

The Myth of Mental Indexicals~

Thesis: So-called "essential indexicals" in thought are indeed essential, but they are not indexical. It is not their semantics that distinguishes them but their function, their psychological role.

A strong contemporary current runs to the effect that the ability of an agent to project knowledge of the world into relevant action in the world depends on the ability to think indexical thoughts. For example, if I wish to get to Boston, it may be helpful to know that the 8:25 train goes there. But I cannot put this knowledge to use unless I also come to know, at some point, that *there* [a place indexed via perception] is the 8:25 train. Similarly, should my life be endangered by an approaching bear, it might help me to know it. But it will not be enough for me to know of this danger to me under some impersonal description of me, such as "the person sitting in Bruno's favorite berry patch" or even under the name "Ruth Millikan," unless I further know that I am the person in Bruno's favorite berry patch or that I am Ruth Millikan (I might not know, for example, should I be amnesiac). But this kind of thought *there is the 8:25; I am Ruth Millikan* *is, it is supposed, indexical.* Thus Dennett, summing up the literature, remarks, "Indexicality of sentences appears to be the linguistic counterpart of that relativity to a subjective point of view that is a hallmark of mental states" (Dennett 1987, 132).¹ He clarifies, using a (ubiquitous) quotation in which Perry remarks, "When you and I have beliefs under the common character of 'A bear is about to attack me' we behave similarly, ... [whereas] when you and I both apprehend that I am about to be attacked by a bear we behave differently" (Perry 1977, 494). That is, our behaviors hinge not so much on the *objects* of our thoughts, on their propositional contents, but on what Kaplan calls the "character," in this case the indexical type, of our thoughts. Kaplan too identifies "the context sensitivity of character" with what he calls "the context sensitivity of mental states" and remarks, "Dare I call it ego orientation?" (Kaplan 1989, 531).

No, he should not dare. For it is not indexical thoughts that serve to orient an agent in his world. A picture that holds us captive portrays the index as a pointing finger, showing the direction of its referent from here, so that we may act from here regarding it. Internalized, the pointing finger is a pointing thought, guiding action towards its object. But, I will argue, first, it is not true for the general case that the relation an indexical or the interpreter of an indexical bears to the indexical's referent is a relation that needs to be taken account of during action. Second, conversely, it is not true for the general case that those relations of self to world that one must take into account in order to act in the world are relations of the sort that an indexical or the interpreter of an indexical bears to the indexical's referent. Third, it is no part of the job of an

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¹ Dennett cites Castañeda 1966, 1967, 1968; Perry 1977, 1979; Kaplan 1989; and Lewis 1979. Another clear example is McGinn 1983. There are also clear gestures toward such a thesis, alas, in my (1984).

indexical token to *signify* the relation either of itself to its referent or of its interpreter to its referent. Fourth, conversely, inner signs that do signify relations between agent and world as needed for action are not as such indexical. Finally, if an agent employs a mental term to represent herself, this in principle cannot be a mental indexical: there can be no *thought* that has the (Kaplan-style) character of "I." Nor are there thoughts with the character of either "here" or "now." It is not just that for Indexicals there is no simple Fregean correspondence between possible sentence meanings and possible thought types. The whole genre of indexicals is simply missing from thought.

An indexical sign has no constant referent, no referent qua sign type. Tokens of an indexical type have referents when they are situated in appropriate contexts. An appropriate context contains something bearing a designated relation to the indexical token, which something is thereby that token's referent (e.g., a person, an object) or is thereby that variant in world affairs that the token indexes (e.g., a time, a place, a property). This designated relation for a given indexical type I call its "indexical adapting relation."² The indexical adapting relation for "I," for example, is being the producer of the token; for "you" it is being the addressee of the sentence containing the token; for "here," being a position near the origination point of the token; for demonstratives, being suitably related in any of various conventional ways to, say, a gesture accompanying the token, to other words bearing certain relations to the token; and so forth.³ Thus the meaning of an indexical type can be thought of as expressed by a function from token context to token referent. Kaplan (1989) calls this function (or close enough) the "character" of the indexical type. It is a thought's "character" in this sense SSI shall say "karacter" SSthat is taken by Kaplan and many others to connect directly with action, with behavior. "We use the manner of presentation, the character, to individuate psychological states, in explaining and predicting action" (Kaplan 1989, 532).

