




Remembering the Past and Imagining the Actual

Daniel Munro¹ 

Published online: 23 July 2020
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Abstract

Recently, a view I refer to as “hypothetical continuism” has garnered some favour among philosophers, based largely on empirical research showing substantial neurocognitive overlaps between episodic memory and imagination. According to this view, episodically remembering past events is the same kind of cognitive process as sensorily imagining future and counterfactual events. In this paper, I first argue that hypothetical continuism is false, on the basis of substantive epistemic asymmetries between episodic memory and the relevant kinds of imagination. However, I then propose and defend an alternative form of continuism, according to which episodic memory is continuous with a capacity I call “actuality-oriented imagination.” Because of the deep epistemic affinities between episodic memory and actuality-oriented imagination, it makes sense to think of them as cognitive processes of the same kind.

1 Introduction

This paper is about *episodic memory*, our capacity to remember the past by means of sensory mental imagery. Philosophers often characterize episodic memories both by *what* they represent and the *way* they represent it. Episodic memories represent particular past events that one personally experienced, such as one’s tenth birthday party or yesterday’s lunch; furthermore, they represent the past using mental imagery and have a characteristic phenomenology, a feeling as of “re-experiencing” the past first-hand.¹ Episodic memory is distinct from another capacity to which we frequently

¹It’s controversial exactly how to characterize this phenomenology in more detail; for discussion, see Dokic (2014) and Fernández (2019, ch. 4).

✉ Daniel Munro
daniel.munro@mail.utoronto.ca

¹ Department of Philosophy, University of Toronto, 170 St. George Street, Toronto, Ontario M5R 2M8, Canada

apply the word “remember,” *semantic* memory, which involves simply storing and retrieving facts: although we also use phrases like, for example, “I remember that Descartes is the author of the *Meditations*,” such uses of “remember” refer to semantic memory.² Hereafter, I’ll use “memory” and its cognates to refer just to episodic memory, unless otherwise specified.

Recently, a view that’s come to be known as *continuism* has garnered some favour among philosophers. Proponents typically formulate continuism as the view that remembering past events is the same kind of cognitive process as sensorily *imagining* future and counterfactual events (I’ll refer to these two kinds of imagination together as “hypothetical imagination,” following literature which groups them under labels like “hypothetical thought”).³ In some ways, the prospect of unifying memory and hypothetical imagination is intuitively attractive, especially given some deep affinities between the two. Most obviously, both involve imagistic representational formats. Furthermore, as Tulving (2002) points out, there’s an apparent symmetry between them in that both allow us to “mentally time travel,” to the past in memory and to the future in imagination. They therefore seem in some sense like two sides of the same coin.

Yet, this view looks less intuitively attractive when we consider the epistemic roles of memory and hypothetical imagination. We typically think of the epistemic role of remembering as quite narrow, involving the retrieval of existing beliefs formed during past experiences. For example, when I use memory to bring to mind the fact that I ate cake at my tenth birthday party, it’s natural to think that I’m retrieving information about my tenth birthday party which I acquired during my perception of that event. In contrast, although we can imagine things we already believe (e.g., I can both believe the sun will rise tomorrow and imagine it), hypothetical imagination’s epistemic role seems broader than memory’s, since we also use it to form *new* beliefs. If, for example, I’m wondering whether the couch I just bought will fit through my front door when I get it home, I might try to answer this by imagining trying to fit it through the door. If I thereby conclude that the couch will fit, it’s natural to think I’ve used imagination to form a new belief, not to retrieve an existing belief.

So, on an intuitive level, we have reasons both for and against the claim that memory and hypothetical imagination are cognitive processes of the same kind. However, this claim’s proponents typically support it not with intuition but with empirical evidence about memory and imagination. As I’ll describe in more detail below, this evidence is taken to show two things. Firstly, it reveals that the affinities between memory and hypothetical imagination run quite deep, in that there’s significant neurocognitive overlap between them. Secondly, it’s taken to show—contrary to the intuitive view of the previous paragraph—that remembering is not a process of belief-retrieval but an

² For a historical review of this distinction by the psychologist who popularized it, see Tulving (2002).

³ The term “continuism” was coined by Perrin (2016), who formulated it as a claim about remembering the past and imagining the future (in line with its roots in the “mental time travel” paradigm from psychology—cf. Tulving 2002; Schacter et al., 2007; Suddendorf and Corballis 2007). But psychologists have increasingly shifted to investigating memory in relation to the more general category of hypothetical imagination (e.g., Schacter et al. 2012; Mullally and Maguire 2014; Addis 2018), as have philosophers who endorse continuist-type views (e.g., De Brigard, 2014; Sant’Anna and Michaelian 2019; Michaelian et al., forthcoming). So, I take it that the current “state-of-the-art” continuist view is about memory and hypothetical imagination, even if it’s sometimes put as a claim just about memory and future imagination.

imagination-like process of generating new beliefs. In other words, empirical evidence is taken to show both that the intuitive differences between memory and hypothetical imagination are merely apparent and that the intuitive similarities between them correspond to psychological reality.

This paper has two, related aims regarding continuism. Firstly, I'll argue that the view that memory is the same kind of cognitive process as hypothetical imagination—call this “hypothetical continuism”—is false. Despite recent empirical work on memory which has been alleged to show the contrary, something like our intuitive conception of how memory works is correct; furthermore, this conception gives rise to substantive epistemic asymmetries between memory and hypothetical imagination, asymmetries which render hypothetical continuism false. Secondly, I'll articulate and defend an alternative form of continuism, according to which memory *is* continuous with a distinct imaginative capacity I call “actuality-oriented imagination”—call this view “actuality-oriented continuism.” Although actuality-oriented imagination is often overlooked in literature on the relation between memory and imagination, there are no substantive epistemic asymmetries between it and memory.

Here's how the paper will proceed. §2 first argues that the intuitive view of memory would, if true, give rise to epistemic asymmetries which render hypothetical continuism false. It then explains how hypothetical continuists appeal to empirical evidence about the “constructive” processes involved in remembering to argue that the intuitive view of memory is false. §3 then defends the intuitive view of memory against these arguments, arguing that the intuitive conception of memory can accommodate the finding that remembering is constructive. I therefore conclude that hypothetical continuism is false. §4 then argues for actuality-oriented continuism; the upshot of this argument is that, unlike hypothetical imagination, actuality-oriented imagination has deep epistemic affinities with memory.

2 Hypothetical Continuism and Memory

Empirical research consistently confirms that there's much neural overlap between remembering and hypothetical imagining (this evidence is thoroughly reviewed elsewhere, so I'll summarize it very briefly—on all points in this paragraph, see Schacter et al. 2012; Mullally and Maguire 2014; Addis 2018). Most directly, neuroimaging shows significant similarities in the brain areas involved in both, leading psychologists to conclude that a single core brain system underlies them. The existence of this single system has been further, indirectly corroborated with various other kinds of evidence. This includes evidence from cognitive impairment (e.g., that patients with deficits in memory show corresponding deficits in imaginative ability) and developmental evidence (e.g., that the ability to remember the past and imagine the future emerges around the same time in children).⁴

⁴ There are also some measurable differences between the two, e.g., their neural overlap isn't total; memories are typically more detailed than imaginings; and imagining typically requires more effort. Continuists see such differences as matters of *degree*, not as evidence for processes of different kinds (Michaelian 2016a; Addis 2018).

