

Philosophical Perspectives on Memory and Imagination

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Chapter 6

On the Putative Epistemic Generativity of Memory and Imagination

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6 On the Putative Epistemic Generativity of Memory and Imagination

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1 Introduction

Memory is widely regarded as a source of justification.¹ Imagination is also regarded as a source of justification (and even knowledge) by a number of philosophers in the recent philosophical literature on imagination (see Kind and Kung 2016 for an overview; see also Kind 2016, 2018; Langland-Hassan 2016; Williams 2021; Williamson 2016).

In general, there are at least two ways in which a source of justification can justify beliefs. Some sources of justification justify beliefs by generating new justification, while other sources justify beliefs by preserving pre-existing justification that has been generated by some other sources. Perception is a typical example of the generative source of justification. My perception of an apple on the table justifies my believing that there is an apple on the table, and this justification is something new, above and beyond the justification that I already had before the episode of perception by any other sources. Memory, in contrast, is sometimes regarded as a typical preservative source of justification. I recall that there was an orange on the table yesterday, which justifies my believing that there was an orange on the table yesterday. But perhaps this justification is not over and beyond the justification that I already had, for example when I saw the orange on the table yesterday. This view of memory, however, has been challenged by several philosophers (e.g., Bernecker 2010; Fernández 2016, 2019; Lackey 2005; Michaelian 2011, 2016), and we will come back to this issue later.

Theoretically, there are four possibilities; A and B are symmetric cases, and C and D are asymmetric cases.

- A: memory is a preservative source / imagination is a preservative source
- B: memory is a generative source / imagination is a generative source
- C: memory is a preservative source / imagination is a generative source
- D: memory is a generative source / imagination is a preservative source

The aim of this chapter is rather modest. We do not aim to pick an option among others and defend it as the correct view. Rather, we focus on a

particular option, B, and a particular argument for it, which we call the “argument from psychological generativity” (the “APG” for short). Roughly, the APG says that B is true because, first, both memory and imagination are psychologically generative (in the sense that they generate new representations rather than merely preserving prior representations) and, second, psychological generative processes are epistemically generative (in the sense that they generate new justification rather than merely preserving pre-existing justification).

We think that the APG fails, and this chapter explains why and how it fails. We begin by clarifying the APG (Section 2) and the generative/preservative distinction (Section 3). Then, we will critically examine the APG, focusing on memory (Section 4) and imagination (Section 5). We will not dispute the premise that both memory and imagination are psychologically generative, but we reject the other premise that psychological generativity implies epistemic generativity. In other words, even if it is true that both imagination and memory generate new representations rather than preserving prior representations, this does not mean that they generate new justification rather than preserving prior justification.

Note that this chapter rejects a particular argument for option B but not option B itself. There might be some other compelling reasons to accept option B, which we do not address.

2 APG

The APG is formulated as follows:

- (1) Imagination is a psychologically generative source of justification.
- (2) Memory is a psychologically generative source of justification.
- (3) If a source of justification is psychologically generative, then it is epistemically generative.
- (4) Therefore, both imagination and memory are epistemically generative sources of justification.

Let us look at each premise closely. Premise 1 says that imagination is a psychologically generative source of justification. A process is psychologically generative if it can generate new representations rather than merely preserving some prior representations. It is fairly obvious that imagination is psychologically generative in this sense; when I imagine a golden mountain, which I haven’t seen before, the imaginative representation of the golden mountain is something generated rather than something merely preserved, say, from my prior perceptual experience of the golden mountain. Of course, there are cases in which I imagine something that I perceived before, but it is perfectly compatible with the fact that imagination *can* generate new representations.

Some clarifications are in order. First, to say that imagination is psychologically generative is not to say that it generates something from nothing. The former claim is perfectly compatible with Humean copy principle that all the constituents (or “simple ideas”) of an imagining are copied from some prior perceptual experience (“impressions”). Second, to say that imagination is psychologically generative is not to say that imagination is unconstrained at all. The former claim is perfectly compatible with the view that epistemically useful imagination is constrained in several ways (e.g., Kind 2016, 2018; Langland-Hassan 2016; Williams 2021).

Premise 2 says that memory is psychologically generative: both at the encoding stage and at the retrieval stage. There are excellent empirical reasons for thinking that memory processes do not simply retain the experienced contents from the time of the original experience, but actively manipulate them in transformative ways. As a result, there are many situations wherein we remember more than we actually experienced, and those cases are outputs of a properly functioning memory system (Michaelian 2016, 87). This kind of manipulation may involve recombination of experienced contents, incorporation of extraneous information, shifting or broadening of the original perspective, and other generative processes (we will look more closely at some of these processes in Section 4).

