2 The relation between memory and imagination

A debate about the right concepts

César Schirmer dos Santos, Christopher Jude McCarroll, and André Sant'Anna

2.1 Introduction

Episodic memory and imagination both represent absent events, and do so similarly, involving a rich, quasi-sensory phenomenology. Yet, is this similarity substantive? Is there a difference in kind between memory and imagination, or simply a difference in degree? Indeed, what precisely is the relation between memory and imagination? According to discontinuists, memory and imagination are different kinds of states or processes. According to continuists, any difference between memory and imagination is a difference in degree. This is the (dis)continuism debate about memory and imagination (Perrin 2016).

The (dis)continuism debate has been mostly articulated as a debate about causation and has resulted in two different factions—*causalism* and *simulationism*. According to causalists, memory is defined in terms of an appropriate causal connection to a past experience (Martin and Deutscher 1966). Because no such connection is present in imagining, causalists argue that memory and imagination are mental states of different kinds (Debus 2014). According to simulationists, memory and imagination are mental states produced by the same cognitive system, and as such, are states of the same kind (Michaelian 2016b). Because a causal connection of the relevant sort is unnecessary for imagining, the simulationist argues that it is not required for remembering either. This has led Perrin and Michaelian (2017) to suggest, in a recent overview of the debate, that the dispute concerning the relationship between memory and imagination boils down to the question of whether a causal connection is necessary for remembering.

Even though this debate focuses to some extent on *describing* the mechanisms of memory, given the focus on the necessity of an appropriate causal connection, one might wonder whether there is not a sense in which the debate is also *conceptual*. That is, maybe these different ways of conceiving the relationship between memory and imagination result from causalists and simulationists defining 'remembering' very differently. This, in turn, might imply that they are talking past each other. Compare the two natural language sentences, 'Mary moved to the bank' and 'Mary went to the bank'. In determining whether Mary ended up at the side of a river, or a financial institution, we need to know which sense of the word 'bank' these sentences are picking out. In the same way that the word

'bank' may express different meanings in different sentences, perhaps causalists and simulationists use the word 'remembering' in different ways? Indeed, there is a constant risk of reducing a substantive debate to a merely verbal dispute when it comes to philosophical discussions. It happens, for instance, when an observer tries to be charitable to the truth of the claims of all the participants in a debate, even though the participants may be using the same word in different ways, and concludes that everybody is right about different themes (Thomasson 2017). It also happens when one disputant interprets the opponent uncharitably, or, as we will argue in this chapter, when one fails to acknowledge the intentions of, or how the debate is conducted by, those involved in it.

These problems, it might be argued, threaten to trivialise the debate between causalists and simulationists in philosophy of memory, and, consequently, the debate about the relationship between memory and imagination. We suggest in this chapter that the debate is about *using the right concepts*, without being merely a verbal dispute. The use of 'remember' in the (dis)continuism debate is not the same as the different senses of 'bank' invoked earlier. We show that the debate between causalists and simulationists in particular, and the debate about the relation between memory and imagination more generally, are substantive ones. Importantly, we depart from recent approaches in that we think the substance of the debate lies not in an attempt to *describe* the mechanisms responsible for remembering and imagining, but rather in determining how the terms 'remember' and 'imagine' *should* be used. In a nutshell, we propose the reinterpretation of these debates as *normative* or *prescriptive*—instead of *descriptive*—disputes.

The chapter progresses as follows. Section 2.2 begins by introducing the causalism–simulationism and (dis)continuism debates. Section 2.3 then argues that, reinterpreted as prescriptive, the causalism–simulationism debate is about substantive questions relative to how the concept of 'remembering' *should* be used: it is important to look at the *intention* for using a concept in a particular way. According to our proposal, the causalist *prescribes* an appropriate causal connection between an accurate representation of an event *e* and the previous experience of the same event as the difference-maker between remembering and merely imagining (Martin and Deutscher 1966). In contrast, simulationists *prescribe* that memory is an inherently constructive capacity, thus arguing that this is reason for rejecting the causalist prescription (Michaelian 2016b, 13).

Finally, Section 2.4 considers an important implication of the prescriptive approach. We argue that it opens the logical space for a discussion of two problems, rather than only one problem, concerning the relationship between memory and imagination. In particular, we argue that focusing on the necessity of a causal connection is only *one* way of thinking about the continuism–discontinuism debate. We explore an alternative view, which involves conceiving of the continuism–discontinuism debate in terms of the *attitudes* that characterise remembering and imagining (Robins 2020; Sant'Anna 2021).

This proposal relies on a common way of characterising mental states in philosophy of mind, which consists in distinguishing between their *contents* and their *attitudes* (Searle 1983). The content is what the mental state represents,

whereas the attitude is the stance taken toward what is represented. This distinction between attitude and content helps explain why we can have *different* mental states, which play different roles in our cognitive economies, that have the *same* content. Remembering and imagining are intentional states—they are states that represent or are about some object or state of affairs. While it is important to think of the relation between them in terms of content, and whether their content involves a causal connection to a past event, it is also essential to adequately characterise their respective attitudes.[1] Considering this alternative will lead to a more refined understanding of the precise issues involved in thinking about the relation between memory and imagination.

