

# Remembering is an Imaginative Project

## Introduction

This essay defends the claim that episodic remembering is a mental action by arguing that episodic remembering and sensory- or experience-like imagining are of a kind in a way relevant for agency. Episodic remembering is a type of imaginative project that involves the agential construction of imagistic-content and that aims at (veridically) representing particular events of the personal past. Neurally intact adults under normal conditions can token experiential memories of particular events from the personal past (merely) by intending or trying to. An agent's ability to actively remember depends not only on her being able to determine that some memory event occurs but on her ability to construct the relevant scene at will as well. I claim that the ability to guide construction with respect to imagistic-content is a distinctive feature of a subset of active imagining. Episodic remembering is of a kind with that subset of active imagining by being a process of agential construction of imagistic-content, in this case, scene construction that aims at (veridically) representing the personal past. Agential scene construction in the context of remembering is the agent's exploring her personal past as a highly circumscribed region of modal space.

My main argument starts with an appeal to constraints. Constraints are limits or rules imposed on processes or activities. Some constraints are enforced ultimately in virtue of an agent's intending to perform some action—her intention sets limits on what is to be done. Both imagining and remembering are subject to agentially-mediated constraints of this sort. More specifically, both intentional imagery-involving imagining and intentional episodic recall are subject to the same kinds of agentially-mediated constraints on the construction of content appropriate to the execution of the agent's intention. Such constraints are constitutive of the category of imaginative projects (see Dorsch, 2012, 46-47, 145ff.). In which case, the agent's episodic remembering is an imaginative project.

To argue that remembering and imagining are subject to the same agentially-mediated constraints, I appeal to the agent's ability to determine what it is she's doing and, to some extent, what her doing it consists in. I claim that these abilities comprise a characteristic feature of intentional agency. In intentionally raising her arm, the agent not only determines *that* her arm goes up but also *what* her movement consists in, namely, the relevant properties of its

trajectory. I argue that, of the types of mental state that contain imagistic-content, only sensory or experiential imagining is determinable by the agent both with respect to its occurrence and with respect to what that occurrence consists in, namely, the specific imagistic-content it has. In intentionally imagining a dancing banana, the agent not only determines *that* she imagines a dancing banana but also *what* her imagining it consists in—conjuring imagery as of a banana that is dancing.

Episodic memory's trading in imagistic-content and being determinable in the way intentional action is together suggest a continuity with experiential imagining. When an agent successfully intentionally remembers her last birthday party, she determines *that* she remembers that party and *what* her remembering it consists in, namely, constructing imagery that constitutes the retrieval of experiences she had of her last birthday party. She might choose, say, to focus on some details rather than others, to construct imagery of the events in the order in which they occurred or in some other order, to take on an observer perspective of herself blowing out the candles, and so on.

Of course, the agent's success in remembering will depend on her mnemonic activity working within certain constraints whose imposition is partly definitional of the intentional action itself. Perhaps most important is the constraint that the imagery she constructs is really that of her experience of her last birthday party. After all, she cannot remember anything she likes. Yet, when intentionally remembering, this constraint is indirectly self-imposed by her intention along with the directly self-imposed constraint that she engage in an attempt to remember. Such indirectly self-imposed constraints are likewise present when an agent intentionally imagines, say, what (really) would have happened had she thrown a rock at a window or what (really) will happen if she throws that rock at that window now. Intentionally remembering involves the selection of appropriate (veridical) content by the remembering agent. Its being so controllable suggests that the agent's remembering is no different than her engaging in imaginative projects like episodic counterfactual and hypothetical thought. When successful, all three are agency-involving cognitive processes of constructing imagery in compliance with the relevant constraints and appropriate to their respective aims. All three are ways of actively imagining.

Here's the essay's structure: §1 sets out two commitments that come with the claim that remembering is a mental action. §2 introduces the notion of constraints and applies the notion to

constraints imposed on memory and imagination. §3 accounts for the imposition of those constraints by arguing that they are conditions of success in acts of remembering and imagining and argues that the same types of constraints are involved in both. I then introduce a novel account of active imagining on which to actively imagine is to embark on some imaginative project as a means of exploring circumscribed regions of modal space. I conclude with a summary.