First let us examine the relation of the referent of an indexical token to the token's interpreter: is this relation relevant to action? If there were such things as mental indexicals, the mental indexical token would be *inside* the interpreter. Let us begin instead with the easier case of public-language indexicals, where the full structure of the relation of interpreter to indexed

² The reason for this terminology is explained in my (1984), chaps. 2 and 10. Notice also that I am not using "context" quite in Kaplan's recommended way.

³ For a discussion of the various kinds of indexicals and their adapting relations, see my (1984), chap. 10.

referent is out in the open. For public-language indexicals, it is evident that there are actually two relations to be considered. First, there is the relation the indexical token bears to its referent as dictated by the character of the sign: this is the "indexical adapting relation" for the sign. Second, there is the relation the interpreter bears to the indexical token. Different interpreters may, of course, bear quite different relations to the same indexical token, hence to its referent. Should a public indexical serve to alert or accommodate its interpreter to the relation of its referent to the interpreter, it is clear that the interpreter would have to sum two prior relations to find this relation: the interpreter's relation to the token plus the token's relation to the referent. The same structure is still there, though less evidently, when the relation of interpreter to sign remains constant, the sign remaining inside the interpreter.

The first thing to notice is that this pair of relations does not as such or necessarily yield a sum relevant to action. I'll give two examples of failure to sum in a relevant way. These should be enough to make the general point. The first occurs when the indexical adapting relation is *being a* (certain sort of) *cause of* the indexical token. The second occurs when the referent or variant indexed by the indexical token is a type or kind rather than a particular.

Suppose that you receive an undated postcard from Barcelona signed by Alvin that says, "I am leaving for a few days in Rome." You know what the referent's, Alvin's, relation to the indexical token "I" is: the referent wrote it, he was its cause; that's what makes him the referent. And you know what your relation to that token of "I" is: you have it in your hand. But this yields no clue concerning your relation to the referent, to Alvin. At least, it yields no clue concerning any salient relation. any relation you are likely to need to take account of in order to act regarding Alvin. The given relation of you to the token plus the given relation of the token to its referent has, as it were, no vector sum.

Nor does it help to move the sign that indexes its cause to the inside of the interpreter. Suppose that it were true that your thought-tokens "Iris Murdoch" were indexical tokens, referring (as do tokens of public language "I") to their salient cause, which was in this case the cause, Murdoch herself, of the first ancestor token of "Iris Murdoch" produced at Murdoch's baptismal ceremony. (I am not recommending this theory of thoughts of Murdoch.) Thinking this (supposedly) indexical thought, even if it involved understanding the nature of this indexical adapting relation between thought and referent exactly, would not reveal to you any salient relation you presently bore to Murdoch. It would not help you to take action towards Murdoch.

Taking what is perhaps a more plausible case, consider the popular theory that percepts are mental indexicals referring to their salient causes. The fact that the perceiver contains the percept plus the fact that the percept was caused by the perceived, by the referent, does not sum to a determinate usable relation between perceiver and perceived. Think of seeing an object through a set of trick mirrors. You perceive the object alright, but you perceive it as in a different spatial relation to you than it in fact bears. The bare fact that the object perceived equals what causes your percept does not mean you can locate it, that you grasp its relation to you as needed for action. It is not true in general then that the indexical adapting relation for an indexical sign is one that it helps to take into account when engaging in action toward the referents of its tokens. Indexicality as such seems to have nothing to do with orientation for action.

