paper in which I began to find my philosophical voice.

The paper now seems overly technical and too hard to read. There are some emphases in it that I would like to adjust, formulations that I regard as mistaken, and commitments that I no longer maintain. Nevertheless, there are things in the paper that I still like very much. I retain a warm spot for it. In view of the difficulty of the paper, I will go over some of its main points slowly, articulating my current attitudes toward them, cold and warm.

I

'Belief *De Re*' sets out to explicate a *de re*/*de dicto* distinction that respects history and that centers on issues that are of philosophical importance. It focuses on the distinction as applied to propositional attitudes. My counting attitudes, not pieces of language, as the primary domain of the *de re*/*de dicto* distinction is explicit in many places in the paper. I am primarily interested in the logical form of the representational contents of the beliefs themselves, and only secondarily and derivatively interested in the nature of belief ascription in natural language.

There are, however, passages where this idea is not nearly as clear as it should be. Near the end of section I, I write, 'I have expressed the intuitive *de re*/*de dicto* distinction in terms of the logical form of ascriptions of belief.' I then go on to discuss the 'epistemic basis' of the distinction. The epistemic basis has to do with the nature of the attitudes themselves, not anything to do with linguistic ascriptions of the attitudes. What is the relation between these two accounts—linguistic and epistemic?

In the background of this two-pronged approach lay an assumption about a purpose of some ascriptions of propositional attitudes in actual, ordinary language use—and certainly in some scientific language use. I assumed that one purpose of some ascriptions is to describe those attitudes as exactly as possible, consistent with the conventional and practical purposes of language use. I thought that in studying ascriptions that have this purpose, one can gain insight into the nature of the attitudes themselves. I certainly had this methodology in mind when I wrote 'Belief *De Re*'. Yet I did not articulate the methodology or its background assumption as clearly as I should have. As a result, some formulations make it appear that I am primarily concerned with understanding the language of propositional attitude ascriptions *in general*, as opposed to specific

uses of propositional attitude ascriptions that shed light on the propositional attitudes themselves.[1]

A reason why it is important to articulate the methodology and background assumption is that significant aspects or uses of many propositional attitude ascriptions do not reflect any particular concern to describe the relevant attitudes at all. Many aspects or uses of ascriptions are aimed simply at communicating something practically relevant to a hearer. Many are aimed at relating the person with the attitudes to an object of interest for the ascriber. Such ascriptions abstract almost entirely from the representational content of the attitudes, from the way that the person thinks about things.

The paper shows awareness of these points. In the penultimate paragraph of section I, I discuss what were sometimes called 'pseudo *de re* ascriptions'. Alfie says, 'The most powerful man on earth in 1970 (whoever he is) is a crook.' Suppose that Alfie has no idea who the most powerful man is, and has only *de dicto* belief regarding that man. A friend of that man, who heard Alfie's claim, says to the man, 'Alfie believes that you are a crook.' The ascription involves a demonstrative ('you') applied to the man. It attributes to Alfie an open content you are a crook, as applied to the powerful man. The ascription is *pseudo de re* because there is no implication that Alfie thinks of the most powerful man in a way that is governed by the demonstrative application, or in any other epistemically special way. The ascriber's demonstrative and application at most preserve the referent of some representation that Alfie used. They do not bear on how Alfie thought about the man at all. I commented that the case is at best an example of a *de re* ascription of a *de dicto* belief, not an example of *de re* belief. This remark seems to me correct.

I also commented that the pronoun 'you' is 'partly anaphoric', picking up the referent of 'the most powerful man'. This point seems correct as well, at least as applied to the particular case. The idea is that the ascriber's demonstrative pronoun has, in addition to its deictic or demonstrating use, a pronominal relation back to some expression used by the person to whom the attitude is ascribed. The demonstrative pronoun does not in itself indicate whether the person's way of thinking was *de re* or not. The ascriber may not care. The ascriber is not ascribing deictic usage. The deictic usage is purely his or her own. Through the expression 'you', the ascriber is 'anaphorically' indicating some singular usage by the subject of the ascription, Alfie.

[1] W. V. Quine, in 'Quantifiers and Propositional Attitudes', *The Journal of Philosophy*, 53 (1956), repr. in *Ways of Paradox* (New York: Random House, 1966), is primarily concerned with language. David Kaplan, in 'Quantifying In', in D. Davidson and J. Hintikka (eds.), *Words and Objections: Essays on the Work of W. V. Quine* (Dordrecht: Reidel, 1969), repr. in L. Linsky (ed.), *Reference and Modality* (Oxford: Oxford University Press, 1971), has a dual focus, but certainly makes contributions to understanding the nature of *de re* attitudes themselves. I see my paper as taking a further step away from Quine's purely linguistic focus. However, the interest in natural language was so dominant in those days that separating the issues about the character of language use from issues about the nature of the attitudes as sharply as we would today was not common or easy.

This idea has a chance of being general enough to cover all relevant cases, however, only if 'anaphora' is understood very broadly. The ascriber may not have in mind any definite, antecedent expression used by the subject. In such a case the 'anaphora' would have to purport to go back to some unspecified or unknown singular way of thinking on the part of the individual who has the attitudes. It might, for example, even go back to a definite description used non-referentially, in *pseudo de re* cases. Or the 'anaphora' might go back to a family of ways of thinking—not to any definite *linguistic* antecedent at all.[2] Here again, making explicit what are linguistic claims and what are claims about connections to actual attitudes would have strengthened the paper.