## §1 Remembering as a Mental Action

### 1.1 Remembering can be Basic

In order to defend the claim that remembering is a mental action, I want to start by considering what making that claim, as myself and others have made it, consists in and the commitments that come with making it. The claim that remembering is a mental action consists at minimum in the claim that neurally intact adults under normal conditions can remember as a non-deviant<sup>1</sup> effect of intending to do so. And this claim brings with it at least two commitments. First, agents can episodically remember by intending to do so and without having to do anything else. That is, remembering is at least sometimes a basic action. Second, because imagistic imagination is the specifically *agential* mental power for the construction and use of imagistic content (usually in the absence of a corresponding stimulus), episodic remembering's being at least sometimes a basic action of constructing and using imagery constitutive of scenes of remembered events means that it is in some way continuous with imagination with respect to agency.<sup>2</sup> I will discuss the second commitment in the following subsection. The rest of this subsection is concerned with the first commitment. Returning to it, basic actions are those the agent can perform at will or merely as an effect of intending to perform them (see Danto, 1965; Goldman, 1970; Hornsby,

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<sup>1</sup> Causal deviance occurs whenever some bodily or mental movement matches the content of the agent's intention but purely incidentally or without the agent's guidance or control (see Davidson, 2001). There's a massive literature on deviance which I bracket here, as it's not relevant to my argument. Moving forward, I drop reference to non-deviance except where clarity dictates.

<sup>2</sup> Some have argued that imagination is also an agential mental power for the construction and use of propositional content or objectual content, usually in the absence of a corresponding stimulus. Because I'm concerned with episodic memory and episodic memory is thought to trade primarily in imagery, I restrict focus to imagistic imagining. Should it turn out that non-imagistic imagination is also an agential power, a parallel claim concerning the status of non-imagistic forms of declarative memory as a mental action opens the door to a corresponding parallel commitment that this is due to such memory being continuous with non-imagistic imagining in a way relevant for agency.

1980).<sup>3</sup> Following Hopkins (2014, 2018), Arango-Muñoz and Bermúdez (2018), and [removed for anonymity] (2022), I focus on the retrieval of episodic memory. Instances of episodic remembering are conscious attitudes or processes that contain sensory-like imagistic-content which represents some past event at a sufficiently far remove from the subject’s local temporal environment (Tulving, 1972, 385).<sup>4</sup> An agent’s episodically remembering her last birthday party, then, consists in her being in a conscious state of entertaining images, say, of her being surrounded by friends, blowing out candles, and eating cake, and so on as a non-deviant effect of intending to remember her last birthday and where that imagery is (at least typically) actually of her last birthday.<sup>5</sup> Of course, claiming that episodic remembering is at least sometimes a basic mental action is consistent with acknowledging unbidden memories. Unbidden memories come to us without our intending and sometimes against our wills. The claim that episodic remembering is a mental action entails that we at least sometimes remember (merely) as a result of intending to remember and, to some extent, exercise control over our ability to represent past events. It likewise entails that such mnemonic events enjoy a kind of metaphysical priority over instances of unbidden memory. Note that this entailment doesn’t concern frequency. Unbidden memories might be more common than intentional rememberings. What matters is that the claim that episodic remembering is a mental action entails that intentional rememberings are the primary kind, however infrequent they might be, whereas unbidden memories are a derivative or defective kind, however frequent they are.<sup>6</sup>

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<sup>3</sup> There’s a massive literature on basic action and its coherence which I bracket here, as it’s not relevant to my argument. The point is just that intentional episodic recall doesn’t always require that the rememberer merely trigger the coming about of a memory, where that coming about is itself automatic or ballistic (cf. Strawson, 2003; Mele, 2009). The reader can substitute mention of basic action with the notion of “direct” determination regarding not just the occurrence of recall but the content recalled as well (see §3 and Dorsch, 2009, 2012).

<sup>4</sup> As the claim that memory is a mental action focuses squarely on episodic memory (cf. [removed for anonymity] 2022), I use “episodic memory,” “episodic remembering,” “episodic recall,” “memory,” “remembering,” and “recollection” interchangeably except where clarity dictates. I also use “mnemonic processing” and “mnemonic projects” to pick out remembering at the level of (cognitive) process. Though the present essay has upshots for the other forms of declarative memory with which episodic memory is connected, including semantic memory, I leave discussing those upshots for another occasion. Finally, “sufficiently far remove” is intentionally left vague. If one thinks one can episodically remember reading the previous sentence as one reads this one then a few seconds might be sufficiently far removed from one’s local (read: present) temporal environment.