On the other hand, a veridical percept generally does show some relation or relations

between the perceiver and the perceived that it might be necessary or useful for the perceiver to take into account during action toward the perceived. Specifically, there are usually (mathematical-style) transformations of the percept that would correspond systematically to transformations of the spatial relation of perceiver to perceived. For example, one *sees how far* and *in what direction* one is from an object. But these relations are not determined by adding the fact that the percept is inside the perceiver to the fact that the perceived is a cause of the percept; it is not a resultant of those facts. The spatial relation is *independently* shown in the percept. Because percepts often do show certain relations to the self of the objects perceived and because you often do need to take those relations into account in order to act, perception is often essential for action. But this has nothing to do with *indexicality* in perception. Possibly the percept that shows relations is also indexical (I think not—see note 8 below, and also my 1997) but showing relations would not make it indexical nor would being indexical make it represent any relations. (Relations shown in my percepts are, of course, relations *to me*. Soon I will raise the question whether, in order to show a relation *to me*, the percept must index me or my place, but that is a separate question.)

The irrelevance of indexical adapting relations to action shows up especially clearly when what is indexed is a type or kind: *that color*, *that word type*, *that species*, *that metal*, and so forth. Similarly, if quotation marks are indexicals (Davidson 1979, My (1984) chapter 13) or if intentional contexts ("believes that..." "wishes to..." etc.) are indexicals (Davidson 1968, My (1984) chapter 13, Boër and Lycan 1986), these must index types rather than tokens. Conceivably, in these cases the indexical token brings the interpreter into some sort of non-vector-sum relation to the type that is indexed. But how would a grasp of this relation help the interpreter to *act* in relation to the indexed type?

There does not seem to be anything about indexical adapting relations per se that makes them especially relevant to action. Conversely, the sorts of relations between self and world that an agent must take into account are not relations that adapt any indexicals. To act, I must, of course, take account of the nature and disposition of things in my world relative to my powers of action. The example we all think of first is taking account of my spatial relations to the things I would act on, for I must act on them from my place in relation to them. (Notice that this is contingent: with the power of telekinesis, I might not need to take account of these relations.) An important way of knowing the places of things to be acted on relative to me is through perception. But if the perceptual representations of these spatial relations are easy to confuse with indexicals, most action-relevant relations that one must take account of certainly are not. Consider, for example, my grasp of the size and weight of things I would act on relative to my size and strength, of various distances relative to my reaching powers, climbing powers, leaping, throwing, walking, running, and shouting powers, and so forth. Nor is it true that all action is based on perception. I need not perceive my arm in order intentionally to raise it, or perceive my eyelid in order intentionally to blink it, and if I should come to know that the trigger releasing the catch to the door of my jail cell is directly under my left index finger (say, the kindly guard tells me) I don't need to perceive anything at all in order to act so as to free myself. I need only know *how* to depress my left index finger. Indexicality certainly is not "the linguistic counterpart of that relativity to a subjective point of view that is a hallmark of mental states," then—at least not in so far as the subjective point of view is the point of view needed for action.

It is not indexicals that orient me in my world for action. This is apparent also from the fact that the indexical adapting relation for an indexical is not a relation that is expressed or shown by the indexical. Suppose that the relation that an indexical bears to its referent *should* turn out to be relevant to action. Still, it is not the job of an indexical to tell of or to display this relation between itself and its referent.

The Karacter of the indexical does not correspond to any part of its propositional content. Instead, to interpret an indexical, one must have prior knowledge of which item it is that bears the relevant adapting relation to the indexical token. one must know this independently and prior to successfully interpreting the indexical. One must already know both that this referent exists and that it is appropriately related to the indexical token. One does not find this out by interpreting the indexical; one needs already to know it in order to interpret the indexical. For example, a token of "I" does not tell me who the originator of that token is, that it is, say, Alvin, nor even that it has an originator and that this is relevant. Rather, if I am to understand a token of "I," I must *already know* who the speaker is and that knowing this is relevant. That is why Alvin had to sign his postcard, and why I had to learn English to understand what it said. Similarly, a token of "here" does not tell me where it is. To understand "here," I must independently know what place the token is in, or was in when originated. A "here" shouted in the dark is of no use to a person with one deaf ear who cannot localize sounds.