Because the paper was focused on the nature of attitudes, not language, it underplayed the complexities involved in different uses of natural language. The paper acknowledged the existence of these complications. But it did not signal as clearly as it might have how complex these complications are, or how much of ordinary usage is indifferent to describing just what the individual's propositional attitudes are.

II

I turn now to the specifics of the accounts of the *de re/de dicto* distinction. I gave both a semantical account and an epistemic account. The semantical account centers on attitude ascriptions that are meant to characterize or indicate the nature of the attitude, including its representational content. The epistemic account centers on the underlying epistemic and representational capacities of the individual with the attitude.

The epistemic account is squarely aimed at the more fundamental philosophical issues. Kant, in his notion of sensible intuition as a singular capacity, and Russell, in his notion of acquaintance, try to do justice to a common intuition. They believe that we have an epistemically distinctive and important capacity, or set of capacities, to connect our thought to particulars in a singular way. Both philosophers see this sort of capacity as fundamental in understanding human knowledge. Both are opposed to the view that this capacity can be reduced to predicative, attributive capacities. Both seem to be on to something deep about our representational and epistemic relations to objective subject matters. The main reason to reflect on *de re* phenomena is to try to obtain further insight into this 'something'.

Despite my overriding sense that the epistemic issues are the most important ones, I gave a semantical as well as an epistemic account of the distinction. I hoped that the two accounts would reinforce one another.

[2] This broad understanding of anaphora is implicit in the discussion of vacuous names in the paragraph in section I that begins 'The representations given so far'. I developed the notion further in 'Russell's Problem and Intentional Identity' in James Tomberlin (ed.), *Agent, Language, and the Structure of the World* (Indianapolis: Hackett Publishing Company, 1983), 79–110.

Let us suppose that we are dealing with ascriptions that are aimed purely at characterizing or indicating the nature of an attitude, including its representational content. Then the semantical account maintains that an ascription ascribes a *de re* attitude if it ascribes the attitude by ascribing a relation between what is expressed by an open sentence, understood as having a free variable marking a demonstrative-like application, and a *re* to which the free variable is referentially related. The semantical account maintains that an ascription ascribes a *de dicto* attitude if it ascribes the attitude by ascribing what is expressed by a closed sentence—roughly one that involves no applied demonstrative or indexical elements.[3] I will return to the points about open sentences, free variables, and applications in section III of this Postscript.

The intuitive idea behind all this *technicalia* is simple. *De re* attitudes are ascribed by indicating representational contents that contain successfully applied demonstrative or indexical elements. *De dicto* attitudes are ascribed by indicating representational contents that contain no demonstratives or indexicals.

There are cases in which an individual thinks in a demonstrative-governed way—for example, in perceptual beliefs—but fails to refer to a *re*. The perceptual belief might derive from a (referential) illusion. There are certain uses of demonstratives that fail reference. An analogous point applies to demonstrative-like applications in thought. A fully informative ascription of such propositional attitudes will ascribe something expressed by a demonstrative-governed open sentence, but will not relate that representational content to a *re*. Strictly speaking, the ascription ascribes an attitude that counts as neither *de re* nor *de dicto*. However, the attitude itself, as distinguished from its referential relation to the world, is more like a *de re* attitude than a *de dicto* attitude. I believe that insofar as one is interested in a taxonomy of mental 'natural' kinds, these non-referring attitudes group with the *de re* attitudes.

The 'epistemic account' of what it is to be *de re* is more basic than the semantical account. In fact, the semantical account points toward an epistemic account inasmuch as the semantical account attempts to explicate ascriptions of belief that are meant to describe the beliefs (as opposed to carrying out other communicative purposes). The epistemic account that I favored at the time directly corresponds to the semantical account: An attitude is *de dicto* if it is completely conceptualized. An attitude is *de re* if it has a content that is not completely conceptualized (and, it should be added, a not completely conceptualized element in the content succeeds in referring to a *re*). That is, the content contains a demonstrative or indexical element successfully applied to a *re*. The application of the demonstrative or indexical element is the element in the content that prevents the content from being completely conceptualized. This

[3] The points about anaphora in *pseudo de re* cases are assumed: If the ascription involves anaphora, whether a *de re* or a *de dicto* attitude is ascribed depends on what types of ways of thinking the anaphoric pronoun goes back to. In such cases, the ascription is not aimed purely at describing the attitude, and it may be unclear from the ascription what attitude content is ascribed.

element is formalized by a free variable contextually applied. When successful, such applications are to *res*.

In the last paragraph of section I of 'Belief *De Re*', I gave *two* epistemic accounts of *de re* attitudes. The first is the one just cited. According to the second, which is vaguer, an attitude is *de re* if it involves an appropriate 'not completely conceptual' relation to a *re*. Perception is used as an example of a not completely conceptual relation. Other examples are tentatively suggested in the last paragraph of 'Belief *De Re*'.[4]

The two epistemic accounts are nonequivalent in a subtle but important way. The first account takes successfully applied demonstrative or indexical elements in a belief content to be the hallmark of *de re* attitudes.[5] The second account allows all the cases that the first account allows. It, however, leaves prima facie room for *de re* attitudes to include attitudes that have no demonstrative or indexical element in their representational contents.

The special cases of possible *de re* attitudes mentioned in the last paragraph of 'Belief *De Re*' include beliefs in pure mathematics. I believe—and, I think, believed then—that it is not plausible that demonstratives or indexicals occur in the contents of thoughts in pure mathematics. The representational content $\underline{3+5=8}$ does not seem to contain demonstratives or indexicals. So it seems to me that the first account is vulnerable if *de re* attitudes include some thoughts in pure mathematics. The second account is not obviously vulnerable in this regard.