Because of the psychological generativity of memory, the strict boundary between memory and imagination has been contested. For instance, Michaelian takes them both to be realized by the same episodic construction system and thinks that the only difference between memory and future-directed imagination is that memory’s target is some past episode, while future-directed imagination targets some future episode (Michaelian 2016, 116; see also Schacter, Addis and Buckner 2008; Schacter, Guerin, and Jacques 2011). If memory and imagination are psychologically continuous (and there are good reasons for thinking that they are) then premise 1 and premise 2 stand (and fall) together.

Premise 3 says that if a source of justification is psychologically generative, then it is epistemically generative. In other words, when a source of justification can generate new representations rather than merely preserving some prior representations, then it can generate new justification rather than merely preserving some prior justification. For instance, perception is psychologically generative (e.g., generating a new representation of an apple on the table rather than preserving a prior representation of an apple on the table), and it is epistemically generative (e.g., generating new justification for believing that there is an apple on the table rather than preserving prior justification for believing it). We will say more about the distinction between epistemic generation and epistemic preservation in the next section.

The APG is at least *prima facie* attractive. Michaelian (2011) and Senor (2017) discuss something like the APG, although their focus is only on memory.

Michaelian argues that, assuming reliabilism about justification, his new causal theory of memory, which takes into account the psychological generativity of memory, supports a strong form of generativism about memory according to which “memory can generate justification by generating a new content, along with a belief with that content” (Michaelian 2011, 337). His new causal theory regards memory as psychologically generative (generating new representations or new “content”), and (given reliabilism) it implies that memory is epistemically generative too. Michaelian’s reasoning here seems to be very similar to the one in (the memory part of) the APG (although, unlike Michaelian’s reasoning, the APG does not presuppose reliabilism or any particular theory of justification).

Senor discusses an argument for generativism about memory, which is analogous to (the memory part of) the APG:

If memory is both constructive and reconstructive, then one might wonder why it isn’t epistemically generative as well. In the same way that, say, perceptual processes produce beliefs from percepts, memories produce beliefs via a combination of stored items and background knowledge. So why not think that perception and memory are equally doxastically and epistemically generative?

(Senor 2017, 326)

Senor argues that this argument for generativism about memory is not applicable to semantic memory. The argument might be sound, but still, it does not rule out preservationism about semantic memory.

Michaelian and Senor seem to agree with the (memory part of) the APG, or something near enough, as long as episodic memory is concerned. In contrast, our view is that the APG does not work, even for episodic memory. Before explaining why, we need to say more about the distinction between epistemic generation and epistemic preservation, which is the topic of the next section.

3 Epistemic Generativity and Epistemic Preservativity

A source of justification J1 is preservative, roughly, when J1 only preserves the prior justification by some other source, J2, rather than generating new justification above and beyond the prior justification by J2. And, a source of justification J1 is generative, roughly, when J1 generates new justification above and beyond the prior justification by any other sources, J2, J3, J4... For our discussion in this chapter, however, we need a little more precise characterization of generation and preservation. Here is our proposal:

A source of justification, J1, is “**preservative**” just in case, for all subjects, S, propositions, P, and times, T2, if S is justified in believing that

P by J1 at T2, then it is because, at an earlier time, T1, S was *prima facie* propositionally justified² in believing that P by another source of justification, J2.³

A source of justification, J1, is “**generative**” just in case it is not preservative.

The crucial feature of this definition of generativity/preservativity is that it rules out the cases that Lackey (2005) provides us with in support of generativism about memory.

Lackey’s Case 1 shows that “a subject’s relation to normative defeaters can change over time as a result of changes in the external environment, thereby enabling memory to generate knowledge” (Lackey 2005, 641). For instance, at T1, a person believed that P, but he was not justified in believing that P because of the presence of an undefeated normative defeater, of which he was not aware. At a later time T2, however, the normative defeater does not exist anymore, and the person’s belief that P is now justified. Lackey’s Case 2 shows that “undefeated doxastic defeaters are not necessarily retained with their defeatees via memory” (Lackey 2005, 645). For instance, at T1, a person believed that P, but he was not justified in believing that P because of the presence of an undefeated doxastic defeater, which is incoherent with P. At a later time T2, however, the doxastic defeater does not exist anymore, and the person’s belief that P is now justified. Lackey’s Case 3 shows that “through certain changes in a subject’s cognitive system over time, memory has the capacity not only to generate the epistemic status of the item in question, but also to generate the belief itself” (Lackey 2005, 650). For instance, at T1, a person saw that P without forming the belief that P. At a later time, T2, he recalls what he saw at T1 and comes to believe that P, which is justified.