Similarly, turning an example of Perry's on its side, suppose that a postcard arrives with illegible postmark, return address, and signature saying, "I am having a good time now." Perry says that the "truth conditions" of this inscription are, merely, that "the person who wrote the postcard was having a good time at the time he or she wrote it" (1988, 9). But the "truth conditions," understood this way, express only the reader's knowledge of the karacter, rather than expressing any of the propositional content, of the inscription. By analogy Perry should say that the sentence "John has brown hair" has as "truth conditions" that whatever person named "John" it is being used to denote has brown hair. But this is to confuse knowing how to find out what it means with knowing how to find out whether it is true. It is to confuse pre-semantics with semantics. It is not part of the job of a sentence to tell you what does or would make it meaningful. The content of "I am having a good time" concerns only its actual writer and time and place of writing. Clearly, in order to get to that content it would be necessary to *know* who wrote it, when, and where. If the interpreter lacks this knowledge, none of the intended message gets through. Nor, of course, does the message *contain* that information.

Exactly the same principle applies to the most paradigmatic of indexicals: "that" accompanied by a pointing finger. The pointing finger is understood only if what it points *at* is visible or otherwise independently identifiable. Or suppose it is the job of "that" to point out a direction, "that way." The interpreter must have a clear view of the surroundings so as to see in *what* direction the finger points. The interpreter must be able independently to *identify* that direction, not necessarily with a name ("east, west") but, say, via an ability to track it, to know what it would be to continue following that selfsame direction, as opposed to turning away from it. To know what an indexical points to, to identify the indexed, requires that one have *a prior route to thinking of that object*, a route other than via the indexical token, and that one grasp this prior route as arriving at the same object as bears the (priorly known) indexical adapting relation to the indexical token. Indexicals do not *tell* what they point at. It is their interpreters that do the

telling. Indexicals do not tell what is in their contexts. The context of an indexical is what *determines* its content.

Nor should we be confused by the fact that it is often possible to *use* a sign to obtain information that *it* is not the function of the sign to convey. For example, you can use any public language sign as evidence that there existed a person, who spoke a certain language, at its point of origin. Like footprints in the sand. Similarly, you could use Perry's partly illegible postcard as evidence that there existed a person who wrote the postcard and who was having a good time at that time. You could reach this conclusion, as Perry has suggested, by making the assumption that the sentence on the postcard is true. If the postcard had said, "I will meet ... in Rome," the blank filled in with an illegible name, on the same assumption you could infer that *someone* had at some time planned to meet *someone* else in Rome, and so forth. But it was not the purpose of the postcard to convey this general proposition. Its purpose was to tell about, say, Alvin. Similarly, from a pointing finger accompanied by the sentence "This is a carpenter ant, you may gather that close to the end of the finger is a carpenter ant, even though you cannot see it from there. But that is not what it is the speaker aims to impart. The speaker intends you to see *what* is a carpenter ant.

Nor should we be confused by the fact that sentences whose public meanings are indexical can also *intentionally be* turned to nonindexical purposes by individual users. Consider an anonymous threat over the telephone, "I'll see that you die," or the child who says, "This is what you are getting for Christmas," while coyly holding it behind her back. These are indexical sentence types, but they are not serving indexical purposes. They are not functioning in a normal way.⁴

All of these uses of language are possible. But what *defines* the indexical use of a sign is that its context is used by the interpreter to *determine* the content, to determine the referent, not talked about in the content. A representation that told of its own relation to something else would not be indexical but self-referential, and it would be its content, not its karacter, that told of the relation.⁵ Similarly, an *inner* representation that told or showed the relation of itself to the world would not on that account be indexical.

