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James Openshaw

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(In defence of) preservationism and the previous awareness condition:**What is a theory of remembering, anyway?**

I suggest that the theories of remembering one finds in the philosophy of memory literature are best characterised as theories principally operating at three different levels of inquiry. Simulationist views are theories of the psychofunctional process type *remembering*. Causalist views are theories of *referential* remembering. Epistemic views are theories of *successful* remembering. Insofar as there is conflict between these theories, it is a conflict of integration rather than—as widely presented—head-on disagreement. Viewed in this way, we can see the previous awareness condition and preservationism as principles applying at only some of the corresponding levels of inquiry. Where either principle has been rejected, it is, I claim, due to arguments which slip between these different levels. While the view of the landscape I offer does not *dissolve* ongoing disputes about the nature of remembering, it clarifies the dialectical rules of engagement, helping to clear the path for future, collaborative progress to be made. The view enables us to see less conflict in the recent philosophy of memory literature than there seems at face value to be.

1 Introduction

Consider two principles which have shaped much work in the philosophy of memory.

Previous awareness condition (PAC): One can remember some particular—an event, object, sensation, property instance, etc.—only if there is, in one’s personal past, an experience in which one was (non-mnemonically) aware of it.¹

Preservationism: One can remember some particular—an event, object, sensation, property instance, etc.—as having been F only if there is, in one’s personal past, an experience in which one was (non-mnemonically) aware of its being F (or some more determinate way F' such that the extension of F' is a subset of the extension of F).²

¹ This thesis has a long heritage (Locke 1690; Reid 1785; Shoemaker 1970). Though it is sometimes called the previous experience condition, I use ‘awareness’ to avoid the corollary that successfully remembering experiences would require that one had previously experienced the experience. Plausibly (though see Strawson (2015)), one either simply *has* experiences or has some “form of cognitive awareness” of them (Soteriou 2013: 196).

² Fernández (2018: 56), Michaelian & Robins (2018: 23), and Michaelian & Sant’Anna (2022: 844) do not put it quite this way, but I think this is a fairly precise statement of what they intend.

According to PAC, for all particulars which may be the value of a first-order variable x , if one remembers x then one must have been aware of x in one's personal past. For example, if "I remember the transit of Venus over the sun in the year 1769", "I must therefore have perceived it at the time it happened, otherwise I could not now remember it" (Reid 1785: 254). Or, if one remembers the face of one's grandmother, one must have been perceptually aware of her face in one's past. In general, any content-modulating processes that might unfold during encoding, consolidation, and retrieval contribute to *remembering* only insofar as they replicate *referential* aspect(s) of experiences in one's personal past. As Reid went on to write, "[o]ur first acquaintance with any object of thought cannot be by remembrance. Memory can only produce continuance or renewal of a former acquaintance with the thing remembered" (1785: 254).

According to preservationism, for all properties X , if one remembers some particular as having been X then one must have been aware of its being X in one's personal past. For example, if one remembers how Alice seemed quiet at Bill's birthday party, one must have been aware of Alice seeming quiet during the party.³ Or, if one remembers one's first bicycle as having been red, one must have on some occasion been perceptually aware of its being red. Of course, one will have experienced the bicycle as being some determinate hue—e.g., scarlet—but since one can surely still accurately remember the bicycle as having been merely red rather than scarlet, preservationism includes a parenthetical remark allowing for such loss of specificity. In general, any content-modulating processes that might unfold during encoding, consolidation, and retrieval contribute to *remembering* only insofar as they replicate—or at least entail—*predicative* aspect(s) of experiences in one's personal past.⁴

The plausibility of each principle depends on treating the operative term 'remembering' as picking out a kind of mnemonic success. PAC, in effect, treats its operative notion of remembering as constitutively *referential*. Preservationism, in effect, treats its operative notion of remembering as constitutively *accurate*. To see this, consider that PAC is simply not plausible for cases which are the mnemonic analogue of perceptual hallucination (call it *confabulation*, though I do not mean to use the term in its clinical sense). Nobody would suggest that one can

³ I'm assuming in this example that *what* one remembers is Bill's party (with Alice's demeanour being a feature of this event), not the event of Alice seeming quiet (else this would be another example of PAC).

⁴ Preservationism also has a propositional analogue which has received more discussion but which I will mostly set aside here. It says that one can remember that p only if, at some time in one's personal past, one knew that p (or some p' such that p' entails p). So, for example, if one remembers that Charlemagne was crowned emperor on December 25th, one must have previously known that Charlemagne was crowned emperor on December 25th. While there are interactions between the predicative thesis and the propositional thesis, the latter raises distinctive issues which would require a separate discussion to be adequately treated. See Bernecker (2010: 222) and Lackey (2005) for some discussion.

only confabulate an event if one had been previously aware of it. One can obviously confabulate having fought in the Battle of Trafalgar despite not having been around to do so. Analogously, preservationism is simply not plausible in the case of the mnemonic analogue of perceptual illusion (call it *misremembering*). Nobody would suggest that one can only misremember an event as having been *F* if one experienced it as being *F* at the time. One can obviously misremember Alice as having worn a red jumper at Bill's birthday party despite one having instead seen her wearing a green jumper. For this reason, each principle is to be seen as describing the necessary conditions for a mnemonic *achievement*: referential remembering on one hand, accurate remembering on the other. To put it differently: misremembering is not a defective instance of what 'remembering' picks out in preservationism; confabulation is not a defective instance of what 'remembering' picks out in PAC.

So far I have simply illustrated that there is a closer relationship between PAC and preservationism than is sometimes acknowledged. Both state that some mnemonic achievement is possible only to the extent that one has, in a sense, retained a kind of 'cognitive contact' with what one remembers. According to PAC, referential remembering is limited in scope to the particulars of which one has previously been aware. According to preservationism, accuracy in remembering is limited in scope to the way(s) one experienced things as being. Since *successful* remembering requires both reference and accuracy, PAC and preservationism together contribute to a unified picture of what (in part) successful remembering requires. Clarifying that picture will involve precisifying notions such as *awareness* and *personal past*, as well as providing a statement of the principles in positive terms without any negative qualifier (i.e., 'non-mnemonically'). For example, must the required awareness be conscious, attentive, and reflective? Or might it in some cases be unconscious, inattentive, or prereflective (Righetti 2021)? I set the fine details of the two principles aside in this paper.⁵

My primary goal in what follows will be to defend PAC and preservationism from a very general and influential 'constructivist' line of objection by demarcating three distinct levels of inquiry about remembering and situating the two principles at their respective proper levels. Before setting off, I make two final points of clarification concerning PAC and preservationism.

⁵ Precisification is also needed to avoid apparent objections. Suppose that, having just acquired the concept of the game *chess*, Sally now remembers Alice and Bill *playing chess yesterday*, despite at the time experiencing them as simply sitting at a table engaged in some unknown activity. Would this be a counterexample to preservationism? This depends on what we take the content of experiences in general to be and also on whether we take '*F*' in preservationism to be substitutable by high-level or only low-level features. Thanks to Kristina Liefke for raising this point.