The debate over continuism is typically formulated in terms of whether—despite all this evidence of deep similarity—there are nevertheless substantive differences between memory and hypothetical imagination, such that they amount to cognitive processes of different kinds (see, e.g., Debus 2014; Michaelian 2016a; Perrin 2016; Perrin and Michaelian 2017). Continuists argue that, besides their distinct temporal and modal orientations, no such substantive differences exist. *Discontinuists* deny this.

In this section, I'll first argue, in §2.1, that our intuitive conception of how memory works would, if true, render hypothetical continuism false. In §2.2, I'll then explain why empirical evidence about the “constructive” nature of memory has been taken by continuists to falsify this intuitive conception.

2.1 Hypothetical Continuism and the Intuitive View of Memory

Remembering brings to mind occurrent beliefs about the past. Intuitively, this involves bringing to mind *existing* beliefs, beliefs formed during one's perception of the remembered event and retained during the time between that event and one's remembering it. Thus, when I remember my tenth birthday party and my memory image includes the content that I ate cake, I seem to be simply retrieving the stored information that I ate cake, not forming an altogether new belief.⁵ This subsection first describes two ways that, *if* this intuitive conception of memory is correct, remembering differs from hypothetical imagining. I then argue that these intuitive differences would together give rise to two epistemic asymmetries between memory and hypothetical imagination, asymmetries which would problematize hypothetical continuism.

First, hypothetical imagining often generates *new* beliefs, rather than retrieving existing ones. Consider the sorts of cases typically discussed in literature on the epistemology of imagination—for example, a case in which you're wondering whether you'd be able to fit a couch through your doorway (cf. Dorsch 2016) or wondering whether you'd be able to successfully jump over the ravine in front of which you're currently standing (cf. Williamson 2016). In contrast with remembering, such cases don't seem to involve retrieving existing beliefs; instead, they seem like a matter of, for the first time, thinking through some scenario or the answer to some question. In other words, hypothetical imagination seems, in such cases, like a kind of conscious reasoning to new beliefs about what will or would occur in hypothetical scenarios. Much existing literature on imagination agrees that this is the case, in both the “mental time travel” literature from psychology and literature by philosophers of imagination. In the former, future imagining is typically thought of as a means of “predicting the future via imagined scenarios,” an “ability to flexibly recombine elements of past experience into simulations of novel future events” (Schacter et al. 2012, 689). This positions hypothetical imagination as a capacity to newly construct representations of novel events, thereby generating new beliefs. Much philosophical work on the epistemic value of imagination takes a similar line. For example, various philosophers hold that the imagination is a means of newly discovering the results of hypothetical actions or

⁵ This is somewhat ambiguous about the relationship between memory imagery and belief—specifically, whether the image is itself literally a belief, versus the belief being an attitude, distinct from the image, which one has towards (some part of) the image's content (cf. Langland-Hassan 2011; Arcangeli 2019). I think that, while the latter fits better with what I go on to argue below, both are consistent with my arguments. What matters is just that it's in the process of remembering that a belief comes into occurrent thought.

events, in that it automatically fills out the consequences of states of affairs we initially begin imagining (e.g., Williamson 2016; Langland-Hassan 2016; Van Leeuwen 2016). More generally, many accounts explicitly describe subjects as forming beliefs they didn't possess prior to imagining (e.g., Dorsch 2016; Kind 2018; Egeland 2019).

That's a first difference between hypothetical imagination and our intuitive picture of memory, since the latter says remembering always retrieves existing beliefs. Of course, even if this is how we *often* use hypothetical imagination, we still *can* use it to make existing beliefs occurrent—it's clearly possible to first form the belief that the sun will rise tomorrow then imagine it rising. However, there's a second way in which remembering intuitively differs even from such cases of hypothetical imagining: while remembering that P involves retrieving a belief formed *during a perception* that P, it's impossible for this to be the case for hypothetical imagining. We can use hypothetical imagination to bring to mind beliefs that originated in various sources, such as testimony or inferences about hypothetical events. However, it's in principle impossible to use hypothetical imagination to bring to mind a belief that P formed in a perception that P, since future events haven't occurred yet to be perceived and counterfactual events cannot be perceived. So, even when hypothetical imagination is used to make existing beliefs occurrent, there are in-principle differences between it and our intuitive conception of memory with respect to the source of those beliefs.

The two differences I just explained between memory and hypothetical imagination would, if true, jointly give rise to two substantive epistemic asymmetries. The first asymmetry concerns each capacity's ability to generate and justify beliefs. Since hypothetical imagination is a process by which we can form new beliefs, it seems that it can both generate and justify beliefs: one forms a new belief in the process of imagining a hypothetical scenario, and one's imaginative episode serves as the evidence on which one bases this belief, in virtue of which that belief is justified.⁶ In contrast, if the intuitive conception of memory is correct, memory neither generates nor justifies beliefs. Instead, remembering brings to mind beliefs one already possesses on the basis of past perceptual experiences, where these experiences are what justified the beliefs.⁷

The second asymmetry is that, even in cases where hypothetical imagination does bring to mind existing beliefs, the relationship that memory has to perception gives it a kind of epistemic authority which hypothetical imagination doesn't have. Perception has a kind of authority over other sources of belief and justification: perceiving that P

⁶ I take this to be the standard contemporary view of the epistemology of imagination, due to prominent work by, e.g., Williamson (2016) and Kind (2018). There are skeptics (e.g., Spaulding 2016), but they're a minority.

⁷ Lackey (2005) takes this to be the orthodox view of the epistemology of memory (citing Plantinga 1993; Dummett 1994; Audi 1995; Owens 2002). But she also argues that memory can both generate and justify belief. She argues that memory generates justification when a subject starts out believing a defeater for another belief she has stored in memory, then later forgets the defeater: after forgetting, the subject gains justification for the belief stored in memory. I think Senor (2007) successfully responds to this—see his argument regarding the *prima facie/ultima facie* justification distinction (Lackey 2007 responds to Senor, but doesn't criticize the substance of this response regarding this first kind of case). Lackey also argues that memory can generate beliefs when a subject acts as if she believes P but also has some information stored in memory which she could bring to mind to form the contradictory belief that Q: if the subject retrieves this information, she'd be using memory to revise her belief from P to Q. I think such cases involve subjects with *inconsistent* beliefs. One can both have a belief that P which manifests in one's behaviour and, simultaneously, a contradictory stored belief that Q.

firsthand defeats justification for believing not-P which one might have from other sources, such as testimony. If memory brings to mind beliefs that were generated and justified by perception, it's therefore a means of retrieving beliefs which have the kind of epistemic authority bestowed by perception: the fact that you remember that P would be reason to, for example, doubt countervailing testimony. This fits with our intuitive sense of the normative force of memory beliefs: if one remembers that P and receives testimony that not-P, it seems to make sense to doubt the testimony. In contrast, since hypothetical imagination either generates new beliefs or retrieves beliefs not formed in perception, it can't inherit perception's epistemic authority the way memory does.

