

Remembering and Imagining: The Attitudinal Continuity

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Abstract: Cats and dogs are the same kind of thing in being mammals, even if cats are not a kind of dog. In the same way, remembering and imagining might be the same kind of mental state, even if remembering is not a kind of imagining. This chapter explores whether episodic remembering, on the one hand, and future and counter-factual directed imagistic imagining, on the other, may be the same kind of mental state in being instances of the same cognitive attitude. I outline a continuist position where all three involve the same judgment-like attitude and compare its advantages to a discontinuist alternative where remembering requires use of its own distinctive attitude. Reasons are given for favoring a version of the continuist position, though this chapter's focus is on the metatheoretical questions of how to go about understanding remembering in terms of a content and attitude pair, and which considerations are relevant when deciding among competing content/attitude pairs.

I.

There are several interesting questions that can be asked about the relationship of remembering to imagining. One is whether remembering is a kind of imagining. A second is whether remembering and imagining are the same kind of mental state. While superficially similar, these questions are distinct. Someone may hold that remembering is not a kind of imagining while allowing that remembering and imagining are the same kind of mental state in some other sense. This would be akin to denying that cats are a kind of dog, while holding that cats and dogs are the same kind of thing in being *mammals*. In the case of remembering and imagination, one might hold that the two are the same kind of mental state in

being instances of the same mental *attitude*, even if remembering is not a kind of imagining. Of course, we would want to hear more about the nature of this mental “attitude” that could include remembering and imagining as instances. It is not immediately clear how there could be an attitude that applies to remembering and imagining that does not render remembering a kind of imagining, or imagining a kind of remembering. Showing how there could be such an attitude, and making a case for its existence, will be this chapter’s main project.

For context, it is important to situate this project with respect to the more frequently debated question of whether remembering is a kind of imagining (Addis, 2020; Michaelian, Perrin, & Sant’Anna, forthcoming; Robins, 2020a). In that discussion, the kind of remembering in question is *episodic remembering*—the active representation of an event from one’s personal past, typically keyed to some sense modality through which the event was originally experienced (Tulving, 1983). There is less consensus concerning the sense of ‘imagining’ at issue when it is asked whether remembering is a kind of imagining. In other work, I have proposed that there are at least three different senses of ‘imagining’ worth distinguishing in that context: imagistic imagining, attitudinal imagining, and constructive imagining (Van Leeuwen, 2013). The most interesting question, I’ve argued, concerns whether episodic remembering is a kind of constructive imagining, where the term ‘constructive imagining’ refers to any kind of creative and constructive thought process during which a thinker actively assembles or juxtaposes mental representations in new ways (Langland-Hassan, 2021). Continuists, struck by the highly constructive and creative nature of episodic remembering that is emerging from the scientific study of memory, have proposed that remembering is a form of constructive imagining and, as such, not different in kind from other creative forms of episodic thought, such as considering future or counterfactual scenarios (Addis, 2020; De Brigard, 2014a; Michaelian, 2016a, 2021). Discontinuists hew to a more traditional view on which the successful remembering of an event must bear an appropriate causal relationship to the event itself, and, as a result, is too constrained by the past to be considered a constructive imagining (Debus, 2014; McCarroll, 2018; Perrin, 2018; Robins, 2020a; Werning, 2020). There are many interesting questions to consider in trying to clarify and arbitrate this debate. Most of them turn on whether (and how often) rememberings must satisfy an appropriate causation relationship to the past events they represent, how we are to understand that appropriate causation relation, and the nature of the memory traces or “engrams” that supply content to our rememberings (Langland-Hassan, 2021, forthcoming; Michaelian & Robins, 2018; Perrin & Michaelian, 2017).

With the more familiar debate on whether remembering is a kind of (constructive) imagining now in view, we can shift focus to our present topic of whether remembering and imagining may be instances of the same mental attitude type. Here, as before, the relevant sense of ‘remembering’ is *episodic*

remembering. I will be interested in episodic remembering understood as an occurrent¹ mental state that is the output of a process of memorial retrieval and (possible) reconstruction, and where the contents of this occurrent state correspond to what one is remembering. Like some other recent authors—such as Michaelian (2016b) and Fernández (2019)—I will not assume a factive conception of ‘remembering,’ allowing instead that there may be rememberings that are misrepresentational (and therefore not *successful* rememberings). Put otherwise, “seeming to episodically remember,” successfully or not, will be the non-factive, occurrent mental state I aim to analyze.

Turning to the sense of ‘imagining’ at issue, I will be concerned not with constructive imagining but *imagistic imagining*, which I will understand as the use of mental imagery in cognition of any kind (Langland-Hassan, 2020; Van Leeuwen, 2013).² I will follow Bence Nanay in understanding mental imagery as “perceptual processing that is not triggered by corresponding sensory stimulation in a given sense modality” (2018, p. 127). This kind of imagining is sometimes also referred to as sensory or perceptual imagining (Byrne, 2007; Noordhof, 2002). This chapter’s aim, then, is to assess whether episodic rememberings and (some) imagistic imaginings involve taking the same attitude toward a content.

It is uncontroversial that most, or even all, episodic rememberings are also imagistic imaginings, simply because it is uncontroversial that mental imagery is usually, or even always, used in acts of episodic remembering. Thus, it is likewise trivial that, if remembering involves taking any attitude at all toward a content, at least some imagistic imaginings (namely, the episodic rememberings) involve the same attitude as remembering. The more interesting question will be whether *future-directed imagistic imaginings* and *counterfactual-directed imagistic imaginings* involve the same attitude as remembering. By ‘future-directed imagistic imaginings’ I mean episodes of occurrent thought where mental imagery is used with the aim of accurately representing some future scenario—as when Jane visualizes what it will be like to see her office again, after a year of working at home. A more common term for the same capacity, which I will use equivalently, is *episodic future thought*. Similarly, by counterfactual-directed imagistic imagining, I mean episodes of occurrent thought where mental imagery is used with the aim of

¹ For a state to be occurrent is for its existence to necessarily involve a current mental change or process (Bartlett, 2018). Occurrent states differ from dispositional states insofar as possessing the latter at any given time requires no corresponding mental change or process.