First, PAC and preservationism articulate necessary conditions for remembering a particular, or remembering a particular as having been a certain way, respectively. If there are instances of remembering which do not involve the awareness of particulars, these are not counterexamples but simply cases on which the principles are silent. For instance, if total sensory hallucinations are representational states with purely general accuracy conditions, then remembering *the purported object of* such hallucinations will presumably not involve the awareness of particulars, either. (One could still remember one's *experience*, of course—see footnote 1, above.) What PAC entails is that if sensory hallucinations sometimes *do* involve the awareness of particulars (*inter alia*, Byrne & Manzotti (2022); James (2014); Werning & Liefke (forthcoming)), then remembering those particulars will require that one was aware of them in one's original experience. And, according to preservationism, whatever hallucinated thing one can accurately *remember* as having been *F*, one must have been aware of its being *F* at the time of one's hallucinatory experience.

Second, and crucially, the principles are totally silent on *how* such retention is implemented, and so they must be carefully contrasted with views such as *transmissionism*, according to which remembering requires that explicit content be stored by discrete, persisting vehicles (e.g., 'memory traces') between encoding and retrieval (Michaelian & Robins 2018: 22). Transmissionism is a speculative claim about the *psychological mechanisms* underpinning remembering. By contrast, preservationism is a claim about the accuracy conditions of remembering. While preservationism and PAC are not at all hostage to the truth of transmissionism, they provide only necessary conditions. So if successful remembering is to be distinguished from relearning (Martin & Deutscher 1966), there will need to be some further constraints on the causal aetiology of the vehicles involved in successful remembering. Nevertheless, it is crucial to distinguish preservationism from transmissionism, not only because the issues are conceptually distinct but because we plausibly have grounds to deny transmissionism (Robins 2016b; Sutton 1998). Even if the distinction between remembering and relearning presupposes that we have something to say not only about the accuracy but also the *aetiology* of the vehicles of remembering, the logical independence of preservationism and transmissionism is important.⁶ Historically, the two have not always been distinguished.⁷

⁶ Thanks to Chris McCarroll for emphasising this to me. For theories which do not entail transmissionism, see Perrin (2018) and Werning (2020).

⁷ The view variously characterised as the 'copy theory' (Brewer 1988: 26), 'xerox model' (Bernecker 2008: 144–146), 'archival view' (Campbell 2006: 362; Robins 2016a: 432), or simply 'preservationism' (McCarroll 2018: 15; Werning 2020: 304), is a blend of what I call preservationism and transmissionism.

Despite the close relationship between PAC and preservationism, recent philosophy of memory has taken a rather more sceptical attitude to the latter than to the former. In a nutshell, the threat comes from certain philosophical interpretations of constructivist theories of memory in psychology. What these theories offer is a picture of memory on which its normal course of operation is not the simple retention of static, discrete representations, but, in large part, the active transformation of such representations and even the construction of new ones:

The 'reconstructive turn' in memory theory rejects an *archival* picture of memory, in which memory is depicted as the capacity to make detailed mental representations of our experiences, and then to store these representations discretely [...] [so that a] particular memory is then faithful insofar as it represents a past experience in ways unaffected by factors subsequent to it (Campbell 2006: 362).

While the details can wait until §2, the headline is that philosophers have generally taken such constructivist theories as providing grounds to reject not only transmissionism (a speculative claim about psychological mechanisms) but preservationism (a claim about accuracy conditions), too. And at least one philosopher (Michaelian 2022) has taken such theories as providing grounds to reject not only transmissionism and preservationism but PAC, too. In this paper, I argue that these moves are a mistake.

The first take-home lesson of the paper is that, by situating preservationism and PAC at the right levels of our theorising about remembering, we can see them as resistant to the arguments directed against them. A second lesson of the paper is that we can also see the leading theories of 'remembering' found in the philosophical literature as in fact operating at different levels of inquiry, too. Once we have a view of the landscape which finds room for preservationism in addition to PAC, this view also enables us to see simulationist views as theories of the psychofunctional process type *remembering*, causalist views as theories of *referential remembering*, and epistemic views as theories of *successful remembering*. Insofar as there is conflict between these theories, it is a conflict of integration rather than (as widely presented) head-on disagreement. While the view I offer does not dissolve ongoing disputes about the nature of remembering, it clarifies the dialectical rules of engagement, helping to clear the path for future, collaborative progress to be made. Although I won't be arguing that simulationist, causal, and epistemic theories are *correct* answers to the corresponding questions, the view enables us to see much less conflict in the contemporary philosophy of memory literature than there seems at face value to be.

In §2 I present the case that has been made against preservationism, and indicate how it is naturally extended as an argument against PAC, too. §3 demarcates three levels of inquiry at which a ‘theory of remembering’ might operate and claims that simulationist, causal, and epistemic theories are best viewed as characterising each of these respective levels. Finally, §4 argues that it is only by losing sight of these different levels of theorising that the argument(s) against preservationism and PAC go through. Once we are clear about the status of PAC and preservationism, and about what ‘remember’ picks out in the statement of each principle, the arguments against them lose their bite. §5 concludes.⁸

2 The case against preservationism (and PAC)

An historically influential way to motivate PAC is by appealing to the generally preservative character of memory, with preservationism following hand-in-hand. For example, according to Martin (2001), remembering is a success notion, it is successful when it fulfils its function, and “the general preservative function of memory applies across the range of cognitive contact” (Martin 2001: 266). So the PAC is then simply “a special case of a more general [i.e., preservative] feature of memory” (Ibid.).⁹ Or, as Phillips puts it, “the fundamental unifying feature common to all forms of memory is that they are all ways of preserving past psychological success”, with remembering consisting in “the preservation of past apprehension or acquaintance (or more precisely, the preservation of an associated ability)” (2018a: 291).

It is now often suggested that we ought to reject this sort of claim about ‘the’ ‘function’ of ‘memory’. Not because memory does not involve preservation (Aronowitz 2019), or because it in no sense has functions (Schwarz 2020), or because there is no cohesive faculty picked out by ‘memory’ (Andonovski 2021), but rather because consolidation, reconsolidation, semanticization, and other such dynamic processes are all part of *memory* itself, and one of the crucial things these processes do is transform the content(s) of whatever vehicles are

⁸ Some have discussed a thesis they call ‘authenticism’, according to which one accurately remembers an event as having been *F* only if, at the time of one’s experience of the event, one experienced it as being *F* (see Bernecker (2015), McCarroll (2018), and Michaelian & Sant’Anna (2022) for discussion). The basic idea is that accuracy in remembering has an essentially ‘first-personal’ character, being a matter of faithfulness to the way one experienced the event. Yet once preservationism is clarified as already being a claim about the necessary conditions for accuracy in remembering—and since it would hardly be endorsed by anyone who read ‘remembering’ there as anything other than a success notion—it becomes clear that this is an unnecessary multiplication of terms. Authenticism is preservationism in disguise.

⁹ Others who defend PAC via a general claim about the preservative nature of memory include Byrne (2010), Debus (2018), Dummett (1993), Hoerl (2018b), Martin (2019), Phillips (2018a), and Teroni (2018).

characteristically retrieved in remembering (De Brigard 2014). According to this (apparently) anti-preservationist line of thinking, one should not *a priori* conclude that those processes are not really part of *memory per se*—and that the retrieval of their products does not constitute *remembering proper*—simply because they are not purely preservative in character. The conclusion that memory is not fundamentally a faculty tailored to preserve past cognitive success is, in this sense, one of psychology’s triumphs.

