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CONCEPTS, DEFINITIONS, AND MEANING* **

TYLER BURGE

The Aristotelian tradition produced many of the elements of what is widely thought of as “the traditional view” of concepts. I begin by attempting to summarize this view. The summary runs roughshod over numerous distinctions that were dear to various thinkers who contributed to this general conception of concepts. I sacrifice historical accuracy in favor of an idealized type that, I hope, will serve despite its crudity to further understanding.

Although I shall be criticizing natural and traditional readings of the principles that follow, there are readings, which should become clear as we proceed, under which I accept all the principles but the last, (4c). My objective is to show how two important contemporary doctrines – holism about confirmation and anti-individualism about the individuation of mental states – affect our understanding of this traditional view of concepts.

Here are the main principles that delineate the idealized traditional conception of concepts that I wish to discuss. Principles (1)–(1b) concern the relation between concepts, thought contents, and propositional attitudes.

- (1) Concepts are sub-components of thought contents. Such contents type propositional mental events and abilities that may be common to different thinkers or constant in one thinker over time. Having a concept is just being able to think thoughts that contain the concept.¹
- (1a) Propositional mental abilities are type-individuated in terms of concepts partly because concepts enable one to capture a thinker’s ability to relate different thoughts to one another according to rational inferential patterns.

Thus we count a thought that all dogs are animals and a thought that Fido is a dog as sharing a concept in order to capture a thinker’s ability

* I am indebted to David Charles for valuable comments.

** The Editors invited Tyler Burge to submit the following paper.

¹ Georges Reys discusses misconstruals within empirical psychology of concepts, and of philosophical work relevant to them, in his excellent articles “Concepts and Stereotypes” *Cognition* 15 (1983), pp. 237–262; “Concepts and Conceptions: A reply to Smith, Medin and Rips” *Cognition* 19 (1985), pp. 297–303. Although my account of the traditional view differs from his, many of the fundamental points are similar.

to infer, according to the obvious deductive pattern, that Fido is an animal.

(1b) In being components of thought contents, concepts constitute ways a thinker thinks about things, properties, relations, and so on. A concept of these things is a way of thinking of these things.

Principles numbered (2)–(2b) concern the referential functions of concepts – or relations between concepts and the world that they purport to be about.

(2) In being components of thought contents, and ways of thinking, concepts are representational or intentional (I make no distinction here). They need not apply to actual objects, but their function is such that they purport to apply; they have intentional or referential functions.

(2a) Concepts' identities are inseparable from their specific intentional properties or functions.

Thus a concept of an eclipse could not be the concept that it is if it did not represent, or if it were not about, eclipses. If a concept were found to apply to things in the world that were not eclipses, it would not be the concept *eclipse*. Traditionally, the principle also applied to vacuous concepts. So the concept of a unicorn could not be the concept that it is if it were not about unicorns.

This principle may appear trivial, and it certainly is virtually undeniable as applied to concepts. But it is notable that an analog of the principle does not apply to other types of representation. Thus the word-form “eclipse” would be the same word form even if it were not about eclipses; and an image of a tower on a screen could be the same image even if it were not an image of a tower – if, say, it had been produced in response to something other than a tower.

(2b) Many concepts fix the things that they are about in the sense that given the concept and given the world, the concept, of its nature, referentially determines the range of entities that it is about.

Some traditionalists recognized that this principle does not apply to indexical concepts like *now*, or demonstrative concepts like *that*, or a variety of other context-dependent notions.² There are also role or

² Since indexical notions like *now* do constitute ways of thinking, I think it appropriate to think of them as concepts. But the concepts are general in that they are common to any application of “now”. According to 2a) they are inseparable from their particular intentional functions. (Roughly in this case, to pick out the time of a thought or utterance.) But they do not fix the things that they referentially determine except relative to the existence of the thought or utterance in which they are contained (or more broadly, relative to context). Thus there is a natural awkwardness in speaking of the concept of *now*, since such an occurrence suggests misleadingly a particular time that is associated with all occurrences of the concept.

office concepts that have implicit tensed elements – like *the president* – for which the principle needs obvious modifications. Moreover, it requires some qualification for vagueness. But it was taken to be true – and I think is obviously true – of many concepts for empirical and mathematical objects, properties and relations. For example, given the concept *dog* or *chair* and given the elements of the world, the concept will referentially apply to exactly the dogs or chairs in the world.

I take it that the principles numbered (1)–(2) are more fundamental to the traditional view than those numbered (3)–(4). Principles (3)–(3a) concern the relation between concepts and definitions. Principles (4)–(4c) govern the relation between concepts, meaning, and language.

(3) Definitions associated with concepts fix necessary and sufficient conditions for falling under the concept. They give the essence, or if not essence at least the most fundamental individuating conditions, of the entities that the concept applies to.