² Not everyone agrees that all uses of mental imagery are instances of imagining in the ‘imagistic imagining’ sense—or in any sense at all (Arcangeli, 2019; Kind, 2001). This is because they find nothing inherently “imaginative” in the mere use of mental imagery. This concern—legitimate or not—will not, in the present context, detract from the value of understanding episodic future thought and episodic counterfactual thought as cases of imagining. All scruples about how to use the term ‘imagining’ aside, it remains an interesting and important question to consider whether remembering, episodic future thought, and episodic counterfactual thought all involve the same psychological attitude.

representing how things would have gone differently in the past, and some other fact not obtained—as when Gary visualizes how the game would have ended had his team’s star player not become injured. An alternative name for the same capacity is *episodic counterfactual thought*.³

When engaged in episodic remembering, future-directed imagistic imagining, and counterfactual-directed imagistic imagining, we aim to accurately represent the actual world as it was, will be, or would have been. This raises the possibility of seeing all three as involving the same judgment-like attitude, where the key differences among the states consist in whether their contents concern past, future, or counterfactual events.⁴ This chapter will explore the prospects for defending this brand of *attitudinal continuism*, where the question is whether episodic remembering, episodic future thought, and episodic counterfactual thought are continuous in being *judgments* of a kind. The focus will be less on defending such continuism, however, than on weighing the considerations on either side of the debate and on clarifying what it would take to resolve it. As a last prefatory remark: when asking whether future-directed and counterfactual-directed imagistic imaginings involve the same judgment-like attitude as remembering, we should bear in mind that a positive answer need only apply to a subset of each—namely, those that aim to accurately represent some state of affairs, be it past, future, or counterfactual. In short, some imagistic imaginings may involve the same judgment-like attitude as remembering even if not all do.

II.

Before mapping out some possibilities for understanding remembering in attitudinal terms, a few general remarks about attitudes and their relation to debates about memory are in order. For the most part, it is only recently that theorists in philosophy and psychology have sought to understand remembering as a type of attitude (see, e.g., Marh & Csibra (2017), Robins (2020a), Sant’Anna (forthcoming) and Fernández (2019)). Some memory researchers may remain skeptical of the value of such an approach, opting instead to analyze episodic memory as a kind of cognitive system, or as the output of such system, without any mention of the notion of an attitude (Michaelian, 2016b). However, attitudinal and systemic approaches need not be in conflict. Even if episodic remembering is well

³ De Brigard (2014) includes both *episodic future thought* and *episodic counterfactual thought* under the term *episodic hypothetical thinking*, which he characterizes as “self-centered mental simulations about possible events that we think may happen or may have happened to ourselves (p. 173).

⁴ This discussion will not assume that the three forms of imagistic imagining just named are exhaustive. *Prima facie*, there are instances of imagistic imagining—as may occur in daydreams and idle fantasies—that do not aim at accurately representing the past, future, or counterfactual past, and which suggest no commitment to things being as we represent them. Elsewhere I have argued that these *prima facie* appearances are misleading, and that seemingly non-committal imagistic imaginings can be reduced to imagistic judgments and desires of various kinds (Langland-Hassan, 2020). But nothing I say here will depend on the cogency of that account.

analyzed as the output of a special cognitive system, the twin notions of attitude and content can play a valuable heuristic role in allowing us to discern and track the features that are distinctive of remembering in a way that allows us to appreciate the similarities and differences it has with other mental kinds that we can symbolize with the same tools. For instance, when considering whether remembering can be seen as a kind of judgment—and, if so, whether it is a special *kind* of judgment—we stand to gain a clearer appreciation of both the nature of judgments and rememberings. The content/attitude distinction is also useful as a shorthand means for locating competing theories within a general cognitive scientific framework where cognition is understood as the processing of information. Understanding thinking as information-processing—in line with the systemic approach to memory—requires that we draw, as clearly as possible, distinctions between contentful representations, on the one hand, and their causes and effects, on the other. As we will see, the notion of an attitude can be introduced to capture the distinctive causes and effects of a class of contentful representations—namely, those representations generated by the memory system. The upshot is that the key substantive disagreements among theories of remembering can be symbolized and cataloged through comparing and contrasting the contents and attitudes they imply. I undertake this project below.

What, exactly, *are* mental attitudes, in the present sense? Because “mental attitudes” are creatures of theory, there is no single shared conception of what an attitude is or must be. Traditionally, the attitudes of folk psychology are said to be *propositional attitudes*, where propositions are truth-evaluable entities towards which attitudes—such as belief, desire, and intention—are taken. The guiding idea behind the positing of attitudes in psychology and the philosophy of mind is that thoughts represent objects or states of affairs (where what they represent is their *content*), and where those thought contents, together with the attitudes we take toward those contents, help to explain and rationalize human behavior. While it is common to link the notion of a thought content to a truth-evaluable proposition, and the notion of a proposition to that of a language-like representation that represents the proposition, many theorists now allow for attitudes to be taken toward contents that are represented by imagistic or non-language-like representations (Arcangeli, 2019; Langland-Hassan, 2015, 2018; Mahr & Csibra, 2017; Robins, 2020a; Van Leeuwen, 2013). Some prefer to think of such representations as assessable for accuracy as opposed to truth or falsity, while others develop views where such states remain assessable for truth or falsity in the way of traditional propositions (Langland-Hassan, 2015, 2020). Either way, the idea that mental imagery can play a role in representing contents (propositional or not) toward which we may take one or another

attitude is an essential component of any attempt to understand remembering in attitudinal terms. Its coherence will be assumed in what follows.⁵

Attitudes and contents are, in effect, two sides of a single explanatory coin, summing to accomplish a certain amount of theoretical work that neither can do on its own. We cannot know what sort of effect a belief will have on behavior, for instance, until we know the content of the belief. And, likewise, we cannot know what effect representing the content p will have on one's behavior until we know the attitude taken toward the content. After all, desiring, believing, remembering, imagining, and wondering whether p all have quite different associated dispositions and behaviors. The explanatory co-dependence of content and attitude gives rise to an ambiguity in folk psychological explanation. Because both content and attitude play a role in determining the overall functional role of a mental state, it is at times possible to articulate distinct attitude/content pairs with the same, or very similar, functional roles, by making compensatory adjustments in each component. As a simple example, suspecting that p —that is, taking the attitude of suspicion toward the content p —has much the same associated cognitive role as believing that r , whenever r is the proposition that *it is somewhat likely that p* . In essence, the attitudinal component of the suspicion that p does the work of the ‘it is somewhat likely that’ component of the content of the belief that r . We may then wonder which ascription—of the belief that r , or of the suspicion that p —is the correct one to make. This sort ambiguity will come into play below, when we consider different ways of understanding remembering in attitudinal terms.