The phenomena of boundary extension (Intraub and Hoffman 1992), the telescope effect (Neter and Waksberg 1964), and ‘observer’ perspectives in memory (Nigro and Neisser 1983) are examples of routine memory ‘distortions’ that have been used to argue against preservationism in this sort of way.¹⁰ It is in the context of discussing boundary extension that Michaelian (2011) argues: “we need not and should not say that the subject does not genuinely remember the scene because she did not see the whole of it; we should instead say that she remembers the scene *even though* she did not see the whole of it” (334; emphasis added). To illustrate the general dispute over preservationism without relying on any specific experimental evidence, we can use a toy case from Fernández (2018). Fernández supposes that he once saw his father shoot a rabbit and is now vividly remembering that event.

I am now having an experience wherein I visualize the event, almost exactly as I perceptually experienced it in the past. The only difference is that I now visualize my father as wearing a belt with a silver buckle on it at the time of the shooting, a detail that (let us stipulate) I could not have perceived at the time of the shooting given my spatial position in the scene relative to my father’s. Suppose that this is a belt with which I am very familiar, and as it turns out, my father was indeed wearing it at the time of the shooting. The intuition remains that I am having a memory (Fernández 2018: 56).

Those who deny preservationism will be open to the suggestion that the subject in this case *remembers* his father wearing a belt with a silver buckle when he shot the rabbit. Preservationists, by contrast, will systematically deny this.

It is worth mentioning that Fernández himself does not explicitly conclude that he, the protagonist, *remembers his father wearing a belt with a silver buckle when he shot the rabbit*. He concludes that he *remembers the event*, or is ‘having a memory’ (2018: 56; 70, n. 34). And this claim is compatible with both preservationism and PAC. For the preservationist may argue that

¹⁰ Whether all of these really are always distortions by preservationist lights is debatable (see, e.g., McCarroll (2018) for discussion).

remembering that event as a whole is compatible with misremembering some details—details which, though unfaithful to one’s original experience of the event, may be accurate with respect to the event itself.

Preservationists, as characterised here, will claim that the subject in this case correctly represents—perhaps via processes identical in psychological kind to genuine remembering—but *does not accurately remember* his father wearing a belt with a silver buckle when he shot the rabbit. Anti-preservationists, in contrast, will insist that sameness of psychological kind is all there is to the matter. Who is right? And how should we adjudicate this?

Before answering this question, notice that an analogous dispute can be (and has recently been) raised concerning PAC.¹¹ Michaelian (2022) argues that PAC shares the fate of preservationism from a naturalistic point of view: “the relevant natural kind is [...] imagination for possible events, with episodic memory being simply a past-directed form of this kind of imagination” (15), and so “there is no deep difference between, for example, my ‘remembering’ my own arrival in Grenoble in 2015 and my ‘imagining’ Napoleon’s arrival in Grenoble in 1815: both are [...] straightforwardly instances of episodic remembering” (16). Just as the preservationist will claim, in the face of Fernández’s case above, that the subject correctly represents—perhaps via processes identical in psychological kind to genuine remembering—but does not accurately remember his father wearing a belt with a silver buckle when he shot the rabbit, the defender of PAC will claim, when faced with an example where a subject is in the same psychofunctional state regardless of whether or not there is an event in her personal past to which she succeeds in referring, that *being in the same psychofunctional state is not all there is to the matter*. So, once again, who is right? And how should we adjudicate this?

While it is often supposed that PAC can be safeguarded from these worries, it is widely thought that preservationism cannot be.¹² In the remainder of the paper I will defend both

¹¹ That it has been a less prominent debate in the literature is perhaps because (PQ) and (RQ), below, have been less clearly demarcated from one another than (PQ) and (AQ).

¹² Although it is hard to pin down explicit endorsements of this combination of views, examples include Langland-Hassan (2022), Michaelian (2011), and Werning (2020). The combination of views quickly results from sympathy to the anti-preservationist argument(s) discussed in §2 with an endorsement of the necessity of appropriate causation for remembering (with such causation having as its origin the formation of a memory trace, formed at the time of one’s experience of the event, and the retrieval of which metasemantically determines *what* one is remembering). (Although Langland-Hassan (2022) rejects the necessity of *memory traces per se*, his view nevertheless requires *some* vehicle (e.g., ‘one-off beliefs’) to preserve a “discrete causal pathway from each act of remembering to the event remembered” (21, n. 23). And although Werning (2020: 325, n. 20) has suggested that *vicarious* or *dream* experience is sometimes enough for the proper formation of a memory trace, he nonetheless thereby appears to accept PAC, albeit with a much broader notion of ‘awareness’ than is usually assumed.)

principles against what Campbell (2006), quoted earlier, called the ‘reconstructive turn’. Since I take this to be the correct way of defending PAC, I will therefore be arguing that combining adherence to PAC with a rejection of preservationism is unstable. If one accepts PAC because one takes the relevant explanandum to be constitutively referential, one should be equally open to a project the explanandum of which is constitutively accurate. Once one is, preservationism about accuracy in remembering is motivated in an irresistibly parallel way to how PAC is motivated in the case of reference in remembering. For much the same reason as the defender of PAC insists that *which* events and objects it is possible for one to remember is a function of the events and objects encountered in one’s past, she will be moved to say that *the properties* it is possible for one to remember those things as having had is a function of how one experienced them as being.

3 What question(s) should a ‘theory of remembering’ answer?

To adjudicate such disputes over the truth of PAC and preservationism, it is important to keep track of what philosophical theories of remembering are purported answers to. Contrast the following questions:

- (PQ) Under what conditions does remembering occur? (*The psychofunctional question.*)
- (RQ) Under what conditions is there some event in one’s personal past *e* such that one is remembering *e*? (*The reference question.*)
- (AQ) Under what conditions is there some event in one’s personal past *e* such that one is accurately remembering *e*? (*The accuracy question.*)

The intended reading of (PQ)—the psychofunctional question—is equivalent to a ‘narrow scope’ question, concerning the conditions under which a subject satisfies the schema ‘S remembers $\exists x Fx$ ’. We can contrast this with the explicitly ‘wide scope’ question in (RQ)—the reference question—concerning the conditions under which it is true that a subject satisfies the schema ‘ $\exists x (S \text{ remembers } Fx)$ ’.¹³ Finally, we can contrast each with (AQ)—the accuracy question.

An analogy may help to bring out the difference between (PQ) and (RQ). Undergoing a sensory hallucination, there is an intuitive sense of ‘sees’ in which one might be said to see a pink elephant. But, supposing that is right, it is not an entailment that there *is* some pink

¹³ While I think of this scope disambiguation as a helpful illustration, I don’t mean to suggest that either perspicuously presents the content of remembering.

elephant such that one is seeing *it*. (Which pink elephant could it be?) Likewise, on some views, the conditions for referential remembering may be more demanding than the conditions for remembering *per se*. That is, remembering might not require there to be some event in one's personal past such that one is remembering *it*. This might be the case if one takes 'remembering' in (PQ) to pick out a psychofunctional process which could just as well occur whether or not the subject is remembering *some particular* (just as one might, on some views, undergo a sensory experience of the same fundamental kind as perceptual experience when one hallucinates without there being some thing of which it is true that one experiences *it*).

