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Memory and the concept of time

Christoph Hoerl

In *The Problems of Philosophy*, Bertrand Russell writes of a form of memory the essence of which is constituted by “having immediately before the mind an object which is recognized as past” (Russell, 1912, p. 66), and adds the following:

But for the fact of memory in this sense, we should not know that there ever was a past at all, nor should we be able to understand the word ‘past’, any more than a man born blind can understand the word ‘light’. (ibid.)

A similar passage can already be found earlier in the same book:

It is obvious that we often remember what we have seen or heard or had otherwise present to our senses, and that in such cases we are still immediately aware of what we remember, in spite of the fact that it appears as past and not as present. This immediate knowledge by memory is the source of all our knowledge concerning the past: without it, there could be no knowledge of the past by inference, since we should never know that there was anything past to be inferred. (Russell, 1912, p. 26)

It is plausible to interpret these remarks as being concerned with the particular type of memory that psychologists – and increasingly also philosophers – refer to as *episodic memory* – that is, the distinctive capacity we have for recollecting particular past

events that we have personally experienced.¹ Thus interpreted, Russell's claim is that the possession of episodic memory is necessary for a grasp of the concept of the past, and, by extension, a full understanding of the concept of time. Understanding what it is for there to have been a past, and for events to have happened in the past, depends on the possession of episodic memory. This is the claim I wish to investigate in this chapter. I will refer to it as the Dependency Thesis.²

1. The idea of episodic memory as a generative capacity

Suppose the Dependency Thesis is true. If the possession of episodic memory is indeed necessary for a grasp of the concept of the past, how should we think of the connection between the two? There is a certain conception of the general nature of memory that, at least *prima facie*, seems to be in tension with the thought that memory could itself play a role in our grasp of a certain concept. That is the conception of memory, in general, as being *preservative*, i.e. as preserving knowledge that has been acquired by other means, rather than itself generating or being a source of knowledge.

As applied to *semantic memory*, the idea that memory is preservative in this sense possesses a great deal of plausibility. This is the kind of memory that simply involves the retention of knowledge of propositions such as 'Paris is the capital of France', or 'Caesar crossed the Rubicon'. In order to acquire and retain such knowledge, the subject must already be able to grasp the concepts that figure in the

¹ The current usage of the term in psychology is due to Tulving (1972, 1985). Philosophers who make use of the term include Martin (2001), Soteriou (2008) and Michaelian (2016).

² See also Wittgenstein (1958, vol. II, pt xii), Dummett (1993), Hoerl (1999), and Debus (2013) for similar claims.

relevant propositions; otherwise she won't understand and be able to commit them to memory in the first place. (Note that this applies also to the contribution the past tense form of the verb makes to the meaning of the proposition in the second example.) Thus, semantic memory, due to the way in which it simply preserves propositional knowledge, doesn't seem to be the kind of psychological faculty that could explain how we come to have some specific concept in the first place. On these grounds one might think that if episodic memory, too, was purely preservative, it also couldn't play any role in our grasp of concepts, including the concept of the past.

Obviously, one possible way in which one might react to this perceived tension is by simply denying that episodic memory is (purely) preservative, and instead arguing that there is also an epistemically generative aspect to it. There are in fact a number of theories of episodic memory that effectively imply that recollecting an event in episodic memory makes available to the subject some kind of information that goes beyond (or is at least different from) the information that was available to her when she experienced the event.³ Here, for instance, is Gareth Evans writing about the possibility of a form of memory which ensures

³ Locke (1690 bk. II, ch. 10, §2) portrays memory as being generative when he defines it as “a power [possessed by the mind] in many cases to revive perceptions which it has once had, with this additional perception annexed to them, that it has had them before”. For more recent examples, see Dokic (2001) and Fernández (2016). There are at least two senses in which memory could be thought to be epistemically generative. It might make available to the subject *content* or *information* not already available through the original experience or learning episode, or it might be able to produce positive epistemic qualities such as justification (on the latter, see, e.g., Lackey, 2005). In the current context, when I speak of the idea that episodic memory is epistemically generative, I have in mind specifically the former.