The spirit of the last paragraph of the paper and its relation to the point just made is hard for me to judge at this temporal distance. One might take that spirit to be as follows: The first account of the distinction between *de re* and *de dicto* attitudes takes perceptual beliefs to be the paradigm cases. A range of further cases—perceptual memories, certain historical beliefs, self-ascriptions, and so on—have the relevant features of perceptual beliefs. Beliefs in pure mathematics are a further special case. They do not fit the first account. They do, however, involve other sorts of not completely conceptual relations between attitude and object—sorts other than those involved in perceptual belief. They can be included by a looser criterion of the *de re/de dicto* distinction—that of the second epistemic account.

[4] The dialectical point of the second account was not to prejudge the discussion of Kaplan's account—hence the reference, in the last paragraph of sec. I, to sec. III. I wanted to give an account of what it is to be *de re* that did not already entail that a content that denoted its objects noncontextually, purely by way of context-free concepts, was not *ipso facto* ruled out from being *de re*.

[5] Every nonconceptual element in a propositional representational content is associated with a conceptual or other attributive element. There are no unmodified demonstrative applications in thought. The demonstrative referential elements in the contents of *de re* attitudes always have attributive elements that accompany and guide the demonstrative application. All pure indexical applications involve an attributive element—e.g. is a time in now. The key point is that they are not *completely* conceptual. For a discussion of this point see 'Five Theses on *De Re* Attitudes', forthcoming in a volume edited by Paolo Leonardi, honoring David Kaplan (Oxford: Oxford University Press).

This gloss is probably overly generous. As far as I can see, I favor the first epistemic account in the article without explicit reservations. I do not point out any consequences of the difference between the two accounts in the article. I do not indicate the special issues that beliefs in pure mathematics raise. I do remember, however, thinking that such beliefs raise special issues that could not be tackled in the article. And I knew that pure mathematics does not contain demonstratives or indexicals.

How should we see these matters now? Perceptual beliefs do constitute paradigm cases of *de re* attitudes. They surely involve demonstrative-like applications. Most of the other clear types of *de re* attitudes do also. One could draw a *de re*/*de dicto* distinction so as to exclude the mathematical cases. Drawing such a boundary is not obviously mistaken. Nevertheless, it seems to me that there are epistemic kinds that are more general, that include the mathematical cases, and that can plausibly be associated with the terms '*de re*' and '*de dicto*'. I think it potentially fruitful philosophically to try to understand this broader distinction. The second epistemic account I gave, vague as it was, is more useful than the first as a guide in this enterprise. So I shall take it that at least some simple arithmetic beliefs are singular *de re* attitudes. The *res* are natural numbers. An example might be a belief that $3 + 5 = 8$.

It seems to me that certain specifications of representational *thought contents* are non-demonstrative and non-indexical, but also yield *de re* attitudes. In thinking the thought that snow is white is true, my thought specifies the thought that snow is white in the that-clause way. It seems to me that this thinking is *de re*. Here the *de re* reference feeds directly off immediate understanding of representational contents, the *res*. In this respect the case is different from *de re* beliefs about the numbers. The numbers are not themselves representational contents. They can be understood only by representing them via representational contents.

In neither of these cases—reference to numbers or reference to representational contents—is it plausible that there is an application of a demonstrative or indexical form of representation in the thought contents themselves. In both cases, it appears that the representational thought contents that carry out the *de re* reference are completely conceptualized. If attitudes of these two sorts are to be included among *de re* attitudes, the distinction between *de re* and *de dicto* cannot hinge on whether the representational content itself is completely conceptualized.

The second epistemic account specifies a not completely conceptual relation to the *re*. In both of these cases there is a striking relation to a *re* that goes beyond merely conceiving of it or forming a concept that represents it. I think that these cases satisfy the condition for being *de re* set by the second account, but not the condition set by the first.

Let us first consider the case of that-clause-like reference to representational contents. That-clause forms of representation in thought are individual concepts. They are complex structure- and content-specifying concepts when they name whole representational thought contents. They are simple concepts when they

name simple components of the thought contents. Mastery of such an individual concept, of either sort, requires comprehending the representational content that the individual concept names. The 'not completely conceptual' relation to a *re* is comprehending the *re*, not *merely* conceiving of it. Yet the canonical way of thinking about the thought content can itself be fully conceptualized.[6] For example, in an attribution of a belief that 3 + 5 = 8, the that-clause way of thinking of the thought that 3 + 5 = 8 is fully conceptualized. There are no demonstratives or indexicals in the that-clause way of naming the thought content. This form of *de re* representation is possible only for *res* that are themselves representational contents.

The canonical concepts for the natural numbers present a somewhat different case. In understanding this case, it seems to me fruitful to consider our actual psychological capacities in thinking about the natural numbers. I think that reflection on these capacities provides a fruitful basis for explicating what it is to be 'directly' or 'immediately' related to a *re*.

Obviously, complex numeral names are formed from simpler ones. I think that the simpler ones are associated with a capacity for immediate, non-inferential, non-computational counting. We have a capacity to count small groups (say, groups of up to about nine) at a glance. We are able to apply the number in counting immediately—non-inferentially through perception. In the arabic system this immediate applicational capacity is at least approximately associated with the non-complexity of the initial canonical names for natural numbers—$\underline{0}$, $\underline{1}, \underline{2} \ldots \underline{9}$. There is psychological evidence that $\underline{2}$ is simple. It is *not* understood as $\underline{1+1}$. By contrast, the concept $\underline{12}$ in various contexts is psychologically treated as compound. The capacity to represent the simplest natural numbers (say, those up to about 9) is associated with a perceptual capacity for immediate perceptual application in counting. Thus there is a relation to these smaller numbers in addition to being able to conceive them—being able to apply individual concepts of them noninferentially and noncomputationally in counting perceived groups.