Delineating (PQ)–(AQ) provides us with an idealised model of distinct debates that could take place in the philosophy of memory. Answering these questions will require providing an account of episodic memory (Tulving 1972), of reference in remembering (Openshaw and Michaelian (in progress)), and of accurate remembering (Michaelian & Sant'Anna 2022), respectively. Albeit interrelated, these questions in a sense occur at different levels of the overarching project of understanding human remembering.

Talk of 'levels' needs to be handled with some care. (PQ)–(AQ) do not so much address different levels 'in nature' (Craver 2007: 171ff)—i.e., different levels of physical phenomena—as different levels of inquiry. On one hand, then, there is the project of understanding the psychological mechanisms of remembering, and on the other hand there are the projects of understanding what it is for instances of remembering to possess the semantic features of referentiality (aboutness) and accuracy. So while it is not that simulation theorists, causal theorists, and epistemic theorists are entirely talking past one another—for they are answering questions that are sufficiently interrelated for genuine tensions to arise—nevertheless the tensions are indirect, emerging from the need to at some point integrate these theories within a complete account of remembering.

In practice, any suitably ambitious philosophical theory will take a stance on—or place constraints on the range of possible answers to—more than one of these questions. For example, although it is natural to view Michaelian's (2016) simulationism as a theory which aims at answering just (PQ), the view does place some constraints on the range of possible answers to (RQ) and (AQ). According to simulationism, remembering is distinguished from episodic future thought and episodic counterfactual thought only in being a past-oriented output of one and the same 'episodic construction system'. So a subject is remembering if and only if she has a current representation that was produced by a properly functioning (read: reliable) episodic construction system aiming to produce a representation of an event in her personal past (Michaelian 2016). While it is natural to hear simulationism as an answer to (PQ), the theory places at least some constraints on the range of possible answers to both (RQ) and

(AQ). First, given its biconditional formulation, either the proper functioning of the episodic construction system must, on any given occasion, determine a referent for the representation it produces, or reference is a contingent feature of remembering. Second, if remembering is an output of an episodic construction system, accuracy will be somehow related to the telic notions of *aim* and *proper functioning*.¹⁴

Since any complete theory of remembering will have something to say in answer to (PQ)–(AQ), these conceptually distinguishable debates have taken place more or less concurrently. But it is nonetheless important to distinguish them, lest claims about ‘remembering’ on one reading be mistaken for claims about ‘remembering’ on other readings. With this in mind, we can begin to see that the reason both PAC and preservationism are seen as dubious by those whose *focus* is on the narrow-scoped reading of (PQ) is because the very intrusion of reference and accuracy into one’s explanandum is a distraction. The simulationist’s naturalistic project treats

remembering as a psychological capacity and seeks to reveal its underlying mechanisms, systems, and processes. That capacity can be characterized by describing regularities involving its inputs and outputs, its modulating conditions, and the conditions under which it fails or falters (268). [...] The mechanism is a system for simulating events [...]. Whether the mental representation is directed at the past, the present or the future is irrelevant to their core psychological essence as a construction device (e.g., Michaelian 2016; De Brigard 2014). [...] *true or false, the system just generates representations* (Craver 2020: 270; emphasis added).

On this view, representations will not be distinguished by whether or not they succeed or fail to refer, or by whether they succeed or fail to be accurate. Representations will be distinguished, more or less, only by how they help the theorist to “characterize states of the head; to specify their causal roles with respect to behavior, stimuli, and one another” (Lewis 1979: 526). When Michaelian (2022) tells us that one is remembering if and only if one has a representation as if of an event which was produced by a properly functioning and hence reliable episodic construction system, he is best read not as providing an account of either referential remembering or accurate remembering but a psychofunctional profile stripped of these semantic and normative features. He is answering (PQ) and simply remaining silent on

¹⁴ In this paper I focus on the standard version of simulationism presented in Michaelian (2016). There are important differences between this and, for example, the virtue-theoretic simulationism defended in Michaelian (2021), which is (explicitly) a theory of *successful* (and therefore accurate) remembering.

(RQ) and (AQ). If what we are characterising are ‘states of the head’, as Lewis put it, reference and accuracy are irrelevant.

In contrast, for traditional causalists, (PQ) and (RQ) are practically inseparable. Reference is of the utmost relevance. Martin & Deutscher’s (1966) classic causal theory of remembering provides necessary and sufficient conditions for its being the case that “someone remembers something, whether it be ‘public,’ such as a car accident, or ‘private,’ such as an itch”, requiring *inter alia* that one “represents that past thing” and that one’s “past experience of the thing was operative in producing a state or successive states in him finally operative in producing his [current] representation” (166). And, more generally, such causalists claim that one is remembering only if there is an appropriate causal connection between an event in one’s personal past and one’s current memory representation. This essential ingredient in their answer to (PQ) doubles up as an immediate answer to (RQ): if S is remembering, it is already the case that one can say *what S remembers*, namely the event that gave rise to the original experience (uniquely) encoded in the memory trace which S now retrieves in remembering. For traditional causalists, there is never in practice any gap between (PQ) and (RQ).

Just as causalists and simulationists are not in agreement about whether an answer to (PQ) must yield an answer to (RQ), it is equally unclear that epistemic theorists (Hoerl 2018b; Soteriou 2013) and either causalists or simulationists are in agreement over whether an answer to (PQ)/(RQ) must yield an answer to (AQ). According to epistemic theorists, remembering is both factive (i.e., constitutively accurate) and a form of knowing.¹⁵ Knowledge being a state, it would be more accurate to say that remembering (an occurrence) is the *activation* of knowledge. Insofar as PAC is true, it is natural for epistemic theorists to suggest that remembering involves the activation of a special sort of knowledge, or at least a special way of activating knowledge of one sort or another. For Soteriou, “episodic recollection involves a form of self-knowledge—one’s knowledge of the conscious character of one’s past experience” (2013: 181). On such a view, what distinguishes such knowledge is that it is *about experiences* or the phenomenal qualities thereof.¹⁶ An alternative view is that remembering can at least sometimes consist in the activation of knowledge that simply concerns the perceptible qualities of past events or objects, while nevertheless being knowledge somehow grounded in

¹⁵ Factivity: One can remember an event *e* (or object *o*, etc.) as having been *F* only if *e* occurred (or only if *o* existed) and was *F*. Calling this thesis ‘factivity’ is something of a misnomer, since events and objects are not propositions (or facts). Yet the thesis predominantly goes by this name in the literature and I do not wish to introduce new terminology here.

¹⁶ Likewise, for Hoerl, “episodic memory both embodies and is underpinned by grasp of the category of an experience [...] because the knowledge retained in episodic memory is specifically knowledge of past experiences as such” (2018a: 157).

experience (Openshaw 2022).¹⁷ At any rate, against *all* epistemic theorists, there are those who deny that either remembering (PQ) or referential remembering (RQ) entail successful remembering (AQ). That is, some reject a factive conception of the explanandum of a theory of remembering. For instance, as Michaelian (2016) puts it, “it is not as if there is one kind of remembering responsible for producing accurate memories and another responsible for producing inaccurate memories. [...] the factivity condition has no place in the naturalistic project of describing memory as a psychologically real process” (69).