the subject's possession of a *non-conceptual* informational state, whose content corresponds in a certain respect with that of some earlier state of the subject (a perceptual state); although its content differs from that of the antecedent perceptual state in that, if the subject is in the memory state, it seems to him that such-and-such *was* the case. (Evans, 1982, p. 239)

Does adopting a conception of episodic memory as epistemically generative help in fleshing out the Dependency Thesis? The traditional way in which something like the general idea sketched by Evans has usually been construed is in terms of what is sometimes referred to as the *empiricist theory of memory*. According to this theory, there is supposedly something *about* the state in which the subject finds herself when she remembers – a specific feature of the phenomenology of being in that state – that indicates to her that that state represents a past event. Prominent examples of this type of approach come from Hume (1739-40), who appeals to a difference in ‘force and vivacity’ between perception and memory, or Russell (1921), who appeals to the idea that feelings of ‘familiarity’ and ‘pastness’ accompany memories, which can act as an indicator that we are remembering something that happened in the past. (See also chapters 13 and 24 of the present volume on views of this type.) Quite apart from a host of well-known problems that the empiricist theory of memory faces, though,⁴ such a theory also in fact seems to be of no help when it comes to trying to flesh out the Dependency Thesis, i.e. idea that memory might have a role to play in our very

⁴ For critiques of the empiricist theory of memory, see, e.g., Holland (1954), Urmson (1971) and Hoerl (2014).

grasp of the concept of the past.⁵ As David Pears writes, discussing in particular Russell's theory:

No doubt, familiarity is a felt property of certain images. But it suggests the proposition, 'I have experienced something like this before' only to someone who already possesses the concept 'past'. Presumably, the same is true of whatever property Russell means by the 'pastness' of an image. In general, such properties of images get their names from the propositions which they suggest, and they suggest propositions containing the concept 'past' only to those who have already learned the meaning of the word 'past' at closer quarters. (Pears, 1975, p. 238)

Thus, the empiricist theory of memory does not provide a suitable framework for fleshing out the Dependency Thesis. Rather than explaining what enables a subject to grasp the concept of the past, it presupposes a grasp of the concept of the past on the part of the subject, which she can employ in inferring from some present feature of her mental state that it represents some past occurrence.

Having said that, it is doubtful anyway whether Evans, in writing the passage I quoted before, was thinking of an account of episodic memory along empiricist lines, in the sense just sketched. Immediately after it, he explicitly distances himself from the idea of memory as involving "free-floating images whose reference to the past is read into them by reasoning on the part of the subject" (Evans, 1982, p. 239), which

⁵ Note also in this context that the version of the empiricist theory of memory advocated in Russell (1921) differs quite radically from that informing the avowals of the Dependency Thesis in Russell (1912) that I quoted at the beginning of this chapter.

can be read as an attempt to distinguish the account he is putting forward from an account of the type that is the target of Pears's criticism. Instead, it seems, we are to envisage the 'informational system' directly putting the subject into a state of it seeming to her *that such-and-such was the case*, without this requiring any inference on her part.

This gives us an alternative way in which episodic memory might be conceived of as being epistemically generative, in the sense of making available to the subject information that differs from the information available to her when she experienced the remembered event. Yet, on closer inspection, it is far from obvious how we are to conceive of the idea of a non-conceptual informational state with a past-tensed content. Note in particular that it is important not to conflate this idea with the idea of states involved in information processing that are sensitive to time. The idea of the latter possesses a great deal of plausibility – indeed, postulating such states seems indispensable to explaining timing abilities possessed by both humans and animals. Work in psychology seems to demonstrate the existence of a number of timing mechanisms that make us sensitive, say, to the length of temporal intervals. But the existence of such mechanisms alone, even on the assumption that they play some role in episodic memory, is not enough to provide for the idea of information processing simply putting the subject into a state of it seeming to her *that such-and-such was the case*.⁶ Christopher Peacocke, who holds a view according to which such timing mechanisms do play a crucial role in episodic memory, acknowledges this point when he raises the question as to what the difference is “between being merely responsive to the temporal interval which has elapsed since a particular event