Although unlike Frege, I believe that the numerals are primitive, not defined in terms of sets, classes, or extensions, I think that Frege was correct in thinking of numbers as having a certain second-order status. The equivalences between counting with numerals, on one hand, and quantificational expressions that capture the counting of objects falling under predicates, on the other, is so close that the relation seems to me to be constitutive.[7] The connection suggests a certain second-order status for the numbers. Like the operations expressed by quantifiers, numbers bear an essential relation to predication. Understanding pure

[6] The issue is discussed in some detail in 'Frege and the Hierarchy' and especially in the Postscript to that article in *Truth, Thought, Reason: Essays on Frege* (Oxford: Oxford University Press, 2005).

[7] The allusion to the relation between numerals and quantifiers cites the familiar fact that 'there are 3 F's' is equivalent to 'there are F's, x, y, and z, which are not identical to one another, and all F's are identical to x, y, or z'.

arithmetic requires understanding applications of it in counting. Understanding '3' involves understanding 'there are 3 F's', which in turn requires being able to count the F's—put them in one–one relation to the numbers up to 3. Being able to apply a canonical (numeral-like) concept for the number 3 in an immediate perceptual way, without carrying out a discursive figuring, seems to me to constitute a 'not completely conceptual' relation to the number. One can apply a concept of it perceptually and nondiscursively, without conceptual computation or inference.

Canonical concepts for larger natural numbers are the results of computations on the psychologically simple and immediately applicable (applicable, say, in perception-based counting) canonical representations of smaller numbers. Canonical concepts for larger numbers are built by simple recursive rules from the simplest ones. *Perceptual* counting of groups much larger than nine usually involves first factoring the group into smaller groups that can be counted in immediate perceptual apprehension and then adding the numbers numbering the groups.

Understanding what larger numbers are derives from this immediate hold on the applicability of the smaller ones. The concept 547 is formed in simple recursive fashion from the simplest canonical natural number concepts. It seems to me that insofar as the application of these rules invokes an immediately applicable 'non-inferential' computational capacity for comprehending the larger, more complex names, the process is similar to the formation of complex that-clause-like individual concepts for complex representational contents, by grammatical rules, from canonical name-like concepts for the simple contents. Thus the canonical, complex individual concept that writing long papers requires concentration is formed from canonical name-like concepts for the component representational contents (for example, writing) by directly comprehended rules. The canonical individual concept 547 is similar.

The simpler, canonical, numeral-like individual concepts, those that can be immediately applied in perception-based counting, are, I think, the source of *de re* representation of natural numbers. Representation of more complex numbers through canonical numeral individual concepts is *de re* derivatively: Embedded in the content of a complex numeral individual concept (547) are simple individual concepts (5, 4, 7) that involve *de re* application. One may regard the complex name as *de re*. If one does, however, it seems to me a less direct type of *de re* relation to the numbers than that involved in the conceptual counterparts of simple names into which the complex numerals are resolvable.

What is complex and what is simple may vary with individuals. Psychology indicates that for most human beings, the immediately graspable numeral names are very few. They put us in the most direct *de re* touch only with small natural numbers.[8]

[8] The foregoing view is a slight elaboration and amendment of an account that I give, with considerably more detail, in 'Five Theses on *De Re* States and Attitudes'. There is a huge psychological

The foregoing account of *de re* representation with canonical individual concepts for natural numbers depends on a very strict view of what counts as immediate, non-inferential, non-computational representation. The *immediacy* lies in non-inferential, paradigmatically perceptual, application in counting. It also lies in the fact that the simple individual concepts, expressed by the numerals, are not products but bases of conceptual computations.

A tenable alternative is to include, as *non-derivatively de re*, representation with the more complex numeral concepts, at least until one gets to canonical representations that require conscious computation, or figuring, for comprehension. The idea is that computation in pure mathematics ultimately comes down to immediate comprehension of canonical names for natural numbers. When one has reduced the answer to a mathematical question to a canonical name for a natural number, one is finished, *unless one needs to do figuring to comprehend the name*. At that point, one knows which number to cite in answering the question—in the most basic sense.

In an unpublished set of lectures on this topic, Saul Kripke argues for an even more liberal conception of (non-derivative) *de re* representation of numbers. He holds that *any* belief involving the conceptual counterparts of numerals is *de re*. So beliefs involving hugely long numerical concepts, expressed with the conceptual counterparts of arabic numerals, will be *de re*. The intuitive idea is that if one has an arabic numeral as a name of a number, it does not make sense to think, the number is *a*, but which number is that? (where '*a*' stands in for the arabic numeral). This very liberal view seems to me also a tenable position. It locates the *de re/de dicto* distinction more in a conscious, commonsense view of the end point of questions than in the more theoretical notion of psychologically and epistemically immediate, non-inferential types of representation.

It does seem to me that Kripke's very liberal conception is fragile, even on its own terms. The underlined question *can* make intuitive sense with extremely long arabic numerals. One needs to do some figuring, calculating, grouping, or simplifying of a thirty-seven-figure numerical name to grasp which number it names.