III.

I turn now to developing a framework for representing remembering and other imagistic imaginings in terms of an attitude/content pair. Because both episodic remembering and imagistic imagining make use of mental imagery, it will be useful to have a means for representing the attitude-to-content relationship that finds a place for mental imagery. Not coincidentally, I have developed a framework of just that sort in other work (Langland-Hassan, 2015, 2018, 2020). I will outline it again here, with the *proviso* that one needn't accept all aspects of the framework to take on board the main points I want to make in this chapter.

I will understand judgments to be the occurrent manifestations of beliefs. So understood, a judgment can occur at the moment a belief is first acquired (e.g., as the result of inference), or when a

⁵ Depending on one's theoretical outlook, the claim that a person takes an attitude toward a content brings different levels of ontological commitment. For extended treatment of this issue, see Langland-Hassan (2020, Chapter 2).

standing belief is retrieved and made available for further processing. An ordinary judgment that the door is unlocked can be symbolized as:

(1) JUD (the door is unlocked)

To make room for the idea that some imagistic imaginings may be judgments, we can allow that the content of some judgments may be represented, at least in part, by imagery. In the symbolizations to come, I will use **bold** to indicate the aspects of content that are represented by mental imagery. However, I will not assume that the specific properties named by the bold text are represented by the imagery in question. The bolded words are simply used to evoke the sort of image that is featured, whatever properties such states are in fact capable of representing. So, for instance, **a large green and brown oak tree** will be used to stand for what we would intuitively think of as a mental image of a large green and brown oak tree, even if that image may not represent the properties of being an oak, or even of being a tree. I will leave open the question which sorts of properties mental imagery *proper* is in fact able to represent, though we will consider, below, the consequences of different views on this matter.⁶ Further, the words in bold can be taken as shorthand either for the contribution of a single image, or for an extended sequence of related images.

On the framework I will recommend, the content of many attitudes is represented by a hybrid of imagistic and non-imagistic mental states. This has explanatory advantages I have explored elsewhere (Langland-Hassan, 2015, 2018, 2020). Chief among them are an explanation of how a sequence of mental imagery can be said to be about one as opposed to another particular object, how some imagistic imaginings can be said to have correctness conditions of the right kind, and how one and the same type of mental image can be about different objects in different instances. However, for present purposes, one needn't follow me in allowing for hybrid contents if one is otherwise comfortable holding that attitudes can be taken toward truth (or accuracy)-assessible contents that are represented by (sequences of) mental imagery.

I will use JIG instead of JUD to represent the attitude of judgment when mental imagery contributes some of the content. ('JIG' is for "judgment-imagining", where the relevant sense of 'imagining' is *imagistic* imagining.) JIGs are to be understood as a subset of all judgments. Like ordinary judgments and beliefs, they have a "mind to world" direction of fit (Searle, 1983) and aim to accurately represent the world. In marking JIGs with their own symbol, however, there is an implicit

⁶ For instance, in debates about memory, the question of whether mental imagery can itself represent temporal relations (such as being in the past as opposed to the future) may influence one's view on how to understand remembering in attitudinal terms.

suggestion that there are functional differences between JIGs and judgments that do not involve imagery. I will discuss below (Section VI) what some of those differences may consist in.

Here is an example of a JIG, the content of which is represented in part by mental imagery:

- (2) JIG (This tree planted in the back yard would be **a large green and brown oak tree in the back yard**)

We can imagine someone—Alfred, say—who is considering whether a space in his back yard would be well-filled by an oak tree he is viewing at the garden shop. He makes the occurrent judgment in (2), which will be true if the tree in question, when planted in his back yard, would look as his image represents. (If one worries that contents represented by imagery can only be accurate or inaccurate, and not true or false, then we can say, alternatively, that the judgment is *accurate* if such a tree would look as his image represents *inaccurate* if not.)

We now have in hand the tools to see how remembering and (some) imagistic imaginings can involve the same attitude. They may all be JIGs. Consider a future-directed imagistic imagining: while driving home from work, Aimee calls her kids and discovers that they are home alone doing some unsupervised baking. Visualizing the mess they are creating, she makes the following (image-involving) judgment:

- (3) JIG (When I get home, the kitchen will be **a flour-and-cocoa-covered, bowl-and-spoon-strewn mess**).

Nevertheless, she arrives home to a sparkling clean kitchen. It turns out her kids were playing a prank, banging pots and pans, pretending to be baking. Thus, Aimee's judgment in (3) was a false (or inaccurate) representation of the future. However, a closely related *counterfactual* imagistic imagining remains true when she judges:

- (4) JIG (Had my kids been baking, the kitchen would have been **a flour-and-cocoa-covered, bowl-and-spoon-strewn mess**).

This counterfactual is true because, in the nearest possible world where her kids were indeed baking, the kitchen was a mess. These two JIGs, (3) and (4), involve the same attitude but different contents. From this perspective, future-directed imagistic imagining and counterfactual-directed imagistic imagining are mental states of the same type, in the attitudinal sense.⁷

⁷ I omit in (3) and (4) the relevance of degrees of credence. Often, when we aim at representing the future or counterfactual past—or at remembering, for that matter—we do so with less than full credence in the content

Now to remembering. Aimee clearly remembers how the kitchen looked the last time her kids made cookies by themselves. This is why she was so convinced of (3) when she thought they were baking, and why she still judges (4). We might symbolize such a remembering as:

(5) JIG (Last time my kids baked alone, the kitchen was **a flour-and-cocoa-covered, bowl-and-spoon-strewn mess**).

After all, like judgments generally, rememberings make a claim on world, aiming to represent how it was in the past. Given the cognitive role they play in guiding action, it is correct to convict them of misrepresentation—of not fulfilling their aims—when the world was not as they represent. Thus, we have with (3), (4), and (5) a simple way of seeing remembering as involving the same attitude-type (JIG) as (at least some) future-directed imagistic imaginings and (at least some) counterfactual-directed imaginings.