Not just any set of necessary and sufficient conditions were seen as essential or fundamental individuating conditions. A definition captured something peculiar to conditions for individuation associated with the concept. It was supposed to say something illuminating about what it is to be the relevant kind.

(3a) Definitions also state basic epistemic conditions that the individual has for applying the concept, or the individual's best understanding of conditions for falling under the concept.

Commonly a distinction was made between adventitious and in-essential methods of application and fundamental or essential ones. Only the latter belong in the definition.

Different thinkers seem to have taken different views about the relation between what one might call metaphysical or essence-determining definitions and epistemic definitions – definitions that capture what is epistemically prior when one sets out to discover what something's essence is. Aristotle seems to have distinguished the two. Others, such as Hume and the Logical Positivists, drew no such distinction.³

(4) Concepts are commonly expressed in language. They constitute meanings of the speaker's words.

³ Aristotle conceived definitions primarily as attempts at codifications of the essence of what terms or concepts apply to. See for example, Aristotle *Topics* VII, 5, 30 and *Posterior Analytics* II, 10. But for some purposes he did distinguish between definitions that articulated essence and definitions that articulated epistemic procedures. He seems to have thought, in the cases of concepts like *eclipse* or *thunder*, that the essence could be discovered only through empirical investigation; the epistemic conditions for applying the concept seem to precede and underdetermine the outcome of the investigation. Cf. *Posterior Analytics* II, 8.

When we say “That’s a chair”, we express a thought that that’s a chair; we express the concept *chair* with the word “chair”. The concept is not to be distinguished from the meaning of the word “chair”.

(4a) Just as concepts, as ways of thinking, are to be distinguished from the range of entities thought about, so the sort of meaning that is expressed in language as concepts is to be distinguished from the sort of “meaning” that is constituted by the range of entities which the words and concepts signify, apply to, or refer to.

The general idea that I have summarized in (4a) and (2b) was variously expressed in terms of a distinction between two kinds of meaning: concept and kind, objective reality and reality, idea and nature, connotation and denotation, intension and extension, sense and reference. But the common theme was that the former element in each pair fixed the latter; a word that expressed the former applied to the latter.

(4b) Definitions of words articulate conceptual meanings.

(4c) Concepts are prior to language in the sense that language is to be understood as functioning to express thought; but thought is never fundamentally individuated in terms of language.

A traditional consideration in favor of this view was expressed by Aristotle: thoughts are the same for all men, but language varies.⁴

Although the Logical Positivists maintained a version of this view of concepts, much subsequent mainstream work in philosophy in this century has attacked various elements in it. Behaviorism and Quinean eliminationism attack the very idea of an idea or concept, or indeed the very idea of mental events and kinds. I shall not discuss these general forms of hostility to mentalistic notions. I want to discuss two other doctrines that have been used to attack the traditional view – holism and anti-individualism. Unfortunately, I will largely ignore (4c), an element in the traditional view that has received very considerable discussion in this century. I think that this omission will leave us with more than enough to think about.

Quine pointed out that sentences are not confirmed or disconfirmed one by one. Only whole theories, or at least large bodies of theory, face experience. Quine joined Duhem in further indicating that there was no set formula for saying which sentences within the theory might be revised, and which still assented to, when new experience was out of step with the theory’s pronouncements. In fact, the practice of empirical science suggests that virtually any scientific claim, including one that serves as a definition, is subject to possible revision in the interests of

⁴ Aristotle, *De Interpretatione* 1, 5–9.

accounting for new findings. These points apply to beliefs as well as sentences, to definitions of concepts as well as to definitions of terms.⁵

The claim that theoretical definitions are revised is supportable by numerous cases from the history of science. Definitions of mass, momentum, atom, gene, and so on have been rejected for theoretical reasons. Subsequent discussion has made it seem hopeless to claim that in every one of these cases the old definition remains true (because it is a definition!) and a new theoretical notion (e.g. a new notion of atom or momentum) is introduced with the new definition. Rather it is often the case that the old definitions are false; and the new ones are better accounts of how to understand the defined notion, as well as better accounts of what the defined notion applies to.⁶

How do these considerations affect the traditional view? Some, including Quine, have taken them to undermine the belief that there are concepts at all. This line of reasoning is directed against the idea that there is clear sense to the notion of a constituent of a propositional content. An oversimplified version of the reasoning is as follows: concepts and word meanings are if anything procedures used to determine whether something falls under the concept, or satisfies the meaning. But no such procedure can be associated with any unit as "small" as a concept or a word meaning would have to be. Such procedures can be associated only with blocks of sentences. So there is no determinate entity that is a concept or a word meaning.

Another argument, again oversimplified, proceeds similarly: The only ground for attributing concepts lies in accounting for a person's linguistic and cognitive procedures in assenting to or dissenting from sentences. But one can always attribute *systematically* different concepts and come out with equally good overall accounts of such procedures. So there is no reasonable ground for attributing any particular set of concepts to anyone.