2.2 Causalism, simulationism, and the (dis)continuism debate

One way of thinking about the relation between memory and imagination is to think of it in terms of the necessity of a causal connection to the event represented by those mental states. Is a causal connection necessary for remembering and not imagining? The idea that present memories stand in a causal relation to past events has been articulated by a number of philosophers and can perhaps even be traced back to Aristotle, who tells us that memory images are produced in our soul *as a result of* former perception.[2] But the first systematically developed version of the causal theory, and the one that most informs contemporary research in philosophy of memory, is from Martin and Deutscher (1966).

The causal theory of memory, or simply *causalism*, says that remembering occurs only when a representation is appropriately causally connected to a past perceptual experience.[3] This is often expressed by the idea that remembering requires a *memory trace*,[4] understood as a brain state that encodes and stores information at the time of experience and that is later retrieved to cause memories of those events. Thus, causalists have proposed that a causal connection is appropriate when a memory trace, laid down at the time of the original event, connects a particular past event to a current representation of it.

The requirement for a causal connection in remembering has led causalists to argue that memory and imagination are mental states of different *kinds*. According to them, if there is an appropriate causal connection between a subject's current mental representation of an event and his previous experience of it, the representation will count as a case of remembering; in contrast, if such a causal connection is missing, the representation will count as a case of imagining.[5] Memory and imagination are, in other words, *discontinuous* (e.g., Debus 2014; Perrin 2016).

Causalism has, however, been challenged by a wealth of recent empirical evidence, which demonstrates that remembering is an active, constructive and reconstructive process, using information generated in the present (Addis 2018). Memories are constructed in—and alive to—the context of the present. To remember is not to retrieve a representation of a past event in the form of a memory trace, but rather to generate a representation that may incorporate content that was unavailable at the time of the original experience of the event

and hence was not stored in a trace. Even though the classical causal theory can be updated and modified to reflect memory's creativity (e.g., Michaelian 2011), another line of research seems to further dissolve the boundaries between memory and imagination. According to this body of research, (episodic) memory and (episodic) imagination are just two specific occurrences of a more general cognitive capacity that we have for mental time travel in subjective time: while remembering is the specific ability we have to mentally travel into past subjective time, so as to "re-live" or "re-experience" an event, imagining corresponds to the specific ability we have to mentally travel into future subjective time, so as to simulate the experience of a possible event.[6] This research on memory as mental time travel (MTT) provides further motivation to abandon the necessity of a causal condition.

Inspired by the evidence on constructive memory and MTT, the simulation theory makes just such a move: it rejects the idea that a causal connection is necessary for remembering. The simulation theory, or simply *simulationism*, proposes that remembering is just a form of *imagining* the past (Michaelian 2016b, 103, 111). On this view, successful remembering occurs when a representation of a past event is produced by a reliably (properly) functioning *episodic construction system*, a neurocognitive system that also constructs representations of other scenarios, such as future and counterfactual episodes (see De Brigard 2014a).

Simulationism thus suggests that remembering and imagining are *continuous*; that is, they are mental states of the same kind at the most fundamental level.[7] The continuity between memory and imagination motivates the simulationist argument against the necessity of a causal connection for remembering. According to simulationists, mental time travel research implies that memory and imagination are mental states of the same kind. Given that imagination does not require a causal connection to what is imagined, it follows that a causal connection is not necessary for remembering.[8]

Thus, as is clear from this brief overview, the current dispute between causalists and simulationists has, in the context of the philosophy of memory, been closely associated with the dispute over whether memory and imagination are mental states of the same kind, or whether they are continuous with one another. On the one hand, causalists side with *discontinuists*, who believe that there is a fundamental difference between memory and imagination; on the other hand, simulationists side with *continuists*, who believe that there is no such fundamental difference. Some, such as Perrin and Michaelian (2017), have even gone as far as to say that the continuism–discontinuism dispute boils down to the causalism-simulationism dispute (see also Michaelian, Perrin, and Sant'Anna 2020). We believe, however, that reducing the former debate to the latter is problematic, for reasons articulated elsewhere (Sant'Anna 2021). Rather than rehearse those arguments here, in what follows, we will argue that there is a different way of formulating the dispute over the (dis)continuity between remembering and imagining. Motivating this alternative will require, as a first step, getting clear on what we mean by 'memory' and 'imagination', a task to which we turn our attention in the next sections.

2.3 Defining 'remembering'

Let us begin by looking into what we mean by 'remembering'. As we will see, one worry arising in the context of causalism–simulationism is that the participants in the debate seem to be defining 'remembering' in different ways. This might suggest that the debate is merely verbal, that is, that causalists and simulationists are just talking past one another. We will argue, however, that this is not the case. We show that even though they have different conceptions of remembering, the debate is a substantive one. Getting clear on the terms of the causalism-simulationism debate, we suggest, will afford us a way of getting clearer about the relation between memory and imagination.