Yet, there are two immediate reasons to think that (5) is not an adequate rendering of an act of episodic remembering. They both flow from the intuition that there is an important difference between (merely) using imagery to represent the past, on the one hand, and remembering, on the other. Remembering seems more demanding in two ways. First, it seems to have the narrower aim of representing events that are a part of one's *personal* past, as opposed to past events in general. We don't satisfy our aims in remembering if we accurately represent a past event in which we played no part. Call this the *personal past aim*. Second, and more controversially, remembering is often said to aim at recreating a particular past perceptual experience of the rememberer, with regard to which it may be said to be authentic, or not (Bernecker, 2010; McCarroll, 2018).⁸ On causalist, factive views of remembering—such as those associated with Martin & Deutscher (1966) and Bernecker (2010)—such a recreation of past perceptual experience amounts to the remembering's being appropriately caused by a memory trace that transmits content from the original experience from which it was encoded. On this style of view, there are no rememberings that do not, in fact, recreate a past perceptual experience. However, it is also possible to maintain a non-factive, functionalist view of remembering, where it is part of the aim or cognitive role of remembering to recreate past perceptual experiences, even if there are instances of remembering that fail in that aim (see, e.g., Fernández (2019) and Langland-Hassan (2021)). In the same way, an ordinary belief might fail in its aim to be true, while still being a belief. From both perspectives, what a person (or cognitive system) aims to do in remembering is not merely to accurately represent some

represented. We may only aim to represent a variety of *probable* scenarios. This is compatible with the present account where the appraisals are judgments, if we allow that they are often judgments with less than full credence. Thanks to Kourken Michaelian for raising this issue.

⁸ See De Brigard (2014a) for an argument that this an incorrect account of the aims of remembering, as the human capacity for episodic memory was not selected for its ability to accurately recreate past experiences.

event from her past, but to do so by generating a representation that mirrors (or “recreates”), in its content, a perceptual experience one had of the event. Call this the *recreative aim*. Some may further propose, more stringently, that the remembering system or subject aims to generate a representation of the past that itself *causally depends* upon their having had a similar perceptual experience of the event (Fernández, 2019). Memory’s having this aim is again consistent with a non-factive view where there are instances of remembering that fail in this aim, because the remembering subject’s representation of the past does not causally depend upon a past experience in the right way. Call this the *causal dependency aim*.

When considering how to understand remembering within a content/attitude framework, it is important to keep in mind these aims that distinguish remembering from simply aiming to accurately represent the past. This is because the aim of a mental state or process will inevitably have echoes in its causes and effects, and any suitable understanding of remembering in terms of a content and attitude pair will need to account for those distinctive causes and effects in either the content or attitude of the state. For instance, the person who remembers that *p* is likely to say that they witnessed that *p*, whereas the person who merely judges that, in the past, *p*, may lack that disposition. In addition, a person’s remembering that *p* is likely to have been caused by their having witnessed *p*, whereas a person’s judging that *p* will not have such a cause as a default. These effects and causes distinctive of remembering—supposing they *are* distinctive of remembering—need to be captured by any related content/attitude structure.

One way to do so is to hold that the attitude of remembering is distinct from the JIG attitude, with different associated causes and effects, just as the attitude of suspicion is different from that of belief, and just as the attitude of desire is different from both suspicion and belief. Recall (5), my first offering for how we might understand Aimee’s remembering in attitudinal terms:

JIG (Last time my kids baked alone, the kitchen was **a flour-and-cocoa-covered, bowl-and-spoon-strewn mess**).

In light of the recreative, causal dependency, and personal past aims that seem to distinguish remembering from merely making judgments about the past, we might instead posit a distinct attitude of remembering (“REMEM”) and hold that Aimee’s remembering is better captured by the following:

(6) REMEM (Last time my kids baked alone, the kitchen was left **a flour-and-cocoa-covered, bowl-and-spoon-strewn mess**).

The difference between (5) and (6) is only in the attitude taken toward the content. In having the REMEM attitude of (6), we can hold that Aimee is disposed to say that she witnessed her kids' past mess, that she remembers how it looked, and (perhaps) that her current representation was appropriately caused by her having witnessed the mess she is representing. In general, for any content p towards which one takes the attitude of REMEM, the subject will be disposed to say she observed that p , that she remembers how p appeared, and that her present representation causally depends upon her having observed p . Whereas, simply in having the JIG attitude toward p , one will lack those dispositions. For instance, Aimee may have the JIG in (5) while believing that she never witnessed such a thing and that her representation of the event depends upon having heard about it from her husband.⁹

We have, with REMEM, a kind of shorthand for the raft of functional and dispositional differences that come with the more exacting aims of remembering, compared to judging. A view much in keeping with the claim that remembering involves a distinctive REMEM attitude of this sort can be found in Mahr and Csibra (2017), who distinguish episodic remembering from (mere) event remembering by positing a distinct attitude of remembering that brings with it auto-noetic features, such as a commitment that one witnessed the event in question.¹⁰ Simply using imagery within a judgment that thus and such event occurred, without any attached commitment about the source of that information (as in (5)), would be a case of event memory. From their perspective, event memory may involve the same attitude as episodic future and episodic counterfactual thought; but remembering, with its auto-noetic character, does not.

Were this the last word on remembering and judging, remembering would not involve the same attitude as future or counterfactual-directed imagistic imagining, both of which—as JIGs—lack the distinctive functional characteristics of the REMEM attitude. The kind of attitudinal continuism earlier envisioned would be blocked. However, there are further wrinkles to consider. Because content and attitude are two sides of a single explanatory coin, an apparent difference in attitude can at times be accounted for with a difference in content. Thus, instead of rendering Aimee's remembering as (6), we could, for instance, express it as:

⁹ A bit of housekeeping: In representing remembering as an attitude taken toward a truth or accuracy-evaluable content, I speak of remembering *that* p , as opposed to simply remembering event e . To remember e , on this approach, is to take the attitude of REMEM toward a content (such as that p) that truly or accurately characterizes e .

¹⁰ Mahr and Csibra attribute these auto-noetic features to the *format* of the state and not its attitude (or content). However, what they refer to as a format-related element can, in my terms, be understood as an attitude-related element. They seem to use the term 'attitude' to refer to the combination of (what they term) format and content-related elements. My discussion remains neutral on the actual format of the representations at work in episodic remembering (as, I think, theirs should as well).