Each argument's first premise seems to me vulnerable. I think concepts are not merely procedures for finding a referent or merely elements in procedures for determining responses to sentences. The second argument's second premise – the claim that equally good, systematically different attributions of concepts are always available – also is questionable.

I will not undertake to discuss these and allied arguments here. Instead, I will proceed on the invidious assumption that such arguments are unsound, making up slightly for this highhanded policy by later

⁵ W. V. Quine, "Two Dogmas of Empiricism" in *From a Logical Point of View* (Harvard University Press, Cambridge, Mass., 1953).

⁶ The view that new definitions sometimes produce deeper understanding of the original concepts is expressed, without any special philosophical motivation, over and over in scientific writings. For example, see Robert Geroch, *General Relativity, From A to B* (University of Chicago Press, Chicago, 1978), pp. 4–5.

advancing considerations that count against the first premise of each argument. That is, I will later raise considerations for thinking that one should not conceive of confirmation procedures and patterns of assent and dissent as the only grounds for individuating or attributing concepts. I think that holism has been thought to undermine the notion of a concept because holism about confirmation is equated or conflated with holism about the nature of meaning or propositional content.⁷

Holistic considerations can seem to threaten aspects of the traditional view even when they are not taken to undermine the very applicability of the notion of a concept. Holism bears most specifically on the principles in the traditional view that are concerned with definition – (3) and (3a).

Take (3a) first. It seems reasonable to think of definitions as sometimes articulating the epistemic conditions that a thinker *treats* as most basic for applying the concept. Scientific practice indicates, however, that a definition that functions as the most basic explanation of a concept at one time can later be displaced and even seen to be false. This is possible because the thinker, or theory, has, besides the definition, other epistemic hooks on the entities that the concept applies to – for example, other theoretical characterizations that had seemed less fundamental; or experimental identifications that are not fully dependent on the definition. What the thinker treats as fundamental in his own epistemic practice may have to defer to other epistemic means of access that turn out to have been more accurate or basic. Thus a given concept can have a succession of definitions, each of which functions as a fundamental epistemic tool, only to be seen to be mistaken, or adventitious, and replaced.

Turning to (3): it is not in general true that statements that actually function as definitions fix necessary and sufficient conditions for falling under the concept. A definition may not even be true of things that fall under the concept. Thus (3) must be seen as stating an ideal for definitions. Or it may be seen as applying not (or not necessarily) to definitions that are actually in use, but to something that is yet to be discovered – either the end result of ideal inquiry, or simply the true account of necessary and sufficient conditions, whether it has been discovered or not. Either way, this idealized notion of definition must be distinguished from the notion of definition that applies to whatever is functioning as a definition in the thinker's current repertoire.

A metaphysically correct definition – one that states actual necessary and sufficient conditions, indeed essential or fundamental individuating conditions for instantiating a kind – need not be known, or knowable on

⁷ An example of the slide from holism about confirmation to holism about meaning without any explicitly connecting premise is Putnam's otherwise excellent summary discussion of the force of the Quine-Duhem thesis in Hilary Putnam, *Representation and Reality* (MIT Press, Cambridge, Mass., 1988), pp. 8–9.

mere reflection, by someone who has the concept. This is clearly true in empirical cases. I think it true in other cases as well. Finding “the definition” in this idealized sense may require acquisition of new knowledge or even new concepts. As I noted earlier, there is reason to suppose that Aristotle already made something like the distinction between metaphysical definitions, yet to be discovered, and definitions that guide one’s current investigations. So these remarks about (3) are not meant as criticism of all versions of “the traditional view”. They do, however, bring out points that are not emphasized and developed in the tradition. There is little reflection before this century on how what a thinker treats as his most fundamental means of applying a concept can be displaced by other means that are in fact more fruitful and accurate.

These effects of holism on the traditional principles governing definition also affect our understanding of traditional principles governing the relation between concepts and meaning. According to (4), concepts are commonly expressed in language; in being so expressed they constitute word meanings. So far there is nothing more to the notion of meaning than “what is expressed” by words. I will explicate some restrictions on notions of linguistic meaning that have become standard in modern thinking. Then I will try to show how (4) and (4b) are affected.

On most modern conceptions, linguistic meaning is a complex idealization of use and understanding. The meaning of a term is revealed in its use and articulated in reflective explanations of its use by competent users. The meaning of a term at a given time is fixed by what an ideally reflective speaker would articulate by reflecting on all his intuitions, beliefs, dispositions to apply a term, and so on, with no reliance on advances in non-linguistic knowledge. This point applies both to communal and idiolectic linguistic meaning. Communal meaning is fixed by the reflective understanding and use of the “most competent” speakers or by some idealized rendering of normal usage. Idiolectic meaning is fixed by the individual’s idealized use and understanding.