Are these epistemic differences sufficient for rejecting hypothetical continuism? There's no single, clear recipe for deciding what would be sufficient to think memory and hypothetical imagination are processes of different kinds. However, recent (dis)continuist literature agrees that identifying substantive epistemic differences would be sufficient (Perrin 2016; Michaelian 2016a; Michaelian et al., [forthcoming](#)). I'll follow this lead. So, if the intuitive conception of memory is correct, it implies that hypothetical continuism is false, given the two epistemic asymmetries to which it gives rise.⁸

2.2 Hypothetical Continuism and Constructive Remembering

So, hypothetical continuism must contend with the fact that remembering at least *seems* importantly different from hypothetical imagining, epistemically speaking. Here, another key body of empirical work comes in: that which shows that, when considered at a more abstract level of information-processing (rather than the level of neural implementation), memory involves seemingly "imaginative" processes to an extent one wouldn't intuitively expect. As I said in §2.1, it's widely accepted by empirical researchers that hypothetical imagining involves re-combining elements of past experiences in novel ways, thereby constructing representations of hypothetical scenarios (Schacter et al. 2012; Addis 2018). It's tempting to think memory isn't like this, instead involving something like the process described by Martin and Deutscher's (1966) "causal" theory, according to which remembering is a matter of simply retrieving an overall representation of a past event. On this theory, one acquires a perceptually-formatted representation of an event during one's experience of it, which is later retrieved when one remembers. Contrary to this, recent research on memory suggests that remembering is "constructive" in ways much like imagining: rather than retrieving a single, stored representation, remembering integrates various kinds of information to construct a representation.

In this vein, one unifying feature of many empirical accounts of memory is that, rather than storing overall representations of events, memory instead stores representations of individual event features and associations between them. Event features are individual objects (particular people, places, landmarks, etc.) and object types (dog, table, cake, etc.) that we've encountered in the past. We retain associations between event features that have co-occurred in our past experiences, with stronger associations between those which have co-occurred more frequently. When we experience novel event features, we retain representations of these along with associations with co-occurring features; when we experience features we have encountered before, we simply retain strengthened associations between

⁸ There are various existing discontinuist arguments I don't have space to review here, both metaphysical (e.g., Debus 2014) and epistemological (e.g., Perrin 2016). Michaelian (2016a) compellingly handles many of these.

these and co-occurring features. While event features are sometimes described as organized in relation to one another merely by frequency of co-occurrence (cf. Robins 2016), it's unlikely this is the whole story. Rather, it's likely we also retain information about how individual features were organized relative to one another, along both spatial and temporal dimensions—i.e., that event features are organized into “maps” representing where they appeared physically and temporally in relation to one another (Morton et al., 2017; Aronowitz 2018; Aronowitz 2019). Remembering then involves assembling event features into a representation of a past event, by re-integrating the features which were likely to have co-occurred during that event in the spatiotemporal pattern in which they were likely to have been organized.

It's also often posited that the network of event features stored in memory is connected to various kinds of more abstract and semantic representations, both general information about the world and information about particular past events (Irish and Piguet 2013; Robin and Moscovitch 2017; Addis 2018). This includes explicit semantic beliefs about past events, which may even have originated in sources other than one's experience of those events, such as in testimony after the fact (De Brigard 2014; Michaelian 2016b). Some theorists also posit that we retain “gists” of experienced past events, abstract representations of events' main components; put metaphorically, gists are something like the main “plot points” of an event, such as “eating cake at my tenth birthday party” (McCormick et al. 2018). The role of more abstract information is thought to be, in part, to *guide* which event features are initially selected to be integrated into a memory—for example, the gisty representation “eating cake at my tenth birthday party” begins the integration of appropriate event features like “cake” and “party.” From there, the associative strength between these and other event features is used to fill out the details of a remembered scene.

Now, Michaelian (2016b) argues that, if we accept that remembering is constructive, we should reject the view that remembering involves retrieving existing beliefs—i.e., reject the intuitive conception of memory, according to which memory retrieves beliefs originally formed during the perception of remembered events. That's because, when we remember, we newly construct a representation of the past by integrating different sorts of information, rather than simply retrieving an existing representation. Once we accept this scientifically-informed alternative to the causal theory of memory, Michaelian argues, we should reject the view that memory stores and retrieves beliefs about the past—because memory isn't, in the first place, in the business of simply storing and retrieving overall representations of past events. This would imply, furthermore, that it's irrelevant to the success of hypothetical continuism whether our intuitive conception of memory raises epistemological problems for it, as I argued in the previous subsection.

However, the next section argues that the intuitive conception of memory actually withstands the finding that remembering is a constructive process. I'll thus conclude in that section that hypothetical continuism is false, for the reasons given in §2.1.

3 Against Hypothetical Continuism

A guiding assumption of this section is that genuine remembering is factive. Factive mental states are those one can have only towards truths, while one can have non-

factive states towards either truths or falsehoods (see, e.g., Williamson 2000; Nagel 2017). The paradigmatic examples of factive and non-factive states are, respectively, knowledge and belief: while “S knows that P” implies that P is true, “S believes that P” doesn’t imply either that P is true or false. Other states typically thought to be factive include perceiving and realizing: “S perceives that P” and “S realizes that P” each imply that P is true. Philosophers typically take remembering to be another such state (cf. Williamson 2000; Bernecker 2008, ch. 8; Debus 2014; Werning and Cheng 2017).⁹

There are two aspects to memory’s factivity. First, to remember an event E, that event must have occurred—i.e., “S remembers E” implies that E occurred. Although I’ll assume this is right, it’s not the aspect I’m primarily concerned with. Instead, I’m primarily concerned with the factivity of remembering particular propositional contents, as in the sentence “S remembers that P.” When one remembers an event, one’s memory image includes various propositional contents—for instance, my memory of my tenth birthday party may include the contents that I ate cake, that I wore a party hat, and that my mother was there. The sentence “I remember that I ate cake at my tenth birthday party” implies that this is part of my occurrent memory’s content *and* that it’s true. However, it doesn’t imply anything about whether other contents of my memory are accurate. I may be genuinely remembering that I ate cake while merely apparently remembering that I wore a hat and that my mother was there. Put generally, the claim “S remembers that P during E” implies only that P is true and E occurred; S’s memory may otherwise be largely inaccurate.¹⁰

Below, I’ll appeal to memory’s factivity in my argument that the intuitive conception of memory withstands the finding that memory is a constructive process, and therefore that hypothetical continuism is false. To shore up the intuitive conception, this section defends this necessary condition on genuine remembering:

GEN-REM: Genuinely remembering that P, as part of a memory of event E, involves making occurrent a belief that P acquired in one’s perception that P during E.¹¹

Here’s how my argument for GEN-REM will go. First, §3.1 argues that, even when remembering is thoroughly constructive, there’s nevertheless a sense in which it can make occurrent an existing belief that P which originated in one’s perception that P.