<sup>5</sup> Some, notably Dorothea Debus, Sarah Robins, Jordi Fernández, and Andre Sant’Anna hold that episodic memories are (at least typically) rightly experienced by the subject as being authentic to her actual past experience (on the authenticity of memory, see Bernecker, 2010, 2015).

<sup>6</sup> The claim that intentional remembering has a kind of metaphysical priority over unbidden memory gets some support from the claim that remembering is continuous with imagination in the relevant, agential way. So, I won’t provide an argument here to that effect. Another source of support for this claim comes from an account of the function of episodic memory according to which it addresses some (epistemic) need or problem which calls for the

Accounts of memory as a mental action differ as to the balance of unbidden or otherwise non-agentive memory versus active remembering as well as where in the process of retrieval the agent can exert her influence. For instance, Hopkins (2014) holds that the agency involved in remembering is exhausted by our trying to remember and either failing or succeeding (314-315, 323-325). For Hopkins, remembering is necessarily basic and what content is remembered is “causally controlled by how [the past event] was” (2014: 324). Arango-Muñoz and Bermúdez (2018) hold that our mnemonic agency is exhibited in the metacognitive feelings of, say, fluency or familiarity which attenuate the imagistic reconstruction involved in episodic memory (84ff.). Exercise of that agency in imagistic reconstruction is always indirectly mediated by these feelings and the agent’s practical responses to them. Finally, [removed for anonymity] (2022) holds that the type of agency involved in remembering is skillful (6ff.). Because successful mnemonic activity is often habitual, direct intervention is usually unnecessary. However, we can directly intervene when our mnemonic activity threatens to go awry.

Yet, the differences just mentioned are consistent with holding that remembering is at least sometimes a basic action. At least sometimes the agent constructs the appropriate images of, say, her last birthday party as an effect of acquiring an intention or of trying to remember that event. More specifically, accounts of memory as a mental action are committed to the following: if an agent episodically remembers some event as a non-deviant effect of her intending or trying to remember that event and without her having to do anything else, then her remembering that event is an action.<sup>7</sup>

The possibility of basic acts of remembering distinguishes remembering as a type from behaviors such as falling asleep, digestion, or triggering the patellar reflex. The latter are non-actions in part because they cannot be instantiated as an effect of the agent’s intention (alone). They are not only bodily processes that occur in the absence of the agent’s intentions to sleep, digest, or kick, respectively, but, on the whole, are insensitive to her goals (for similar

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agent *to do* something in satisfying that need or solving that problem. I don’t have the space here to provide that account. But [removed for anonymity] (under review) seeks to provide one.

<sup>7</sup> Hereafter, I use “intend” to cover both intending and trying, as the distinction between them is not relevant to my argument. I have so far assumed a broadly causalist account of action purely for expository purposes. Everything I say in the essay is consistent with adopting a guidance-views and with swapping mention of intention with belief-desire pairs, plans, beliefs, or any other pro-attitude that is thought to be involved in the production of action. I only incidentally exclude agent-causation and intentional-action-first approaches (see Levy 2013, O’Brien 2017). However, I expect that similar considerations apply to these approaches were they to be applied to memory.

distinctions between actions and non-actions, see Strawson, 2003; Mele, 2009; Wu, 2013b, 2016; Arango-Muñoz and Bermúdez, 2018; *cf.* Fridland, 2017). Mental actions, by contrast, are mental processes that the agent initiates and guides and, thus, by definition are sensitive to her goals. Following accounts of memory as a mental action, then, I partially delineate the category of mental action in accordance with the following sufficient condition:

(Trying) If an agent causes the occurrence of a mental process as a non-deviant effect of intending to engage in that process and without her having to do anything else then the occurrence of that process is her performing a mental action.

Applying this to memory, we get, again:

(M-Trying) If an agent causes the occurrence of a veridical episodic memory of an event as a non-deviant effect of intending to remember that event and without her having to do anything else then her remembering that event is her performing a mental action.

It is this claim that I ultimately hope to defend in this essay. In this section, I aim to lay out the claim itself as myself and others have made it, the commitments it engenders, and the arguments that I hope to substantiate in section 3.