This difference in the very projects of different theorists gives rise to different desiderata in theory selection. And losing track of these differences gives rise to cross-purpose talk. From the point of view of those who take remembering to be a success notion, for example, simulationists are really just eliminativists (Hoerl 2022). And from the point of view of simulationists, causalists and epistemic theorists rely atavistically on armchair intuitions and are not sufficiently deferential to the psychology of memory (Michaelian 2022).

Craver (2020) offers a recent commentary on the debate between these various theorists of ‘remembering’, suggesting that there are somehow different explanatory ambitions in play.¹⁸ While the simulationist takes an empirical notion of episodic remembering as their theoretical high ground, Craver emphasises that there are two different ‘senses’ of ‘remembering’: “one *empirical*, describing bio-psychological capacities and their mechanisms; the other *epistemic*, declaring an achievement, a success, in the effort know the past” (262). Although the view I wish to recommend is similar in spirit to Craver’s, I have identified two different successes, referential and normative, each picked out by the best precisifications of PAC and preservationism, respectively. It would be a mistake to object to causal or epistemic theorists that the psychological process *remembering* (or indeed ‘simulating’) is present not only in cases of accurate remembering but also in cases of inaccurate remembering. And, for the same reason, it would be a mistake to reject preservationism and PAC out of hand. My

¹⁷ It is interesting to consider whether there might be non-epistemic theories in this category, so that remembering is factive but not a form of knowing. Perhaps remembering could instead be conceived of as a certain kind of skill (see Goldwasser (forthcoming)) or as a *sui generis* relation to the past.

¹⁸ See also McCarroll et al. (2022) and Schirmer dos Santos et al. (2023) for related though importantly different discussions. While I agree with the former discussion that we have different interests in different contexts, I think it sells causal theories short to suggest that they are concerned not with psycho-semantic mechanisms but with the conditions under which it is ‘legitimate’ to assert that someone remembers something in certain contexts. The latter discussion proposes that the causalist-simulationist debate is really “about normative semantics” (51), or “what *should* be in the extension of ‘remembering’” (44). But in that case who does the prescription target? And for *what* normative purposes, exactly, do the parties disagree on what ‘remembering’ should mean, if not to make true descriptive claims about what remembering *is*?

suggested diagnosis of why this would be a mistake is that these theories are simply operating at different levels of inquiry about the mind.

To summarise this section, there are (at least) three different levels of inquiry at which one might be principally operating when one offers a ‘theory of remembering’. And it is crucial to bear the separateness of (PQ)–(AQ) in mind. It is not that these questions have nothing to do with one another, or that we should theorise at these levels in complete isolation. But since theorists have been prone to lose track of these different levels of inquiry, and since—I suggest—this has led to the appearance of greater conflict than there in fact is, it is important to keep the separateness of (PQ)–(AQ) in view when theorising about remembering.

It is tempting to see a linear progression across (PQ)–(AQ), so that only once one is in the right psychofunctional state can the question of reference in remembering properly arise in any given case, and only once one is referentially remembering can the question of accuracy in remembering properly arise. Although I do not think of this linear view as a presupposition for the metatheoretical import of the model, I do think of it as a plausible take. On that take, the best interpretation of ‘accuracy’ without reference sees it as, at best, a kind of *matching*. Cases of referentially empty yet ‘veridical’ confabulation (even if they turned out to be instances of the same psychofunctional process type which (PQ) concerns) are then, strictly speaking, no more veridical than would be Tolkien’s *The Hobbit* if a planet exactly matching the description of Middle Earth were discovered in a distant galaxy.¹⁹

I intend to remain neutral on what the *correct* answers to questions (PQ)–(AQ) might be. In particular, while simulationism is a prime example of a theory the principal concern of which is (PQ), I do not mean to imply that simulationism is an adequate answer to (PQ). But one might object at this point that an adequate answer to (PQ) will have much more to say on (RQ) and (AQ) than my tripartite division implies, so that it is only by selectively focusing on certain theories that the division is sufficiently motivated. For example, it has been argued that simulationism is not an adequate answer to (PQ) because it is unable to convincingly explain the reliability of memory. According to Werning (2020), it is here that we can expect to see modern causal theories of remembering emerge as victorious. If Werning were right, one could perhaps criticise the division I have set up between (PQ) and (RQ) on the grounds that modern causal theories, such as trace minimalism (Werning 2020), show that we should answer (PQ) and (RQ) simultaneously.

In reply, the very fact that simulationist, causal, and epistemic theories have emerged as the three leading categories of theory is motivation enough for intervening in the current

¹⁹ Thanks to Imogen Dickie for this expression of the point and to Juan Álvarez and José Carlos Camillo for pressing me on it.

literature and distinguishing the differences in their projects and the implications that these differences have for the tenability of PAC and preservationism. Second, however, it is far from clear that considerations of reliability do provide sufficient support for a causal theory of remembering that treats it as constitutively referential. As Andonovski (2022) convincingly argues, considerations of general reliability at the level of process type could not establish the (meta)physical necessity of appropriate, token-level causation for remembering.²⁰ While it might be true that the reliability of episodic memory processes is best explained in causal/informational terms, this claim is compatible with there being genuine or even normal instances of successful remembering that involve no appropriate causation at all (Andonovski 2022: 10–15).²¹ Since it could be accepted by functionalists such as Fernández (2018) and perhaps even simulationists such as Michaelian (2016), what uncontroversial truth there is in the claim that the reliability of memory requires a causal explanation does not get us sufficiently far as to privilege causal theories of remembering, and so nor do such considerations suggest that (PQ) and (RQ) are, after all, practically inseparable.

4 In defence of preservationism (and PAC)

The anti-preservationist (and anti-PAC) arguments described in §2 can now be seen as guilty of a bait-and-switch. The arguer presents us with a worry that, given the vast psychological literature on memory distortions, the apparent regularity with which they occur, and the adaptively beneficial content-modulating mechanisms they seem to indicate, to say that remembering is only successful when it meets the condition set out in preservationism “may force us to accept that we have a memory system that regularly and systematically malfunctions” (De Brigard 2014: 159).²² This worry gets traction only if we are already slipping between the levels of inquiry marked out in questions (PQ)–(AQ). The empirical evidence is used to make claims about a psychologically typed memory system and the conditions under which it fulfils its proper function. But the purported conclusion, and the rejection of

²⁰ The basic reason is that while Reichenbach’s common cause principle (to which Werning (2020) appeals) can license inferences from probabilistic correlation to *type*-level causal relations, it can only license inferences about the *probability* of token causal relations between particular events. In short, “[p]robabilistic dependence is not sufficient for token causation” (Andonovski 2022: 9).

²¹ While Werning appears to endorse this necessity claim (2020: 320; 325), it may be that he allows for ‘deficient’ cases of remembering which lack an appropriate causal connection (2020: 313, n. 12).

²² Similar claims can be found in, *inter alia*, Schacter & Addis (2007) and Suddendorf & Corballis (2007). For critical discussion of whether there is one stable notion of ‘function’ ripe for use in this sort of argument, see Schwarz (2020).

preservationism, concerns *successful* remembering: the conditions under which remembering is normatively accurate. Once we demarcate these levels and distinguish claims about the function of memory and the mechanics of its operation from claims about the accuracy conditions of remembering, the enthymeme character of the reasoning is clear. While Michaelian (2016) is in one sense correct when he claims that “the factivity condition has no place in the naturalistic project of describing memory as a psychologically real process” (69), this should not be taken to mean that factivity, or preservationism (which entails it), have no place in the philosophy of memory. Preservationism is part of an account of the conditions under which remembering is normatively successful.