These cases support generativism about memory in light of Lackey’s distinction between generativism and preservationism. Here is her definition of preservationism:

S knows (justifiedly believes/rationally believes) that p on the basis of memory at T2 only if (i) S knows (justifiedly believes/rationally believes) that p at an earlier time T1, and (ii) S acquired the knowledge that p (justification with respect to p/rationality with respect to p) at T1 via a source other than memory.

(Lackey 2005, 637)

Case 1 and Case 2 are counterexamples to preservationism thus defined; in both cases, although the person in question was not justified in believing that P at T1 because of the (normative or doxastic) defeater, she is justified in believing that P at T2 because the (normative or doxastic) defeater is no longer around. Case 3 is another counterexample; although the person in

question was not justified in believing that P at T1, simply because she did not believe that P in the first place, she is justified in believing that P at T2.

But instead of treating Lackey's cases as problems for preservationism, we take them to be the problems for Lackey's definition of preservationism. Lackey's cases shouldn't be problems for preservationism because they are only superficially generative; there is no substantive sense in which memory generates new justification in Lackey's cases. Lackey's cases are all consistent with the spirit of preservationism – i.e., what memory does is just to preserve pre-existing justification, rather than generating new justification. Case 1 and Case 2 are the cases in which memory preserves pre-existing *prima facie* justification. The person is justified in believing that P at T2 because (or at least partly because) there was a pre-existing *prima facie* justification at T1, which has been preserved up to T2 (see Senor 2007 for a similar analysis; see also Wright 2016 for a similar issue in the epistemology of testimony). Case 3 is the case in which memory preserves pre-existing propositional justification. The person is justified in believing that P at T2 because there was a pre-existing propositional justification at T1, which has been preserved up to T2 (see Fernández 2016 for a similar analysis).

Lackey's cases fail to be counterexamples to preservationism, according to our definition. Case 1 and Case 2 fail because the person was already *prima facie* justified in believing that P before T2. Case 3 fails because the person was already propositionally justified in believing that P before T2. But, note that our definition does not trivially rule out any possible candidates for generative justification by memory. For instance, Fernández (2016) argues that episodic memory has a peculiar, self-referential content, which is not possessed by earlier experiences. If Fernández is correct about this, then memory is likely to be a generative source of justification; there is some proposition, P, such that a person can be justified in believing that P at T2 by memory, but there is no earlier point before T2 at which she was *prima facie* propositionally justified in believing that P by anything other than memory. This shows, we believe, that our definition of preservationism and generativism is fair and neutral – i.e., it is not unfairly biased towards preservationism.

4 Epistemically Generative Memory?

We resist premise 3 of the APG. To explain why premise 3 fails, we now focus on memory as a test case. Although the APG itself is about both memory and imagination, for the purpose of this chapter, which is to argue against premise 3 of APG, it suffices to focus on memory and to show that the psychological generativity of memory does not imply its epistemic generativity. When it is successfully shown, in effect, it is established that premise 3 fails. We briefly discuss imagination in the last section.

Here are some clarificatory notes. Premise 3 can be falsified by some counterexamples; e.g., the cases in which memory is psychologically generative

but not epistemically generative. But, in fact, there is a sense in which we will show something weaker than this, and there is another sense in which we will show something stronger than this.

In a sense, what we will do next is weaker than providing some counterexamples to premise 3. As we already noted earlier, we do not necessarily claim that memory is not epistemically generative; our claim is just that at least the particular argument for the epistemic generativity of memory (the APG) does not work. There can be some other plausible reasons to think that memory is epistemically generative (e.g., Fernández 2016). If there is such a plausible reason, and if it is applicable to the case we will discuss in the following sections, then these cases are in fact the cases of generative justification by memory. Then they fail to be the counterexamples to premise 3 after all. We do not rule out such a possibility. Still, even in such a case, we can say at least that it is not the case that memory is epistemically generative *just because it is psychologically generative*.

In another sense, what we will do next is stronger than providing some counterexamples to premise 3. In fact, we will not just argue that there are some cases in which psychologically generative memory is not epistemically generative. We also claim that there is no case in which psychologically generative memory is epistemically generative.⁴ More precisely, we claim that there is a dilemma about psychologically generative memory: either psychologically generative memory does not provide justification in the first place or it provides justification that is preserved from some earlier justification. Either way, psychologically generative memory does not generate new justification. Strictly speaking, this result is stronger than what is needed to refute premise 3, but we find it philosophically significant in its own light.

To illustrate how this dilemma forces itself on the proponent of epistemic generativity, we will now look at various examples of memory's psychological generativity. We have chosen these examples in particular because in the philosophical literature on memory, they seem to be the most prominently discussed ways in which memory generates new content. However, we also think that the dilemma that we present is applicable to other cases of generativity.