⁹ Future and counterfactual imagining are non-factive, since one can genuinely imagine that P even if P is false. Is this difference enough to conclude that hypothetical continuism is false? I don’t think it’s sufficient to show that memory and hypothetical imagining are distinct *kinds of processes*. Consider the relation between another state typically thought to be factive, *seeing*, and a closely related non-factive state, visually *hallucinating*. The asymmetry in factivity doesn’t clearly imply that they’re discontinuous. Perhaps this asymmetry is because genuine seeing succeeds in perceptually hooking one up to the world, while hallucinating is basically “seeing” that fails to do so. (This is especially plausible on recent “constructive” models of perception, where the two are psychologically very similar—cf. Hohwy 2016.) This would make hallucinating a kind of defective seeing. That’s consistent with only the latter being factive *and* the two being the same kind of psychological process.

¹⁰ The way I’ve just set things up assumes that episodic memories have propositional contents (following, e.g., Fernández 2006; Byrne 2010). This is not uncontroversial (see Sant’Anna 2018 for arguments against it), but it’s beyond my scope to comment on this debate here. I accept the view that *perception* has propositional contents (as per, e.g., Dretske 1997; Byrne 2009), and I take it that memory images inherit their representational format from perception and therefore also have propositional contents.

¹¹ Note that since GEN-REM is a necessary condition, not a sufficient one, I leave open whether a subject can satisfy GEN-REM yet fail to genuinely remember because she fails to meet some other necessary condition(s).

Then, §3.2 appeals to the factivity of memory to argue that remembering that *P* necessarily does this—i.e., that GEN-REM is true. I'll then conclude that hypothetical continuism is false, since GEN-REM renders it so for the reasons described in §2.1.

3.1 How Remembering Makes Existing Beliefs Occurrent

Consider the following case:

SUSHI: On Wednesdays, Olive and her colleague Dwayne typically go out for lunch together. They have two favourite restaurants between which they rotate week-to-week: a sushi restaurant and a burrito restaurant. One Wednesday, as Dwayne and Olive are about to go out, they can't immediately recall which restaurant they're scheduled to go to this week. Dwayne asks, "Where did we go last week, again?" Olive pauses for a moment, bringing to mind a memory of last week's lunch. She thereby remembers that she and Dwayne had sushi for lunch last Wednesday, saying, "We had sushi last week, so it's burritos this week."

This subsection first explains how Olive's remembering could be a means of making occurrent a previously existing belief that she and Dwayne had sushi for lunch last Wednesday. It then explains what it would mean for this belief to have originated in her perception that she and Dwayne had sushi.

On a narrow conception of what beliefs are, one which restricts beliefs just to contents one is consciously entertaining, Olive wouldn't count as believing she and Dwayne had sushi last Wednesday prior to her remembering. However, this conception is much narrower than what many epistemologists endorse, especially since it's clearly inconsistent with our typical patterns of belief-attribution. In particular, it leaves out the category of *standing* beliefs, beliefs one possesses but is not currently entertaining. This includes beliefs one previously formed explicitly but which are no longer in occurrent thought: after learning in a philosophy class that Descartes authored the *Meditations*, I can retain this as an explicit standing belief if I store a semantic memory with this content, even once I'm not consciously entertaining it. Besides explicit standing beliefs, we also often attribute *implicit* standing beliefs. One can implicitly believe that *P* in various ways, none of which require one to have a stored representation with the explicit content *P*. It could be that *P* is something one could easily bring to mind by deriving it from other information one already possesses—for example, if I have the explicit beliefs that Trudeau is the current prime minister of Canada and that prime ministers are politicians, it's natural to attribute to me the implicit belief that Trudeau is a politician, even if I've never explicitly thought about this. Or, it could be that *P* is something one takes for granted in one's patterns of behaviour or reasoning, but which one would be swift to endorse upon reflection—for example, it's natural to attribute to most typical adults the belief that objects don't cease to exist when one stops perceiving them, even for those who have never explicitly entertained this.¹²

¹² I don't mean to have just given a sharp definition, or set of necessary conditions, for possessing an implicit belief. Rather, I'm noting some possible ways of possessing implicit beliefs in hopes of gesturing toward an intuitive category of belief. For more detailed discussions of standing and implicit beliefs, see, e.g., Hawthorne (2000); Schwitzgebel (2002); Gertler (2011).

Is there some sense in which, prior to her remembering, Olive had a standing belief that she and Dwayne had sushi for lunch last Wednesday? If the constructivist picture of memory from §2.2 is right, it may rule out that Olive had an *explicit* standing belief—i.e., that Olive stores a single representation with the content that she and Dwayne had sushi last Wednesday, which she retrieves. However, I think it's nevertheless possible that Olive had an *implicit* standing belief, which is made occurrent and explicit when she remembers.

SUSHI doesn't say exactly what kind of information is used to construct Olive's memory, but, given what §2.2 said about memory construction, there's a rich set of information from which this process could potentially have drawn. Here's one possibility. Suppose Olive has stored gist information about the particular event she's remembering, something like "lunch with Dwayne at restaurant X." This gist representation is stored in an appropriate temporal sequence relative to other recent events, including other recent lunches with Dwayne. Thus, it's stored in a way that implicitly tags it as *last* Wednesday's lunch. When Olive remembers last Wednesday's lunch, this abstract, gist information guides her memory construction to integrate event features which typically feature in her sushi lunches with Dwayne. She thereby brings to mind a memory that represents her and Dwayne having sushi. Now, consider this story about Olive's memory construction in light of my above claim that, when one possesses information from which one could easily bring to mind the explicit belief that P, this is one way of possessing an implicit standing belief that P. This seems like an accurate description of Olive prior to the time that she remembers last Wednesday's lunch, with respect to the memory content that she and Dwayne had sushi. Olive possesses various information about last Wednesday's lunch and about how such lunches typically go. From this information, she can easily use the constructive process of remembering to bring to mind an occurrent belief that they had sushi. So, Olive had an implicit belief that she and Dwayne had sushi for lunch even prior to her remembering.

We can also ask what it would mean for this belief to have originated in Olive's perception that she and Dwayne had sushi. One simple answer to which we *can't* appeal is that *all* the information used to construct her memory originated in the relevant perception: while that's true for some of the information, other bits of it originated elsewhere, since her remembering partly draws on event details and associations that are typical of her various past lunches. Nevertheless, there's a strong sense in which the fact that Olive's memory includes the content that she and Dwayne had sushi depends on information she retained from her perception of their lunch: the selection and integration of event details was guided by such information, including both an abstract gist representation of the particular event and the temporal organization of the information stored in her memory. It's therefore *because* Olive perceived that she and Dwayne had sushi that she possesses a set of stored information from which she can bring to mind a memory that includes this content—i.e., it's because she perceived that she and Dwayne had sushi that she retains an implicit belief that they had sushi. Had Olive not perceived that she and Dwayne had sushi (if, e.g., they had eaten something else), she would not have stored this implicit belief, because she would instead have stored an overall set of information from which she could construct a different memory. Olive's belief thus originated in her perception because the fact that she possesses this belief causally depends on that perception.

Of course, the psychology behind memory storage and retrieval is controversial; whether the possible way I described Olive's process of remembering captures how things typically go in reality depends on the accuracy of §2.2's empirical posits about the kinds of information memory construction incorporates: temporally organized event details, gist representations, and so on. The general points here are somewhat independent of this, though: as long as one has available a set of information which one can easily integrate to construct a memory that includes content P, one thereby possesses a standing belief that P. Furthermore, if one possesses such a set of information in virtue of one's past perception that P, this standing belief originated in one's perception that P. These general points are consistent with various possible pictures of exactly what kinds of information memory construction draws upon. Suppose, for example, that one rejects the idea that memory construction draws on gist information but accepts that it's guided by the temporal organization of stored event details, retained from a past experience. Even so, an instance of remembering could still satisfy my descriptions of what it takes for remembering to bring to mind an implicit belief, since this still involves drawing on stored information, originating in a past experience, from which one is able to construct a memory.