Those who would assert PAC on *any* reading of ‘remember’ as it occurs in PAC are those who think that an answer to (PQ) should yield an answer to (RQ). And those who would assert preservationism on any reading of ‘remember’ as it occurs in preservationism are those who think that an answer to these questions should yield an answer to (AQ). But one should not assert these principles unrestrictedly, on just *any* reading of ‘remember’. PAC is a principle concerning referential remembering, and preservationism is a principle concerning successful remembering. Once this is clear, the critique of preservationism in §2 loses its bite. For the anti-preservationist argument is not about referential or successful remembering but instead the psychofunctional process type which may be present whether or not there is some particular such that one remembers *it*, and whether or not one remembers it accurately.

To return to Fernández’s rabbit case (§2), the defender of preservationism should claim that the subject correctly represents—*perhaps via processes identical in psychological kind to proper remembering*—but does not accurately remember his father wearing a belt with a silver buckle when he shot the rabbit. While anti-preservationists will insist that sameness of psychological kind is all there is to the matter, this insistence on its own has no dialectical sway.

Of course, both referential and successful remembering are, in part, implemented by the faculty *memory*. And both reference and normative accuracy are, perhaps, two of its proper functions. But there is no direct conflict between a constructivist view of memory as a faculty and preservationism about successful remembering. Once we distinguish claims about the function of memory and the mechanics of its operation from claims about the accuracy conditions of remembering, the enthymeme character of the constructivist argument against preservationism (§2) emerges. Perhaps the arguer could supplement their case against preservationism, bridging the gap between (PQ) and (AQ) by advocating for a view that ties the accuracy conditions of mental states very closely to the conditions under which the psychological process responsible for producing them fulfils its proper function. In response, the burden is on such an arguer to persuade us with such a view, and I think pessimism here is

warranted. Moreover, proponents of anti-preservationist arguments have not only been disinclined to bridge this gap, they have sometimes made note of it themselves. When De Brigard (2014) writes, “most of the time what you recall accurately depicts the witnessed event. Sometimes it does not. In both cases, however, the system is doing what it is supposed to do (172)”, ‘supposed to do’ does not pick out the normative accuracy which ‘remember’ encodes in the statement of preservationism, but some broadly telic notion of proper functioning.

Perhaps those making the anti-preservationist argument presented in §2 are really making a meta-theoretical move. Perhaps they are suggesting that we have no better grip on what ‘remembering’ could pick out, for the purposes of naturalistic theorising about the mind, other than through the psychological construct ‘episodic memory’. But this move is not something which is settled by the science itself; it requires substantive philosophical argumentation which is far from being obvious. Although I cannot argue the point in detail here, it is not obvious why we should accept an explanatory monism, or scientific parochialism, on which only psychological (or perhaps neural) constructs can be appealed to in providing genuine explanations of mental phenomena.

I’ve argued that it is important to keep track of different levels of investigation when we are trying to understand an apparently unitary phenomenon such as *remembering* or *perceiving*. And there is room for at least three different such levels that are pertinent to recent philosophy of memory, indicated in (PQ)–(AQ). We could say that they characterise, respectively, a psychological natural kind, an intentional or semantic natural kind, and (insofar as successful remembering can be seen as a form of knowing) an epistemic natural kind.²³

It would be a substantive philosophical claim to insist that, really, all of these should be identified with or eliminated in favour of a natural kind at one privileged level, be it psychological or otherwise.²⁴ Of course, such debates about *how* we should theorise about remembering and other phenomena are as urgent to have as any, but the point is that we

²³ The so-called ‘continuism-discontinuism’ debate (Perrin 2016), concerning whether or not remembering and imagining (on some precisification of ‘imagining’) are of the same fundamental kind, is then best seen as a dispute over whether there is one psychofunctional process type (perhaps what Langland-Hassan (2023) calls ‘constructive imagining’) common to sufficiently many paradigm cases of remembering and imagining.

²⁴ It is with this in mind that Craver (2020) writes: “[t]o reduce epistemic remembering to empirical remembering, one would have to derive a theory of competence from a theory of performance” (2020: 271). Since it is far from clear that this can be done, “the memory empiricist is not free to jettison the epistemic theory; it is the basis for their research domain, for their study designs, and for the very concept of an apparent memory. The science of memory presupposes and so cannot eliminate the distinction between veridical and non-veridical remembering” (276).

should not engage in disputes that are on their face first-order disputes—about whether preservationism or PAC are true—while trading in arguments that make meta-theoretical assumptions one’s opponents do not share. This will only muddy the dialectic and lead to noise and confusion in the conversation.

I have allowed that despite the importance of clearly separating questions corresponding to each of the levels in (PQ)–(AQ), genuine disagreements can still arise. First, there may be indirect conflicts that arise from attempts to integrate theories pitched at these different levels. A simulationist who insisted on the same story about reference being applicable in cases of episodic future imagination as well as cases of episodic remembering would hardly accept the causalist’s account of referential remembering. But in at least some cases these conflicts can be smoothed out by again emphasising the different levels of inquiry concerned. Insofar as the simulationist who insists on seeking out a parallel account of reference being given in episodic future imagination and episodic remembering is motivated by their apparent sameness in psychological kind, their insistence can be called into question by emphasising that sameness in psychological kind does not make for sameness in (meta)semantic respects. We can be maximally respectful of the psychological commonalities between episodically remembering events in one’s past and episodically simulating events in one’s personal future without thinking these commonalities signify that singular reference is not only present in both cases but determined in the same way.

A second way that disagreements can arise is that one might assign the three explananda different roles in one’s broader theorising. For instance, one could think of referential remembering but not accuracy *per se* as intruding into one’s account of recollective experience.²⁵ Alternatively, one could instead think of recollective experience as something that is independent of whether mnemonic reference is achieved (Hopkins 2018). This dispute concerns whether reference makes its way into recollective experience and makes for a difference in *kind*. And a parallel can be drawn here between remembering and perceptual experience. As some have been keen to insist, the non-factive representational states posited by our best vision science need not be identified with the subjective, factive, relational kind (Campbell 2011; Phillips 2018b).

²⁵ This would entail disjunctivism about recollective experience. On this view, in referential remembering “one undergoes an experience of a distinctive kind. [...] it *lies in the nature* of experiences of this kind to be [appropriately] caused” (Moran 2021); “what is distinctive of experiential memory, in contrast to imagery, is that it has an intrinsic particularity of content inherited from earlier sensory experience [...] [so that] one aspect of how the world is now depends non-causally on how it was” (Martin 2001: 277).

Computational processing and its representational products are the primary objects of theorizing within vision science. Its joints mark psychological kinds. This process and its representational products do not themselves constitute acquaintance with the environment, however. They form a common kind across veridical and hallucinatory cases. The naïve realist will thus insist on distinguishing such processing from the conscious relation which we stand in when, however partially and fleetingly, [...] the world is revealed. This relation we stand in is the ordinary kind, *perception*, whose nature the naïve realist expounds (French & Phillips, forthcoming).

