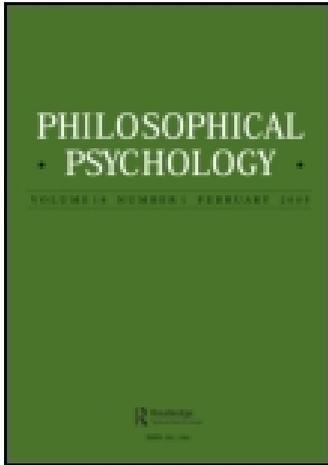


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# Do Characters Play a Cognitive Role?

Vojislav Bozickovic

*Focusing on the ‘today’/‘yesterday’ case, I argue that Perry is wrong in accounting for and explaining indexical belief states in terms of Kaplanian characters and in taking these states to be internal (narrow) mental states inside the subject’s mind. It is shown that this view is at odds with Perry’s own reliance on remembering a past day as a necessary condition for retaining a belief about it. As a better tool for explaining appropriate indexical beliefs, I offer an alternative which is neo-Fregean in that it takes senses or modes of presentation as playing only a cognitive, not a semantic role. It, however, takes remembering a past day as necessary for retaining a belief about it, rather than keeping track of time as urged by Evans. I also consider unfeasible Evans’s further requirement which he takes over from Frege: that in order to retain a belief about a certain past day we need to think of it now under the same mode of presentation as we did on that very day.*

## 1. Perry’s View

According to Kaplan (1989 a), an account of the meaning of indexicals and sentences that contain them should be based on the concepts of *content*, *character* and *context*. The *content* of a statement (i.e. an indexical sentence in a context) is a singular proposition which involves, as its constituent, the object referred to by the indexical (and is thereby trivially *de re*). The *character* of the sentence used is its linguistic meaning [which Perry (1977) also used to call its role]. Which proposition a statement expresses depends not only on its character but also on the *context*: who is speaking, to whom, when, where and in what circumstances. A character is thus a rule that takes us from context to content.

Perry (1997) postulates a level of meaning for indexical beliefs that is analogous to, but *not derived from*, that of character for sentences. Since characters correspond to internal psychological states, human behaviour should be explained and

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predicted in terms of the *epistemologically transparent* (doxastic) characters, not the *epistemologically opaque* contents. And it is characters, not contents, that line up with causal roles of beliefs, where the causal role of a state is meant to be ‘various combinations of factors that bring the state about, and the various combinations of factors it brings about in turn’ (Perry, 1997, p. 20). The same proposition/content can correspond to different causal roles/characters, and vice versa. Following an example that Perry derives from Kaplan, suppose that David Kaplan accepts sincerely the character ‘My[self] pants are on fire’, where the bracketed material identifies the underlying cognitive role involved, based on relations that an object can have to a given episode of thought or a particular belief. Suppose further that he sees himself in a mirror but believes himself to be seeing someone else with his pants on fire, and, pointing at the man in the mirror, accepts ‘His [the man I am looking at] pants are on fire’. The different characters involved here account for two different kinds of action that Kaplan is disposed to take here. In the former case he would, say, try to take his pants off and throw them out of the window, while in the latter he would try to pour a bucket of water on ‘the man in the mirror’. But, the content corresponding to these two characters is the same—that David Kaplan’s pants are on fire—and it is psychologically inert. It ‘does not contain the *mode of presentation* or *cognitive fix* that the believer has on the individual’ (Perry, 1980, p. 71). Alternatively, the character ‘My[self] pants are on fire’ accounts for ‘the common nature that different beliefs with different contents belonging to different people at different times might have, and in virtue of which these different situations might instantiate the same psychology of content’ (1997, p. 23). Since characters play this cognitive role, Perry also calls them senses or *modes of presentation* but insists that they differ from Frege’s senses in that Frege’s senses, being ideal procedures for determining reference, are meant to be complete (Perry, 1977, p. 475), which is not the case with characters. And, as Fregean thought is ‘first and foremost that for which the question of truth arises’, it lines up with Perry’s content rather than character. In keeping sense and thought distinct, Perry speaks of *entertaining* a sense and of *apprehending* a thought (1977, p. 493).