We divide those examples into two groups. Cases in the first group are those where the first horn of the dilemma is more salient (Section 4.1): psychologically generative memory fails to justify beliefs in the first place. Cases in the second group are those where the second horn is more salient (Section 4.2): psychologically generative memory does justify some beliefs but only because of some prior justification. It is important to stress that we do not claim that the proposed division is final or ultimate. It might eventually turn out that some cases that we have assigned to the first group are more fittingly assigned to the second group instead, and *vice versa*. But either way, the dilemma still holds.⁵

4.1 *The First Horn: No Justification*

4.1.1 *Imagination Inflation*

An interesting example of psychologically generative memory concerns imagination inflation. Imagination inflation happens when an imagining of some novel scenario increases one's confidence that this scenario obtained in the past (Schacter et al. 2011, 468). On the assumption that confidence is reflected in the content of memory (which is disputable), this is an example of memory processes generating extra content. However, does this count as an example of epistemic generativity? Suppose that a person, Naomi, imagines at T1 that a skin sample is removed from her little finger by a nurse and, under the influence of imagination inflation, comes to believe at T2 that a skin sample was removed from her little finger by a nurse. Does Naomi at T2 have new justification for believing that a skin sample was removed from her little finger by a nurse?

The cases of imagination inflation seem to face the first horn of the dilemma; it is implausible to think that Naomi is justified in believing that a skin sample was removed from her little finger by a nurse. It seems that there is nothing reasonable about such beliefs because it is not reasonable to believe that something took place just because one imagined it to have taken place. The claim that imagination inflation can be epistemically generative thus faces the first horn of the dilemma: one has no justification for believing on the basis of imagination inflation.

In response, a generativist might claim that we can identify a subset of imagination inflation cases in which true beliefs are systematically produced. For instance, when Naomi's imagination is tracking some realistic scenarios (e.g., when she imagines that one of her teeth is extracted by a dentist), imagination inflation might systematically produce true beliefs (e.g., the true belief that one of her teeth was extracted by a dentist). We do not rule out this possibility. But this response would face the second horn of the dilemma; if Naomi is really justified in believing at T2 that one of her teeth was extracted by a dentist, it is probably because, at T1, Naomi was already *prima facie* propositionally justified in believing that one of her teeth was extracted by a dentist. Already at T1, she was in the position to justifiably believe that.

4.1.2 *Recombination-Based Memory Beliefs*

Memory also generates new content when elements of past experiences are recombined. For instance, people can easily commit memory conjunction errors, in which case features of previously experienced items are combined into a novel item which wasn't given in any previous experience (Reinitz, Lammers, and Cochrane 1992). For instance, if someone is presented with the words *blackmail* and *jailbird*, they may falsely remember also being presented with *blackbird* (Reinitz, Morrissey, and Demb 1994). As another

example, in their study, Odegard and Lampinen (2004) asked the participants to fill in diary pages about life events and to report the importance and vividness of those events. Then later, in the recognition phase of the experiment, they were presented with some of the events in the diary and with lists of features. Some of these features belonged to the events in question, while the others that did not belong were conjunction lures. For instance, while a participant's diary involved an entry of going to the dance with Richard and an entry of going to the masquerade with Tom, the conjunction lure associated Tom incorrectly also with the dance (ibid., 291). Then they were asked to identify those features that were present in the event and those that were not. In the given example, a conjunction error occurred when the participant also attributed Tom to the dance entry. As it turned out, in addition to falsely recognizing the conjunction lures, the participants also often constructed narratives about the events which incorporated the lures (ibid., 296).

Suppose that Naomi was with Richard at the dance at T1 and was with Tom at the masquerade at T1.5. Under the influence of the memory recombination effect, she comes to believe, at T2, that she was with Tom at the dance. Does Naomi at T2 have new justification for believing that she was with Tom at the dance?

Just like the cases of imagination inflation, the cases of memory recombinations seem to face the first horn of the dilemma; it is implausible to think that Naomi is justified in believing that she was with Tom at the dance. Just recombining elements of representations into new representations seems too arbitrary to form epistemically merited beliefs. For instance, the fact that *being with Tom at the dance* can be formed by combining elements from *being with Richard at the dance* and *being with Tom at the masquerade* does not make it reasonable to think that one was actually with Tom at the dance.