If one allows evidence from psychology, not merely conscious introspective evidence, I believe that this point can be made to apply even to much smaller numerals (e.g. to '547'). The calculation is so quick psychologically that

literature on animal psychology and human developmental psychology of mental representation relevant to counting and measuring. Issues regarding the relations among different numerically relevant capacities, perceptual and conceptual, are very complex. I am avoiding any precise commitments in this work. In particular, nothing hangs on my writing as if 9 is at the boundary between the simple and complex for both application and conceptual understanding. The example is meant merely to be illustrative and evocative. The general direction of the psychological research seems to me in line with the view that I outline. But I regard the details of the view as inevitably open to empirical specification and refinement. In further work, I hope to discuss in more detail what is known about the psychology of number representation. For an overview and sample, see Stanislas Dehaene, *The Number Sense* (New York: Oxford University Press, 1997); and *idem*, 'Precis of *The Number Sense*', *Mind and Language*, 16 (2001), 16–36.

we do not notice it. But it is part of the psychology of understanding and of representation, nevertheless. Asking 'Which number is 547?' does make sense from this perspective. This consideration points back to the very strict conception of *de re* immediacy that I first outlined above (and employ in 'Five Theses on *De Re* States and Attitudes'). My explication of *de re* mathematical concepts takes seriously the approximate coincidence of the notion of the starting points for calculation with the starting points for non-inferential (say, perception-based) mathematical applications in counting.

A variety of different conceptions of what constitutes *de re* representation in mathematics seem to me to be tenable. What is important is investigation of the different epistemic types, not fixing the meaning of the traditional expression '*de re*'. The very strict construal of that term, however, retains some attraction for me.

I have discussed two types of *de re* representation for abstract *res*. The key idea for both canonical concepts for representational content and canonical concepts for natural numbers is an un-Kantian one. The idea is that individual concepts are among the effectors of *de re* attitudes.[9] The epistemic immediacy that is a hallmark of *de re* reference need not require context dependence, much less perceiving the *re*.

None of the relevant individual concepts are *descriptive*. That-clauses do not describe the representational contents that they specify. Numerals do not describe numbers. Certainly, the non-complex numerals (1, 2 ... 9) do not. Both of these types of *de re* representation are associated with special immediate, non-descriptive powers—understanding and immediate perceptual applicability.

[9] Kant thought that basic (in effect, *de re*) singular representation is effected only by a nonconceptual capacity, intuition. The present view allows basic, *de re*, singular representation to be effected by individual concepts, as long as these concepts are associated with some further appropriate relation to the *re* beyond merely conceiving it. Kant did not discuss canonical that-clause representation of representational contents (backed by understanding the *re*, the represented contents). Perhaps he would have rejected the idea that such contents are *res*. Kant does discuss basic representation of numbers. He sees such representation as derivatively *de re*, but grounded in *de re* representation of time through a nonconceptual capacity—pure sensible intuition. My view is un-Kantian in that the semantics of *de re* singular reference in pure arithmetic is purely conceptual—through individual concepts for the natural numbers. I am inclined to believe that the individual concepts for the numbers are primitively singular. They are not covertly attributive. Kant rejected the very notion of individual concepts. Cf. Charles Parsons, 'The Transcendental Aesthetic', in Paul Guyer (ed.), *The Cambridge Companion to Kant*, (Cambridge: Cambridge University Press, 1992), esp. 63–66, 82. Cf. also my 'Frege on Apriority', in P. Boghossian and C. Peacocke (eds.), *New Essays on the Apriori* (Oxford: Oxford University Press, 2000), repr. in my *Truth, Thought, Reason*, esp. sec. V.

Nevertheless, there is in my position an echo of Kant's view that *de re* conception of the numbers must be 'grounded' in some capacity that goes beyond merely conceiving of them. *De re* representation of the numbers is essentially associated with non-inferential counting, for example through perception. Moreover, as the discussion of sec. II of 'Belief *De Re*' in sec. IV of this Postscript indicates, I believe that all representation requires, as an enabling condition, a capacity for a subset of *de re* representation—*de re* representation that effects a nonconceptual application of representation to subject matter. This is a Kantian thesis, and may capture some of what Kant wanted in his requirement that all representation of objects be grounded in a nonconceptual capacity—intuition.

These powers are not completely conceptual, in that they involve a relation to the *re* that goes beyond its *merely* being conceived.

To review: the second epistemic account of *de re* attitudes in 'Belief *De Re*' takes *de re* representation to be referentially successful representation that involves an appropriate 'not completely conceptual' relation to a *re*. As I have elaborated this account, it grants that in canonical specifications of representational content or the natural numbers, the representational contents themselves are completely conceptualized. The representational contents are supplemented by a not completely conceptual relation to the *re*. The epistemic relation to the canonically named representational contents through understanding the contents is one such relation: We understand the referent as well as conceive of it. Perceptually immediate applicability of the smaller natural numbers is another: We apply the individual concept for the *re* immediately in perception, as well as merely conceive of the *re*. All types of *de re* representation on this conception are marked by a direct, epistemically basic relation to the *re* that goes beyond merely conceiving of it.

III

I want now to discuss one matter that is somewhat obscured in the semi-technical presentation in 'Belief *De Re*'. This matter is crucial for understanding the paradigm cases of *de re* belief. The paradigm cases are those that have a demonstrative or indexical element in the representational thought content. I want to discuss the nature of the relevant representational contents. What is it for a propositional representational content to be incompletely conceptualized?

I have heard interpretations of the paper according to which there is a 'hole' in the representational aspects of the proposition, where the hole corresponds to the object (which completes the proposition). I regard these interpretations as rather silly. But my exposition is partly at fault. In the formalizations of the representational contents of the relevant *de re* beliefs, I formalized the demonstrative or indexical elements as free variables. This formalization may have made it puzzling how the representational contents could in themselves have a truth-value. For open sentences are true of or false of objects, but they are not strictly true or false. One might think that one needs the objects themselves to fill out what is thought in such a way as to make the thought true or false. I did associate the *de re* representational contents with objects, the *re*. I clearly indicated, however, that I was *not* thinking of the contents as having objects 'in the proposition', in what is thought, *à la* Russell. The contents are representational contents through and through. The propositional attitudes are incompletely conceptualized, but they indicate individuals in a way that makes *them* and their representational contents true or false—not just true-of or false-of objects.