Turning to the ‘today’/‘yesterday’ case as the main concern of the present paper, the difference between Frege and Perry is this. When the subject, in a normal course of circumstances, thinks of a certain day *d*, first as *today* and on the following day as *yesterday*, that it is (was), say, a nice day, he is, on Frege’s view, thinking the same sense/thought twice. What is being adjusted is just the means of framing this sense/thought. By contrast, ‘today’ and ‘yesterday’ are for Perry more than this. They are different characters/senses and so are ‘today [the day of this thought] is a nice day’ and ‘Yesterday [the day before the day of this thought] was a nice day’, although the content/thought corresponding to them in the given context—that *d* is nice—is the same. The difference in the characters the subject accepts is in turn taken to account for the difference in his belief states and behaviour. This might seem right, for, he will apparently think of this day in two different ways, first, say, as *the present day* and then as *the previous day*. His thinking about it as *the present day* can make him pragmatically attached to it because he can make changes in what

happens on it, whereas his thinking about it as *the previous day* cannot make him pragmatically attached to it because he can no longer make any changes in what happens on it (see Perry, 1997, p. 33). Considering some non-standard cases will, however, reveal that it is not characters that account for indexical belief states and behaviour but rather senses or modes of presentation which are wholly independent of characters, and that Perry is wrong in conflating the two.

## 2. The Rip Van Winkle Case

Both Kaplan (1989a) and Perry (1980, 1997) discuss the case of Rip Van Winkle who slept for 20 years and woke up thinking he slept for only one day. In view of this possibility, Kaplan remarks that Frege's strategy concerning the retention of belief by means of replacing 'today' with 'yesterday' does not work. If, on the day he fell asleep, call it *d*, Rip Van Winkle acquired the belief which he (in Perry's terms) held under the character 'Today [the day of this thought] is a nice day', he will, upon waking up, try to update it by means of 'Yesterday [the day before the day of this thought] was a nice day'. But, due to Rip's losing track of time, this, in Kaplan's view, shows that the Fregean strategy of adjusting verbal expression in order to express the same belief leads us to deny that Rip has retained the given belief.<sup>1</sup> For, what is left of the original belief is, in Perry's terms (1997, p. 36), just the false belief about the day before he woke up (presuming that it was not a nice day). But the false belief cannot be the true belief, suggesting that Rip in fact lost the given belief. Yet, this in Kaplan's view seems strange, for Rip surely seems to *remember* (that) *d* (was a nice day).

This verdict is the outcome of seeing Fregean sense as playing both a *semantic* and a *cognitive* role. Sense is meant to both semantically determine the referent and to exhibit it via a cognitively significant *mode of presentation*. And, as the token of 'yesterday', that Rip is accepting, semantically determines the day before he woke up, his belief *ipso facto* needs to be about that particular day, not about *d*, which is implausible.

Kaplan provides no solution to this problem and it is doubtful that one can be provided once we take Fregean sense as playing a dual semantic/cognitive role. As a neo-Fregean, Evans, on the other hand, insists that the sense of an indexical, being different from its linguistic meaning, plays only a cognitive, not a semantic role. This entitles him to claim that Rip is having a belief about *d* in spite of the token of 'yesterday', in the given context, *semantically* determining the day before he woke up. Yet, Evans denies that Rip is having a belief about *d* (as well as about the day before he woke up) because he has lost track of time. His response to Kaplan's aforementioned remark is:

I see no more strangeness in the idea that a man who loses track of time cannot retain beliefs than in the idea that a man who loses track of an object cannot retain the beliefs about it with which he began. If one has in fact lost track of time without knowing it, then one could think that one had retained one's belief when one has not. (Evans, 1985, p. 311, note)

Keeping track of time has thus been made a *necessary* condition for retaining such a belief. And Rip's apparent retention of his belief about *d* is explained away by his being under the *illusion* of having retained it.

Evans might be right about the case of Rip Van Winkle who has been out of epistemic contact with so many days. But, we shall see that the requirement that keeping track of time is necessary for retaining appropriate beliefs is too severe.

Unlike Evans, and like Kaplan, Perry (1997) holds that Rip retains his belief acquired on *d*. When he awakes, he updates it according to his view of how the context has changed. His view about the change of context is mistaken, and the new character 'Yesterday [the day before the day of this thought] was a nice day' is not a *way of believing* the original content, where, to recall, the bracketed material identifies the *underlying cognitive role* involved, based on relations that an object can have to a given episode of thought or a particular belief. But that is no reason to say that Rip has lost his original belief, claims Perry, since he retains it under various other backup characters. That is, when Rip believes, towards evening, as it grows dark, of *d*, that it was a nice day, he has certain *memories* of that day. So, the character 'That day [the day I remember] is or was a nice day' is, in Perry's view, available to sustain Rip's belief when the attempt at the updating goes awry. Even if these memories fade, there is, claims Perry, the character 'That day [the day this belief was acquired] is or was a nice day' (1997, p. 36).