There are many problems with the full specification of this conception, but let us take it as a familiar and rather deeply entrenched restriction on a notion of meaning, which will help us interpret (4). Let us now add (4b) to this conception of meaning. Interpreted in the light of our assumptions about meaning, this principle maintains that the content of a concept – and hence the meaning of a term – is codified in ideal lexical entries that capture the cognitive condition under which the speaker would apply the term. Thus if a fundamental reflective explication of the meaning of a word is changed, because of acquisition of new non-linguistic information, the meaning of the term changes.

Holism notes that the definitions that capture the conditions that the speaker treats in his usage as most fundamental for applying the term

may be false. They may be false of what the term, and the concept it expresses, apply to. This shows, contrary to what some traditionalists presumed, that the definition cannot exhaust the significance of the term or the associated concept.

Of course, a number of other developments besides holism have conspired to demote the role of definitions in accounting for meaning. Wittgenstein's discussion of family resemblances, his insistence on the contextual complexity of language use, his and Austin's emphasis on the wide variety of word function, and Davidson and Quine's theories of interpretation, have all reduced the prominence of definition in thinking about language. Many words and concepts are not susceptible to definition at all, whether epistemic or metaphysical.

On the other hand, I think that it would be a mistake simply to reject (4b). Where they are possible, epistemic definitions do articulate the meanings of a speaker's words in one important sense. They articulate what the word means for the speaker, and what conception he associates with his concept. They constitute a summary or explanation of speaker-usage that provides the speaker's most considered explication of his term.

The points I am making here do not depend on just what sort of function the definition fulfills. Different words, and perhaps different conceptions of meaning, allow for variation here. I have been assuming that the definition fulfills the function of trying to state the conditions most fundamental to the speaker under which something satisfies the concept. For example, take Dalton's definition of an atom, near enough: "An atom is the smallest indivisible particle, out of which all other bodies are made". Dalton assumed that atoms fall into a scheme of atomic weights, in something like the way his experimental evidence suggested. The definition turned out to be false, but the approximately true scheme of atomic weights turned out to anchor the concept. Some definitions are like this in reaching for fundamental characteristics. Others function differently. Some seem to provide a short account of the application of the concept that meets the practical interests of someone else likely to use the term. (E.g. "Tigers are big, normally orange and black, striped cats.") I think that the primary points that I am making apply to these sorts of definitions as well.

Thus one should distinguish between two sorts of meaning: the meaning of the term that would remain constant even as one definition is replaced by another, and the articulations of what the term means for the speaker – which might undergo change. The former might be called "translational meaning"; the latter will be called "lexical meaning". Similarly, the thinker's concept must be distinguished from the conception that the thinker associates with the concept.

A corollary of this point is that one must distinguish the sort of understanding of a word in being able to use it to express a concept or

translational meaning from the sort of understanding that is involved in being able to give a correct and knowledgeable explication of it. One may think with a concept even though one has incompletely mastered it, in the sense that one associates a mistaken conception (or conceptual explication) with it.

The need for these distinctions is most straightforward in instances in which the definition actually turns out to be false. But I think that the distinctions should be drawn in any case. One argument for drawing the distinction in either case derives from Frege's test. The definitions ("force is mass times acceleration") are informative in a way that identity statements ("force is force") are not. So there is some difference in the significance of the defined word from the definition; definitions are usually not simply abbreviatory. Yet there remains the sense we discussed in which the definition does give the (lexical) meaning of the term.

Another argument for drawing the distinction derives from considerations of dynamic potential. It is not incoherent to conceive of there being a discovery that would lead to our counting the definitions false, even though the defined term succeeds in referring. In such a case the definition would be given up, but the term would continue to be used to pick out the same entity. And we would continue to interpret our past attitudes making use of the term. The mere fact that these changes are conceivable indicates that we attach some difference in significances of the defined term and the definition. Thus there is a need to have some way of conceptualizing this type of difference, even as we recognize that such definitions do provide "the meaning" of the term in the sense that I have indicated.

I think that the distinction is largely independent of the role of definition in accounting for "meaning". There is a notion of meaning that is dependent on use and understanding, where these are cashed out in terms of some idealization of some of the speaker's considered beliefs and his normal practice. Such a notion of meaning is more subject to change under radical changes in belief than translational meaning or concepts. These latter notions are grounded as much in the reference of the term and the way that the speaker's practices are actually connected to that referent, as in the speaker's beliefs and understanding. (Cf. principles 2–2b.)⁸ The upshot of all this for the traditional view is that the sense in which concepts *are* (sometimes) the meanings of a speaker's words (cf. (4)) is different from the sense in which definitions constitute or "provide" the meaning of the word (cf. (4b)). Neither epistemic nor metaphysical definitions exhaust the significance of a word (the word's

⁸ Cf. my "Intellectual Norms and Foundations of Mind", *The Journal of Philosophy* LXXXIII (1986), pp. 697–720, and "Wherein is Language Social?" in *Reflections on Chomsky*, Alexander George, ed. (Basil Blackwell, Oxford, 1989).

translational meaning). Nor are they merely re-expressions of the concept that they provide a conception of.