⁶ This issue is discussed in more detail in McCormack (2001).

occurred, and taking it as a temporal interval” (Peacocke, 2001, p. 364). As he goes on to say (*ibid.*), “[i]n the latter case, the event at the far end of the interval is assigned a position in one’s history, and, correlatively, in the history of the world.” That is to say, taking an interval that has elapsed *as* a temporal interval that has elapsed requires, beyond some capacity to be causally sensitive to its length, also the ability to locate the event at the start of that interval in the past. As such, it seems once again to presuppose an existing understanding of the concept of the past, rather than being able to explain the existence of such an understanding.

Setting aside these difficulties with particular ways of fleshing out the idea of episodic memory as epistemically generative, there is also a more general issue with trying to press this idea into service in attempting to flesh out the Dependency Thesis. I said earlier that one reason one might have for thinking that episodic memory is generative in this context is in order to account for the difference between episodic and semantic memory, and for how the former, in contrast to the latter can have a role to play in our grasp of concepts, specifically the concept of the past. Yet, as G.E.M. Anscombe effectively argues, if the capacity to retain beliefs about the past in semantic memory can’t explain the subject’s ability to grasp what a thing’s having taken place in the past consists in in the first place, it in fact is of no more use trying to explain this ability by appealing to the idea that one simply finds oneself with such beliefs as the result of the workings of memory. As she puts it,

If the question is “What does it mean to say that such and such happened?” one is not helped to answer it by saying “It *did* happen”; nor is one helped by saying “I have the idea of its having happened, without being told and as a witness”. For the question is “What is the idea?” (Anscombe, 1981, p. 109)

Thus – somewhat paradoxically, perhaps – attempts to account for the difference between episodic and semantic memory by arguing that the former is not purely preservative can actually end up diminishing the difference between the two forms of memory that is of potential relevance to the Dependency Thesis. They do so if they end up construing both episodic and semantic memory as putting a subject in a position to know, at a certain time, *that* a certain fact about the past obtains, whilst telling us nothing about how the subject can come to grasp what it is for facts of the relevant type of obtain in the first place.⁷

2. Episodic memory and grasp of time as a domain

Adopting a conception of episodic memory as epistemically generative, thus, provides at least no straightforward strategy for fleshing out the Dependency Thesis (and may also come with other problems). It is therefore worth asking whether perhaps there is a way of construing episodic memory, too, as essentially preservative – albeit in a different way from semantic memory – that is nevertheless compatible with the idea that it has an essential role to play in our grasp of the concept of the past, or what I have called the Dependency Thesis?

I started this chapter with some quotations from Russell's *The Problems of Philosophy* illustrating the Dependency Thesis. Russell's discussion of memory in *The Problems of Philosophy* is set within the wider context of a distinction he draws between two forms of knowledge: knowledge *by acquaintance* and knowledge *by*

⁷ If the argument in this section is along the right lines, it plausibly also carries over to other accounts of episodic recollection according to which it involves, for instance, being in a state that carries the information that that state itself originates in a prior perceptual experience, as Fernández (2016) argues.

description. More specifically, the thought that there is a form of memory that involves “having immediately before the mind an object which is recognized as past” (Russell, 1912, p. 66) – which he singles out as the one at issue in the Dependency Thesis – turns, for him, on the idea that this form of memory involves knowledge by acquaintance, rather than just knowledge by description.

This suggests an alternative way of conceiving of what episodic memory consists in, and how it differs from semantic memory. Moreover, as M.G.F. Martin (2001) has pointed out, it allows us to draw a distinction between episodic memory and semantic memory whilst at the same time conceiving of *both* of them as preservative. What makes episodic memory distinctive, as Martin puts it, is that it preserves the distinctive kind of ‘cognitive contact’ with events that perception provides us with. Perceptual experience, the thought is, does not just typically furnish us with certain items of propositional knowledge, it also puts us in a relation of acquaintance with the experienced events and states of affairs themselves (in a way that, e.g., just reading about them doesn’t), and this acquaintance with the particular events or states of affairs we witnessed is retained or preserved in episodic memory. In this way, we arrive at an account that lets us see how the knowledge involved in episodically recollecting an event “simply is the knowledge I had as an eyewitness, maintained in being”, as Michael Dummett (1993, p. 414f.) puts it, though a knowledge of a different sort than that maintained in being through semantic memory.