If causalists and simulationists are not talking past one another, then what is the sense in which the debate is a substantive one? Answering this question requires identifying two ways in which a philosophical debate might unfold. On the one hand, the debate might be about *facts*, in the sense that it is about the nature or existence of an object, property, or relation. For example, in the debate about the relation between memory and imagination, the question of whether there is a property or relation, such as vivacity or causation, that pertains primarily or only to mnemonic states, is a debate about a fact concerning memory and imagination. On the other hand, the debate might be about *language*, in which case it is about the meaning of a word—for instance, when we want to know what 'remembering' means.

It might be argued that, if there is a sense in which the causalism–simulationism debate is substantive, it must be a debate about facts. A factualist interpretation along these lines is actually suggested by Michaelian (2016b, 97). On this way of seeing the dispute, the causalist proposes that an appropriate causal relation between a past experience and a present representation marks the difference between remembering and imagining. The simulationist, in contrast, argues that this difference has to do with the operations and aims of the episodic construction system—i.e., with whether the system is functioning reliably and whether it aims to represent an event in the personal past, the counterfactual personal past, or the personal future. Thus, the debate about what the criterion of mnemicity is—i.e., what makes a mental state a memory—boils down to the question of which view, causalism or simulationism, gets the relevant facts about 'remembering' right.

A problem with this factualist view of the debate is that there is no evidence of causalists or simulationists rejecting facts about memory and imagination. It is quite the opposite. For instance, both sides try hard to propose research compatible with the discoveries about mental time travel (Michaelian 2016a, 2016b; De Brigard 2014a; Robins 2020; Werning 2020). Indeed, another important issue that separates causalists and simulationists is whether remembering requires that a subject previously experienced the remembered event. While causalists argue that this is a requirement, simulationists deny it (Michaelian 2016b; see McCarroll 2020 for discussion). Thus, the dispute is *not* about the relevant facts for distinguishing memory from imagination. Instead, we propose, it is about the *meaning* of 'remembering'.

Of course, this proposal can be challenged. After all, causalists and simulationists seem to agree about the meaning of 'remembering'. For instance, both use the word to refer to the mental representation of an episode of one's personal past. But, as we saw in the last section, they disagree about the nature of remembering. More specifically, they disagree about the continuity between remembering and imagining. And, as we said in the last paragraph, they agree about the facts. How to interpret this situation? Carl Craver (2020) provides a source of inspiration. He notes that "[t]he construct 'remembering' is equivocal between an *epistemic sense*, denoting a distinctive ground for knowledge, and *empirical sense*, denoting the typical behavior of a neurocognitive mechanism" (2020, p. 261, our emphasis).

While we will not speak of 'epistemic' and 'empirical' remembering in what follows, we believe that Craver's overall diagnosis that there is an ambiguity in the notion of 'remembering' is on the right track. Building on this, we want to explore the hypothesis that causalists and simulationists disagree about the meaning of 'remembering'. For simplicity, we will refer to the causalist usage of the term as 'REMEMBERING$_C$'. In opposition, we will refer to the simulationist's use of 'remembering' as 'REMEMBERING$_S$'. A problem with this path, understood in this way, is that if the dispute is about language, and no fact is disputed, then there does not seem to be much substance to the debate after all, for it can be dissolved by the parties simply acknowledging that there are two concepts of 'remembering' at play.

A debate *can* be dissolved this way. But the causalism–simulationism debate is not. Why is it not? We propose that the explanation concerns the participants' *intentions*. Both causalists and simulationists know very well that they use 'remembering' differently. Thus, mere awareness of this situation does not suffice to end the debate. So, the question that becomes central is, why does the debate continue? Our suggestion is that the causalism–simulationism dispute is ultimately a debate about what the word 'remembering' *should* mean, given the facts we know about its nature. To further motivate this point, we need to look back at the distinction between debates about facts and debates about language introduced earlier. We tend to assume that only debates about facts can be substantive. However, there can be substantive disputes about what a word *should* mean.

Let us consider an example to illustrate. Suppose that one wants to assess the debate between two philosophers, M. and B., on the reality of time. Both accept that the time of physics is different from commonsensical time and that we can experience time. Thus, M. and B. accept the same facts. But while M. claims that 'time' means 'physical time', B. claims that 'time' refers to a feature of experience. M. and B. know very well each other's position. Still, in a debate, they manifest disagreement:

M.: Time does not exist.
B.: No. Time exists.

What is happening in this dispute? If we interpret the debate as a dispute about the literal meaning of 'time', then there is no substantive disagreement between M. and B. But if we understand the conversation as a dispute that is not centred on literal meaning, we can make explicit the point of disagreement (Plunkett and Sundell 2013, 7). One option is that, in their conversation, as a way of manifesting disagreement, M. and B. use 'time' *metalinguistically*, i.e., to show how the word should be used (Plunkett and Sundell 2013, 3). In this case, there is substantive disagreement, but it is not about facts. In this sense, M. and B. are not involved in a merely verbal dispute. There is something *substantive* at stake: how one *should* understand a concept (Thomasson 2017, 2–3).