I want to turn now from holism to a second putative threat to the traditional view, anti-individualism. Modern anti-individualism has its roots in the theory of reference. Donnellan, Kripke, and Putnam showed that proper names and natural kinds in ordinary discourse could succeed in referring even though the speaker's knowledge of the referent was incomplete or defective.⁹ Reference depends not just on background descriptions that the speaker associates with the relevant words, but on contextual, not purely cognitive relations that the speaker bears to entities that a term applies to.

The work on reference bears on the meaning of terms and on the identity of concepts. For the meaning of a wide range of non-indexical terms and the nature of a wide range of concepts are dependent on the referent or range of application in the sense that if the referent were different, the meaning of the term, and the associated concept, would be different. (Cf. principles 2a–b.) For example, different meanings or concepts would be expressed by the word-forms "chair" and "arthritis" if the word-forms did not apply exactly to chairs and to instances of arthritis. The points about reference can be shown to carry over to many such terms and concepts. That is, an individual can think of a range of entities via such terms and concepts even though the thinker's knowledge of the entities is not complete enough to pick out that range of entities except through the employment of those terms and concepts. What the individual knows about the range of entities – and hence, by (2a)–(2b)–(4), about the meanings or concepts – need not provide a definition that distinguishes them from all other (possible) meanings or concepts. So the meanings of many terms – and the identities of many concepts – are what they are even though what the individual knows about the meaning or concept may be insufficient to determine it uniquely. Their identities are fixed by environmental factors that are not entirely captured in the explicatory or even discriminatory abilities of the individual, unless those discriminatory abilities include application of the concept itself.

Anti-individualism is the view that not all of an individual's mental states and events can be type-individuated independently of the nature of entities in the individual's environment to which the individual bears not purely conceptual relations. There is a deep individuating relation between the individual's being in mental states of certain kinds and the

⁹ Keith Donnellan, "Proper Names and Identifying Descriptions" in *Semantics of Natural Language* Davidson and Harman eds. (D. Reidel, Dordrecht, 1972); Saul Kripke, "Naming and Necessity" in *ibid* also reprinted in book form by Harvard University Press, Cambridge, Mass. 1980; Hilary Putnam, "Is Semantics Possible?" in Putnam's *Philosophical Papers* volume 2 (Cambridge University Press, Cambridge, England, 1975).

nature of the individual's physical or social environments. Anti-individualism can be supported by numerous specific thought experiments, but can also be derived by reflecting on the foregoing points about reference and its relation to our conceptions of meanings and concepts.¹⁰

Hilary Putnam has in effect sought to turn the sorts of considerations that support anti-individualism into an argument against the conjunction of (1), (2b), and (4). He maintains that one cannot hold both that knowing the meaning of a term is a matter of being in a certain psychological state and that the meaning of a term fixes its reference or extension. The argument is that one cannot hold these two principles because the reference of the term may be fixed even though the speaker's knowledge of the referent is incomplete. The reference depends on non-cognitive relations between the speaker and the referents of his terms that are beyond anything the speaker knows. So the speaker's psychological state cannot suffice to fix the referents of his terms in the relevant cases, as the conjunction of (1), (2b) and (4) requires.¹¹

This argument is unsound. The argument would succeed if the meaning of a speaker's term or concept were reducible to what he believed, knew, or understood about its meaning, content, or referent; or if a speaker's psychological state consisted in elements of his psychology that could be described independently of relations to the environment or of what concepts he has. But neither of these conditions holds. As regards the first, anti-individualism reinforces the point derived from holism that there must be a notion of meaning – associated, I think, with the traditional notion of concept – that is distinct from the notion of meaning that is fixed by what the speaker can articulate as his understanding. As regards the second, anti-individualism underwrites a notion of psychological state that is not describable independently of an individual's concepts, or of the relations the speaker bears to his environment.¹²

So the considerations that support anti-individualism, far from undermining the conjunction of the three principles that Putnam

¹⁰ Cf. my "Individualism and the Mental" *Midwest Studies in Philosophy IV* (1979), pp. 73–121; "Other Bodies" in Woodfield ed., *Thought and Object* (New York: Oxford, 1982); "Intellectual Norms and Foundations of Mind" *op. cit.*; "Individualism and Psychology" *Philosophical Review XLV* (1986), pp. 3–45.