Now, hypothetical imagining can draw on the same kinds of information originating in past experience that remembering does. Furthermore, it's plausible that we can possess standing, implicit beliefs in virtue of possessing information we can draw upon this way in imagination. Suppose that, when driving to work one Monday morning, Olive sees that her favourite sushi restaurant has been unexpectedly demolished over the weekend, and that there's now a vacant lot where it once stood. On the basis of information stored from this experience, it seems plausible to attribute to Olive the implicit belief that there will be a vacant lot in the same location when she drives by again this afternoon. That's because, on the basis of her past experience, Olive could, if prompted, easily imagine what she'll see when she drives by this afternoon—i.e., she possesses a set of stored information from which she could easily bring to mind a mental image of the lot as vacant this afternoon. It might therefore seem that, much like memory can, hypothetical imagining can bring to mind implicit, standing beliefs that causally trace back to past experience. However, there's a key difference, relevant to my point in this subsection, between Olive's remembering in SUSHI and this case of imagining. Given how I formulated GEN-REM, the arguments of this subsection are meant to show how remembering that P can bring to mind a belief originating in the perception *that P*—i.e., where the past perception and the belief have the same content. In remembering, Olive brings to mind the belief *that she had sushi*, which originated in a perception *that she had sushi*; but, in the imagining I just described, Olive brings to mind the belief that the lot *will be* vacant this afternoon, which causally traces back to her perception that it *was* vacant this morning. As I argued in §2.1, one can't use hypothetical imagination to bring to mind a belief that P formed in past perception that P, since hypothetical imaginings are about the future or the counterfactual.

To conclude this subsection, note that nothing I've argued implies that Olive had implicit beliefs, retained from her past experience, about other aspects of last Wednesday's lunch besides the fact that she and Dwayne had sushi. Perhaps Olive has no such implicit beliefs about what kind of sushi they ate or how crowded the restaurant was, with these aspects of her memory getting filled in by more general background information from various past lunches. Or, perhaps Olive has *false* implicit beliefs

about these other matters, her memory representing them inaccurately. As constructivists like Michaelian (2016b) emphasize, the processes involved in remembering are such that the way we're disposed to remember past events changes over time and between contexts in which we're prompted to remember. But, to have an implicit belief that she and Dwayne has sushi prior to remembering it, Olive need not possess any kind of stable disposition to accurately remember other details of their lunch.

3.2 GEN-REM as Necessary

I just explained what it means for a memory of event E to make occurrent a standing belief that P which originated in one's perception that P during E. However, GEN-REM doesn't merely say that remembering *can* do this; it, furthermore, says that genuine remembering *always* does this. In this subsection, I argue for this stronger point by appealing to the factivity of memory. I argue that accepting GEN-REM allows us to non-arbitrarily rule out, as merely apparent memory, many cases in which S seems to remember that P but P is false.

SUSHI, as I described and filled out the case in the previous subsection, satisfies GEN-REM with respect to the content that Olive and Dwayne had sushi for lunch: Olive has a standing belief they had sushi, which originated in her perception that they had sushi, and which her remembering makes occurrent. The first kind of case from which I want to differentiate SUSHI is one in which a subject's mental image construction doesn't involve making an existing, standing belief occurrent. Consider:

LEFTOVERS: After a burrito lunch with Olive one week, Dwayne is driving the two of them back to work. They get into a car accident in which Olive sustains a blow to the head, wiping out all record of her experiences from the past week. Olive wakes up several minutes later in the back of an ambulance on the way to the hospital. Dwayne, unharmed, is accompanying her. He asks her if she can remember what they were doing before the accident. At that same moment, Olive notices, sitting on the seat next to Dwayne, a takeout bag that looks exactly like the ones in which she sometimes takes home leftovers from their usual burrito restaurant. Seeing this makes her think about eating burritos with Dwayne, triggering a mental image of them eating burritos which is constructed from general background information about their various past lunches. Olive takes this image to be a memory of today's lunch, so tells Dwayne she thinks they were having burritos for lunch.

If GEN-REM is true, Olive isn't genuinely remembering that she and Dwayne had burritos for lunch earlier that day, because her mental image construction doesn't involve making occurrent a standing belief that they had burritos; instead, it generates a new belief.

In LEFTOVERS, the mental image content that Olive and Dwayne had burritos for lunch is true. So, this case on its own wouldn't, if accepted as genuine remembering, present a counterexample to the factivity of memory. Nevertheless, the assumption that genuine remembering is factive gives us reason to accept GEN-REM, thus ruling out LEFTOVERS as genuine remembering. That's because GEN-REM allows us to non-arbitrarily exclude cases in which, despite implementing an identical process of mental

image construction to that in LEFTOVERS, Olive ends up falsely representing that she and Dwayne had burritos for lunch. Consider:

LEFTOVERS*: Olive and Dwayne have sushi for lunch, after which Olive goes through the same kind of memory-erasing accident as in LEFTOVERS, winding up in the back of an ambulance with Dwayne. Dwayne asks if she can remember what they were doing before the accident. Just then, Olive notices, on the seat next to Dwayne, a takeout bag that looks exactly like the ones in which she sometimes takes home leftovers from their usual burrito restaurant. Although this is indeed a bag of leftovers from that very restaurant, she's unaware that it was accidentally left there by the ambulance driver earlier that day. Seeing the bag triggers a mental image of Olive and Dwayne eating burritos together, which Olive takes to be a memory of today's lunch.

Since genuine remembering is factive, this case can't count, since what Olive seems to remember is false. Yet, Olive goes through the same psychological process of mental image construction here as in LEFTOVERS. So, it would be arbitrary to count LEFTOVERS as genuine remembering without counting LEFTOVERS*. Accepting GEN-REM, thus rejecting LEFTOVERS, allows us to non-arbitrarily reject LEFTOVERS*.

One might be tempted to respond: since genuine remembering is factive, LEFTOVERS* doesn't count as genuine remembering just in virtue of the fact that the content Olive seems to remember is false; we therefore don't need to appeal to anything like GEN-REM to exclude LEFTOVERS*. However, this response assumes that the claim that remembering is factive is merely the claim that we should count as genuine remembering only cases where one gets things right, while excluding as apparent remembering all cases where one gets things wrong. But the claim that remembering is factive is more interesting and informative than this. Rather than merely allowing us to sort cases of genuine remembering from apparent remembering, it tells us something about the nature of memory itself: that it's part of the very nature of memory to be tied to the truth. In other words, the fact that remembering is a factive state tells us that there's something about the nature of memory which *explains why* cases of genuine remembering involve truth, rather than merely that we should label cases of truth "genuine remembering" and cases of falsity "apparent remembering."