### 3. Identity of Belief State is not Tied to Identity of Character

What Perry suggests is that Rip has *retained* and *updated* his belief about *d* although the character he accepts is, according to *our* (*ex hypothesi* correct) view of how the context has changed, not suitable for him to frame it in. In the given context, this character does not semantically pick out *d* but rather the day before he woke up, and is thereby not a way of believing the original content. On the other hand, the suggested backup characters are, according to *our* (correct) view of how the context has changed, suitable for him to frame his belief about *d* in because, in the given context, they are *ways of believing* the original content whereby they also semantically pick out *d*.

There are, however, two problems with this. First, all Perry has shown is that such characters are available to Rip according to our, not his, view of how the context has changed. Characters are *epistemically transparent*. As a result, Rip will know that 'Yesterday [the day before the day of this thought] was a nice day' and 'That day [the day I remember] was a nice day' are different characters (types). And if so, it is mysterious why he is to accept such a backup character (which is awkward *for him* at that) if it is *unknown* to him that the character 'Yesterday [the day before the day of this thought] was a nice day' in the given context is not suitable for him to frame his belief about *d* in. Second, granting Perry that Rip's belief about *d* has been *retained* under *various* backup characters as well as under the mistakenly accepted 'Yesterday [the day before the day of this thought] was a nice day' means that the identity of the belief state he is in is not affected by whichever of these

characters he accepts, suggesting that characters (as Perry conceives of them) are *not ways of believing* the content. Rip's belief is being retained and updated in spite of his acceptance of the unsuitable character and it involves a particular *way of believing* the content which will be the same if he is to accept any of the suitable characters. According to *his* view of how the context has changed, this is a situation in which he chooses (between) two or more equally suitable characters (types) as (between) two or more different means of updating the same belief.<sup>2</sup> The underlying cognitive roles accompanying these characters presuppose that having *memories* of *d* is *necessary* for Rip's retaining his belief about it. This is so even if his memories have faded and the only backup character left for him to hang on to is 'That day [the day this belief was acquired] was a nice day'. For, Rip is *updating* his belief about *d* because he *remembers* it; otherwise there would be nothing to update. Remembering *d*, that is, furnishes Rip's *disposition* towards it, which underlies his belief about it. (It is understood that, contra Evans, having such a disposition does not require keeping track of time.) Characters are there only to frame an independently generated belief (state).

In general, it is a sound claim that *retaining* and *updating* a belief about a certain day requires having a memory of it. This, in turn, makes it possible for us to be in the same indexical belief state about that day under different characters (types). It is then not true that the identity of such belief states that explain and predict human behaviour is tied to the identity of characters. Nor is it true that such states are internal (narrow) states that are epistemically transparent. Since they are memory-based, it is possible for the subject to take himself as being in such a state when he is not because he does not remember what he takes himself to remember, and vice versa.

On finding out that he slept for 20 years, Rip will need to update his belief yet again as a result of taking a different temporal perspective towards *d* which requires additional identifying information. He will typically frame it with the character 'That day [the day I remember] was a nice day', no longer finding the character 'Yesterday [the day before the day of this thought] was a nice day' suitable because, according to his (this time correct) view of how the context has changed it does not semantically pick out *d*, the day that his belief state is about.

As a necessary condition for Rip's being in the belief state he is in about *d*, his remembering it makes *d*, together with the time at which the belief is held, the relevant contextual feature that his acceptance of the appropriate character is based on.<sup>3</sup> On *d*, when his belief was acquired, the object of his belief (i.e. *d*) and the time at which this belief was held (*d* again) coincided, making the character 'Today [the day of this thought] is a nice day' appropriate for Rip to frame his belief in. When he woke up, and learned that he had slept for 20 years, the object of his belief (i.e. *d*) and the time at which his belief was now held were (taken to be) wide apart, making the character 'That day [the day I remember] was a nice day' appropriate for this purpose, and similarly for other characters. The time at which the belief is held determines which character is to be used to match *d* in respect of its position in the sequence of days. This is to say that the *cognitive* fix that Rip

is having on  $d$  directs the character's *semantic* fix, i.e. that the character is playing only the semantic, not the cognitive role.