¹¹ Putnam, *Representation and Reality*, *ibid.*, pp. 19–24. Putnam's argument goes back to his "The Meaning of 'Meaning'" in *Philosophical Papers*, volume 2 *op. cit.* I discuss the argument critically in "Other Bodies" *op. cit.*

¹² I think that the ordinary notion of psychological state is typed in terms of concepts and their demonstrative or perceptual applications. One need not appeal to environmental relations to describe ordinary psychological states. The mind, or the psychological state, is not normally itself a relation to the environment. But the individuating conditions for the psychological states involve relations to the environment.

discusses, show their compatibility. In one sense of “knowing the meaning”, one knows the meaning of the term “arthritis” – even though one’s knowledge of the nature of arthritis may be defective – if one can use the term to express thoughts involving the concept arthritis: if one can express such beliefs as that arthritis is a painful disease. One’s term “arthritis” applies to arthritis. One’s belief that arthritis is a painful disease contains a concept, that of arthritis, that fixes its referent. One’s belief and one’s concepts are part of one’s psychological state. So one’s psychological state of believing that arthritis is a painful disease (or the psychological state of having the concept *arthritis*) and one’s understanding of the term “arthritis” suffice to fix the referent of the concept *arthritis* and the term “arthritis”. All these points are compatible with the individual’s making mistakes about the nature of arthritis or about the definition of the word.

Putnam’s error is historical as well as substantive. He attributes to the tradition stemming from Aristotle the conjunction of (1), (2b) and (4).¹³ This much seems right. But he interprets concepts as mental representations and interprets mental representations as signs that can be individuated independently of their intentional properties – in the cases we are dealing with, independently of their referents. Thus he underestimates the centrality of (2a) in the traditional view. He writes,

. . . the Aristotelian model is what I spoke of . . . as a Cryptographer model of the mind. . . . No thinker has ever supposed that sameness and difference of meaning are the same thing as sameness and difference of the syntactic properties . . . of the sign. But the Cryptographer model – the model of sign understanding as “decoding” into an innate *lingua mentis* – postulates that at a deeper level there is an identity between sign and meaning (this is the fundamental idea of the model, in fact). The idea is that in the *lingua mentis* each sign has one and only one meaning. . . . By this point we should be quite suspicious. What makes it plausible that the mind (or brain) thinks (or “computes”) using representations is that all the thinking we know about uses representations. But none of the methods of representation that we know about – speech, writing, painting, carving in stone, etc. – has the magical property that there *cannot be* different representations with the same meaning. None of the methods of representation that we know about has the property that the representations *intrinsically* refer to whatever it is that they are used to refer to.¹⁴

¹³ *Ibid.*, p. 19. Putnam’s attribution is slightly different. But except for his interpretation of concepts as a certain sort of mental representation, which I shall discuss, I think the differences are not significant in the present context. He actually attributes these three principles: (1) Every word a person uses is associated in the mind of the speaker with a certain mental representation. (2) Two words are synonymous (have the same meaning) just in case they are associated with the *same* mental representation by the speakers who use those words. (3) The mental representation determines what the word refers to, if anything.

¹⁴ *Ibid.*, pp. 20–21.

This construal seems to me inapposite to the way thoughts and concepts were conceived by most philosophers from Aristotle to Frege.¹⁵ It is directly relevant to syntactic theories of mind recently proposed by Jerry Fodor and others. But Fodor is hardly a stereotypical representative of the tradition. I do not see the Cryptographer model as central to the philosophical tradition at all. It is not “the fundamental idea” of the traditional view of concepts that at some deep level there is an identity between sign and meaning. Traditionally, concepts were not seen as signs in Putnam’s sense. Unlike sounds in speech or signs in writing, or paintings, or stone carvings, concepts were not seen as entities whose identities are independent of their intentional functions, independent of the sorts of things they represent. So questions about how they *relate* to their intentional properties did not arise. The identity of sign and meaning was not a hypothesis of the traditional view because concepts were not construed as signs. Concepts’ identities were seen as inseparable from their specific intentional properties or functions – (2a).

There is no reason for the Traditional view to deny that the mind makes use of signs or mental representations in Putnam’s sense. But concepts are not to be identified with such signs. (Cf. the remark about Frege in note 15.) Insofar as concepts are construed as signs in the mind like images or words, it may indeed appear “magical”, as Putnam implies, that they intrinsically refer to whatever they are used to refer to, or even that they always have one and only one meaning. But there is no invocation of magic in the traditional view. I see no reason to construe an explanatory scheme that identifies mental abilities in terms of their specific intentional functions (concepts) as “magical”.