To illustrate this kind of point, take again the distinction between knowledge and belief. Believing that P is non-factive because there's nothing about the nature of belief which entails that, when S believes that P, P is true; instead, to believe that P is just to take P to be true, regardless of whether P is actually true. So, the claim that belief is a non-factive state tells us that there's something about the nature of belief such that it's not a state which necessarily links one to truths. Knowing that P is, in contrast, a factive state, but not merely because we apply the word "knowledge" to all and only S's beliefs which are true but otherwise indistinguishable from the false ones. Rather, this has to do with facts about the nature of knowledge. To know that P is more than merely to be right about P—it's a state of being securely hooked up to the truth that P, such that one's cognitive faculties are disposed to reliably vary with or be sensitive to what's true. This is why epistemologists typically define knowledge in a way that involves not just getting things right but getting things right in such a way that one couldn't (easily)

have been wrong.¹³ So, the claim that knowledge is a factive state tells us that it follows from something about the very nature of knowledge that, when S knows that P, P is true. In other words, it tells us that there's something interesting about the nature of knowledge which ties knowing to the truth, rather than merely indicating that we should count cases involving truth as genuine knowledge and ones that don't as apparent knowledge.

Analogously, the claim that remembering is factive indicates that there's something about the nature of remembering which explains why remembering that P implies the truth of P. If we accept GEN-REM as necessary for genuine remembering, we can see what this is. Firstly, perceiving that P is itself a factive mental state (as opposed to, e.g., *having an experience as of P* or *seeming to perceive that P*, which the state of perceiving that P has in common with non-veridical experiences such as hallucinating that P). So, in SUSHI, for example, Olive originally acquires the standing belief that she and Dwayne had sushi for lunch in a way that guarantees this belief's truth. Olive then retains this belief in the intervening week, and, in the process of remembering, makes it occurrent. As long as Olive's act of remembering is embedded in a diachronic process like this, the memory content that she and Dwayne had sushi for lunch is guaranteed to be true. There's no alternative possible case in which, despite Olive's memory construction functioning in a way that's indistinguishable from the way it functions in SUSHI, the resulting content is false. In other words, if we hold fixed that one follows the process described by GEN-REM—perceiving that P, retaining a belief that P, then bringing to mind that same belief—one's occurrent memory belief will always be true. So, if we accept GEN-REM, we can say what it is about the nature of remembering that explains why all memory beliefs are true: remembering involves retrieving a standing belief which was originally formed in a way that guarantees its truth.

The same can't be said if we reject GEN-REM and accept LEFTOVERS as a case of genuine remembering. That's because there are alternative cases, such as LEFT-OVERS*, in which the process underlying Olive's image construction functions the same way as in LEFTOVERS, yet what she seems to remember is false. In other words, holding fixed the belief-forming process Olive goes through in LEFTOVERS—seeing a bag of leftovers which triggers a mental image, by association, of eating burritos—is consistent with the resulting belief being either true or false. So, to retain the significance of the claim that remembering is factive, we should reject LEFTOVERS as a case of remembering.

Accepting GEN-REM also rules out as genuine remembering cases where one's mental image does bring to mind a standing belief that P, but where this belief originated elsewhere than perception. For example:

TESTIMONY: Immediately after the events of LEFTOVERS, Olive asks Dwayne, "Is that right? Were we eating burritos for lunch together today?" Dwayne truthfully tells her that, yes, this is correct. She retains this information from his testimony. A week later, Olive has recovered from her injuries enough to go out for her usual Wednesday lunch with Dwayne. He asks her if she can

¹³ This takes various more specific forms, but it typically includes the claim that knowledge involves or entails some modal notion like reliability or "safety" (cf. Williamson 2000, sec. 5.3).

remember what they had for lunch last week. Olive brings to mind a mental image of last week's lunch in which she and Dwayne are eating burritos, constructed based on the information she retained from Dwayne's testimony in the ambulance.

Here, Olive does bring to mind a standing belief that they had burritos last Wednesday, but she fails to satisfy GEN-REM, since this belief originated in Dwayne's testimony instead of the relevant perception.

Constructive remembering often draws on information from sources other than one's experience of a remembered event, including testimony, and the extent to which information incorporated into a memory originated in any one source varies between cases. It might therefore seem that there's no principled difference in the constructive processes involved in SUSHI versus TESTIMONY (cf. Michaelian 2016b). However, the factivity of memory again gives us a principled reason for rejecting cases like TESTIMONY, by similar reasoning to that which led us to reject LEFTOVERS. Compare TESTIMONY to:

TESTIMONY*: Immediately after the events of LEFTOVERS, Olive asks Dwayne, "Is that right? Were we eating burritos for lunch together today?" Dwayne lies to Olive and tells her, "Actually, the burrito restaurant was unexpectedly closed, so we went for sushi." A week later, Olive has recovered from her injuries enough to go out for her usual Wednesday lunch with Dwayne. He asks her if she can remember what they had for lunch last week. Olive brings to mind a mental image of last week's lunch in which she and Dwayne are eating sushi, constructed based on the information she retained from Dwayne's lie.

Olive follows the same cognitive process in both TESTIMONY and TESTIMONY*. Given that Olive's occurrent belief turns out false in TESTIMONY*, this process doesn't guarantee a true belief. That's because forming beliefs on the basis of testimony is not a factive process, since testifiers can mislead. Therefore, the process of forming a belief from testimony, retaining that belief, then bringing that belief to mind can result in either a true or false occurrent belief, unlike in a case where one originally formed the belief via the factive state of perception. If we want to account for the factivity of memory without just arbitrarily excluding TESTIMONY*, we should accept GEN-REM, restricting the source of memory beliefs to perception and thereby also rejecting TESTIMONY.

GEN-REM reflects our intuitive conception of memory, according to which remembering is a matter of bringing to mind beliefs about the past formed during one's perception of a remembered event. I argued in §2.1 that, if this intuitive conception of memory is true, hypothetical continuism is false. That's because, given this conception, there are two important differences between the epistemology of memory and hypothetical imagination. First, hypothetical imagination often both generates and justifies beliefs, while remembering does neither: it retrieves existing beliefs which were generated and justified by perception. Second, hypothetical imagining that P cannot retrieve a belief formed in a perception that P, while remembering that P always does so; memory therefore has a kind of epistemic authority that's derived from perception, which hypothetical imagination lacks.

Having argued in favour of GEN-REM in this subsection, I conclude that hypothetical continuism is false, in virtue of these two epistemic differences between memory and hypothetical imagination. I'll now close this section with two clarifications about how what I've argued relates to existing literature in the philosophy of memory.

First, my characterization of remembering in terms of GEN-REM bears some resemblance to Martin and Deutscher's (1966) classic causal theory of remembering, and my LEFTOVERS and TESTIMONY cases are similar to cases which they use their theory to rule out. So, it's worth briefly spelling out the similarities and differences between my account and theirs. In their paper, Martin and Deutscher first characterize memory very generally: remembering involves an occurrent representation which causally traces back to a past experience via some intermediate state(s) which were produced by that past experience. This accurately describes my own account, according to which remembering involves making occurrent a belief that traces back to an experience via an implicit belief which that experience produced. In that sense, my account is broadly in the same "causalist" spirit as theirs. However, there two substantive differences between my account and the full theory of remembering Martin and Deutscher go on to develop. First, Martin and Deutscher reject analyses of memory in terms of belief and hold that belief is not necessary for remembering; my necessary condition GEN-REM does include belief. Second, Martin and Deutscher hold that the intermediate state via which an occurrent memory traces back to an experience must be an explicit, stored representation, a "structural analogue" of the original experience (metaphorically, like the imprint of a coin in wax). My account instead gives this intermediate role, as per §3.1, to *implicit* beliefs, grounded in the possession of a set of information from which one can construct a memory.