Certainly I was thinking too much in terms of formalization and not enough in psychological terms. I expected the talk of free variables to be more informative than it was. Let me say a bit more about free variables. Open sentences are, of course, in themselves neither true nor false. But open sentences can be used or interpreted in such a way as to take on truth or falsity. There are two ways in which they can be thus used or interpreted. One is equivalent to universal quantification on the variable. The other occurs in interpretations of open sentences to form a particular model, assigning particular objects in a domain of discourse to the free variables. I was thinking of this second use.

My idea was that in actual *de re* beliefs the free variables, the formal counterparts of demonstratives and indexicals, are contextually applied, or 'assigned', to an object by the believer. The application or assigning is part of the full representational thought content. The demonstrative or indexical as a *type* cannot fix a referent. It needs an application. Applications are individuated in terms of token acts or events. Ordinary attributions of *de re* beliefs do not specifically refer to such applications, but they presume that they are there.

This idea guides the discussion of deictic *uses* of demonstratives in sections I and II and the discussion of free variables as representing *applied* demonstratives (or indexicals) in the fourth to last paragraph of the paper. I wrote, 'The free variables do no more than indicate the not purely conceptual character of these means of identification and mark differences in the contexts in which they are applied.' Thus, in addition to the demonstrative or indexical *type*, marked by the free variable type, there is an application of the demonstrative analog, or indexical analog, in the believer's thought. Applications are individuated in terms of actual occurrent mental events or acts. Applications are the non-conceptual elements in the propositional representational contents of the relevant *de re* attitudes. These points are developed in greater detail in other papers.[10]

Beliefs are true or false, not merely neutrally true of some objects and false of others. The aspect of a belief that is true or false is its representational content. For a representational content that contains analogs of demonstratives or indexicals to be true or false, the analogs must be applied in a context. So in understanding the relevant representational contents, one must consider the demonstrative or indexical type *and* its contextual application. These two must be distinguished from one another and from any attributive (the 'F' in 'that F') that modifies the demonstrative or indexical and that guides its application.

[10] Aspects of applications (and my use of free variables) are also discussed in 'Reference and Proper Names', *The Journal of Philosophy*, 70 (1973), 425–439; 'Demonstrative Constructions, Reference, and Truth', *The Journal of Philosophy*, 71 (1974), 205–223; 'Kaplan, Quine, and Suspended Belief', *Philosophical Studies*, 31 (1977), 197–203 (Ch. 2 in this volume); 'Russell's Problem and Intentional Identity'; 'Vision and Intentional Content', in E. Lepore and R. Van Gulick (eds.), *John Searle and his Critics* (Oxford: Basil Blackwell, 1991); and 'Five Theses on *De Re* States and Attitudes'. The notion of application in 'Belief *De Re*' is the psychological analog of the notion of a linguistic act of reference discussed in the first two articles cited above. Through reflection on perception, I have come to believe that not all applications are acts. But all are individuated in terms of occurrences, some of which are acts.

A second general consideration supports recognition of applications. Insofar as the beliefs single out a *re*, there must be a singular element in the representational content that does the job. Individuals cannot think (or perceive) objects neat. They must think of them from a perspective—'intentionally' or representationally. General arguments, discussed in the last section of 'Belief *De Re*', show that individuals cannot always single out objects in context-free ways. So they must do so in context-dependent ways. Context-dependent *types* of reference or representation cannot do the job by themselves. Demonstratives, indexicals, and their analogs as *types* single out no objects at all. The types must be associated with some instantiation, occurrence, or act, in a context, to succeed in representing a *re*. So a full account of the representational content of the relevant thoughts must make a place for the mental instantiations, occurrences, or acts that point context-dependent types, or context-dependent mental abilities, to particular *res*. These occurrences or acts are part of the representational content that is evaluated for successful or unsuccessful reference, for truth or falsity. A fundamental idea of the article is that representational contents include occurrent applications.

IV

Section II of 'Belief *De Re*' contains three general arguments, or argument sketches, that are meant to make plausible a necessary and central role for *de re* attitudes in thought and language. I see these arguments as prefiguring anti-individualism. I think of the second of them as the most broadly interesting feature of the paper.

The argument that *de re* attitudes are necessary for learning language is an adaptation of Quine's point that learning language depends on learning occasion sentences. Occasion sentences are roughly context-dependent sentences, whose truth- and assertability-values vary over relatively short periods of time.[11] I reasoned that such sentences' meaning has to be associated with some true perceptual beliefs about the immediate surroundings, and that perceptual beliefs are, and must be, *de re*. This little argument still seems to me sound.

The second argument, really an argument sketch, is for the conclusion that *de re* attitudes are necessary for having any propositional attitudes at all. This argument is much more ambitious than the first.[12] The idea of the argument is that to

[11] W. V. Quine, *Word and Object* (Cambridge, Mass.: MIT Press, 1960), chs. 1 and 2. P. F. Strawson made a similar point earlier in 'Singular Terms, Ontology and Identity', *Mind*, 65 (1956), 433–454; but I believe that I first got the point from Quine.