⁴ That is, they are not serving their stabilizing functions. See my (1984), chaps. 3 and 4.

⁵ I accept Kaplan's remarks on Reichenbach's confusion of indexicality with self-reference as definitive, a confusion embodied in Reichenbach's term "token reflexive." See (Kaplan 1989), pp. 519-520.

Still, wouldn't a representation telling of something's relation to me that was crucial for action, say the spatial relation of something to me, have to represent me, and wouldn't any representation of me used in this way have to be indexical? Colin McGinn says, "All the [essential] indexicals are linked with I, and the I mode of presentation is subjective in character because it comprises the special perspective a person has on himself. Very roughly, we can say that to think of something indexically is to think of it in relation to *me*, as I am presented to myself in self-consciousness" (1983, 17). It will not be enough, a substantial literature agrees, that an agent entertain representations the *content* of which concerns the relation of herself to the world. That might be done by the use of relation terms along with an inner Millian name that the agent has for herself, or along with any description that happens to catch her uniquely.⁶ What is required is that the agent recognize any such name or description as a name for *herself*, that she identify its content with that of her inner term "I." Only when she grasps that the person so positioned in the world is "I" can she act from a knowledge of that position. And this grasp requires thinking an indexical thought.

Now it is trivial that if I am to react in a special and different way to the knowledge that I, RM, am positioned so in the world, a way quite unlike how I would react knowing anyone else was positioned so in the world, then my inner way of representing RM must bear a very special and unique relation to my dispositions to act. *But what does that have to do with indexicality?* My inner way of representing RM obviously is not just an ordinary name in my mental vocabulary. It hooks up with my know-hows, with my abilities and dispositions to act, in a rather special way. Conceivably, I might also have ordinary mental names for RM, or mental descriptions, that didn't hook up with these know-hows, because I didn't recognize them as having the same content as this special RM representation, just as I might think "Cicero" and then "Tully" without knowing these were thoughts of the same. My way of representing RM is indeed special. Let us call it "RM's active self-thought" or "@RM," for It represents a person

⁶ By a "Millian name" I mean one about the semantics of which nothing can be said beyond that it is a name with such and such a referent. The semantics of mental names of this sort, their psychological possibility, and how they get their referents are discussed in my (1984; 1993, chapter 4; 1994) and, especially, in my (1998a, 1998b).

whom I know, as thought of that way, *how* to manipulate directly; I *know how* to effect her behavior. But in order to know how to manage this person, why would I need to think indexical thoughts? What has know-how to do with indexicality?⁷

⁷ I give accounts of abilities or "know-hows," calling them "competencies," in my (1993 chapter 11; 1994). Abilities express biological purposes and, as such, are very different from mere causal dispositions.

An indexical term is one whose referent varies with context, being identified, for each token, by the fact that it is what bears a certain relation, the indexical's adapting relation, to the token. Applying this principle to indexicals in thought, a thought would be indexical if its context determined its referent, and if there were normal procedures for *identifying* this referent, that is, for determining with what prior or independent thought tokens it coincided in content, procedures depending on the fact that the referent bore the indexical adapting relation to the token. That is, these procedures would work only because the referent bore the adapting relation to the token. Determining for a thought token with what other thought tokens it coincides in content is determining, paradigmatically, which other term tokens it can be paired with to serve jointly as a middle term during inference. (Determining this correctly is best thought of as an ability or know-how rather than as knowledge that.) To illustrate, if there were such things as Millian names in a language of thought, an obvious procedure for identifying the referent of a mental Millian name token would be to pair it with other tokens of the same mental type. But the procedure for pairing a mental *indexical* token with other tokens having the same referent would have to be routed via the *context* of the token: "As I know who is tired when Alvin says "I am tired" through an independent identification of the person who has produced this token of "I." Otherwise, the mental term would not be functioning *indexically*.⁸