To sum up, there are at least three mnemonic explananda which a ‘theory of remembering’ might target: psychofunctional process type, perhaps construed as a psychological natural kind; referential remembering; accurate or successful remembering.²⁶ PAC articulates a necessary condition for *referential* remembering. Preservationism articulates a necessary condition for *accurate* remembering. These principles are perfectly compatible with constructivist, anti-transmissionist theories of the mechanisms of episodic recollection.²⁷ Moreover, simulationist theories of remembering are best characterised as theories of the psychofunctional process type; causal theories are best characterised as theories of referential remembering; epistemic theories are best characterised as theories of successful remembering. Once these projects are demarcated and held in view, we can move past seeing the theories as in direct competition. We can then focus on identifying conflicts of integration, moving the debate forward by pursuing a harmony across these various levels of theorising.

5 Conclusion

²⁶ There are, of course, further explananda that philosophical theories might target, such as the phenomenal character of remembering, its role in enabling the communication of first-hand evidence, or its ethical dimensions. I have focused on the particular three in the text given my aim to defend PAC and preservationism and to also show that the three leading theories of the *nature* of remembering found in the literature have, as their principal focus, overlapping but crucially distinct subject matters.

²⁷ Aronowitz (2019) and Andonovski have pointed out that, by specifying what *memory* is in a more neutral way (“a faculty that manages information for a variety of uses—some of which we don’t usually think of as exercises of remembering—under significant computational constraints” (2021: 244)), we can explain why there is a well-documented “selection pressure for the (gradual) construction of generalized representational structures” (2021: 243). As I see it, preservationists could agree with all of this, too.

I have argued that the best precisifications of PAC and preservationism each use the term 'remember' to pick out a success notion: referential remembering and accurate remembering, respectively. Once we are clear about this, we can see these principles as resistant to the line of argument against them recapitulated in §2. These considerations also led us to identify three distinct levels of inquiry and to observe that the leading theories of 'remembering' in the recent philosophical literature are in fact best characterised as theories cast at these three different levels. As such, the theories do not compete over precisely the same territory. Just as a simulationist who (in contrast to causalists) rejects reference as a condition on remembering, *however broadly* we understand 'remembering', would be operating at only one level of theorising, a causalist who (in contrast to epistemic theorists) rejects factivity would be making an analogous move which rides across different levels of theorising and overlooks the different projects which might be undertaken.

Moreover, since the causalist is already taking her explanandum to be a success notion in the semantic or referential sense, it is unclear why she should not wish to *also* mark out an explanandum which is a success notion in the normative sense. But as soon as one does that, *preservationism* about accuracy in remembering is motivated in an irresistibly analogous way to how PAC is motivated in the case of referential remembering. For much the same reason as one insists that *which* events it is possible for one to remember is a function of the events encountered in one's past, one will be moved to say that the properties it is possible to for one to remember such events as having had is a function of how one experienced them as being in one's past. And this explanandum is what epistemic theories of remembering target.

Although there is room for genuine clashes between simulationist, causal, and epistemic theories, these arise not from head-on disagreement over a single, constant subject matter but from conflicts of integration. It is likely that standard simulationism, the traditional causal theory of remembering, and simple epistemic theories of remembering are not fully correct theories of the psychofunctional process type *remembering*, *referential* remembering, and *successful* remembering, respectively. By attending to the clashes that result from trying to integrate these views across their respective levels of theorising, tweaking the views to obtain a reflective equilibrium, we can make better collaborative progress in our collective inquiry into the nature of remembering.*

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Bibliography

- Andonovski, N. 2021. 'Memory as triage: Facing up to the hard question of memory', *Review of Philosophy and Psychology* 12: 227–256.
- Andonovski, N. 2022. 'Causation in memory: Necessity, reliability and probability', *Acta Scientiarum* 43(3): e61493.
- Aronowitz, S. 2019. 'Memory is a modeling system', *Mind & Language* 34(4): 483–502.
- Bernecker, S. 2008. *The Metaphysics of Memory*. Dordrecht: Springer.
- Bernecker, S. 2010. *Memory: A Philosophical Study*. Oxford: Oxford University Press.
- Bernecker, S. 2015. 'Visual memory and the bounds of authenticity', in Coliva, A., Munz, V., & Moyal-Sharrock, D., (eds.), *Mind, Language and Action: Proceedings of the 36th International Wittgenstein Symposium*. Berlin: De Gruyter.
- Brewer, W. F. 1988. 'Memory for randomly sampled autobiographical events', in Neisser, U. & Winograd, E., (eds.), *Remembering Reconsidered: Ecological and Traditional Approaches to the Study of Memory*. Cambridge: Cambridge University Press.
- Byrne, A. 2010. 'Recollection, perception, imagination', *Philosophical Studies* 148(1): 15–26.
- Byrne, A. and Manzotti, R. 2022. 'Hallucination and its objects', *Philosophical Review* 131(3): 327–359.
- Campbell, S. 2006. 'Our faithfulness to the past: Reconstructing memory value', *Philosophical Psychology* 19(3): 361–380.
- Campbell, J. 2011. 'Review: *Origins of Objectivity* by Tyler Burge', *Journal of Philosophy* 108(5): 269–85.
- Craver, C. F. 2007. *Explaining the brain: Mechanisms and the mosaic unity of neuroscience*. Oxford: Oxford University Press.
- Craver, C. F. 2020. 'Remembering: Epistemic and empirical', *Review of Philosophy and Psychology* 11: 261–281.
- Debus, D. 2018. 'Handle with care: Activity, passivity, and the epistemological role of recollective memories', in Michaelian, K., Debus, D., & Perrin, D. (eds.), *New Directions in the Philosophy of Memory*. New York: Routledge.
- De Brigard, F. 2014. 'Is memory for remembering? Recollection as a form of episodic hypothetical thinking', *Synthese* 191(2): 155–185.
- Dummett, M. 1993. 'Testimony and memory', in his *The Seas of Language*. Oxford: Oxford University Press.
- Fernández, J. 2018. 'The functional character of memory', in Michaelian, K., Debus, D., & Perrin, D. (eds.), *New Directions in the Philosophy of Memory*. New York: Routledge.
- French, C. & Phillips, I. forthcoming. 'Naïve realism, the slightest philosophy, and the slightest science', in McLaughlin, B., & Cohen, J., (eds.), *Contemporary Debates in the Philosophy of Mind*. London: Blackwell.
- Goldwasser, S. forthcoming. 'Memory as skill', *Review of Philosophy and Psychology*. DOI: 10.1007/s13164-021-00605-x
- Hoerl, C. 2018a. 'Episodic memory and theory of mind: A connection reconsidered', *Mind & Language* 33(2): 148–160.
- Hoerl, C. 2018b. 'Remembering past experiences: Episodic memory, semantic memory, and the epistemic asymmetry', in Michaelian, K., Debus, D., & Perrin, D., (eds.), *New Directions of Research in the Philosophy of Memory*. New York: Routledge.
- Hoerl, C. 2022. 'A knowledge-first approach to episodic memory', *Synthese* 200(376). [DOI: 10.1007/s11229-022-03702-1]