Many modern philosophers – inspired by the idea that thought is just use of an inner language or that the mind is just a computer – begin by assuming that mental activity must be construed as the manipulation of inner signs. Intentional aspects of the mental are seen as interpretations or meanings of the manipulations of these signs. This approach seems to have borne some fruit, although I am agnostic about whether it is a good general model of the propositional attitudes. But many philosophers go

¹⁵ Much of what Putnam goes on to say in criticism of the Cryptographer Model seems to me to be true, if one abstracts from the historical attribution. Indeed, in fairness to Putnam, there are elements in the tradition that suggest approximations to the attribution. Some empiricists, for example, conflated images and concepts, thinking of all mental representations as inner pictures, though these pictures are not very language-like. The historical issues are, of course, extremely complex. But I think that the role of (2a) remains dominant even in many of those thinkers who tend to give images a prominent place in their accounts of thought. Moreover, the rationalist tradition – from Descartes, Leibniz, and Kant through Frege – drew a sharp distinction between signs and concepts. These thinkers give almost no ground for attributing the Cryptographer model. Frege’s distinction between ideas (which might pass for inner signs or images) and senses (which are the analogs of concepts in his scheme) is an especially refined example of the rationalist point of view.

further. They assume that attributing inner signs is theoretically more basic and somehow ontologically more secure than attributing intentional items like concepts or thought contents. They see it as a theoretical advance to “identify” concepts with inner signs. (And if the identification cannot be effected, then so much the worse for concepts.) This assumption is rather like the older view, common among the British Empiricists, that images are theoretically and ontologically basic, and thought contents must be identified with or constructed out of them.

I think that these assumptions about theoretical and ontological priority are mistaken. Understanding of propositional mental activity – and even, I think, most mental signs – is fundamentally dependent on attributing intentional notions whose identities depend on their intentional properties or functions. (Cf. (2a).) That is the traditional view. Here I agree with it. Anti-individualism concerns how intentional function itself is to be explicated.¹⁶

Modern anti-individualism makes it clear that, why, and to some extent how, the nature of our meanings, concepts, and mental states are dependent on the individual’s relations to the environment. The explanation of kind-determination, at least for many mental states and intentional contents about the empirical world, is from the environment to the mind. This point does not show that concepts do not fix their referents in the semantical or logical sense that “fix” is intended by the traditional view – from Aristotle to Frege: the sense intended in (2b). This sense of “fix” is neutral as regards explanatory or individuating priority.¹⁷

The main effect of anti-individualism on the traditional view of concepts lies in its contribution to our understanding of the relations between concepts, definitions, and meaning. It forces essentially the same qualifications of (3), (3a), (4) and (4b) that holism about confirmation does. One must distinguish the concept (and an associated notion of meaning) from a definition that captures the individual’s explication or construal of the concept. One must realize that the latter does not in general individuate what the concept applies to. And one must distinguish between concepts (and the sort of meaning associated

¹⁶ In characterizing the traditional view I have left it open whether concepts are to be seen as abstractions that are independent of minds, as Frege saw them (or rather as he saw their analogs – thought components); or as abstractions that are though mind-dependent nevertheless not dependent on any individual mind, as Aristotle and Kant saw them; or as particulars “in” individual minds, as Leibniz seems to have seen them. These differences are compatible with agreement on the priority of intentional properties in individuating concepts.

¹⁷ I think that most philosophers before the British Empiricists, including all Aristotelians, were anti-individualists. Even Descartes is not a clear case of an individualist, although his initial statement of scepticism involves dramatic individualistic presuppositions.

with them), on one hand, and the sort of meaning associated with explication and understanding, on the other.

What does anti-individualism contribute to our understanding of the traditional account of the relations between concepts, definitions, and meaning, that holism does not? I think that it makes three main additional contributions. It broadens the applicability of the points about definition and meaning beyond theoretical notions of science to an extremely wide range of notions in ordinary discourse. It points toward an understanding of the factors in concept-determination that supplement definition and user-explication. And it indicates that procedural, understanding-based, or use-based accounts of intentional notions – often associated with holism about confirmation – cannot be completely satisfactory. Let me comment briefly on these points in turn.

The lessons drawn from holism depended on the possibility of fundamental changes in scientific outlook. Such changes are not common in ordinary discourse. We use definitions for many artifact terms, for example, that are not at all likely to be overturned. So it is less clear that the Duhem-Quine points about the falsifiability of definitions extend to ordinary discourse.

But the thought experiments that fueled the advances in the theory of reference indicate how individual user-explications of non-scientific natural kind terms can be inadequate to fix the reference and can undergo change even as the referent remains the same. Thought experiments that support anti-individualism go further. They indicate how the same phenomenon can occur in individuals' use of other ordinary terms. Someone can think of arthritis as arthritis and think mistakenly that it can occur outside joints. Someone can think that chairs must have legs – having seen ski-lift chairs and counted them chairs, but under circumstances in which icicles hanging from the bottom of the chairs appeared to be legs.¹⁸ In these cases an individual's best reflective explication of a concept can come to be recognized by the individual as mistaken. The individual continues to think of arthritis as arthritis and chairs as chairs, even though his epistemically primary definition – his best means of identifying these entities – is out of step with their individuating conditions. In such cases, the individual's understanding and lexical meaning may change even as the concept or translational meaning remains the same. Anti-individualism uncovers this sort of phenomenon and extensions of it for most notions that apply to empirically discernible entities. Typically, such notions are not introduced through theories or definitions, but through exposure to examples. Relation to the examples may remain constant even when one learns that some of one's fundamental beliefs about the examples are mistaken, or not as general as one might have thought.