(7) JIG (Last time my kids baked alone, the kitchen was **a flour-and-cocoa-covered, bowl-and-spoon-strewn mess**, and I observed it to be like that).

In this judgment, the demonstrative ‘like that’ refers to the way that the imagistic content of the judgment—the part in bold—represents a scenario as being. This rendering accounts for the personal past and recreative aims of remembering. If Aimee did not observe the messy kitchen looking as she now represents it, this judgment does not meet its aims and is indeed false. Further, we can expect this JIG to generate the same dispositions distinctive to remembering (e.g., causing one to say that one witnessed the represented event) that earlier seemed to distinguish the REMEM attitude from JIG. Using an additional self-referential content, we could likewise build in the causal dependency aim:

(8) JIG (Last time my kids baked alone, the kitchen was **a flour-and-cocoa-covered, bowl-and-spoon-strewn mess**, and my having observed it to be like that appropriately caused this experience).

The role of ‘this experience’ in (8) is to refer to the image-involving judgment (viz., (8)) itself. This is the sense in which the content is self-referential, assuring that the judgment is only true if it causally depends upon Aimee’s past observation in the right way. With (8) we have a picture of remembering that better captures the distinctive aims and functions earlier attributed to remembering in (6), yet where the attitude is the same as that at work in (3) and (4) (which were future and counterfactual-directed imagistic imaginings, respectively).¹¹ The possibility of attitudinal continuism for remembering and future and counterfactual-directed imagistic imagining is back on the table.¹²

¹¹ In replies to their target article, Mahr & Csibra consider and reject the idea that what they term a difference in attitude between episodic remembering and event remembering is instead a difference in content: “Autonoesis should not be taken to be part of the content of the memory. The content of [an] event simulation might be exactly the same regardless of whether you formed it on the basis of your friend’s testimony [and so don’t remember it] or not” (2018, p. 47). They do not provide an argument for this claim, however, perhaps taking it to follow trivially from the twin assumptions (rejected here) that the contents of both event memory and episodic remembering are represented entirely by mental imagery and that mental imagery must remain silent about auto-noetic features.

¹² A difficult question I leave unaddressed is whether *temporal* orientation should appear as part of the content of the state, or if such orientation is better viewed as encoded by the attitude. In the ways I have formulated examples of JIGs, I have suggested (without argument) that temporal orientation is best accounted for by content. For those who wish to see the contents of imagistic imaginings (rememberings included) as represented entirely by mental imagery, it may be tempting to think that such temporal orientations cannot be represented imagistically and that such features must instead be accounted for by the attitudes involved. This would suggest an attitudinal discontinuism, where rememberings cannot involve the same attitude as future-directed imaginings because it is in the nature of the REMEM attitude (and not the content of rememberings) that it represents scenarios as having occurred in the past. On the other hand, if one is happy, as I am, with the view that imagistic imaginings have a hybrid structure— involving both imagistic and non-imagistic components—then there is room to build temporal differences into the content of the states and to thereby preserve attitudinal continuism. A reason to favor such continuism is that even among our rememberings we seem to encode distinct temporal properties, representing an event as very long ago, only a few years ago, or very recent. If such graded temporal indices need to make it into the content of rememberings in any case, there is no added cost to allowing them within JIGs generally.

We find a picture of remembering not unlike (8) in Jordi Fernández's (2019) *Memory: A Self-Referential Account*. In addition to telling us about past events, Fernández observes, "it seems that our memories inform us of the fact that they have originated in our remembered perceptions," (2019, p. 72). Accordingly,

When we remember, the memories that we have not only carry the information that some objective facts happened in the past, but they also carry information about themselves and how they are connected to those facts (Fernández, 2019, p. 81).

Fernández's way of accounting for this informational richness is to build it into the content of the remembering, via a self-referential condition. For any subject *S*, memory *M*, and remembered proposition *q*, he proposes, the memory *M* will have the following content: *M is caused by S having perceived that q through P*. (Here 'P' refers to a past perceptual experience through which the rememberer perceived that *q*) (2019, p. 79). As with (8), the content of *M* in Fernández's account contains *M* itself. In motivating this self-referential component, Fernández describes cases where we are inclined to judge that a remembering is false or misrepresentational when it is not appropriately caused by a past perception of the event (or, in his case, proposition) remembered, yet where it otherwise accurately represents the past.

We have already seen (in (7)) that the defender of a distinct attitude of REMEM can hold instead that the self-referential information carried by an act of remembering is implicit in the REMEM attitude and needn't figure in the content of the remembering, just as the difference between believing and suspecting that *p*, or between suspecting and desiring that *p*, can be accounted for by the nature of the distinct attitudes. This was Mahr & Csibra's (2017) approach, discussed above. So, for the time being, we appear locked in a standoff. Before attempting an adjudication, we have a third contender to add to the mix: the binary approach.

V.

The key insight behind the binary approach is that it may be a mistake to try to fit all the aims and representational features that remembering seems to have into one content/attitude pair. The best overall account of the phenomenon may posit two or more such pairs that (either often, or always) combine in acts of remembering. Applied to the case of remembering an event, one might assign the aim of accurately representing a past event to one kind of assertoric, cognitive state, and the additional aims of representing the personal past through causally dependent, recreative states, to one or more additional cognitive states. Thus, adding to our competing analyses of (6) and (8), we can propose a third analysis of Aimee's remembering as involving the two co-present states:

(9a) JIG (Last time my kids baked alone, the kitchen was left a **flour-and-cocoa-covered, bowl-and-spoon-strewn mess**)

(9b) JUD (My having observed their baking is causally responsible for this representation of that event)

The demonstrative ‘this representation’ in (9b) refers to the imagistic representation symbolized in (9a), while the demonstrative ‘that event’ refers to the event represented by the imagistic representation in (9a). The judgment in (9b) is metacognitive in the sense that it takes as its object another of Aimee’s cognitive states. I use the symbol ‘JUD’ instead of ‘JIG’ in (13b) to mark the fact that there is no mental image used in the representation of (13b)’s content. In that way, JUD is an entirely ordinary judgment.