What becomes of the Dependency Thesis, if it is viewed against the background of this kind of view of episodic memory? Why might one think that memory, thus conceived, has a central role to play in our grasp of the concept of the past? I think here it might help to contrast two different pictures of what grasping the

concept of the past comes to in the first place, and the potentially different role they might assign memory in grasp of such a concept.

For an *anti-realist* about the past, understanding a sentence in the past tense is essentially a matter of knowing how it could be verified, i.e. recognizing what would count as (present or future) evidence for its truth. The anti-realist is motivated by the thought that any account of the meaning of linguistic expressions must render it intelligible how we can acquire a grasp of that meaning, and manifest such a grasp in our behaviour. She then answers this question by construing acquiring such a grasp as a matter of learning to endorse or reject sentences in which the relevant expressions figure in response to certain pieces of evidence, and manifesting such a grasp as a matter of demonstrating this sensitivity to the relevant evidence.

Memory is likely to play a prominent role in the anti-realist's account of our grasp of the meaning of the past tense, as a paradigmatic example of something that puts us in a position to verify sentences in the past tense. Yet, this is not to say that anti-realism provides a congenial context for framing the Dependency Thesis. For it is at least not obvious what grounds the anti-realist might have for making the stronger claim that a grasp of the meaning of the past tense *requires* possession of memories, as we obviously think that there can be other forms of evidence for the truth or falsity of past-tensed statements that a subject can learn to recognize.⁸

⁸ Dummett, who provides a classic discussion of anti-realism about the past in Dummett (1968), elsewhere also argues for a version of the Dependency Thesis (Dummett, 1993, see esp. pp. 420ff.). It is difficult to work out what exactly his argument is meant to come to, though, because he seems to it run together with the separate argument that our general reliance on memory is not something for which we can demand a justification without thereby making it impossible for us to acquire any sort of extended body of knowledge (on this topic, see also Hoerl, 2013). This difficulty stems from the fact

What the anti-realist about the past denies, and what *realists* about the past, by contrast, assert, is that we have a grasp of the meaning of the past tense that allows for the idea of truths about the past that we are no position now, or at any point in the future, to establish as such. As John McDowell explains the point,

the conception which the realist claims the right to ascribe is the conception of a *kind* of circumstance. He claims the right to ascribe it on the basis of behaviour construable as a response to *some* instances of the kind, in spite of the admitted fact that other instances, on his view, are incapable of eliciting any response from the possessor of the conception. (McDowell, 1978, p. 139)

So the dispute between the anti-realist and the realist turns on the kind of grasp of the meaning of the past tense we can ascribe to ourselves. In particular, crucial to the realist's picture is the thought, as we might put it, of time as a *domain* in which events can be located, irrespectively of what evidence of their occurrence there is at other locations within the same domain. As John Campbell (1997, p. 157) also puts it, the realist's picture is one according to which "there is a single temporal reality onto which all one's various temporal perspectives face", making it possible for some of those temporal perspectives to reveal aspects of that reality that are inaccessible from other temporal perspectives.⁹

that Dummett does not distinguish between episodic memory and semantic memory (to which the latter argument also applies).

⁹ See here also Peacocke's (2001) related characterization of the realist's position as one on which past-tensed statements or thoughts are 'equi-categorical' with their present-tensed counterparts.