¹⁸ Cf. my "Individualism and the Mental" *op. cit.* and "Wherein is Language Social?" *op. cit.*

A second contribution of anti-individualism, derivative from the work on reference, is that it points toward certain thinker – environmental relations that play a fundamental role in concept determination. Holism suggested that one can rely on one characterization to correct another. This is true. But one's ability to maintain a concept of something even while one changes one's putatively fundamental beliefs about it is grounded in more than alternative descriptions. It is partly grounded in relations to the environment that are not purely descriptive.

The simplest sort of relation is the causal-perceptual relation to instances of the kind to which the concept applies. But this is supplemented by discourse with others who have had perceptual relations to such instances, by inference or imagination about putative instances of one kind based on perception of instances of other kinds, by the inheritance of innate perceptual or conceptual categories from ancestors who have had evolutionarily relevant, cognitive relations to instances of the kind – and so on. These sorts of thinker-environmental relations help fix the identity of a thinker's concepts. They may do so even where the individual's explicational abilities or other epistemic procedures fail in themselves to distinguish the entities to which the concept is applicable from other entities which (in especially unfortunate circumstances) the thinker might mistake for those entities.¹⁹

An individual's concepts for empirically discernible entities are not fully captured by the individual's explications, by his dominant epistemic procedures, by referentially accurate indexical expressions, or by specification of the individuating environmental relations. All of

¹⁹ In the absence of a distinctive definition or explication that individuates a concept's range of application, the individual might in principle use expressions like "That sort of thing" or "The kind of thing with such and such characteristics which bears relation R to my present thought about it", where R is an account of the relevant environmental relation that fixes the application of the concept. These indexical specifications, however, do not suffice to explicate, much less provide a surrogate for, the individual's concept. Expressions like "That sort of thing" are indexical – undergo shifts of reference with context – in a way that concepts like *water*, *aluminum*, *arthritis*, *edge*, *chair*, are not. So the ordinary meaning of the indexical expressions does not articulate the character of the relevant concepts. It is clear that the ordinary indexical expression might be used to fix the referents, or ranges of application, of any number of different concepts. The perceptual or other contextual mode of presentation associated with "that" at a particular occurrence is not in every case a "defining" characteristic, much less the concept itself. In any case, the contextually relevant conceptual backing for the demonstrative would have to be made explicit if philosophical weight were to be placed on it.

The expressions that involve specification of the relevant individuating environmental relation R also fail to provide concept-surrogates. They clearly express different concepts from those they purport to explicate; they do not come close to expressing the way that the individual thinks with concepts like the ones mentioned above, or to typing the same mental abilities. In some cases, the individual may lack the concepts to think about the complex R relation. Cf. "Other Bodies" *op. cit.* and my "Vision and Intentional Content" *John Searle and His Critics*, edited by LePore and Van Gulick (Cambridge, Mass., Basil Blackwell, 1991).

these conceptual elements are significantly, in some cases even constitutively, related to having the ordinary empirical concepts. But the concepts are not to be reduced to them.

This point is in effect the third contribution of anti-individualism to our understanding of the traditional notion of concepts. One of the dominant themes of twentieth century philosophy has been the idea that intentional notions – thoughts, concepts, meaning – are to be accounted for in terms of an individual's procedures for applying those notions. What is understood or thought has been thought to be reducible to actual understanding, which is in turn reducible to actual articulateable abilities or experiences. The Positivistic view that meaning is confirmation procedure, the Wittgensteinian slogan that meaning is use, Quine's argument for the indeterminacy of meaning based on his combination of holism about confirmation with the view that meaning must reduce to confirmation, the attempts to account for conceptual content in terms of inferential or functional role – all develop this theme.

Anti-individualism shows, in a way that holism about confirmation does not, that having certain intentional notions is not thus reducible to an individual's discriminative abilities or procedures. Of course, an individual can discriminate arthritis from any other thing simply by employing his concept of arthritis. Having such concepts requires having certain associated discriminating abilities. But having the concept is not exhausted by those associated abilities. Thus the individual must be able to discriminate arthritis from such things as animals, trees, and numbers, and from certain other diseases, in order to have the concept. But he need not be able to discriminate it from all other rheumatoidal diseases, actual or possible – except insofar as he does so by employing the concept *arthritis*. This is a point that nearly all individuals can be brought to recognize about their own concepts. Having the concept does not depend purely on associated discriminative procedures. It normally depends partly on causally mediated relations to actual instances of arthritis.

Holism and anti-individualism have forced refinement of the traditional view of the role of definition in constituting concepts and of the sense in which concepts are expressed by language. These changes do not “overturn” the tradition, as philosophers fond of the revolutionary model of philosophy sometimes claim. But the changes are of fundamental importance in understanding thought and language. I think that they constitute genuine progress in philosophy.

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