Our claim is that, similar to the dispute between M. and B. about 'time', the dispute between causalists and simulationists about 'remembering' is not merely verbal. Rather, it is a substantive dispute about how we should use the word 'remembering' (and other cognate terms) based on facts. So, despite causalists and simulationists using the word 'remembering' differently, it does not follow from this that they are talking past each other. Instead, they are negotiating what 'remembering' *should* mean given the relevant facts for the appropriate use of this term. Following Plunkett and Sundell (2013, 3), we call *metalinguistic negotiation* 'a dispute … that employs competing metalinguistic usages of an expression, and that reflects a disagreement about the proper deployment of linguistic representations'.

Two points are worth highlighting here. The first is that metalinguistic negotiations can be tacit. Thus, the fact that the disputants involved in a debate sometimes fail to be explicit about how they are using certain words—e.g., they do not say things such as 'by "W" I mean …'—does not imply that they are not involved in a metalinguistic negotiation. For it is often charitable in those contexts to interpret the *use* that the disputants make of the word 'W' as a way of claiming what 'W' should mean. And when we interpret them in this way, we take the disputants to make a metalinguistic usage of the words, in the sense that we view them as making a claim similar to 'by "W" I mean …'. The second point is that, although the claim of a disputant can be interpreted as being about the meaning of a word, it does not follow from this that the dispute is merely verbal. As we pointed out before, the question of what a word *should* mean is a substantive one, in the sense that it is based on reason or evidence for the prescription of an extension or intension for the word in question.

As we said, Craver's (2020) proposal inspired us to explore the hypothesis that causalists and simulationists use 'remembering' differently. However, going beyond Craver's proposal, and adopting a view proposed by Plunkett and Sundell (2013), we propose that the dispute is about what *should* be in the extension of 'remembering.' Causalists and simulationists thus use 'remembering' differently because "crucial aspects of word meaning depend upon facts about the world that remain open" (Ludlow 2008, 117). Their dispute is therefore one about the difficult task of identifying *which* facts should figure in our understanding of the word 'remembering.' There are no facts of the matter

about whether remembering necessarily requires a causal connection, nor are there facts of the matter about whether remembering requires that one necessarily previously experienced the past event. These claims are being negotiated in light of the correct way of articulating what we mean by 'remember'. In other words, the dispute between causalists and simulationists revolves around a metalinguistic negotiation about the proper way of using the concept of 'remembering'.

The idea of a metalinguistic dispute between causalists and simulationists can be further motivated with the help of a little science fiction. Suppose that a scientist wants to build a *Mnem-O-Matic* machine that differentiates remembering from imagining personal episodes from the actual past. The plan for this device must respect some conception of remembering. However, there is no relevant empirical data sufficient for planning the machine, and there is more than one philosophical conception of remembering. Therefore, more than one plan for a Mnem–O–Matic device is possible.[9]

Consider, first, a Mnem–O–Matic machine built according to the causalist concept of remembering. Call this the *C-Mnem-O-Matic* machine. In line with the causalist definition offered before, the main thing tracked by *C-Mnem-O-Matic* is the causal history of a memory representation. Consider, second, a Mnem–O–Matic machine built according to the simulationist concept of remembering. Call it the *S-Mnem-O-Matic* machine. In line with the simulationist definition offered before, the main thing tracked by *S-Mnem-O-Matic* is whether a representation produced by a reliably functioning episodic construction system tries to simulate an event in the personal past.[10] Importantly, both machines reflect different prescriptions about what should be tracked when assessing the nature of an alleged state of remembering. In this sense, deciding which *Mnem-O-Matic* machine should be built is equivalent to negotiating (in a metalinguistic sense) how the word 'remembering' should be used.

Now, to illustrate how the dispute between causalists and simulationists unfolds, consider a couple of different puzzles.

Puzzle 1

Alice goes in the *C-Mnem-O-Matic* machine. Alice represents an episode E in her mind. *C-Mnem-O-Matic* identifies that there is an appropriate causal connection between Alice's previous experience and her present representation of E and her episodic construction system is working unreliably. Does Alice REMEMBER E?[11]

There are two possible answers here. By relying on REMEMBER$_C$, the causalist will say: 'The participant REMEMBERS$_C$ because there is an appropriate causal connection between the present representation and experience'. In contrast, by adopting REMEMBER$_S$, the simulationist will provide a different answer: 'This is not REMEMBERING$_S$ because REMEMBERING$_S$ requires the reliable operation of the episodic construction system'.

Consider now the second puzzle:

Puzzle 2

John goes in the *S-Mnem-O-Matic* machine. John represents an episode E in his mind. *S-Mnem-O-Matic* identifies that there is not an appropriate causal relation between John's previous experience and his present representation of E and his episodic construction system is working reliably and aims to simulate the actual past. Does John REMEMBER E?