[12] I want to criticize in this note some of the formulations in the argument sketch in 'Belief *De Re*'. Initially I argue in terms of whether we would *attribute* propositional attitudes under this or that condition. I also discuss *evidence* or *indication* of an ability needed to attribute attitudes. Attribution and evidence are not the heart of the matter. I think I knew better at the time, and the later formulations in the same argument tend to drop these elements. I lapsed into evidential ways of

have attitudes with definite content, an individual must have some supplementary capacity, beyond that of a general conceptual ability to think about the subject matter, to connect the contents to what they are about. The ability can be causal-perceptual or causal-practical. For a robot to have (autonomous) propositional content, it would have to have either perceptual abilities, or practical abilities to do something for itself. (I think that both are required.) Such abilities would entail having *de re* attitudes. So a condition on having attitudes in pure mathematics is an ability to apply it, or at any rate to be able to apply other attitudes in perceptual or practical *de re* ways.

The argument does not specifically require that the capacities to connect contents to what they are about be empirical capacities. The obvious cases—perceptual abilities and abilities to act in the empirical world—are certainly empirical. I left open whether there are non-empirical capacities—for example, in the exercise of memory of one's own thoughts—that determine a thought/subject-matter relation. Since we lack Platonic vision of mathematical or other abstract entities, pure mathematics almost surely requires supplemental singular abilities if it is to have genuine, autonomous, representational content.

Both pure arithmetic and canonical (that-clause-like) specifications of representational content are plausibly second-order enterprises. They hinge on relations to first-order representations. *De re* relations to the numbers hinge on further *de re* relations to objects that one counts with the numbers. The perception-based counting is a necessary condition for both the *de re* relations to the numbers and the comprehension of pure mathematics. *De re* relations to representational contents through that-clause-like specifications hinge on comprehending the representational contents thus specified. Such comprehension depends on further *de re* relations to *res* at the first-order level. So having *de re* attitudes at the first-order level, presumably involving demonstrative or indexical applications, is necessary for having any conceptual content at all. These first-order content-giving abilities involve the 'appropriate not completely conceptual relations to a *re*' that are the mark of *de re* attitudes. As I have intimated, I am inclined to believe that the relevant first-order abilities are marked by representational content that is not completely conceptualized. So I think that the subset of *de re* capacities that are characterized by the first epistemic account of the *de re/de dicto* distinction underlie and make possible the larger set of *de re* capacities characterized by the second epistemic account.

discussing the matter because they were concrete, and probably because straight out 'transcendental' arguments for conditions on the possibility of having some capacity were at the time foreign. These formulations suggest some sort of verificationism that I certainly never held. I believe that it is fairly easy to reformulate what I wrote in such a way as to avoid these formulations. Some of the formulations in the article in terms of abilities an individual must have in order to have propositional attitudes already did so. The argument also waivers between talking purely about propositional attitudes and talking about language use, perhaps in thought. Here is another area where I would make a sharper distinction between discussions of language and discussion of mind—if only to make clear that the argument applies to beings that have propositional attitudes but lack language.

I do not regard the main idea of this argument as self-evident. The main idea is that 'correlational' abilities are a necessary condition on having states or attitudes with propositional representational content. Propositional representational content necessarily includes conceptual content. Concepts are just the standing or ability-general elements in propositional contents. To have states or attitudes with propositional or conceptual content, an individual must have a capacity that supplements mere conceiving of a subject matter. The supplementary capacity must connect at least some concepts—that mark general abilities—to a subject matter by some further occurrent, non-conceptual, non-attributional representational means.[13] It does so through non-attributional applications. Aboutness is fundamentally and constitutively dependent on such 'correlational' connections in use. I think it plausible that the connection must be through action or perception. Although I do not find this idea self-evident, I think it powerful, plausible, unifying, and foundational. I continue to think it a good and fruitful one.

This argument and its key idea provided a framework for anti-individualism. The idea, again, is that successful correlational, nonconceptual, representational abilities must support conceptual abilities. This idea is a short step from the idea that non-representational relations must support representational abilities. For the key nonconceptual abilities, the events or acts of application, depend on context and on causal relations to their objects of reference for their success in representation. Thus the key idea of a dependence of representation on non-representational relations to a wider reality is implicit in the main argument of 'Belief *De Re*'.

A further key idea of anti-individualism is, however, still missing. This is the idea that the *specific* conceptual aspects of propositional attitudes (and specific attributional aspects of perceptual and other lower-level representational states) depend on non-representational relations to *specific* aspects of the wider reality. The specific conceptual contents of an individual's attitudes partly depend, in complex ways, on specific features of that reality.

The third, and last, argument in section II of 'Belief *De Re*' is that having justified (warranted) empirical beliefs, hence having knowledge, requires having *de re* beliefs. Although it is a near corollary of the main argument (the second argument), it can stand on its own. The hard cases for the main argument are non-empirical attitudes. Apart from these cases, the main argument would be relatively uncontroversial. The addition of the idea of justification or warrant seems to me also relatively uncontroversial: Warrant attaches to states or capacities. Empirical warrant derives from perceptual or other sensory-based

[13] I now think that the argument generalizes further. A condition on having any representational content at all, perceptual or conceptual, is that one have *de re* perceptual or conceptual states. This point can be made with slightly finer grain. I believe that there are perceptual as well as conceptual attributives. (Cf. 'Five Theses on *De Re* States and Attitudes'.) To have states with attributive representational contents, one must have states that include *de re* applicational contents.

beliefs. Since such beliefs are clearly *de re*, the corollary really should not be controversial, or specially interesting.