A second clarification concerns my assumption in this section that memory is factive. While many philosophers endorse this assumption, hypothetical continuist Michaelian (2016a, 2016b) has recently argued that factivity is not a valid condition for a theory of memory. While granting that factivity is part of our everyday, commonsense concept of remembering, he argues that it "has no place in the naturalistic project of describing memory as a psychologically real process," and thus that any theory of memory which includes factivity fails to pick out a genuine psychological natural kind (2016b, 69). This is because factivity has to do with whether memory accurately represents the past, which is a purely external relation between a subject and past events; it's therefore completely external to the neurocognitive process of remembering. If this is correct, the argument of this section relied on an illicit assumption. Hypothetical continuists may follow Michaelian and reject my arguments simply by rejecting the factivity assumption.

I grant that, if my arguments in this section are to fully convince hypothetical continuists, much more work would have to be done to convince them to accept the factivity of memory, work that is beyond my scope here. However, I'll close this section by sketching why I think it's far from inevitable that we eliminate factivity from a naturalistic picture of memory. One very large background issue here concerns whether we should allow *any* factive states—knowing, perceiving, remembering, or whatever else—into naturalistic theories of the mind.¹⁴ While I can't conclusively weigh in on this issue here, it seems plausible that we should define and individuate

¹⁴ For work relevant to this general question, see Nagel (2013, 2017) and Dasti and Phillips (2010).

at least *some* states not merely in terms of processes occurring inside one's head, but also by how these processes relate us to the world. In particular, if we want to carve out *perceiving* and similar states like hallucinating, misperceiving, and dreaming as genuinely distinct states, we should define genuine perception in terms of the kind of occurrent relation it establishes between a subject and facts about her external environment. This allows us to exclude a state like hallucination from counting as genuine perception, since it fails to establish this kind of relation.

Still, it might seem more naturalistically respectable to think of perceiving as a factive state than to think of remembering as one. Perceiving involves occurrent causal relations to one's immediate environment, so it's difficult to totally eliminate relations between a subject and environment from how we conceptualize perception (cf. Schellenberg 2017: perceiving involves "systematic links" between perceptual states and one's environment). Remembering instead involves relations to the *past*, rather than current connections to one's environment; it might therefore seem that, even if we accept perceiving as a factive state, it would be metaphysically strange to think of memory along similar lines, since the connection between a subject and the objects of memory seems so indirect. However, thinking of memory in terms of GEN-REM removes this barrier of metaphysical mysteriousness. That's because, if GEN-REM is true, the factivity of remembering really just traces back to the factivity of perception: remembering involves making beliefs occurrent which originated in perception, a factive source, and thus itself always involves bringing to mind true beliefs. So, under the assumption that it's possible to incorporate a factive conception of perceiving into a naturalistic picture of the mind, it also seems possible to incorporate a factive conception of remembering.

4 Actuality-Oriented Continuism

The previous section concluded that hypothetical continuism is false. This section argues that an alternative sort of continuism is true, because remembering is continuous with a capacity I call "actuality-oriented imagining." I'll first explain this capacity more generally, then argue that the epistemic asymmetries between memory and hypothetical imagination don't apply to memory and actuality-oriented imagination.

Here's an illustration of actuality-oriented imagining:

PARTY: Olive and Dwayne have planned a surprise lunch party for their co-worker Sheryl's birthday. They instruct a group of twelve co-workers to walk together to their favourite burrito restaurant and to text Olive when they have arrived, after which Olive and Dwayne will escort the unsuspecting Sheryl there. At lunchtime, Olive receives the text: "We just got to the restaurant. About to go inside and get a table." Suddenly, Olive thinks to herself, "Hold on, is there even room at that restaurant for a group of fifteen, or do they only have smaller tables?" She brings to mind a mental image of the restaurant's interior and inspects each section of it, one by one. She lands on a particular corner at the back of the restaurant and realizes, "Ah, they do have that one, very large booth in the back. I hope it's available."

Here, Olive is using imagination not to represent a future or counterfactual scenario, but to represent the burrito restaurant as it is, now, in the actual world. While it might seem tempting to describe what Olive is doing as remembering the layout of the restaurant, this isn't right. For one thing, Olive is thinking about whether the restaurant *has* enough space, not whether it *had* enough space in the past. So, we should think of her as bringing to mind a *present-tensed* image of the restaurant, not as remembering. Furthermore, remembering is typically taken to represent particular past events that one experienced (in the terminology of Robins 2020, it has a particular past event as its “target content”). In PARTY, Olive isn't aiming or trying to represent some particular time she previously saw the restaurant, assuming that she hasn't actually had a past experience of methodically inspecting each section of the restaurant. Rather, she's imaginatively generating a mental “tour” of its layout.¹⁵

Intuitively, we associate the imagination with thoughts about the non-actual: the future, the counterfactual, the fictional, etc.¹⁶ However, reflection on examples like PARTY shows that actuality-oriented uses of imagination come quite naturally in various contexts. You'd likely do something similar to Olive when asked, for example, how many windows are on the outside of your house, or whether your balding friend has more or less than half his head of hair remaining—it's natural to answer such questions by forming mental images of the way things are in actuality. We do this when thinking about parts of the actual world we've perceived before, but when thinking about reality as it is in the present instead of as it was in the past. This kind of imagining is “actuality-oriented” because it aims at putting us in touch with the way the actual world currently is. It thereby differs from hypothetical imagining, which concerns how things will be in the future or how things are in other possible worlds.¹⁷

Now, the neural overlap between episodic memory and hypothetical imagination extends to other kinds of imagistic thought, too: the same core brain network underlies our capacity to use mental imagery to construct scenes of all sorts, regardless of their temporal or modal location (Maguire and Mullally 2013; De Brigard and Gessell 2016). This would include the kind of actuality-oriented imagining I just described. I'll now argue, furthermore, that actuality-oriented imagination is epistemically like

¹⁵ The idea that memories must represent *particular* events has recently been challenged by Andonovski (2020), who argues that at least some episodic memories are generalizations of multiple, similar past events. Still, Andonovski recognizes that the particularity condition is a widespread assumption among philosophers, so I'll assume it to be true here. Even if we reject it, though, the kind of generalized memories Andonovski describes still concern the past; so, if I'm right that cases like PARTY can involve present-tensed mental images, we'd still have to distinguish such general memories from actuality-oriented imaginings. However, one might also be tempted to think that Olive's mental image of the restaurant is past-tensed while she forms a present-tensed *belief* based on it—i.e., that the present-tensed part of her thoughts about the restaurant comes only in a belief formed subsequently to a memory. However, even if it's true that we do sometimes form beliefs via such a process, it seems doubtful that we *can't* engage in the kind of present-tensed imagining I described Olive as performing. In fact, as I go on to note, actuality-oriented imagining seems like a common feature of day-to-day life. The possibility of actuality-oriented imagining cases is all I need to make my argument in this section. Thanks to an anonymous reviewer for raising the objections I just addressed.