Like Puzzle 1, there are two possible answers here. Relying on $REMEMBER_C$, the causalist will say that: 'The participant does not $REMEMBER_C$ because $REMEMBERING_C$ requires a causal relation between the present representation and experience'. In contrast, by relying on $REMEMBER_S$, the simulationist provides a different answer: 'The participant $REMEMBERS_S$ because the episodic construction system is working reliably and aims to simulate the actual past'.

The upshot of Puzzles 1 and 2 is that there is a disagreement about what empirical facts matter for the use of 'remembering'. The machines track different facts—causal chains in the case of the C-Mnem–O-Matic machine, reliable operation in the S-Mnem–O-Matic machine case. Thus, the participants in the debate observe and accept the same facts. They also understand how the machines work. But they disagree about which facts are relevant for understanding or explaining what 'remembering' is. Their disagreement about the explanatory facts manifests itself as a disagreement about the meaning of 'remembering'. In Puzzle 1, the causalist uses C-Mnem–O-Matic to prescribe when $REMEMBERING_C$ should be used, namely, only when there is causal connection between experience and representation of an event. The simulationist, of course, disagrees with this prescription. Likewise, in Puzzle 2, the simulationist uses S-Mnem–O-Matic to prescribe when $REMEMBERING_S$ should be used, namely, only when the episodic construction system works reliably and aims to simulate the actual past. And the causalist, of course, disagrees with this prescription.

Thus, the Mnem–O–Matic machine thought experiment allows us to clearly see that the causalism–simulationism debate is not merely a debate about how to describe what 'remembering' is, but rather a debate about how we should use the term 'remembering.' In other words, it is not a *descriptive*, but rather a *prescriptive* debate about 'remembering'. Since the relevant *facts* about 'remembering' remain open (Ludlow 2008, 117), it is natural to expect the existence of different conceptions designed to capture those facts. Hence, far from being a merely verbal dispute, the causalism–simulationism debate is a substantive dispute about the normativity of language.

One could object that the problem of the criterion of mnemicity concerns the metaphysics of memory, and metaphysics, arguably, is about joint-carvingness (Sider 2011). Thus, the metaphysician must commit ontologically to the kinds of objects, events, and properties postulated by the best science available.

According to this objection, there is no space for prescriptive conceptual nego-
tiation. Either the metaphysician commits ontologically to the suitable entities,
or she does not.

In response, we do not think that these considerations threaten our argument:
we provide two distinct replies to this objection. First, while we can accept that,
if possible, a metaphysician must carve nature at its joints according to the best
science available, we point out that the empirical evidence about the relation
between memory and imagination is at best ambiguous. There is empirical
evidence to support both continuism and discontinuism about memory and
imagination (Perrin & Michaelian 2017; Michaelian, Perrin, & Sant'Anna
2020). Science does not tell us the answer, so part of the debate is precisely
negotiating how to best interpret what science is telling us and what evidence
should line up with the concept of remembering. Second, the objection rather
neglects the importance of *conceptual ethics*, the field of investigation concerning
the "concepts [we] should … use to think and talk about the world" (Burgess
and Plunkett 2013, 1091). In other words, the objection assumes that, under-
stood as a concept, remembering is unequivocally a joint-carving concept.
However, it is not obvious that this is the only or even the main function of the
concept, for it may also have an epistemic function (Craver 2020). So, even
metaphysical research motivated by naturalistic concerns has to answer to ques-
tions about "the right concepts" (Kitsik 2020, 1046). And this, we argue, is
precisely what is going on in the causalism–simulationism debate.

2.4 Defining 'imagining'

Getting clear about the concept of 'remembering' is thus an important issue.
Yet, to understand the nature of the relationship between memory and imagina-
tion, we need to get clear not only on what 'remembering' means, but also what
'imagining' means. We have spent time considering different ways to define
'remembering'. Let us now consider 'imagining'.

Although 'imagining' and cognate terms have played a major role in recent
discussions in philosophy of memory, the term is rarely defined in an explicit
way. For 'imagination,' the thought goes, is a term that we seem to have a secure
enough grasp of. Yet, there are different ways of understanding imagination too,
and hence different ways that the debate about the relation between memory
and imagination can be formulated. So, we cannot get clear about whether
remembering is a form of imagining if we do not have a clear picture of what
we mean by 'imagining'.

Addressing the debate about the relation between memory and imagination
in precisely this way, and getting clear about the second term in the relation,
Peter Langland-Hassan (2022; Chapter 1, this volume) surveys different ways of
understanding imagination that might be at play in the (dis)continuism debate.
Langland-Hassan identifies three different senses of the term imagination—
imagistic imagining, attitudinal imagining, and constructive imagining[12]—and
seeks to isolate the one that is of relevance for (dis)continuism.

He begins by considering *imagistic imagining* as a candidate. Imagistic imagining requires—as a necessary feature—the use of mental imagery. As such, Langland-Hassan suggests, this is not the type of imagining assumed in the (dis)continuism debate. Both sides of that debate—continuists and discontinuists—agree that imagination and episodic memory typically involve mental imagery. It would be trivially true that episodic memory is continuous with imagination if imagistic imagining is the sense of imagination we have in mind.