As a rule that takes us from context to reference, i.e. as a function from context to content, a character—claims Perry (1997, p. 15) in relation to Kaplan's linguistic characters—takes a context as input (as its argument) and provides a reference (content) as output (as its value). In terms of our result, this means that  $d$  and the time at which Rip's belief about it is held are taken to be the input (argument) of the appropriately chosen character, whereas  $d$  is also its output (value). In virtue of his cognitive fix on  $d$  and of the time of holding his belief, he will be led to accept the character that will have a semantic fix on it.

Perry's view that behaviour is to be explained in terms of character (Perry's sense, causal role) which takes us from an occasion of utterance to a certain object involves the view that the sense of an indexical is a criterion for recognizing, i.e. determining, the referent, adjusted to the indexical case. The *cognitive* and the *semantic* roles that character is taken, on this view, to be playing are seen as tied together such that there is a pre-established harmony between them (Perry, 1980, p. 76–77). There is indeed a pre-established harmony between the cognitive and the semantic features of one's indexical belief, but not, as we have seen, a harmony that has the cognitive feature lining up with the character.

#### 4. The Existence of Belief State is not Tied to the Existence of Character

Suppose next, to follow an example from Branquinho (1999), that at 11:58 p.m., on a certain day, make it  $d$  again, a certain man, Jones, accepts 'Today [the day of this thought] is a nice day'. Three minutes later, he is unsure if midnight has passed and has no means of checking it. He is thereby not in a position to accept 'Yesterday [the day before the day of this thought] was a nice day' at 00:01 a.m., on day  $d+1$ , because he has lost track of time. For Evans, this would mean that Jones is prevented from retaining at 00:01 a.m. on  $d+1$ , the belief he held on 11:58 p.m. on  $d$ . Still, there seems to be no doubt that he continues to believe what he believed three minutes earlier, even if he is *ex hypothesi* not able to think of the day in question as *yesterday* or *the day which immediately precedes today*, or to identify it by means of knowledge of his own position in time.

Evans's requirement that keeping track of time is necessary for retaining appropriate beliefs is thus shown to be too severe. For, unlike Rip Van Winkle, who has perhaps lost his belief because of being out of epistemic contact with so many days, Jones seems to have retained his belief at 00:01 a.m. on  $d+1$ , on the basis of remembering  $d$ , in spite of his losing track of time. One can thus be in a memory-based belief state about a certain day without accepting any character at all, making it the case that the existence of belief explanatory of behaviour is not tied to the existence (acceptance) of character.

The same result can be established by recalling that, as argued, memory-based belief states are not epistemically transparent. The subject who mistakenly takes himself not to remember a day that he in fact remembers will have no reason to

accept a character that would be of any consequence. Neither needs the subject to be aware that he is in such a state the whole time that he is in it; hence, while being unaware of this he will not be urged to accept any of the relevant characters. He can perhaps be said to be still disposed to accept such a character but then he will be equally disposed to accept *any* characters suitable for framing the belief state that he is in which would just reinstate the last section's claim that the identity of his belief state is not tied to the identity of character.

### 5. Identity of Character is not Tied to Identity of Belief State

We saw that, on Perry's view, the same character type accounts for the common nature that different belief states have, and in virtue of which different situations instantiate the same psychology of content, *irrespective of content and context*. The character 'That day [the day I remember] was a nice day' will always instantiate the same psychology of content, no matter when, where, and by whom it is accepted, and which day is being thought about. With this in mind, suppose that, on the same occasion, somebody simultaneously accepts two tokens of this character taking them to concern two different past days whereas they in fact concern the same day. The character accepted is the same, the belief states he is in are different (i.e. of different types). So, where does, on Perry's view, this difference lie if not in the character itself? In handling some similar cases, Perry hints that it is accounted for by the differing contexts accompanying, respectively, two different tokens of the same character (e.g. 1980, p. 80). But, we just saw that, according to his view, context does not play such a role. Besides, the context accompanying, respectively, the two tokens of this character is the same, since the day thought about and the time at which the two beliefs are held are the same. A way to see these contexts as different would be to incorporate into them the different *memory-based modes of presentation* of the given day, i.e. the different *memory-based ways of believing* the (object-involving) content. This would, however, mean giving up the view that characters line up with belief states in favour of a view akin to that defended in the present paper.