⁸ In the earlier version of this essay ("The Myth of the Essential Indexical") I offered the following as an example of indexicality in perception, but I now think that I was mistaken:

It is plausible that in perception the percept is about, refers to, its cause, that is, to the cause of the percept *token*. What the (veridical) percept token *shows* is certain properties of this cause plus, often, the spatial relation of that cause to the perceiving subject. But the percept is not about the generality that there exists a something of a certain character so related to the perceiver; it does not, as it were, translate with an existential quantifier. Rather, it is about, it is a percept of, its *particular* cause. This particular aboutness is expressed through the ability that the normal perceiver has to *track* the particular referent with eyes, head, and, if necessary, feet in order to accumulate more information about it. This process involves *identifying or, what is the same, reidentifying* the tracked object, for it involves using a series of percepts of it, of the same thing, conjointly (compare the function of a middle term) so as to extract information presumed to be about just one thing, about one particular individual. And the method of determining that these various percepts belong together as percepts of the same *SS* the method of tracking *SS* is routed through the fact that the perceived was the *cause* of the percept. It was the cause of the percept in accordance with a certain way of causing normal for that kind of perception, and it will accordingly cause later percepts in a traceable pattern, other percepts with the same referent.

I no longer think that the cause of a percept functions qua cause to determine any part of its intentional content. The confusion arises because the only verbs of perception that we have are "success" or "achievement" verbs, such as "see," "hear" and "perceive," parallel to "remember," "know" and "realize" in the realm of conception. Just as you do not "remember" it if it did not happen, you do not "see" or "perceive" it if it did not cause your perception. In the realm of

conception, however, we have non-success verbs like "believe" and "think," making us easily aware that the intentional object of conception is not always its actual source. For example, the object of belief may not be what is actually being remembered. I might believe that Aunt Nellie once took me to the movies yet actually be remembering Aunt Alice's doing so. Suppose we invent a verb "to visage" for the perceptual realm to parallel the conceptual verb "to believe." Then we have a way of saying that I may sometimes visage things that are not the actual causes of my perceptions. I might visage Aunt Nellie in the distance when it is actually Aunt Alice I am seeing. Compatibly, just as we can say "I remembered it wrongly," we can say "I saw it wrongly." The intentional object of a perception is what is visaged, and this is not always what actually causes the perception. The percept is not an indexical representation of its cause.

Is that the sort of way that my mental term "@RM," the term that bears that quite unique and special relation to my dispositions to act, hooks up with its referent, hooks up with me? Do I succeed in identifying the content of various tokens of my mental "@RM," that is, do I succeed in reidentifying myself, only because I grasp *for each token of "@RM" independently* that it bears a certain adapting relation me? Isn't it more reasonable that my mental "@RM" is simply a mental proper name? I take different tokens of "@RM" to refer to the same not because of their individual contexts, not as a result of some relation each of these tokens independently bears to me, but simply because they are tokens of the same type.

If the thought "@RM" were indexical in my system of mental representation, then its referent would have to be identified via its context. Correlatively, its referent would have to *shift* in accordance with context. And what sort of context would that be?

Perhaps we are supposing the relevant context to be the *mind* "@RM" appears in. (Devitt: "The reference of 'I' is determined by the head it is in" [1984, 400].) Are we supposing, then, that in my language of thought, in my inner system of representation, tokens of "@RM" might appear in your head so that I must check whose head "@RM" appears in before identifying its content? Or are we supposing, perhaps, that my mental language is some sort of universal language, one selfsame language that all people speak in their heads, so that rather than "@RM," I must think "I," the self-name in universal Mentalese? But even if this were the case (maybe Jerry Fodor thinks that it is), in what sense would the self name be *indexical*? Certainly there would be no interpreter for *whom* it would be indexical. Or is the claim that it would be indexical for God, or for an intrusive mind or brain reader?