What is the point of separating (8) into two closely related if distinct states—a JIG (9a) and a JUD (9b)? Doing so can serve to mark two commitments: first, that the cognitive capacities by means of which each judgment is formulated are in some important sense distinct; and, second, that these two cognitive states needn’t always appear together. In particular, JIGs of the (9a) variety may occur in the absence of metacognitive JUDs such as (9b) that are characteristic, in adult humans, of the complex attitude of remembering.

There are two importantly distinct views one might have concerning the relationship of 9(a) and 9(b) to remembering. The first, which I will call the *conjunctive* view, holds that remembering only occurs when states like 9(a) and 9(b) appear contemporaneously. Whereas, the *minimalist* view holds that only a state of the 9(a) kind—a representing of a past event itself—is required for remembering *proper*, with the autoegetic and metacognitive elements of 9(b) being a frequent but inessential accompaniment to remembering.

The minimalist view coheres fairly well with the simulationist program in the philosophy of memory, according to which remembering, episodic future thought, and episodic counterfactual thought all involve use of a single episodic construction system (De Brigard, 2014a; Hassabis & Maguire, 2009; Michaelian, 2016b; Schacter & Addis, 2007b) or capacity for “mental time travel” (Tulving, 1983). For the simulationist can say that Aimee’s recollection of her kids’ baking, and a counterfactual representation of how their baking would have proceeded had it occurred, make use of the very same cognitive capacity for constructing representations of likely events—past, future, and possible—to the nearest degree of accuracy possible. This capacity, with its distinctive causes (such as a single probabilistic algorithm for generating likely scenarios (De Brigard, 2014a)) can be captured by the JIG attitude. A simulationist of De Brigard (2014a) or Michaelian’s (2016b) stripe may then suggest that remembering itself occurs entirely within (9a)—as the output of a general capacity for hypothetical

episodic thinking—and that (9b) is a mere accompaniment to acts of remembering in some individuals with a particular (incorrect) folk theory of what remembering requires (see, e.g., Michaelian (2018)).

Without endorsing simulationism, Carruthers (2018) more explicitly defends a minimalist view in his commentary on Mahr & Csibra (2017), proposing that:

the experiential mode of one’s original experience of the event can be read directly off the content of the event memory itself. And the fact that it is a memory (as opposed to past-directed imagining) can generally be determined swiftly from the context...and/or from the speed, specificity, and vividness with which the memory emerges in consciousness. There is simply no need for an episodic event memory to possess self-referential or metacognitive content intrinsically (p. 19).

Carruthers’ instance that auto-noetic, metacognitive features are not an intrinsic feature of remembering itself appear partly motivated by the added (and, I think, sensible) conviction that there is no “reason to think that there is a difference of kind between the episodic memories of humans and those experienced by [less conceptually sophisticated] nonhuman animals” (2018, p. 20). While I do not know of any existing defense of the conjunctive view—where 9(a) and 9(b) are distinct states that are necessary and jointly sufficient for remembering—it is possible to read Mahr and Csibra (2017) as doing so, if one interprets their claim that there is a distinct attitude of remembering as committing them to these two contemporaneous states, instead of to a single state involving the *sui generis* REMEM attitude.

We have, then, four approaches to analyzing the act of remembering within a content/attitude framework. The option in (6) invokes an attitude of REMEM, which is used only in acts of remembering (successful or not). The option in (8) translates REMEM into a JIG by increasing the complexity of the JIG’s content. And the two options related to 9(a) and 9(b) (the conjunctive and minimalist views) effectively split (8) into two contemporaneous states with simpler contents, one of which is a JIG and the other a JUD. Both (8), with its complex content, and minimalism can be seen as validations of the claim that remembering is, in an attitudinal sense, continuous with future and counterfactual directed imagistic imaginings, while (7) suggests an attitudinal discontinuity. The conjunctive view—where JUD and JIG are both necessary for remembering—falls somewhere in between these options. On the one hand, the JIG required for remembering is the very same attitude as is at work in future and counterfactual episodic thought; on the other, remembering requires an additional JUD which, while also a judgment, is a different sort of judgment.

In the balance of this chapter, I will explore why one might favor the kind of continuism expressed in the minimalist interpretation of (9a/9b) over both the conjunctive view and the attitudinal discontinuism of (6). The continuist option in (8) will be set to the side, as the minimalist version of the binary approach does a better job of capturing the core continuist thesis, for reasons that will emerge.

VI.

We can begin our comparison of the continuism in the minimalist binary view with the discontinuist (REMEM) alternative in (6) by noting an apparent problem with the continuist approach. If we think of both the JIG and JUD attitudes as judgments whose only difference is that the former involves representing a content with mental imagery, we seem to ignore a crucial feature of remembering: episodes of remembering—on practically everyone’s account—result from mechanisms or processes that are importantly different from those that give rise to ordinary semantic judgments. For defenders of the standard causal theory, episodes of remembering are distinct in being caused by a suitable memory trace (Bernecker, 2010; Martin & Deutscher, 1966). For simulationists, rememberings are different in being the output of a reliably functioning Episodic Construction System (Michealian, 2016), or by mechanisms that track the probability of certain elements appearing together in one’s past perceptions of the environment (De Brigard, 2014a). For a functionalist like Fernández, remembering involves a mental image’s being typically caused by a perception with the same content. And, for Mahr & Csibra (2018), rememberings must result from a quasi-inferential process that seeks to balance contributions of both memory traces and standing semantic beliefs.

Arriving purely as the result of a logical deduction or inductive inference—as may be the case with an ordinary semantic judgment (e.g., in the application of *modus ponens*)—is not the right sort of cause for a remembering to have had, on any of these accounts. Indeed, having such a cause will, on each view, prevent the state from qualifying as an instance of remembering. One might press this point—as Alon Chasid did to me (personal communication)—by noting that we can typically provide *reasons* for why we have arrived at an ordinary judgment, whereas we may not think we can provide reasons for why we are remembering something. We just seem to do so.

The widely-shared thought that episodic rememberings must have different kinds of causes than those that generate semantic judgments is motivated in part by the apparent dissociations seen in some cases of amnesia, where patients lose the ability to generate episodic memories but remain capable of ordinary inductive and deductive inference (Kinsbourne & Wood, 1975; Schacter & Tulving, 1982; Wilson & Baddeley, 1988). These support the idea that episodic rememberings are produced by a distinctive, dissociable system—one perhaps implicated in episodic future and counterfactual thought as well (Hassabis & Maguire, 2009; Schacter & Addis, 2007b; Schacter, Addis, & Buckner, 2007). A natural thought is that it is of the essence of rememberings to be caused by the operation of that system.