### 6. The Existence of Character is not Tied to the Existence of Belief State

When Rip awakes, he accepts the character 'Yesterday [the day before the day of this thought] was a nice day' which, in the given context, semantically picks out the day before he woke up. Yet, in Perry's view, he cannot be in a belief state that is to be accounted for in terms of this character because he does not remember this day. Since he slept through it, there is nothing to remember. Similarly, suppose somebody else, say, Smith, on *d* also acquires a belief about *d* that it is a nice day and on *d* accepts the character 'Today [the day of this thought] is a nice day'. During the following night she suffers a loss of memory and no longer remembers *d* although she takes herself to remember it and on the following day, *d* + 1, she sincerely accepts the character 'Yesterday [the day before the day of this

thought] was a nice day'. As a result, a memory-based belief state that this character is meant to account for is not available to her.

The character's playing a semantic role it is playing is thereby not sufficient for it also to play a cognitive role it is meant to be playing. Hence, the existence (acceptance) of character is not tied to the existence of a corresponding belief state.<sup>4</sup>

## 7. The Stability of Belief

If, on  $d$ , the subject believes of it that it is a nice day, he will typically frame his belief with the character 'Today [the day of this thought] is a nice day', and, on the following day,  $d+1$ , with the character 'Yesterday [the day before the day of this thought] was a nice day'. Since these two characters seemingly involve the respective *ways of thinking* of  $d$ , on  $d$  and on  $d+1$ , one is, as noted, tempted to conclude that his respective belief states are to be accounted for by these characters. But the foregoing discussion showing that belief states are in relevant respects independent from characters has made it clear that this is not true.

This is not to say, though, that the subject's belief state about  $d$  will remain the same on  $d+1$  as it was on  $d$ , as held by Frege and Evans. For, his belief state on  $d$  differs from his belief state on  $d+1$ ; the former involves a perception-based *way of thinking* about  $d$ , the latter a memory-based one. But, allowing *ways of thinking* or *modes of presentation* to change over time creates a problem if we want to see them as part of belief content, for this would make the content of one's belief unstable and shifty. However, *detaching* modes of presentation from characters does not force us into incorporating them into belief contents. We can continue to see these contents as consisting of only objects and properties or relations. This leaves us with a succession of suitably related modes of presentation to account for the retention of belief.<sup>5</sup>

Suitably related modes of presentation are, in the case under discussion, those that succeed one another in the process of the subject's thinking of the same day. On the morning of  $d$ , the subject will think of it that it is a nice day under a certain mode of presentation and, on the evening of  $d$ , he will perhaps think of it under a different one as  $d$  is receding into the past, where both modes are *perception-based*. Then, on  $d+1$ , his thinking of  $d$  will involve a *memory-based* mode of presentation or rather more such modes succeeding each other as  $d$  becomes more and more distant. The characters that he will on these occasions respectively accept share with these modes the feature of being related to the same day, i.e.  $d$ . They have a *semantic* fix on the same referent that these modes are the modes of presentation of. The character 'Today [the day of this thought] is a nice day', accepted, respectively, on the morning and on the evening of  $d$  has on both these occasions a semantic fix on the same day in spite of different modes of presentation being in the two cases (arguably) associated with it, and so does the character 'yesterday [the day before the day of this thought]', accepted

on  $d + 1$ , that yet another mode of presentation is being associated with (or more than one as time goes by). In addition, there is a systematic link that a type of a mode of presentation has with a type of a character. The character ‘today [the day of this thought]’ bonds only with appropriate perception-based modes of presentation, while the character ‘yesterday [the day before the day of this thought]’ bonds only with appropriate memory-based ones, and similarly for other characters.

Since ways of thinking are finer grained than characters, an accurate description or ascription of the subject’s belief states concerning  $d$  in the described situation needs to take into account the subject’s *ways of thinking* of  $d$  and not (only) the character(s) he accepts.<sup>6</sup> It is to be noted that when the subject thinks of  $d$  on  $d + 1$ , accepting ‘Yesterday [the day before the day of this thought] was a nice day’, his way of thinking of  $d$  is going to be the same whether his belief about weather on  $d$  is true or false. He might have been mistaken about the weather from the start or misremembered it later on; yet in both these cases, as well as in the case of having a true belief about it, his belief was first acquired through a perceptual encounter with  $d$  issuing in a particular way of thinking of  $d$  which gradually gave way to his memory-based way of thinking of it. It is the same memory-based way of thinking of  $d$  that furnishes the subject’s belief on  $d + 1$ , whether this belief is true or false and (in addition to the same character used to frame it) is the key common element shared by the true and the false belief.