## **1.2 Remembering and Imagining are of a kind as Agent-Involving Cognitive Processes**

The second commitment that comes with the claim that remembering is a mental action is that remembering is of a kind with imagining in some way. In particular, the commitment is to remembering and imagining being the same kind of agential process. It is uncontroversial that episodic remembering as well as sensory or experiential imagining trade in mental imagery (Langland-Hassan, 2015; Liao and Gendler, 2019).<sup>8</sup> The relevant controversy concerns whether

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<sup>8</sup> A reviewer worries that it's not uncontroversial that episodic memory *requires* mental imagery. They suggest that it's possible that aphantasics really lack mental imagery and that it's possible that, nonetheless, aphantasics have episodic memories. If both possibilities are actual then mental imagery isn't required for episodic memory. In response, while I acknowledge both possibilities, it's unclear to me how likely they are. On the one hand, there's evidence that aphantasics at minimum struggle to episodically remember (Dawes et al. 2022). Since lack of imagery in aphantasia is a matter of degree, I'd suspect that the severity of the condition positively correlates with difficulty with episodic components of recall. On the other hand, it's not clear that aphantasia is (in all cases) a matter of lacking mental imagery, a matter of lacking access to imagery, or a matter of lacking the ability to generate imagery (Cavedon-Taylor 2022). The two salient alternative hypotheses to the hypothesis that aphantasics altogether lack mental imagery are both consistent with the possibility that aphantasics episodically remember and that episodic remembering requires mental imagery. In which case, the claim that episodic remembering requires mental imagery is only at risk if the first hypothesis concerning aphantasia turns out true and, nonetheless, aphantasics with the most severe cases can episodically remember. Thanks to an anonymous reviewer for pressing this worry.

the processes involved in the production of episodic memories of an event are the same in kind as those involved in conjuring images or entire counterfactual or hypothetical scenes.<sup>9</sup> This can include whether or to what extent the processes leading to states of memory and imagination share neural underpinnings or biological or cognitive functions. It is a commitment to identity at the level of process—specifically as processes that admit of the agent’s involvement—that comes with the claim that remembering is a mental action.

For evidence of this commitment among accounts of memory as a mental action, one need look no further than the title of Hopkins (2018): “Imagining the Past.” Arango-Muñoz and Bermúdez (2018, 78 *passim*), like Hopkins (2014, 318-319), appeal to the control we enjoy (or lack) over conjuring mental imagery of such things as pink elephants as reason to think we enjoy a similar degree of control over remembering.<sup>10</sup> They say outright, “we assume the imaginative reconstructive conception [of episodic remembering]” (2018: 75). Meanwhile [removed for anonymity] (2022) simply assumes without argument that the imaginative reconstruction of scenes involved in remembering is often enough itself the skillful work of the remembering agent.

Commitment to the identity of remembering and imagining as processes that admit of the agent’s involvement puts me and accounts of memory as a mental action on the continuist side of the metaphysical (dis)continuism debate in contemporary philosophy of memory (for thorough overviews, see Perrin, 2016; Perrin and Michaelian, 2017; and Michaelian, Perrin, and Sant’Anna, 2020). At issue is whether episodic future-oriented thought, episodic counterfactual thought, and episodic remembering are of a kind as attitudes or processes. Continuists claim that they are of a kind as processes or attitudes (or both) (see De Brigard, 2014a; Michaelian 2016a,b, 2021, forthcoming; Laland-Hassan, 2021, 2023). Discontinuists claim that they are not of a kind as process or attitudes (or both) (see Perrin 2016; Robins, 2020, 2022; Sant’Anna 2023).

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<sup>9</sup> Maintaining parity concerning type of content means that I don’t focus on types of imagination distinguished by having non-imagistic-contents, for instance, those that have propositional or conative contents. For this reason I use “sensory-like imagining”, “experience-like imagining”, “sensory imagining”, “experiential imagining”, and “imagining” interchangeably except where clarity dictates. On propositional imagining, see Dorsch (2012, 42-44). However, see also Gendler (2000, 2006); Weinberg and Meskin (2006). On affective imagining, see LaBar and Cabeza (2006) and Dorsch (2012, 41-42).

<sup>10</sup> Though my examples of active imagery-involving imagining will primarily evoke visual imagery, my argument does not depend on imagery being of or being like that of any particular sense modality. On sensory and experiential imagination, see Dorsch (2012, 37-40, 44-45), Hopkins (nd).