It is because the realist operates with this particular conception of the past that there is also, I believe, a reason for thinking that episodic memory has a distinctive role to play in the realist's picture, assuming a more central significance in her account of our grasp of the past tense than the anti-realist's picture allows for. Moreover, the particular conception of episodic memory that appears to fit best with this role is precisely the one articulated at the beginning of this section, of episodic memory as retained acquaintance with past events. The thought, in short, would be that episodic memory, by preserving the relation of acquaintance with past events that our own experience of them furnished us with, can ground what I referred to as a grasp of time as a domain in which these events can be located alongside those that are now present, and also alongside others of which we may have no cognizance.

Annette Baier can be seen to articulate a view along those lines when she writes that "it is not an unimportant conceptual truth that memory is of times, while knowledge is of facts, and that times cannot be discontinuous, as known facts can be disjoint" (Baier, 1976, p. 220). As the context makes clear, the type of memory she has in mind here is, more specifically, episodic memory, which she explicitly contrasts with "the sort of human memory which is just information storage, just a capacity to regurgitate input" (ibid., p. 219). The point she can be seen to be making is that an important dimension of the contrast between the two types of memory (which I have been framing in terms of the contrast between episodic memory and semantic memory) is that, whereas the latter presupposes a separate understanding of whatever information is retained, and cannot explain such an understanding, the former can itself contribute to, or be a manifestation of, understanding. Specifically, because of the way episodic memory allows us to retain acquaintance with events we once witnessed, it can ground an understanding of a 'single temporal reality', as

Campbell puts it, that affords different temporal perspectives on that reality at different times.

It is in this way, then, that episodic memory might be thought to have a distinctive, and essential, role to play in our grasp of the concept of the past, as the Dependency Thesis maintains. As I have sought to bring out, crucial to this view of the role of episodic memory in our grasp of the concept of the past is the idea that episodically recollecting a past event is more than just a matter of retrieving information about that event; in episodic memory, the thought is, we are still in cognitive contact with past events themselves, and this is why episodic memory can ground an understanding of the reality events happening at different times are all part of.

3. Is episodic memory necessary for grasp of the concept of the past?

So far in this chapter, I have simply taken for granted something like Russell's view that, without episodic memory, "we should not know that there ever was a past at all, nor should we be able to understand the word 'past', any more than a man born blind can understand the word 'light'" (Russell, 1912, p. 66). Instead, what I have looked at is the question as to *how* exactly, on such a view, we should think of the role of episodic memory in our grasp of the concept of the past.

Yet, one might of course question whether it is in fact true that a grasp of the concept of the past requires episodic memory. One challenge to this claim comes from empirical studies of the temporal reasoning abilities of amnesic patient KC, who has been described as having no episodic memories whatsoever, but who can still describe features of time and use temporal vocabulary in the correct way. As Carl Craver explains, KC

defines the future as “events that haven’t happened yet” and the past as “events that have already happened.” He believes that it is possible to change the future, “by doing different things,” and that what happened in the past influences what happens in the future. He believes that once an event is past it will always stay in the past, and that it is not possible for someone to undo a murder at some time after the murder has occurred. (Craver, 2012, p. 465)

I will conclude with some remarks about how the case of KC might be thought to bear on what I have called the Dependency Thesis, i.e. the claim that episodic memory is necessary for a grasp of the concept of the past.

First, note that there is a weaker and a stronger reading of the Dependency Thesis. On the weaker reading, it expresses something like a developmental claim, or what we could call the Developmental Dependency Thesis: Without having episodic memories, the thought would be, one cannot *acquire* a concept of the past, even though it is subsequently possible to retain a grasp of that concept whilst losing the capacity to recollect particular past events in episodic memory.¹⁰ One indication that Russell himself possibly had only this weaker reading in mind in *The Problems of Philosophy* is that he compares the impossibility of grasping the concept of the past without episodic memory to a *congenitally* blind person’s inability to understand the word ‘light’, which suggests that he thought of both of these cases primarily in terms of the *acquisition* of concepts.

¹⁰ On this way of reading the claim, see McCormack (1999), which is a critical discussion of Hoerl (1999), in which the stronger claim is being put forward.