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- Hopkins, R. 2018. 'Imagining the past: On the nature of episodic memory', in Macpherson, F., & Dorsch, F., (eds.), *Memory and Imagination*. Oxford: Oxford University Press.
- Intraub, H., and Hoffman, J. E. 1992. 'Reading and visual memory: Remembering scenes that were never seen', *The American Journal of Psychology* 105(1): 101–114.
- James, S. 2014. 'Hallucinating real things', *Synthese* 191(15): 3711–3732.
- Lackey, J. 2005. 'Memory as a generative epistemic source', *Philosophy and Phenomenological Research* 70(3): 636–658.
- Langland-Hassan, P. 2022. 'Propping up the causal theory', *Synthese* 200 (2): 1–27.
- Langland-Hassan, P. 2023. 'Remembering, imagining, and memory traces: Toward a continuist causal theory', in Sant'Anna, A., McCarroll, C. J., & Michaelian, K., (eds.), *Current Controversies in Philosophy of Memory*. New York: Routledge.
- Lewis, D. K. 1979. 'Attitudes *de dicto* and *de se*', *The Philosophical Review* 88(4): 513–543.
- Locke, J. 1690. *An Essay Concerning Human Understanding* (P. H. Nidditch, ed.). Oxford: Clarendon Press, 1975.
- Martin, C. B., and Deutscher, M. 1966. 'Remembering', *Philosophical Review* 75(2): 161–196.
- Martin, M. G. F. 2001. 'Out of the past: Episodic recall as retained acquaintance', in Hoerl, C., and McCormack, T., (eds.), *Time and Memory: Issues in Philosophy and Psychology*. Oxford: OUP.
- McCarroll, C. J. 2018. *Remembering from the Outside: Personal Memory and the Perspectival Mind*. Oxford: Oxford University Press.
- McCarroll, C. J., Michaelian, K., Nanay, B. 2022. 'Explanatory contextualism about episodic memory: Towards a diagnosis of the causalist-simulationist debate', *Erkenntnis*. [DOI: 10.1007/s10670-022-00629-4]
- Michaelian, K. 2011. 'Generative memory', *Philosophical Psychology* 24(3): 323–342.
- Michaelian, K. 2016. *Mental Time Travel: Episodic Memory and Our Knowledge of the Personal Past*. Cambridge, MA: MIT Press.
- Michaelian, K. 2021. 'Imagining the past reliably and unreliably: Towards a virtue theory of memory', *Synthese* 199: 7477–7507.
- Michaelian, K. 2022. 'Radicalizing simulationism: Remembering as imagining the (nonpersonal) past', *Philosophical Psychology*. [DOI: 10.1080/09515089.2022.2082934]
- Michaelian, K. and Robins, S. K. 2018. 'Beyond the causal theory? Fifty years after Martin and Deutscher', in Michaelian, K., Debus, D., & Perrin, D., (eds.), *New Directions in the Philosophy of Memory*. New York: Routledge.
- Michaelian, K. and Sant'Anna, A. 2022. 'From authenticity to alethism: Against McCarroll on observer memory', *Phenomenology and the Cognitive Sciences* 21: 835–856.
- Moran, A. 2021. 'Disjunctivism and the causal conditions of hallucination', *Erkenntnis*. [DOI: 10.1007/s10670-022-00526-w]
- Neter, J. & Waksberg, J. 1964. 'A study of response errors in expenditures data from household interviews', *Journal of the American Statistical Association* 59(305): 18–55.
- Nigro, G., and Neisser, U. 1983. 'Point of view in personal memories', *Cognitive Psychology* 15(4): 467–482.
- Openshaw, J. 2022. 'Remembering objects', *Philosophers' Imprint* 22(11): 1–20.
- Openshaw, J. and Michaelian, K. in progress. 'Reference in episodic remembering: A simulationist account'.
- Perrin, D. 2016. 'Asymmetries in subjective time', in Michaelian, K., Klein, S. B., & Szpunar, K. K. *Seeing the Future: Theoretical Perspectives on Future-Oriented Mental Time Travel*. Oxford: Oxford University Press.
- Perrin, D. 2018. 'A case for procedural causality in episodic recollection', in Michaelian, K., Debus, D., & Perrin, D. (eds.), *New Directions in the Philosophy of Memory*. New York: Routledge.
- Phillips, I. 2018a. 'Consciousness, time, and memory', in Gennaro, R. J. (ed.), *The Routledge Handbook Of Consciousness*. Abingdon: Routledge.
- Phillips, I. 2018b. 'Unconscious perception reconsidered', *Analytic Philosophy* 59(4): 471–514.

- Reid, T. 1785. *Essays on the Intellectual Powers of Man*. (D. R. Brookes & K. Haakonssen, eds.). Edinburgh: Edinburgh University Press, 2002.
- Righetti, F. 2021. 'The pre-reflective roots of the *madeleine*-memory: A phenomenological perspective', *Phenomenology and the Cognitive Sciences*. [DOI: 10.1007/s11097-021-09774-7]
- Robins, S. K. 2016a. 'Misremembering', *Philosophical Psychology* 29(3): 432–447.
- Robins, S. K. 2016b. 'Representing the past: Memory traces and the causal theory of memory', *Philosophical Studies* 173(11): 2993–3013.
- Schacter, D. L. & Addis, D. R. 2007. 'The cognitive neuroscience of constructive memory: Remembering the past and imagining the future', *Philosophical Transactions of the Royal Society of London B* 362: 773–786.
- Schechtman, M. 1994. 'The truth about memory', *Philosophical Psychology* 7: 3–18.
- Schirmer dos Santos, C., McCarroll, C. J., & Sant'Anna, A. 2023. 'The relation between memory and imagination: A debate about the right concepts', in Sant'Anna, A., McCarroll, C. J., & Michaelian, K., (eds.), *Current Controversies in Philosophy of Memory*. New York: Routledge.
- Schwartz, A. 2020. 'Simulationism and the function(s) of episodic memory', *Review of Philosophy and Psychology* 11(2): 487–505.
- Shoemaker, S. 1970. 'Persons and their pasts', *American Philosophical Quarterly* 7(4): 269–285.
- Soteriou, M. 2013. *The Mind's Construction: The Ontology of Mind and Mental Action*. Oxford: Oxford University Press.
- Strawson, G. 2015. "Self-intimation", *Phenomenology and the Cognitive Sciences* 14: 1–31.
- Suddendorf, T. & Corballis, M. C. 2007. 'The evolution of foresight: What is mental time travel, and is it unique to humans?', *Behavioral and Brain Sciences* 30(3): 299–313.
- Sutton, J. 1998. *Philosophy and Memory Traces: Descartes to Connectionism*. Cambridge: Cambridge University Press.
- Teroni, F. 2018. 'On seeming to remember', in Michaelian, K., Debus, D., & Perrin, D., (eds.), *New Directions in the Philosophy of Memory*. New York: Routledge.
- Tulving, E. 1972. 'Episodic and semantic memory', in Tulving, E., and Donaldson, W., (eds.), *Organization of Memory*. New York: Academic Press.
- Werning, M. 2020. 'Predicting the past from minimal traces: Episodic memory and its distinction from imagination and preservation'. *Review of Philosophy and Psychology*, 11(2): 301–333.
- Werning, M. and Liefke, K. forthcoming. 'Remembering dreams: Parasitic reference in memories of non-veridical experiences', in Gregory, D. & Michaelian, K., (eds.), *Dreaming and Memory: Philosophical Issues*. Springer.