In response, a generativist might claim that there can be a subset of memory recombination cases in which true beliefs are reliably produced. For instance, when Naomi's recombination is tracking some realistic scenarios (e.g., when she concludes that she went to the dance and visited the masquerade), memory recombination might systematically produce true beliefs. But, this response, even if it is really defensible, would face the second horn; if Naomi is really justified in believing at T2 that she went to the dance and visited the masquerade, it is probably because, at T1.5, Naomi was already *prima facie* propositionally justified in believing that she went to the dance and visited the masquerade. Already at T1.5, she was in the position to justifiably believe that.

4.2 The Second Horn: No Generative Justification

4.2.1 Boundary Extension

Boundary extension concerns the tendency to remember a more wide-angle view of the experienced scene than it was given in the original

experience. In other words, the boundaries of the content of the original experience are extended by memory processes. It is as if the mind fills in some of the surrounding context of the perceived situation, resulting in an extended representation of the original experience. The main experimental design by which to test boundary extension has consisted in presenting subjects with pictures and then afterwards asking them to draw what they saw. The common pattern is that subjects tend to draw pictures from a wider angle than the original, which suggests that the spatial boundaries of the experienced scene were extended in memory. Also, when presented with the original picture, the subjects tend to judge it as closer up than it actually was (Gottesman and Intraub 1999), which also suggests that they remember it from a wider angle. Boundary extension seems to be an automatic process because it can occur already 42 milliseconds after seeing an original view (Mullally, Intraub, and Maguire 2012).

Boundary extension looks like a clear example of the generative power of memory. But is it also epistemically generative? We can assume that boundary extension can be operational in the context of perceiving scenes in real life so that people tend to remember a scene in a more spatially extended way than they originally perceived it. Suppose that only five tall buildings were in Naomi's visual field when she was walking on a street at T1, but under the influence of boundary extension, she comes to believe at T2 that there are more than five tall buildings along the street. Does Naomi at T2 have new justification for believing that there are more than five tall buildings along the street?

Unlike the cases of imagination inflation and memory recombination, the cases of boundary extension are unlikely to face the first horn; it is not counterintuitive to say that Naomi at T2 is actually justified in believing that there are more than five tall buildings along the street. It is reasonable to think that beliefs about the extended areas in the real-life context can often be warranted because the extra information generated by the boundary extension reflects realistic expectations about the likely surroundings of what was seen. For instance, Gottesman and Intraub explain boundary extension in terms of the activation of perceptual schema which represent the perceived scene's likely layout (Gottesman and Intraub 1999). Whether or not Gottesman and Intraub's explanation is the final word on the matter, there are reasons to believe that boundary extension in a real-life setting forms reasonable beliefs about the areas within extended boundaries. It is thus a case in which it is easier to argue that one can be justified in forming a memory belief on the basis of the process in question.

The cases of boundary extension are, however, likely to face the second horn; if Naomi is really justified in believing at T2 that there are more than five buildings along the street, it is probably because Naomi was *prima facie* propositionally justified in believing that there are more than five buildings along the street already at T1 when she recognized at least five buildings in her visual field. Already at T1, she was in the position to

justifiably believe that there are more than five buildings along the street on the basis of inductive reasoning or some background knowledge.

4.2.2 *Perspectival Shift*

One interesting aspect of memory processes is that they are relatively free in shifting between perspectives on the remembered scene. While perceptual experience is perspectival in that it is given from a particular spatio-temporal perspective (although see Nigro and Neisser (1983, 468) on cases of experiences from a “detached” perspective), memories can be both from the field and the observer perspective. The former replicates the subjective perspective of the original experience, but the latter takes an observer view. Observer memories can be also given from different locations at the original scene. For instance, when one remembers giving a speech, then their field memory is from their perspective of giving the speech, but an observer memory of that event can be from different directions and different distances (Rice and Rubin 2011, 570). Unlike boundary extension, the perspectival shift does not seem fully automatic but is at least partially under the subject’s control because the form it takes depends on one’s purposes (Nigro and Neisser 1983, 481).

Given that information from the observer perspective was not given in the original experience, the perspectival shift also demonstrates the generative capacity of memory. It is also plausible that one can be justified in forming memory beliefs on the basis of rememberings that go through a perspectival shift. After all, such a shift can often contribute to largely accurate perspective-taking, at least as long as one is sufficiently acquainted with the remembered environment. For instance, a teacher’s memory that includes a view of her from the class’s perspective can be reasonable because she is able to estimate what she would look like from that perspective.

But does perspectival shift also demonstrate memory’s epistemic generativity? In other words, is the justification that one has for memory beliefs about different spatial perspectives on the remembered scene owed to the memory? Suppose Naomi had a conversation with her new classmate, Ken, at T1 and, under the influence of perspectival shift, she comes to believe at T2 that her facial expressions during the conversation were unfriendly from Tom’s perspective. Does Naomi at T2 have new justification for believing that her facial expressions were unfriendly from Tom’s perspective?