Any evidence of a preserved grasp of temporal concepts in KC is of course perfectly consistent with the Developmental Dependency Thesis. What is of more interest in studying amnesic patients such as KC is whether a stronger thesis can also be sustained, which we might call the Constitutive Dependency Thesis. According to this Constitutive Dependency Thesis, it is not just the case that *acquiring* the concept of the past requires possessing episodic memories at the time, *retaining* a full grasp of that concept also depends on retaining the ability to recall past events in episodic memory. Here, too, the analogy Russell draws with the concept ‘light’ may be instructive. As plausible as it is that it is possible for a blind person to understand that concept if they were previously sighted, it is arguably nevertheless also the case that their continuing to grasp that concept requires that at least some abilities connected to their previous visual experiences remain intact. For instance, a continued grasp of the concept ‘light’ may be thought to require the continued ability to call to mind or imagine experiences of light, colours, etc.¹¹ Otherwise, all that might remain is an ability to recognize certain sentences about light as true, but knowledge of the phenomenon itself will be lost. In a similar vein, the defender of the Constitutive Dependency Thesis can argue that there is a specific cognitive capacity that needs to be preserved for a retained grasp of the concept of the past, and that this capacity is episodic memory.

¹¹ Compare here the ‘ability hypothesis’ put forward in discussions of our grasp of phenomenal concepts (Lewis, 1990; Nemirow, 1990), according to which knowledge of ‘what it is like’ to have a experience of a certain kind *consists in* the ability to imagine having an experience of that kind, which cannot be acquired through testimony, but only through actually having an experience of the relevant kind oneself. This also entails that, once acquired, such knowledge can be lost again if the relevant imaginative abilities are lost.

It is this second reading of the Dependency Thesis that the case of KC clearly puts some pressure on. What a defender of the Constitutive Dependency Thesis would have to argue in response is that, whilst KC may still be able to talk *about* various aspects of time, he has nevertheless lost a proper understanding of what time itself is. Obviously, though, a bland assertion of this claim is unlikely to convince anybody, so the question is whether there is any evidence at all to suggest that KC's time-related reasoning abilities are impaired in this way. There is one particular limitation in KC's abilities that Craver and his colleagues did find, which might point in such a direction. One specific conversation they report is concerned with KC's understanding of the notion of regret:

SR: What does it mean to regret something?

KC: Something you don't like doing or wish that you hadn't done.

SR: Can you name some things a person might regret?

KC: If someone lost a large sum of money.

SR: Do you have any regrets?

KC: I don't think so.

SR: What do you regret most about your life?

KC: Nothing – I can't think of anything.

SR: What are some things a person might do if they feel regretful about something?

KC: Try to make it right. [...]

SR: Do you know Richard Nixon?

KC: Yes.

SR: Do you think he/she has any regrets in life?

KC: I don't think so.

SR: Do you think your mother has regrets?

KC: No.

SR: What are some things that they might regret?

KC: Nothing.

SR: Can you describe how these people feel 'inside'?

KC: Mad at themselves. (Craver, Kwan, Steindam, & Rosenbaum, 2014, pp. 193-194)

Craver et al. (ibid.) interpret KC's responses here as a sign that his "command of the semantics of regret persists", but it is at least possible to question how conclusive the evidence for this is. For instance, losing money is only an occasion to feel regret if it happened through a fault of one's own, and people can also get mad at themselves out of frustration over their own limitations. So these responses could be the result of semantic associations without full understanding. More importantly, though, if KC's understanding of the nature of regret is indeed perfectly intact, it seems difficult to explain his apparently complete inability to think of anything he or someone else he knows might regret. The latter seems particularly surprising in light of the fact that, despite not being able to episodically recollect any of the events in question, he retains knowledge of his own "thrill-seeking" lifestyle prior to the onset of his amnesia (Rosenbaum et al., 2005, p. 993), including the motorcycle accident that caused the brain damage responsible for the amnesia, in which he rode his motorcycle off a highway exit ramp.