Memory-based belief states of the subject are states explanatory of action and behaviour. Rip’s behaviour in the foregoing scenario was the same no matter which of the suggested characters he was to accept. Similarly, the discussed case of a person being in two different memory-based belief states under two different tokens of the same character shows that it is these belief states and not the character that account for his behaviour. Acquiring such a belief state concerning  $d$  requires having at some point cognitive contact with it, while accepting an appropriate character does not require this. The existence and the identity of a belief state is tied to the existence and the identity of the day thought about while the existence and the identity of a character is not.<sup>7</sup>

## 8. Concluding Remarks

In sum, considering the ‘today’/‘yesterday’ case, I agree with Perry in holding that character, together with context, semantically determines reference which, concerning indexical sentences, amounts to their object-involving content. Together with neo-Fregeans such as Evans, I, however, disagree with Perry’s view that cognitively significant ways of believing the content are to be identified with or accounted for in terms of characters. To show this, I have argued that characters and ways of believing the content are independent of each other both in terms of their respective identity and existence.

## Acknowledgements

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## Notes

- [1] The reference here is to Frege's famous statement: 'If someone wants to say today what he expressed yesterday using the word "today", he will replace this word with "yesterday". Although the thought is the same its verbal expression must be different in order that the change of sense which would otherwise be effected by the differing times of utterance may be cancelled out'. (Frege, 1918, p. 10).
- [2] According to Frege's intuitive criterion of sameness for thoughts, the thoughts (beliefs) framed by means of these characters are the same because no one who understands them at a given time would assent to one of them but not to the other. (See, e.g. Frege, 1906, p. 197.) Typical cases of framing the same perception-based belief state by means of different characters (types) involve, respectively, interchangeable uses of the characters (formed by means of) 'today' and 'this day', or 'he' and 'that man' functioning as perceptual demonstratives.
- [3] Cf. Kaplan (1989b, p. 588), who claims that in the case of indexicals such as 'today', the relevant contextual feature is always the referent.
- [4] A parallel problem would arise for a view that would, like Perry's, tie behaviour to character but, unlike him, took keeping track of time, instead of remembering, as a necessary condition of belief retention.
- [5] While being unsympathetic to this idea, Evans does, on the other hand, accept it in the sense of allowing two different subjects to communicate successfully by sharing not the same, but different, suitably related modes of presentation. Furthermore, somebody who would, like Jones in the foregoing example, temporarily lose track of time but retrieve it shortly afterwards, say at 00:02 a.m. on  $d + 1$ , would in Evans's view, first lose and then retrieve his belief. This is to say that he would either retrieve the same belief token or acquire a different one suitably related to it. The former option is implausible because belief tokens, once they have ceased to exist, cannot be retrieved but only replaced with other suitably related ones, while the latter is inconsistent with Evans's view that belief retention is the retention of the same belief token.
- [6] A description or ascription of the subject's belief states also needs to be sensitive to the fact that the believer's ways of thinking need not be the same as those of the person providing it. Mark Richard (1990) tackles this kind of issue in terms of belief contents which contain both objects and properties (as in a Russellian proposition) and linguistic expressions in a language of thought which represents them. He calls them Russellian annotated matrixes (RAMs), urging that the ascriber's RAM needs to be related in a certain context-restricted way to one of the believer's RAMs for an ascription to capture the believer's way(s) of representing the objects and properties that his belief concerns. Though similar to the foregoing ways of thinking of objects/days (or of Russellian propositions), the cognitive components that RAMs include seem (unlike ways of thinking) to be epistemically transparent. Richard claims that it is not particularly useful to individuate psychological states like belief in terms of Kaplan's characters of the sentences that realize those states. For, Kaplan's character is a function from context to reference and thus is no more psychologically transparent than the reference (Richard, 1990, p. 265). In contrast, Perry's doxastic characters are, as we saw, epistemically (psychologically) transparent and have a function similar to that of the cognitive components of Richard's RAMs.

- [7] One cannot be in a relevant memory-based belief state about *d* without remembering it even if one (mistakenly) takes oneself to remember it. I hold that the same applies to perception-based belief states but I will not labour the point here. The intuitive criterion of difference for thoughts which Evans (1982, section 1.5) derives from Frege—that two thoughts are different if it is possible for someone (not anyone) to understand them at a given time while coherently taking different epistemic attitudes towards them—can be used as a criterion of difference for the belief states in question. The fact that not everyone needs to realize that two different thoughts (beliefs states) are different makes this criterion sensitive to the fact that such belief states are not epistemically transparent.

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