Similarly, Langland-Hassan rejects the idea that the sense of imagining in the (dis)continuism debate is *attitudinal imagining*. Attitudinal imagining involves taking an attitude, typically understood as a belief-like attitude, towards a content. To imagine, in this sense, "is to represent without aiming at things as they actually, presently, and subjectively are" (Liao and Gendler 2019). Thus, Langland-Hassan adds, attitudinal imagining is not the type of imagining assumed in the (dis)continuism debate either, for both continuists and discontinuists will happily accept the claim that remembering is not attitudinal imagining. The argument supporting this claim appeals to Michaelian's (2016b) claim that one of the conditions for remembering to happen is that it is produced by a reliably functioning episodic construction system that 'aims' at representing an event from one's personal past. This condition, Langland-Hassan argues, places unique epistemic constraints on remembering that do not hold for attitudinal imagining. As he puts it:

> to say that the episodic construction system "aims at" an episode from one's actual personal past is to say that its products are in epistemic need of revision when that aim isn't met—viz., when the episodic memory does not accurately represent an episode from one's actual personal past.
>
> (Langland-Hassan 2022; Chapter 1, this volume)

Langland-Hassan thus concludes that the type of imagining assumed in the (dis)continuism debate is best described as *constructive imagining*, which refers to "the capacity to form novel representations" (Van Leeuwen 2013, 204). In this sense, imagining is a creative, actively constructive process. Saying that memory just is imagination, then, is to say that memory is constructive imagination (Langland-Hassan 2021; Chapter 1, this volume).

This way of understanding the (dis)continuism debate, as a question of whether memory is a form of constructive imagination, crucially depends on how the representations of remembering and imagining are constructed. Discontinuists hold that the representations of memory will be constructed at least partially from content experienced at the time of the original event and stored in a memory trace. In other words, memory representations are constrained so that they cannot be (at least not entirely) creative acts of constructive imagining. Continuists reject this. Hence, framed in terms of constructive imagining, the (dis)continuism debate again boils down to the question of whether an appropriate causal connection is necessary for remembering.

We now want to explore whether this way of framing the debate, in terms of constructive imagination, is correct. We suggest that there is an important way in which the (dis)continuism debate is about the attitudes involved in remembering and imagining (Sant'Anna 2021). This is not, however, to say that the debate is about attitudinal imagining, or the capacity "to represent without aiming at things as they actually, presently, and subjectively are" (Liao and Gendler 2019). As we will discuss, there are forms of imagining that involve distinctive attitudes that are not captured by the notion of attitudinal imagining, such as cases of imagining the actual (Munro 2021). The question of whether memory and imagination are (dis)continuous is, therefore, the question of whether occurrences of remembering involve the same or similar attitudes to certain occurrences of imagining.

The suggestion that the (dis)continuism debate should be settled by considering the relationship between the attitudes of remembering and imagining has been articulated recently. For instance, Sarah Robins (2020) has argued that the attitude of "seeming to remember", which she takes to be characteristic of occurrences of successful and unsuccessful remembering alike, and which involves entertaining a content as being past and as having happened, is clearly distinct from the attitude of imagining. The latter, she argues, involves entertaining a content as being fictional or possible (Van Leeuwen 2013). Thus, by equating the attitude of imagining with attitudinal imagining, Robins argues that remembering and imagining are discontinuous. In a similar vein, Daniel Munro (2021) has argued that remembering is discontinuous with what he calls "hypothetical imagining" because they involve different attitudes towards contents. Unlike Robins (2020), however, Munro thinks that there is at least one type of imagining that is continuous with remembering—namely, what he calls 'actuality-oriented imagining', or situations in which one imagines actual scenarios, such as imagining the layout of a restaurant where one is going to dine. Crucially, Munro's strategy for defending this view involves arguing that remembering and actuality-oriented imagining involve attitudes of a very similar type. Thus, despite their differences, these two attempts share a more general motivation to resolve the (dis)continuism debate by offering characterisations of the attitudes of remembering and imagining.

How does the view that the (dis)continuism debate should be framed in terms of the attitudes involved in remembering and imagining mesh with what we have said in this chapter? We saw previously that there are different ways of thinking about the term 'remembering': remembering$_c$ and remembering$_s$. On our understanding, Langland-Hassan's focus on the notion of constructive imagining, as the key to understanding the relation between memory and imagination, is to adopt a related point of view on the debate. Langland-Hassan is interested in the mechanisms or processes by which the representations of remembering and imagining are constructed, and whether they are inherently creative or constrained. This type of focus brings with it the question of whether an appropriate causal connection, which is maintained by a memory trace, is necessary for remembering.