Just like the cases of boundary extension, the cases of perspectival shift are unlikely to face the first horn (depending on the details of the case); it is not counterintuitive to say that Naomi at T2 is actually justified in believing that her facial expressions were unfriendly from Ken’s perspective. The cases of perspectival shift are, however, likely to face the second horn: if Naomi is actually justified at T2 in believing that her facial expressions were unfriendly from Ken’s perspective, it is probably because Naomi was *prima facie* propositionally justified in believing that her facial expressions

were unfriendly from Tom's perspective already at T1 when she was having the conversation with Ken. Already at T1, she was in the position to justifiably believe, through some imaginative perspective-taking, that her facial expressions were unfriendly from Tom's perspective.

4.2.3 *Associative Memory*

Associative memory illusion (Gallo 2010) arises when one remembers some item that was not given in the original experience, but which can be associated with the content of that experience. That normally functioning individuals are prone to this illusion has been well-established by the use of the Deese-Roediger-McDermott paradigm. This experimental paradigm goes back to the study by Roediger and McDermott (1995) and has been replicated numerous times. The typical setup is as follows. The participants are exposed to a list of semantically associated words. Then later they are presented with a list of words and asked which of these belonged to the original list. Critically, some of the words are lures which did not belong to the original list but are semantically associated with it. As it turns out, people have a tendency to misremember the lure words as being present already in the original experience. For instance, if the original list included "nurse" and "hospital", then the lure word "doctor", which did not belong there, would have a good chance of being falsely taken to have been present in the original list (Pardilla-Delgado and Payne 2017).

Suppose Naomi reads a list of words and has seen "nurse" and "hospital" on the list by T1. Later, under the influence of associative memory illusion, she comes to believe at T2 that the word "doctor" was on the list. Does Naomi at T2 have new justification for believing that "doctor" was on the list?

The cases of associative memory illusion are unlikely to face the first horn (depending on the details of the case); it is not counterintuitive to say that Naomi at T2 is actually justified in believing that "doctor" was on the list. The beliefs that are produced by associative memory tend to be false, but they can be reasonable. They can be reasonable because the lure word does fit together with the general associative structure that the original list represented. For instance, Schacter et al. (2011, 68) understand the associative memory illusion in terms of gist-based memory errors. Gist-based memory errors result from people not being able to retain specific content of the original experience and instead represent only general information. However, this general information often accurately reflects the abstract structure of the environment. Because of this, the error in question can be seen as a reasonable and thereby warranted (but false) guess regarding what else could have belonged to the list.⁶

The cases of associative memory illusion are, however, likely to face the second horn; if Naomi is really justified at T2 in believing that "doctor" was on the list, it is probably because Naomi was *prima facie* propositionally justified in believing that "doctor" was on the list already at an earlier

time, T1, after having seen “nurse” and “hospital” on the list. Although she was not justified in believing on the basis of perception that “doctor” was on the list, she was in the position to justifiably conclude at T1, through inductive reasoning, that “doctor” was on the list. She was not justified in believing that on the basis of perception because she did not perceptually represent “doctor” when she looked at the list, but she was justified in believing that through inductive reasoning after seeing the list because “doctor” was semantically associated with “nurse” and “hospital”.

4.2.4 Testimonial Incorporation

Testimonial incorporation concerns cases in which memory processes integrate information provided by testimony from others into the content of memory, although this information wasn't given in the original experience (Loftus 1979/1996, 2005). As a result, a memory that is formed has richer content than the original experience. Testimonial incorporation has proven to be a serious issue in the case of eyewitness reports – for instance, where an eyewitness's memory can be manipulated by giving them misleading information or asking misleading questions.

Michaelian (2013) distinguishes between positive and negative information (or information and misinformation) effects where the former concerns the incorporation of accurate testimonial information which can result in the formation of a true memory belief which the agent would not have otherwise had. Michaelian takes such memory beliefs that are given rise to by positive information effect to be justified because they are outputs of a reliable process from which epistemic luck is sufficiently excluded.

Positive information cases exemplify the generative capacity of memory in the psychological sense. Should we also say that they exemplify epistemic generativity of memory? Michaelian himself does not explicitly ask this in the paper in question, although he seems to be committed to it when looking at his other work (see Michaelian 2011). Suppose Naomi saw a car accident from a distant position at T1 and, under the influence of testimony from Ken at T1.5 that the driver of the car was talking on the phone, she comes to believe at T2 that the driver was talking on the phone when she saw the crash. Does Naomi at T2 have new justification for believing that the driver was talking on the phone when she saw the crash?