¹⁶ Depending on one's view about the metaphysics of future events, one might think of imagining the future as imagining the actual. However, I think Debus (2014, 2016) is correct that the future at least *seems* genuinely open from the perspective of the imagining subject, such that what one imagines is, to the imaginer, to some extent merely hypothetical.

¹⁷ For a more detailed positive account of actuality-oriented imagination, including more about its relation to different types of memory, see Munro (forthcoming).

memory in ways hypothetical imagination isn't. So, my objections to hypothetical continuism don't hold when it comes to actuality-oriented imagination, suggesting we should think of it and memory as the same kind of cognitive process.¹⁸

First, note that it makes sense to think of Olive as retrieving an existing belief in PARTY, in a way much like I argued remembering retrieves existing beliefs. I argued in §3 that remembering that P involves retrieving an implicit standing belief which is grounded in information from which one can construct a memory that includes the content P. Plausibly, Olive's actuality-oriented imagining brings to mind a standing belief using the same kinds of constructive psychological processes as remembering (as per §2.2). After all her visits to the restaurant, Olive will have retained representations of the restaurant's various features—its furniture, décor, etc. The features Olive has *typically* encountered as co-occurring with one another will have stronger associations between them. Furthermore, they will be organized in a way that maps their physical relations to one another—i.e., the spatial layout of the restaurant. So, when Olive imagines the restaurant's layout, associations between features which are statistically most likely to be there, given her past experiences, will be activated. Thus, by integrating information she possesses about the various features she typically encounters in the restaurant, Olive can easily bring to mind a mental image which includes the content that the restaurant has a large booth in the back. This amounts to possessing an implicit standing belief prior to her imagining.

Furthermore, Olive's standing belief that the restaurant has a large booth was acquired by perceiving that the restaurant has a large booth: when Olive saw the restaurant in the past, it always had a large booth in the back. These past perceptions are the source of her implicit standing belief: she wouldn't possess information from which she could construct a mental image of the restaurant's layout unless she had seen the restaurant before, which makes her belief causally dependent on her past experiences. The main difference here between memory and actuality-oriented imagining is that, while memory beliefs are based on a single past experience, Olive's belief is grounded in multiple past experiences. Now, I said above that, although hypothetical imagining is sometimes a means of bringing to mind existing beliefs, those beliefs can't have originated in perception, given that one is thinking about future or the counterfactual events—i.e., events which haven't been perceived yet or which are impossible to perceive. We might initially think Olive's belief in PARTY similarly can't have originated in perception, since it's about what the restaurant is like *now* even though she can't currently perceive the restaurant. But this would be mistaken. In seeing the restaurant in the past, Olive formed the belief that it *has* a large booth; she'll retain this belief into the future, unless she gains some reason to think things have changed or she forgets it. This is a general fact about belief-formation: it's not as if all our perceptual beliefs about the world become about the past once we're no longer perceiving the parts of the world about which we formed beliefs. So, when it comes to beliefs with present-

¹⁸ One way actuality-oriented imagining is unlike remembering, and like hypothetical imagining, is that it isn't factive. Beliefs about the past which one formed via past perceptual experience remain true until one brings them to mind via remembering, because the past doesn't change after one perceives it. With actuality-oriented imagining, though, a part of the world can change between the time one perceives and forms a belief about it and the time one imagines it. It could be that, for example, the restaurant removed its large booth between the time Olive last saw it and the time she imagines it. But see fn. 9 above for why I don't think differences in factivity are enough of a basis on which to conclude that two cognitive processes are discontinuous.

tensed contents, like Olive's belief that the restaurant has a large booth, it makes sense to think that they can have originated in past perceptions.

We're now in a position to see that the epistemology of actuality-oriented imagination is closely aligned with memory and not with hypothetical imagination. Firstly, I argued in this paper that, while hypothetical imagining often both generates and justifies beliefs, remembering retrieves existing beliefs which were generated and justified by perception. The latter also characterizes Olive's imagining in PARTY. Rather than trying to come up with a new belief, she's trying to bring to mind a stored belief that she acquired via her past perceptions of the restaurant. And the reason Olive's belief is justified is because she's seen the restaurant in the past.

Secondly, since remembering makes occurrent standing beliefs which originated in perception, it has a kind of epistemic authority which hypothetical imagining doesn't. Perceiving that P for oneself is sufficient reason to, for example, doubt someone's testimony that not-P, and remembering that P inherits this kind of authority from perception. The fact that Olive's belief was generated by perception implies that her imagining in PARTY has a similar epistemic authority. This fits well with our intuitions about the normative force of Olive's belief. Suppose, for example, that Dwayne were to tell Olive he doesn't think the restaurant has enough room for their large group. Olive performing the kind of imagining she does in PARTY seems clearly to give her sufficient justification to doubt his testimony. This intuition makes sense, given that Olive's imagining is a means of bringing to mind something she saw for herself.

I conclude that the two epistemic divergences I identified between memory and hypothetical imagination don't hold between memory and actuality-oriented imagination. We can therefore carve a divide between, on one side, the epistemology of remembering and actuality-oriented imagining, and, on the other, the epistemology of hypothetical imagining. So, although hypothetical continuism is false, we can replace it with actuality-oriented continuism.

5 Conclusion

Much empirical evidence shows that episodic memory and hypothetical imagination are psychologically very similar. Given this, it's tempting to think that we should cease viewing memory and hypothetical imagination as distinct kinds of cognitive processes. I argued in this paper that this view is mistaken. Nevertheless, I also argued that another kind of imagining, "actuality-oriented imagination," is indeed continuous with memory. Continuists have thus far been looking to the wrong kind of imaginative capacity to develop their view: while mistakenly focusing on similarities between memory and hypothetical imagination, they have neglected the fact that we also use imagination in a way that has even deeper affinities with memory.

I agree with hypothetical continuists that there's some kind of imagining which is of the same kind of psychological process as remembering. Nevertheless, there's also a sense in which I have reversed the hypothetical continuist's picture of the relationship between memory and imagination. Continuists typically argue that memory is more like imagination than we might pre-theoretically have thought, emphasizing the constructive processes remembering has in common with hypothetical imagining. I have, instead, argued that there's a kind of imagination that's similar to memory in ways we

might not intuitively have realized. We typically associate the imagination with our ability to transcend what's currently actual, using it to represent the future, the counterfactual, the fictional, etc. However, I have argued that actuality-oriented imagination is much like our intuitive picture of memory, since it's a means of making occurrent contents we already believe. So, while I've defended our intuitive conception of memory against continuist arguments, I've also proposed that our intuitive conception of the imagination should be supplemented.

Acknowledgments This paper was awarded the 2020 Philosophy of Memory Essay Prize organized by the Centre for Philosophy of Memory at the Université Grenoble Alpes. For comments on earlier drafts, thank you to David Barnett, Jennifer Nagel, Gurpreet Ratan, Catherine Rioux, Evan Westra, and two anonymous reviewers. This research was supported by the Social Sciences and Humanities Research Council of Canada.

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