However, the debate could be reframed to consider the attitudes involved in remembering and imagining. If the notion of constructive imagining forces us to think about the debate from an empirical point of view, where the processes of constructing representations are important, viewing the debate from an epistemic point of view brings the attitudes involved in remembering and imagining into sharp relief. From an epistemic perspective, remembering is a way of making a claim about how the world was in the past: it involves an assertoric commitment (Mahr and Csibra 2018; Craver 2020). It is in this sense that the attitudes of remembering and imagining importantly differ:

> If we attend to the commitments one undertakes when one asserts to remember epistemically, or what is going on when one in fact remembers, the physiological, phenomenological, or mechanistic overlap among biological mechanisms is less important than the momentous differences in attitudinal stance one takes with respect to a past event in remembering as opposed to imagining.
>
> (Craver 2020, 277)

Langland-Hassan seems to anticipate this type of move in a response to Robins, and suggests that this way of thinking is to take a deflationary perspective on the debate between continuists and discontinuists:

> We could instead interpret the debate … as concerning which kind of psychological kind is most fundamental—attitudinal kinds or, say, neurocognitive kinds—with Robins arguing that a difference in attitudinal kinds is the one that should matter. But this is to take a deflationary perspective on the (dis)continuism debate. Continuists and discontinuists are then no longer disagreeing over whether EMs [episodic memories] are cases of imagining; they are, instead, talking past each other, using 'imagining' in different senses—and disagreeing, if implicitly, over which sense corresponds to a more fundamental kind.
>
> (Langland-Hassan 2021, pp. 237–238)

Yet, this is to ignore the type of metalinguistic negotiation that is taking place in the debate. As we argued earlier, settling how the relevant terms should be used and what the correct way of framing the discussion about the relationship between memory and imagination constitutes a *substantive* debate. It is not a mere verbal dispute that can be resolved by simply specifying which senses of 'remembering' and 'imagining' are being used by each party in the debate. In other words, the kind of dispute in which (dis)continuists are involved in when they disagree about whether 'memory' and 'imagination' are (dis)continuous is *not* the same type of dispute that, for instance, two parties might be involved in when they disagree over whether Mary went to the 'bank', where one party takes 'bank' to mean the financial institution and the other takes it to mean the side of a river. If our argument in the previous sections is correct, only the latter,

but not the former, can be resolved by specifying the terms at play in the dispute. So, rather than 'deflating' the debate, the focus on attitudes provides us with a way to articulate a different prescriptive stance on the nature of remembering, imagining, and their relationship, that departs in important senses from the prescriptive stance, exemplified by Langland-Hassan's approach, which focuses on their underlying mechanisms.

2.5 Concluding remarks

By way of conclusion, let us revisit the more general question of the relationship between memory and imagination. If our argument in this chapter is on the right track, there are two distinct notions of 'remembering' that need to be considered when asking this question: namely, REMEMBERING$_C$ and REMEMBERING$_S$. If we approach it through the lens of REMEMBERING$_C$, then the issue is whether remembering and imagining involve the same attitudes. From this perspective, the question of whether a causal connection is necessary for remembering is not central.[13] In contrast, if we approach the initial question through the lens of REMEMBERING$_S$, then the issue is whether remembering is constructive imagining. And, from this perspective, the question of whether a causal connection is necessary for remembering is indeed central.

Does this mean that there are two separate questions about the relationship between memory and imagination? If we are right that the debate should be interpreted as a prescriptive one, then the answer is no. For, on the prescriptivist approach, both the causalism–simulationism debate and the continuism–discontinuism debate can be conceived as being about normative semantics. On the one hand, continuists prescribe that 'remembering' should be REMEMBERING$_S$ and that 'imagining' should be constructive imagining. On the other hand, discontinuists prescribe that 'remembering' should be REMEMBERING$_C$ and that 'imagining' should be attitudinal imagining. Thus, viewed in this light, the question about the nature of the relationship between memory and imagination is ultimately a question about which facts the notions of 'remembering' and 'imagining' *should* track.

Importantly, characterising the facts that remembering and imagining should track will involve getting clear about both the attitudes and content involved in remembering and imagining. There are different ways of specifying the attitudes of remembering and imagining, which may lead one to either a continuist (Munro 2021) or a discontinuist (Robins 2020) position. Indeed, contra what has been articulated in the current debate between causalists and simulationists, it may turn out that both remembering and imagining draw on memory traces, and that one can opt for a form of causal continuism (Langland-Hassan 2021; Chapter 1, this volume). We hope to have shown that both components of intentionality—attitudes and content—are important to the debate. Yet, the debate is not just about similarities and differences between remembering and imagining; rather, the debate involves a normative dimension that has to do with normative semantics. The debate will not be won by simply stipulating the

definitions of the terms. The debate is about *the normativity of* these definitions themselves. In other words, it is a debate about the *right concepts*.

So, if, once the relevant metalinguistic negotiation is 'over,' we establish that REMEMBERING$_C$ and attitude imagining are the appropriate notions to conceive of the debate, then discontinuists will triumph over continuists, for, with the exception of perhaps a few types of imagining (Munro 2021), the attitude of remembering is clearly different from the attitude of imagining (Robins 2020). However, if we establish that REMEMBERING$_S$ and constructive imagining are the appropriate notions, then continuists will triumph over discontinuists, for neither remembering nor imagining require an appropriate causal connection.