The cases of testimonial incorporation are unlikely to face the first horn (depending on the details); it is intuitively plausible to say that Naomi at T2 is actually justified in believing that the driver was talking on the phone when she saw the crash (which is consistent with Michaelian's claim). The cases of testimonial incorporation are, however, likely to face the second horn; if Naomi is really justified at T2 in believing that the driver was talking on the phone when she saw the crash, it is probably because Naomi was *prima facie* propositionally justified in believing that the driver was talking on the phone when she saw the crash already at T1.5 when she learned

from Ken that the driver was talking on the phone. Already at T1.5, she was in the position to conclude, by combining her perception at T1 and Ken's testimony at T1.5, that the driver was talking on the phone when she saw the crash.

One interesting example of testimonial incorporation (in a broad sense), which calls for a different treatment, involves reconstructive memory processes being influenced by *questions*. There is some data which suggests that an agent's memory is also influenced by the formulation of the question about what they remember. In Loftus and Palmer (1974), the subjects, after watching a movie about a traffic accident, were asked about what they remembered. Those who were asked how fast the cars were when they *smashed into* each other remembered the speed being higher than those who were asked how fast the cars were when they *hit* each other.

Here it seems reasonable to deny that the subjects have justification to believe that the cars drove at a specific speed. They may be justified to believe other things about the accident, but this concerns information at their disposal that was not generated by a question. Questions just do not have the power to justify beliefs in the first place. A preservationist is in a good position to explain why memory beliefs that are informed by assertive testimony can be justified while memory beliefs informed by questions cannot: in the case of the latter, there is no justification to transmit/preserve.

5 Coda: Epistemically Generative Imagination?

If our previous argument was successful, we refuted premise 3 of the APG – i.e., the premise that if a source of justification is psychologically generative, then it is epistemically generative. This is sufficient for establishing the failure of APG, but there are some residual issues. One of them is this. One might think that imagination has a better chance of being epistemically generative nonetheless because imagination is *more psychologically generative* than memory. Memory is psychologically generative to some extent; e.g., in recollection, a person can fill in the details that were not in the original experience – for instance, in boundary extension. But imagination is more generative; e.g., in imagination, a person can freely draw a scene that looks very different from any actual scenes she experienced before. What our discussion of memory in this chapter shows is not that psychological generativity has nothing to do with epistemic generativity but rather that memory is not psychologically generative *enough*. Premise 3 can be challenged, but a revised version of it might have a better chance – i.e., the premise that if a source of justification is psychologically generative *enough*, then it is epistemically generative. With this revised premise, the imagination part of the APG can be salvaged: imagination turns out to be epistemically generative (although the imagination part of the APG is not an argument for option B anymore; it is compatible with both B and C).

We are not able to give a full examination of this idea in this chapter. Rather we only give some sceptical thoughts, with which we close this chapter. We think that imagination faces a similar dilemma that memory faces – i.e., imagination does not provide justification in the first place, or it provides justification that is preserved from an earlier justification. Either way, imagination does not generate new justification.

Let us focus on an example from Williamson in which a hunter uses his imagination to figure out whether he can successfully jump over a stream in a mountain.

Since the method of trial and error is too risky a way of finding out whether he can jump the stream, he needs a way of finding out whether he can do it in advance of trying. He can remember some of his past jumps, but he cannot remember failing with a jump that was clearly easier than this one, or succeeding with a jump that was clearly harder. He has to consider not only the width of the stream, but also the awkwardness of the place from which he would have to launch himself, the slipperiness of the rocks on which he would have to land, how tired he is, and so on. How should he try to determine whether he would succeed? There is a natural human method of gauging one's capacities in such situations. One imagines oneself trying. If one then imagines oneself succeeding, one judges that if one tried, one would succeed. If instead one imagines oneself failing, one judges that if one tried, one would fail. If one is still uncertain, one repeats the thought experiment, perhaps many times.

(Williamson 2016, 116)

Let us think about the second horn of the dilemma. Williamson claims that the hunter in this case is justified in believing that he would successfully jump over the stream if he tried and that the justification is provided by the use of imagination. Let us assume that Williamson is correct, at least for the sake of argument.