Assuming that, by their nature, JIGs and JUDs have no such limits on how they come to be, the conjunctive approach seems to omit a crucial feature. Importantly, this is not a feature that can be built

into the content of the state, as what matters here is not what causal effects a remembering might have—to which content may be relevant—but *how the state came to be*, regardless of its content. By contrast, defenders of the REMEM attitude, in (6), can hold that one of the distinctive aspects of REMEM, as opposed to JUD or JIG, is that it marks the fact that a state has been generated in the memory-distinctive way.

In formulating a reply for the continuist minimalist approach, it will help to distinguish forward-looking from backward-looking causal roles. Any functional analysis of a mental state type—and corresponding attitudinal analysis—must take account both of what kinds of thing tend to cause the state in question (its backward-looking causal role) and the kinds of thing the state tends to cause in turn (its forward-looking causal role). Depending on the type of state at issue, either the forward-looking or backward-looking role may be more important to the nature of the state, and, thus, to whether particular mental events count as instances of the kind. For instance, the forward-looking role of a belief—*viz.* its causal influence on action and inference—is arguably more central to a state’s being a belief than its backward-looking role, which captures how beliefs typically come to be. As an example, people who have suffered major damage to one hemisphere of the brain sometimes exhibit unilateral neglect, denying that their left (or right) arm or leg is truly their own. This delusional belief that one’s leg is not one’s own is indeed a *belief*, due to the way it influences their ongoing behavior, even if the way it came to be—through neurological trauma—is atypical (Bortolotti, 2009). By contrast, a perceptual experience’s backward-looking role—*viz.*, its being the product of perceptual processing mechanisms—may be more important to a state’s being a perceptual experience than its forward-looking role. Perceptual experiences arguably remain perceptual experiences even in cases of knowing illusion, where they lack their normal forward-looking role of causing one to believe in the presence of what they represent.

Interestingly, remembering seems to answer equally to both its forward-looking and backward-looking roles. For instance, as noted, most working on memory agree that genuine instances of remembering must be the output of a distinctive type of process and, accordingly, must have a certain backward-looking role. Arriving purely as the result of a logical deduction—or of hypnotism, for that matter—is not the right sort of backward-looking cause for a remembering to have and will indeed prevent the state from qualifying as a remembering, on most views. We may be more inclined to think of such a state as an ordinary judgment—perhaps a confabulatory one—even if it retains the forward-looking role of a remembering. Nevertheless, and perhaps more controversially, the forward-looking role of remembering appears equally indispensable, including, especially, its influence on belief and action. If a putative remembering does not cause one to believe that one observed the represented event, nor lead one to consider the represented event to be a part of one’s personal past, then it is arguably not a

remembering at all—even if it comes about in the way typical of rememberings in general (Debus, 2010). (More on this in a moment, when I address the third objection to attitudinal continuism.)

With the forward versus backward-looking functional role distinction in place, the attitudinal continuist—and defender of (9a/b) minimalism—can respond to the objection that they have overlooked the important backward-looking causes of rememberings by proposing that part of what distinguishes the JIG from the JUD attitude is the nature and comparative importance of the backward-looking looking role of JIGs. JIGs, it can be proposed, result from the operation of a distinct cognitive module—an Episodic Construction System (“ECS”), perhaps—with its own algorithmic and neurocomputational principles of generation. If simulationists such as De Brigard (2014a) and Michaelian (2016b) are correct, this ECS makes use of much the same computational procedures and neural mechanisms whether it is generating representations of the personal past or of future and counterfactual scenarios. If ‘JIG’ only applies to representations produced by this system, then the JIG attitude can be a kind of shorthand for the claim that certain backward-looking causes are essential to understanding the type of state that it is. The forward-looking causes of JIGs may nevertheless be much the same as those of ordinary judgments (JUDs): they cause one to assert as true the content of the state, to rely on it in guiding one’s actions, to use it as a premise in reasoning, and so on. The difference with JUDs will be in their backward-looking functional role, and, perhaps, the lesser importance that role has for the individuation of the state as a JUD versus a JIG.

A defender of attitudinal discontinuism—as in the REMEM-involving (6)—might object to this response on the part of the attitudinal continuist in (at least) three ways. I will consider each in turn. First, they may observe that rememberings have different forward-looking roles than future and counterfactual-directed imagistic imaginings, insofar as only rememberings cause related beliefs about the personal past and the relation of what one is now representing to one’s own past perceptions. Given the importance to remembering of both its forward and backward-looking roles, this would again be reason to question whether remembering could involve the same attitude as future and counterfactual-directed imagining. Yet the minimalist can reply that the apparent difference in forward-looking roles is accounted for by the common accompaniment of (9b), the metacognitive judgment. On this view, when we remember an event—through generating a JIG like (9a)—we *often* also form a metacognitive judgment to the effect that our ability to generate this representation of the past is a result of our having perceived such an event. When we do so, we are engaged in a quick bit of self-interpretation—or “source-monitoring” (Johnson, Hashtroudi, & Lindsay, 1993)—that is not, strictly speaking, part of the functioning of the ECS, but that is made possible by aspects of the remembered content. (As proposed, e.g., by Carruthers (2018).) This

metacognitive JUD will have the forward-looking functional role that some (such as Fernández¹³) associate with remembering *proper*, where remembering that *p* causes “a disposition to believe both that *p* and that *S* experienced that *p*.” In this way, the minimalist respects the phenomenon that, at least often, people judge that they experienced the event they are remembering and that their having done so is causally responsible for their current representation of it, even if none of that features in the content or success conditions of the JIG (9a) that is the remembering itself.