Acknowledgements

Notes

1 Some readers may worry that it is not obvious what it means to say that 'remembering' is an attitude. One helpful way to look at this is suggested by Langland-Hassan (2015): '[a] rough-and-ready way to conceive of attitude … is simply that aspect of a mental state's typical functional role that cannot be accounted for by its content' (667). Thus, for instance, if one thinks that part of what it means to remember is to entertain a content as past, but nonetheless thinks that the content of remembering does not include any temporal information (e.g., De Brigard & Gessell 2016; Mahr & Csibra 2018)—perhaps the content is simply a mental image of an event—one can account for the 'past orientation' of remembering by claiming that its attitude is such that, when one entertains the relevant contents under that attitude, one takes those contents to represent events in the past. There are, of course, concerns with this characterisation—e.g., there are cases where we entertain contents as being past that are not occurrences of remembering—but it is not our goal to defend it here. This is just meant to be an illustration of what it means to say that remembering is an attitude. So, while there is room to dispute how we should characterise the attitude of remembering, speaking of it as involving an attitude is not particularly mysterious or unmotivated.

2 See Sorabji (1972/2004) and Chappell (2017, 400) for details about causality in Aristotle's theory of memory. And see Bernecker (2008, 17) for a list of philosophers who speak of a causal connection in memory.

3 For an overview of the different versions of the causal theory, see Michaelian and Robins (2018).

4 Martin and Deutscher (1966) were the first to argue for this idea in the recent philosophy of memory literature. Despite the popularity of the causal theory, and despite being central for all subsequent versions of the theory (see Michaelian and Robins 2018 for a review), the idea of a memory trace has been the subject of many criticisms. See Sutton (1998, ch. 16) for discussion; see also De Brigard (2014b); Robins (2017).

5 Martin and Deutscher (1966) were also at pains to distinguish remembering from *relearning*, which occurs when there is a deviant causal connection to a past event. For example, relearning may occur when a subject experiences an event, recounts it to someone else, entirely forgets it, is told about the event by the person to whom he recounted it, entirely forgets being told about it, but then, under the influence of what he has been told, comes to entertain a representation that happens to be accurate with respect to the event in question. See, for example, Robins (2019), Michaelian (2016c).

6 See Tulving (1993, 2002, 2005); Addis (2018, 2020); Addis, Wong, and Schacter (2007); Schacter, Addis, and Buckner (2007); Schacter et al. (2012). See Perrin and Michaelian (2017) for a more detailed philosophical discussion.

7 See Michaelian (2016a, 2016b); Michaelian, Perrin, and Sant'Anna (2020); Sant'Anna (2020).

8 The attempt to show that memory and imagination are continuous is not the only motivation that leads Michaelian to deny that a causal connection is necessary for remembering. Another equally important reason is the possibility of there being memory representations that are fully accurate but that are not causally connected to the original events—e.g., memories whose contents are derived from testimony or memories whose contents are derived from causal connections to events other than the event remembered. See Michaelian (2016b, ch. 6) for discussion.

9 The available data warrant more than just one empirical account of what makes a mental state a memory. Here are two examples: the 'classic' and the 'refined' versions of the constructive episodic simulation hypothesis. In the classic version of this hypothesis, remembering is similar to imagining, and the adaptive function of the episodic memory system is to imagine the future (Schacter, Addis, & Buckner 2007, 659). But the refined version of the hypothesis is agnostic about the adaptive function of the episodic memory system (Addis 2018, 82).

10 See McCarroll (2020) for a worry about the simulationist understanding of the personal past.

11 This classification of remembering comes out on the classical version of the causal theory (Martin & Deutscher 1966). There might be differences in the classification depending on the version of the causal theory one endorses, however. For example, Michaelian (2011) revises the classical causal theory and introduces the notion of a reliably functioning episodic memory system, which rules out as cases of remembering instances where the system draws on a trace to construct the representation but does so unreliably and hence by chance. Nonetheless, the classical causal reading is a real possibility. Consider the case of H.M., one of the most famous individuals studied by memory researchers. Even though he was profoundly amnesic, and hence it could be said that he had a profoundly unreliable episodic construction system, he nonetheless was able to recall at least two events from his personal past in great detail and consistently over multiple retellings (Corkin 2013). In this case we can imagine that, just like in our puzzle, some trace of the past was left in H.M., and that the *C-Mnem-O-Matic* would classify him as remembering those events. Perhaps there are ways to rethink the notion of reliability, such that H.M.'s memory representations were generated by a reliable process in these cases, but the basic point is simply that on the classical causal theory remembering only requires a causal connection and not a reliably functioning system.

12 See, for example, Currie and Ravenscroft (2002); Langland-Hassan (2020); Van Leeuwen (2013, 2014).

13 It might be argued here that appeal to a causal connection is fundamental for characterising the attitude of remembering. We do not have space to address this objection here. For a more detailed discussion of this and other related points, see Sant'Anna (2021).

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Current Controversies in Philosophy of Memory

Edited by André Sant'Anna, Christopher Jude McCarroll, and Kourken Michaelian

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