The debate admits of extreme and moderate forms of each position and can allow for some hybrid views. It focuses primarily on the empirical dimensions of (dis)continuity, including overlap of neural correlates (Klein, Loftus, and Kihlstrom, 2002; D'Argembeau and Van der Linden, 2004, 2006; Rosenbaum et al., 2005; Addis, Wong, and Schacter, 2007; Schacter and Addis, 2007a,b; Szpunar, Watson, and McDermott, 2007; McDonough and Gallo, 2010; Martin et al., 2011; De Brigard et al., 2013; Schacter et al., 2015), similarities or differences in cognitive or biological function (Bartlett, 1932; Hoffman and McNaughton, 2002; Debus, 2008, 2014, 2016; Hassabis and Maguire, 2009; Andrews-Hanna, 2012; Irish and Piguet, 2013; Raichle, 2015; Klein, 2016; Perrin, 2016; Robins, 2016; Wagner, 2016; Fernández, 2017, 2019; Wagoner, 2017, Aronowitz, forthcoming), and similarities and differences in phenomenal character as a function of those cognitive or biological functions, including the role of what is sometimes called “metamemory” (Tulving 1983, 1985; Addis et al., 2010; Berntsen and Bohn, 2010; De Brigard and Giovanello, 2012; Rasmussen and Berntsen, 2013; Robins 2020; on metamemory, see Dunlosky and Bjork, 2008; Dunlosky and Tauber, 2016).

Due to considerations of space, I will not rehash the debate here. However, following Langland-Hassan (2021, 2023), and Sant'Anna (2023), part of what motivates the present essay is a suspicion that the debate is approaching a standstill due to an overly narrow focus on the empirical study of memory and imagination at the expense of metaphysical considerations. I follow Langland-Hassan and Sant'Anna as well in thinking that we can make progress by shifting focus away from empirical considerations of the nature of memory and imagination and towards those relating memory and imagination to our mental agency. Indeed, for the identity of process to do work in my argument, it must be identity along a dimension that grounds remembering as being of the same act-type as imagining. In actively remembering, the agent is essentially doing the same type of thing as when she actively imagines. A result is that the mnemonic and imaginative attitudes produced are also of a kind in virtue of sharing the same agential etiology. That said, an attitudinal discontinuist could accept my account as a form of process continuism.

One might worry that the shift away from the empirical constitutes a shift in topic as it concerns the (dis)continuism debate. For it might be that a shift to metaphysical considerations results in focusing on the wrong kind of considerations. After all, if what's at issue is whether episodic memory and (active) imagination share neural correlates or are underwritten by the



same cognitive processes as implemented by some (overlapping) neural activity then how can this issue be resolved except by appealing to the appropriate empirical findings? In response, I want to suggest that there is room in the current metaphysical (dis)continuism debate for the claim of metaphysical continuity in spite of a lack of clear evidence of neural overlap. After all, the debate takes for granted that metaphysical identity in some way supervenes on there being some significant overlap of neural correlates or of cognitive processes. I wish to remain neutral on the nature or extent of such overlap. What I'm suggesting is that we can find metaphysical identity (or the lack thereof) another way, namely, by looking for significant overlap in the structure of the activities of remembering and imagining themselves. Looking only for overlapping neuronal correlates or neuronal activity sufficient to realize the relevant cognitive processes might well not be sufficient to tell us much about whether the activities of remembering and imagining are sufficiently structurally similar (or the same). So, part of what I'd like to do in this essay is explore this possibility by suspending the upstream assumption of much of the literature on the metaphysical (dis)continuism debate that metaphysical identity in some way (cleanly) supervenes on overlap at the neural or cognitive-neural levels.<sup>11</sup>