V

I will say only little about the remaining elements of the paper. I remain opposed to reducing *de re* to *de dicto*, of course. Thus I resist reducing the epistemology of propositional attitudes to the epistemology of conceptualization. As I pointed out, this resistance is closely associated with the deep changes in our understanding of linguistic reference brought about by Kripke, Putnam, and Donnellan. But it also has a history in the more epistemically oriented conceptions of Russell and Kant.

I have elaborated the discussion of Frege elsewhere.[14] I continue to believe in the distinction among three theoretical functions for his conception of *sense*.

One idea in this discussion seems to me undeveloped, but still worthy of development. It is an idea about the relation between what is normally attributed in the language, even in uses of ordinary language geared to describing propositional attitudes, and what the actual representational contents of an individual's attitudes are. I distinguished sense_3—what is attributed in oblique or non-extensional occurrences in attributions of propositional attitudes—from sense_1—the way of thinking or cognitive value that a thinker associates with an expression. I suggested that sense_3 is coarser-grained than sense_1. That is, what is attributed will often be less specific or fine-grained than the actual way of thinking engaged in by the individual thinker to whom the attitude is attributed. This is so *even for correct oblique occurrences in propositional attitude attribution whose purpose is to describe propositional attitudes as fully as ordinary communicational conditions will allow*. What is easily and conventionally attributable as a way of thinking may be unexceptionable as far as it goes. Yet it may fall short of capturing the individual's way of thinking. It may be something common to a class of ways of thinking, which nevertheless is different from another class of ways of thinking about the same object, property, or relation.

The discussion of this issue in 'Belief *De Re*' centers mostly on proper names. I find this discussion on the right track, but rather inconclusive. The simple point is that the attribution of names in propositional attitudes can be expected sometimes to do more than name the bearer. It may attribute to the individual a way of thinking that involves the name. Although the individual's way of thinking may involve the same name (or a contextually appropriate translation of the name) together with some mental file for the name, the public attribution may fail to convey essential specific aspects in the file. Those are often matters that are not easily publicly accessible, or of any special public

[14] Cf. the Introduction to *Truth, Thought, Reason*, 29–59. This passage in the last section of 'Belief *De Re*' was my first published interpretative work on Frege.

use. Still, they may be basic to the representational content of the individual's psychology. Scientific attributions may have to be more specific than anything natural language bothers with, if the attributions are to correctly type-identify the individual psychological states, for explanatory purposes.

The point applies more obviously to predicational elements. Suppose that I correctly attribute to Al the occurrent perceptual belief that that square block is blue. Al's way of thinking about squareness incorporates a specific perceptual angle on the squareness, representing it from one of many possible perceptual angles in one of many possible perceptual ways. There is no attempt to express or capture the specific way that Al thinks about squareness (or blueness, or blockness). The attribution may, however, be intended to convey that Al's representational belief content contains a representational content that *entails* that it applies to squareness if to anything. It is understood that Al somehow thinks of something *as square*. Thus the attribution may be intended to be more specific about how Al thought about the block than an attribution of the form: Al believes that that block with the property that Uncle Harry liked most is blue—even assuming that being square *is* the property that Uncle Harry liked most. Thus the ascription is intended not to allow free exchange of coextensional expressions; but it is not intended to specify exactly how Al thought ($sense_1$). It is intended to narrow down Al's way of thinking to a class of concepts of squareness as squareness. I believe that such usage is one standard usage in attributions of propositional attitudes.

I believe that the view of 'meaning' as having a number of different types—$sense_1$, $sense_3$, conventional linguistic meaning—remains attractive. I think that if it were more widely adopted, some of the impasses and ruts that have marked disputes over what is in semantics and what is not would be avoided.

What chiefly interests me is the representational content that corresponds to $sense_1$. This notion derives from Frege. Frege's insight into the structure and general character of thought was profound. But he provided relatively little insight into *de re* phenomena. Russell's general epistemology in terms of infallible and perspective-free acquaintance is, I think, hopeless. Kant's specific account of the epistemology of arithmetic in terms of pure sensible intuition is implausible. But their fascination with *de re* phenomena showed an instinct for an element in mental representation, and the epistemic roots of knowledge and understanding, that is of enduring importance.

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.[1]

[1] 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.[2]

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.

[2] 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.[3]

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.[4]

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

[3] 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.

[4] 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.[5]

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

[5] 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.[6]

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 materialist 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

[6] 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 apriori 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.[7] 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.[8]

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

[7] For parallel points about 'Belief *De Re*', see the Postscript to that article above.

[8] 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, IIId). 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*.[9] There are also standard uses on which the exchanges

[9] 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.[10] 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_2O', '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

[10] 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.[11] 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

[11] 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.[12]

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.[13] 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.[14]

[12] 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).

[13] 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.

[14] 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.[15]

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.[16] For example, the belief that a contract can be oral as well as written has empirical warrant. The belief that water is H_2O 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.

[15] 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*.

[16] The general point about the extreme fallibility and empiricality 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.[17] 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

[17] 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.[18]

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

[18] 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.[19]

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.[20]

[19] I develop these points for empirical as well as apriori cases in 'Concepts, Conceptions, Reflective Understanding: Reply to Peacocke'.

[20] 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.[21]

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.

[21] 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.[22]

[22] 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 Al is in no position to recognize through reflection that arthritis is a disease that can only occur in joints. Al cannot recognize through reflection alone that brisket is a cut from the breast, or lower part of the chest, of certain quadrupeds. Al 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.[23] Belief in the relevant explicational principle is nevertheless apriori knowable. Al'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.

[23] 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.[24]

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 fumblings 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.

[24] 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.[25]

[25] 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.[26]

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.

[26] 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 apriori. 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.[27] 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

[27] 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.[28] 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.

[28] 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.