The continuist minimalist approach has the added benefit of explaining how the mental process of remembering can remain the same across individuals who differ in their theoretical views concerning what remembering requires. For instance, for a committed simulationist such as Michaelian (2021)—who rejects the claim that rememberings must be caused by content-matching past perceptions—an episode of remembering will *not* tend to cause a belief that the remembering was caused by a content-similar perception of the event. We need not interpret this as a situation where remembering itself has acquired a different nature (due to its different forward-looking role) than for those in whom it does cause such a belief. Instead, we can hold that, due to their theoretical commitments, simulationists do not form metacognitive judgments of the (9b) sort when they take themselves to be remembering. Instead, they form judgements to the effect that their ECS is operating reliably (or similar). Their rememberings (their past-directed JIGs) do, however, preserve the forward-looking role of causing them to believe that what is represented has occurred, and of guiding their related behavior. Further, by limiting remembering *proper* to (9a), the minimalist can allow children and other animals who perhaps cannot reflect on the nature of their own mental states and how they came to be to engage in the same kind of memorial process as adult humans, typed by appeal to the same kinds of forward and backward-looking causes and effects. The difference with ordinary adult remembering will be in the accompanying metacognitive gloss (expressed in 9b) that some apply to the act.

The second objection that the attitudinal discontinuist may offer is that the backward-looking functional role of remembering is not, in the end, the same as that of future or counterfactual-directed imagistic imagining (or future or counterfactual episodic thought), because only rememberings are typically caused by suitable memory traces. Memory traces (or “engrams”) are here understood as brain states that encode information about a perceived event and, through appropriately causing a later representation of that event, allow that event to be remembered by use of the encoded information (De Brigard, 2014b; Robins, 2017). Such a difference in backwards-looking causes could justify

¹³ I think of Fernández as a “causalist” because he includes an appropriate causation condition—that mental image *M* must “tend to be caused by” perceptions of a certain sort—in the characterization of the functional profile of rememberings, even though Fernández differs from most causalists in allowing for misrepresentational (and non-factive) remembering.

distinguishing JIGs from, say, a REMEM attitude, where only the latter requires causation by a memory trace. On the other hand, if memory traces are also typical causes of future and counterfactual-directed imagistic imaginings, then there is no space here for the causal theorist to insert a wedge. In other work (forthcoming), I have articulated a notion of memory traces as reusable “props” that would be consistent with their causation of future and counterfactual-directed imagistic imaginings, as well as rememberings. However, for present purposes, let us assume that the causal theorist will not hold memory traces to be typical causes of future and counterfactual imaginings, and that they propose to mark this critical difference between remembering and other forms of episodic thought by the attitude REMEM.

We then have a dispute about the attitude at work in remembering that aligns neatly with the existing debate on whether remembering is a kind of (constructive) imagining, briefly discussed at the outset. The (attitudinal) discontinuist will hold that remembering an event involves the assertoric, judgment-like attitude REMEM, while imagistically imagining a future or counterfactual event involves the assertoric, judgment-like JIG attitude. The crucial difference in attitudes, for this attitudinal discontinuist, will be in their backward-looking functional roles. By contrast, the attitudinal continuist (and minimalist) will maintain that all three kinds of imagistic imagining result from the same constructive process, governed by the same probabilistic algorithms aimed at generating reasonably accurate representations of the personal past, future, and counterfactual, drawing on, and flexibly recombining, memory traces (whatever their nature). This makes it possible to see all three as involving the same attitude.

Whether we should favor the continuist picture of a single attitude or the discontinuist’s distinction between REMEM and JIG will now turn on the kinds of empirical data discussed in the existing (dis)continuism debate (Addis, Wong, & Schacter, 2007; De Brigard, 2014a; Michaelian, 2016b; Robins, 2020a, 2020b; Schacter & Addis, 2007a). The apparent fact that remembering and imagistically imagining future and counterfactual scenarios involve overlapping neural networks, develop at approximately the same rate, are constrained by the same probabilistic calculations (De Brigard, 2014), and tend to be impaired together (or not at all), weighs in favor of seeing them as having the same typical causes and effects—and as therefore involving the same JIG attitude that is distinct from the attitude taken toward judgments that do not rely upon that system. Also relevant, in this context, is whether the science of memory supports the existence of memory traces of the sort that are assumed by discontinuist views opposing the simulationist perspective (see Robins (2016, 2020b) for discussion). If it does not, this is another reason not to posit a REMEM attitude distinctive of remembering alone—one that would be primarily distinguished by the fact that its instances are caused by memory traces.

Finally, the third objection the attitudinal discontinuist may raise insists on a discontinuism between remembering and judging (or JIGs) that goes beyond noting a possible difference in the backward-looking roles of each. It may be held that, unlike JIGs (and judgments generally), the forward-looking functional role of a remembering is not essential to how rememberings are typed. On this sort of view, a state is a remembering so long as it is the output of a properly functioning memory system, no matter what kinds of effects it ends up having on other mental states. Call this the *aristocratic* conception of remembering, where a remembering's status as such is fixed at birth. No matter what the state goes on to do—in terms of its effects on other states—it will always be a remembering. As earlier noted, perceptual experiences are arguably aristocratic in the same way, whereas beliefs (and their occurrent counterparts, judgments) are not. A state is not a judgment that *p* (or a similar JIG) if it does not cause one to assert that *p*, or to let the fact that *p* guide one's behavior, or to use *p* as a premise in one's reasoning.

Why think that rememberings are aristocratic? Perhaps the main reason traces to the putative phenomenon of non-believed memories (“NBM”) (Otgaar et al., 2019; Otgaar, Scoboria, & Mazzoni, 2014). NBM occur when a person reports seeming to remember some event, despite their no longer believing the event occurred. Typically, such individuals have at one time taken themselves to remember the event but, subsequently, have been convinced by others that the event did not happen. Such cases may seem comparable to perceptual experiences of known illusions—where one “doesn't believe one's eyes.” Were this the proper way of viewing NBM, it would suggest that remembering is informationally encapsulated (Fodor, 1983) from one's beliefs and would present a serious challenge to any attempt to assimilate remembering to a form of judgment (JIG or otherwise).

Yet, how best to understand NBM and its implications for remembering is a complex matter—one I cannot fully discuss here. My hunch is that there remains ample room for the continuist to maneuver. After all, it is a main theme in recent constructive theories of remembering that what we remember is deeply influenced by our beliefs and is therefore *not* encapsulated from belief (Loftus & Pickrell, 1995; Mahr & Csibra, 2017). But I must leave a proper development of these points for another occasion. For now, it suffices to note that one's view on attitudinal continuism will depend in part on what one makes of non-believed memories, and on the significance one attributes to memory's forward-looking causal role.

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