There are some reasons to think that this is not a case of generative justification. Let T1 be when the hunter exercises his imagination and comes to the conclusion that he would successfully jump over the stream. Presumably, at some point, T0, before his exercise of imagination, the hunter was already *prima facie* propositionally justified in believing that he would successfully jump over the stream by another source of justification. To see this, let us look at Williamson's own account of how imagination is actually used to reach the conclusion that the hunter would successfully jump over the stream if he tried. His proposal is that the process of evaluating a counterfactual conditional with P as the antecedent and Q as the consequent is roughly the same as the process of reaching the conclusion Q when you learn that P. The same process is used online in the latter and offline in the former. For instance, when the hunter learns by testimony that his athletic

friend, Anna, is trying to jump over the stream, he goes through some cognitive processes, such as appealing to some background knowledge and doing some reasoning, to come to the conclusion that she will successfully jump over the stream. Analogously, he goes through the same set of cognitive processes, in an offline mode, when he endorses the counterfactual conditional “Anna would successfully jump over the stream if she tried”.

Now, it is plausible to think that at T0, the hunter was already *prima facie* propositionally justified in believing that he would successfully jump over the stream by appealing to the same background knowledge and doing the same reasoning. If the background knowledge and reasoning are such that the hunter appeals to the background knowledge and reasoning in imagination and justifiably concludes that he would successfully jump over the stream at T1, then the same background knowledge and reasoning are sufficient for the hunter to be *prima facie* propositionally justified in believing that he would successfully jump over the stream at T0.

However, doesn't Williamson stipulate that “[h]e can remember some of his past jumps, but he cannot remember failing with a jump that was clearly easier than this one, or succeeding with a jump that was clearly harder”? Doesn't this mean that he does not have any background knowledge that is enough for being *prima facie* propositionally justified in believing that he would successfully jump over the stream at T0? Maybe not. Even if he cannot remember past successful or unsuccessful jumps that are relevant, still he has other knowledge that is indirectly relevant to this case, such as the knowledge of his athletic capacities, the knowledge of his current physical condition, some general knowledge of physiology, and some general knowledge of physics. Perhaps this kind of indirectly relevant knowledge is enough for the hunter to be *prima facie* propositionally justified in believing that he would successfully jump over the stream at T0.

Here is the first horn of the dilemma. If, in contrast, the background knowledge and reasoning are not sufficient for the hunter to be *prima facie* propositionally justified in believing that he would successfully jump over the stream at T0, then it is hard to see why he can appeal to the same background knowledge and do the same reasoning in imagination and justifiably conclude that he would successfully jump over the stream at T1. In other words, the justification by imagination at T1 seems to stand and fall together with the prior *prima facie* propositional justification at T0, which is exactly what preservationism predicts. Imagination thus does not so easily escape the dilemma that memory faced.

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Notes

- 1 By “memory” we mean episodic memory (e.g., remembering my last visit to Kathmandu), which is contrasted with semantic memory (e.g., remembering that Kathmandu is the capital of Nepal). Similarly, by “imagination” we mean episodic imagination (e.g., imagining my next visit to Kathmandu), which is contrasted with semantic imagination (e.g., imagining that Pokhara is the capital of Nepal). We acknowledge that a strict distinction between episodic and semantic memory can be challenged (see Irish and Vatansever 2020). However, it is a generally accepted distinction in cognitive psychology and neuroscience, and we just take it for granted in this chapter.
- 2 About propositional justification and its relation to doxastic justification, we tentatively adopt Turri’s proposal: “Necessarily, for all S, P, and T, if P is propositionally justified for S at T, then P is propositionally justified for S at T because S currently possesses at least one means of coming to believe P such that, were S to believe P in one of those ways, S’s belief would thereby be doxastically justified” (Turri 2010, 320).
- 3 We thank André Sant’Anna and Steven James for pointing out an interesting possibility in which S acquires a new concept at some point between T1 and T2, which enables S to form a new belief that P at T2 about what happened in T1. S was not even *prima facie* propositionally justified in believing that P at T1 because of the lack of relevant concept. Intuitively, this should not be classified as a case of memory generating new justification; after all, the memory does not do anything particularly interesting in this case. To be consistent with this intuition, our definition of preservativity should be slightly modified; e.g., “at an earlier time, T1, S was *prima facie* propositionally justified in believing that P by another source of justification, J2” can be revised as “at an earlier time, T1, S could have been *prima facie* propositionally justified in believing that P by another source of justification, J2, if S had relevant concepts”.
- 4 We thank Jordi Fernández for raising this issue.
- 5 In discussing the following examples, we will not rely on a particular theory of justification. We will try to be as neutral as possible with regard to the theory of justification. Instead, we will rely on pre-theoretical intuitive judgment about particular cases.
- 6 Interestingly, having category-specific expertise increases the probability of having false memories from that category (Castel et al. 2007). If the associative memory illusion reflects a reasonable guess about the list-relevant associative structure, then this result is not that surprising. It is plausible that category-specific expertise, and thereby familiarity with the relevant associative structure, is conducive to the disposition to make such guesses.

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