But the language of thought, if there is such, is not God's language, nor brain-reader language, but the thinker's language. God might read tokens of the universal self name, tokens of mental "I," indexically, determining the reference of each by first noting whose head it was in. Similarly, I might "read a chameleon's back" descriptively, as a *natural* sign telling what color the chameleon has been sitting on, although the chameleon's color has no descriptive meaning for the chameleon. The universal self name would not be an indexical for the selves who named themselves with it, and when read by someone else, it could function only as a natural sign, not as a sign in the language of thought.

So my mental "I," my "@RM," is not an indexical. More reasonable (though, I will soon argue, probably still incorrect) would be to take it as a (Millian) *name* for me; your "I," which may well have quite a different mental shape, as a (Millian) name for you. But supposing this to be so, there is still the question why using the public indexical "I" seems to express this mental name in a way that using one's name or a description of oneself does not. If I say to you "I was born in Philadelphia" I express to you that the very agent whose presence you are now in was born in Philadelphia, whereas if I say "Ruth Millikan was born in Philadelphia" you will not understand that it concerns the person present unless you happen to know my name. And it also seems true that I might say "Ruth Millikan was born in Philadelphia" without knowing I was Ruth Millikan, whereas saying "I was born in Philadelphia" shows that I believe of the very bearer of my active self name, "@RM," that she was born in Philadelphia. And yet this is not quite accurate. What is true is that for me to say anything at all is for me literally to put words in the mouth of this body, so that if we grant that I understand English and also understand which body it is I control, we must also grant that I realize that any "I" that I intentionally produce will

refer to the controller of this body. Is it possible to be deluded about which body I control so that I might say "I was born in Philadelphia" expecting the words to emerge out of someone else's mouth? If not, that would be an empirical fact about the impossibility of certain kinds of neurological damage or disturbance. The psychological literature shows that a great many mental disturbances that seem inconceivable in fact are occasionally realized.

A more interesting question is how to understand that a name for myself might be "active." A way to begin, I believe, is with the notion of a "pushmi-pullyu representation" or "PPR" (Millikan 1996). A PPR is a representation that is fact stating and directive at the same time, or better, is undifferentiated between these two modes. The simplest examples are found in nature. The beaver's tail splash tells that there is danger and also tells other beavers to dive under. The dance of the honey bee tells where there is nectar and also tells other bees where to go. I have argued that human intentions are inner PPRs, representing future facts about oneself that may need to be considered in further planning and at the same time guiding action towards realization of those very facts (1996). One's active self name, then, is the PPR name for oneself that occurs in the inner representations that are one's intentions.

But this is still not quite right, as I think. I suspect that the self is not routinely represented at all either in one's expectation about one's future or in one's intentions to act. Notice that in soliloquy there is no explicit reference to the self: "To be, or not to be;" "And now to bed." Also, when A hands to B a form that is to direct B's intentions, no explicit reference is made to B's self: "Close the door, please;" "Be quick now." Similarly, when I see or otherwise perceive the spatial relation of an object to myself, often I need not perceive any portion of myself in order to act with regard to it. For example, to walk towards the church at the end of the square, I need not perceive my legs or any other part of myself. And yet, I have said, my spatial relations to other things are an important part of what is represented in perception. How can this be?

Once again, bee dances (Of course! What else!) are the key. What a bee dance shows is the direction, relative to hive and sun, in which there is nectar. But there are no variables in the bee dance that show the hive, or the sun, or that it is nectar that is being represented. For example, there is no aspect of the bee dance that, if varied or replaced, would show the relation of nectar to hive and moon, or the relation of danger to hive and sun. Similarly, the visual percept shows the spatial disposition of other objects relative to where I am, but there is no variable in it that might be replaced to show the spatial dispositions of these objects relative to any other spatial point of view. I can imagine and I can conceive from spatial points of view I do not currently occupy, but I cannot perceive from other points of view. That is of the nature of perceptual representation, designed, in the first instance, to guide action.