What is it about the capacity to feel regret, specifically, that might explain the particular difficulty KC has in figuring out which of the events in his or someone

else's life that he knows about might be occasions for regret? In the context of arguing that KC's ability to reason about time remains fully intact Craver at one point suggests that what may be able to underpin a preserved grasp of temporal concepts, despite complete loss of episodic memory, is retained knowledge of the fact "that the past uniquely constrains the future" (Craver, 2012, p. 465). It does indeed seem difficult to deny that KC is aware that there are certain truths about the past, and that those truths have implications for what is the case now and for what can be done now and in the future. However, it is at least arguable that paradigmatic cases of regret actually involve the ability to reason about time in a way that is somewhat more sophisticated than this. What is at issue in such cases is that, at the time when the individual made a certain choice that subsequently led to a certain outcome, another course of action was also open to her, which would or might have led to a more positive outcome. Representing this state of affairs requires the ability to think about the particular time when the choice was made in what is sometimes referred to as an 'event-independent' way (McCormack & Hoerl, 2008). That is to say, it requires being able to make the time when a certain event happened an object of thought in its own right, as a time when a different event might have happened instead, rather than just recognizing the existence of certain past tense truths and their implications for the present (on this issue, see also Hoerl & McCormack, 2016).

If it is this particular temporal reasoning ability that KC has difficulty with on account of his amnesia – which would be one way of explaining his inability to think of anything he or someone familiar to him might regret – then this might be one way of making concrete a sense in which he has lost a full grasp of the concept of the past. More specifically, in line with what I said in Section 2 of this chapter, KC might be described as lacking a properly realist conception of the past. There I emphasized the

particular role played within that conception by the idea of time as a *domain* in which events can be located. As I also put it, following Campbell, the realist's picture is one on which there is a single temporal reality affording different temporal perspectives on it at different times. Something like this picture, I take it, is also presupposed by the capacity for event-independent thought about time, in which we latch on to a particular point in time in thought, but think of it as a point in time at which various things could have happened. In other words, in such thinking, the past is not just thought of as something we know certain truths of, in the form of past-tensed statements about certain events for which we still have evidence. It is also thought of as a different region of time in its own right, each moment of which was once present in the same way a different moment is now present, and which could have contained a different history of events. If it is episodic memory that underpins – not just developmentally, but constitutively – our ability to think of other times in this way, and the alternative temporal perspectives on reality they afford, KC's inability to think of anything he might regret might also, at the same time, be a sign of a more fundamental loss of an important part of our everyday understanding of time.

4. Conclusion

At one point, Craver and his colleagues write: "If KC is trapped in the present [because of his total loss of episodic memory], he is trapped there with an awareness of his past, present and future" (Craver et al., 2014, p. 193). One way of characterizing the issue at stake in what I have called the Dependency Thesis is by asking just what such an 'awareness of the past and future' can amount to in the absence of episodic memory – in KC, and even more so in someone who never

possessed any episodic memories in the first place (if it is the Developmental Dependency Thesis that is in question).

There is of course a trivial sense in which a person without episodic memories necessarily lacks one type of awareness of the past that those with episodic memories can enjoy, in so far as the latter, but not the former, can consciously recollect particular past events they have witnessed. On the other hand, cases such as that of KC (and other amnesiac patients that have been studied) also seem to make it undeniable that a lack of episodic memory need to be no bar to acquiring and retaining knowledge of truths couched in the past tense, and of truths about the nature of time in general. Is there any more to be said, beyond these two relatively uncontroversial observations, that would still leave room for substantive debate over the truth or falsity of the Dependency Thesis? One thing I have sought to bring out in this chapter is how realism about the past, as discussed in the philosophical literature, might be seen to provide for a way of giving substance to the possibility of a profound sense in which a person may lack a genuine understanding of what it is for an event to have happened, even though they can recognize certain sentences in the past tense as being true. As I have argued, of particular relevance in this context is the realist's idea that such an understanding also involves, as John Campbell (1997, p. 157) puts it, a grasp of the "single temporal reality onto which all one's various temporal perspectives face". What is at stake in the Dependency Thesis, ultimately, is what furnishes us with such a grasp, if it isn't the retained acquaintance with events as viewed from such other temporal perspectives that episodic memory provides for.

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