Similarly, my intentions are not designed to guide anyone's actions but my own. Hence they have no need explicitly to represent me. I do not have to take into account variations in whose head a token of "@RM" appears, nor variations in whose action it is supposed to guide. But, once again, this inarticulateness in how the self is represented has nothing to do with indexicality.

But we have not disposed yet of the quite all of the myths. What about mental indexicals corresponding to "here " and "now"? Corresponding to "here" are thoughts of things understood as being close to me. Thus "here " does not express an indexical thought but merely a thought of

an impure relational property. Thoughts of impure relations, whether the relata are explicitly represented or not, are not, as such, indexical. Being more careful, however, what we express with "here" are thoughts of things understood to be close to me now. Perry tells us, "... it is plausible to suppose that other indexicals can be eliminated in favor of 'I' and 'now'.....But elimination of either 'I' or 'now' in favor of the other seems impossible." I have tried to show how to eliminate mental indexical 'I'. Can we also eliminate "now"?

Using Perry's example, if the absent minded professor intends to go to the department meeting and knows that it starts at noon, even though it is in fact noon, the professor may not move towards the meeting for he may not realize that it is noon now. Whatever is a mental correlate of "now," like the mental correlate of "I," appears also to be, as such, an element in PPRs. From "I am going to the meeting at noon" coupled with "It is now noon" is derived the thought "I am now going to the meeting." And like a bee dance, the thought "I am now going to the meeting" serves both to represent what is happening and to cause it to happen. That accounts for the action-producing characteristic of the thought. Considering this thought in so far as it represents to its thinker both when and who is going, we have also eliminated the indexicality of the part showing who. We did this by pointing out that the context of whatever part shows the who is constant for a given thinker. The same thinker does not think in this way of a variety of who's. But in whatever way the thinker thinks of when he is going, surely the same thinker does think of many different whens. Moreover, which when a thinker is thinking of in this way surely changes with the time of the thought. Doesn't it follow that the thought must be indexical?

Surprisingly, not. Consider a scale drawing of a building where one centimeter represents one meter. Compare a scale drawing of a small insect where one centimeter represents one millimeter. Now consider a scale drawing of a cross-stitch pattern where one centimeter represents one centimeter. Surely none of these representations contain indexicals. On the last drawing, one centimeter does indeed represent one centimeter, but it does not index itself, nor it is "token reflexive." Similarly, children's marking pens are colored on the outside to indicate the color on the inside, red on the outside standing for red on the inside, blue standing for blue, and so forth. Or perhaps the colors on the inside are a shade lighter than the ones on the outside. Another example is the relative places of dots on a map which show the relative places of cities on the earth's surface, geometrical relations on the map indicating the same geometrical relations on the earth.. This kind of representational system bears a strong resemblance to systems exhibiting compositionality, possible transformations (mathematical sense) of the representation corresponding systematically to possible transformations of the represented. One centimeter longer corresponds to one meter longer, or to one millimeter longer, or to one centimeter longer; one shade redder corresponds to one shades redder, twice as far from represents twice as far from, three dots in an isosceles triangle represents three cities in an isosceles triangle, and so forth. Surely there is no hint of indexicality here.

Now consider the beaver's danger signal. It is not indexical, but the place of the splash represents the place of the danger and the time of the splash represents the time of the danger. Similarly, the absent minded professor's thought that now is the time of the meeting represents the time of the meeting with the time of the thought. It is not indexical. The professor need not have any independent hold on the relation of the thought to the time of the meeting SSas one would need an independent hold on who it was that wrote "I am having a good time" SSin order

fully to appreciate his thought that the meeting is now. If he has mistaken the time and, having discovered this, sometime later again thinks that the meeting is now, he does not think the same indexical thought type in another context. He thinks a different thought altogether. Similarly, if the cartographer corrects himself by moving the dot for Chicago to a different location, he does not use the same indexical representation type in a different context. He uses a different representation altogether though, of course, one from the same representational system.

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