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<sup>11</sup> Thanks to an anonymous reviewer for pushing me to clarify this. The reviewer also worries that, given how the metaphysical (dis)continuism debate has so far unfolded, treating active remembering separately from unbidden memory and holding that the former is metaphysically continuous with active imagining might result in a commitment to the claim that active remembering and unbidden memory are of distinct neurophysiological kinds. And, of course, such a commitment requires a substantial defense. In response, I think that suspending the assumption that metaphysical identity (cleanly) supervenes on neural overlap or on overlap between cognitive processes as implemented by neural activity provides space for a different commitment. Namely, I commit to a parallel between remembering and imagining with respect to the derivative, secondary, or defective nature of their unbidden instances. But I allow that both unbidden memory and unbidden imagining (or imagery) might well occur as a result of neural activity that significantly overlaps with neural activity sufficient for the performance of an act of remembering or imagining, respectively. In [removed for anonymity] (R&R), I consider cases of involuntary or unbidden imagining and claim that they occur as a habitual response to an appropriate cue, as action slips, as a result of malfunctions in the neurocognitive mechanisms that underwrites active imagining, or as a result of non-malfunctional misfirings of such mechanisms. I think that unbidden memories might well admit of the same battery of explanations. Finally, the reviewer likewise worries that my commitment to the identity between active remembering and active imagining is weaker than the identity claims at issue in the metaphysical (dis)continuism debates. After all, I'm focusing on what I take to be central instances of episodic remembering to the exclusion of, e.g., unbidden memory. But metaphysical continuism claims that remembering just is the same kind as (some form of) imagining. So, why not go for the weaker claim and leave the metaphysical (dis)continuism debate out of it? In response, I think proponents of metaphysical continuism that hold that remembering just is the same kind as (some form of) imagining without qualification might be criticized for being a bit flatfooted in their formulation of the claim of metaphysical identity between remembering and imagining. What I am claiming is not just that active remembering is the same in kind as active imagining by being among the projects whose completion (usually) depends on imagining the appropriate content but that non-active remembering is derivative, secondary, or defective because it is the parallel of non-active imagining and that such imagining is itself derivative, secondary, or defective. In which case, remembering is of a kind with imagining. But its being so requires qualification and careful articulation concerning the metaphysics of action and process. Laying out the continuity between remembering and imagining as I'm conceiving of it goes beyond the scope of this essay. But I'd like to thank the

Why commit to one side of the (dis)continuism debate; why not stay neutral? What commits proponents of the claim that episodic remembering is a mental action, including myself, to the claim that such remembering is continuous with imagination in a way relevant for agency? Together with Trying, the thought among accounts of mental action appears to be as follows: imagining is an action in part because we can imagine as a non-deviant effect of intending to imagine. If remembering is of the same kind as imagining in some respect relevant for agency then we should be able to remember as a non-deviant effect of intending to remember. Remembering is of the same kind as imagining in the relevant respect. Therefore, we should be able to remember as a non-deviant effect of intending to remember. Put in premise-conclusion form, the argument goes like this:

- P1. An agent actively imagines  $p$  as a basic action iff her imagining  $p$  is a non-deviant effect of her intention to imagine  $p$ .
- P2. If episodic remembering is like active imagining in being an agential process of constructing and using imagery then neurally intact adult human beings in normal conditions can episodically remember that  $q$  as a non-deviant effect of an intention to remember that  $q$ .
- P3. Episodic remembering is like active imagining in being an agential process of constructing and using imagery.
- C1. (From P2 & P3) Neurally intact adult human beings in normal conditions can episodically remember that  $q$  as a non-deviant effect of an intention to remember that  $q$ .
- C2. (From P1 & C1) Some instances of episodic remembering are basic mental actions.

Although some have denied that imagining can be active or done at will (see Strawson 2003 in particular), I take the first premise of this argument onboard as an uncontroversial assumption. Premise 2 expresses the commitment to the continuity of episodic remembering and active imagining. Conclusion 1 is a shortened version of M-Trying. On this argument, remembering's satisfying M-Trying depends, then, on its being of the same kind as imagining in a way relevant for agency. In particular, it depends on remembering and imagining being of the same act-type.

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anonymous reviewer for raising these worries and giving me a chance to address them, if not entirely, at least with some promissory notes.

The rest of the essay is dedicated to defending this claim, that is, mounting an argument in defense of Premise 3.

### **1.3 Setting the Stage: Bounded Agential Image Construction**

Over the course of the next two sections, I argue that imagining and remembering are the same kind of agency-involving process. I claim that both are subject to the same constraints on the successful production of the appropriate imagistic-content(s), that these constraints are in force, at bottom, because of the agent's intention(s), and that it is the agent's constructing the appropriate imagery that satisfies these constraints. Put in premise-conclusion form, this argument goes as follows:

- P1. A process is subject to agentially-mediated constraints just in case their imposition stems ultimately from an agent's tokening a corresponding intention and their satisfaction is a function of the agent's performing an action which satisfies that intention.
- P2. The constraints on actively imagining  $p$  stem ultimately from the agent's tokening an intention to imagine  $p$  and are satisfied as a function of the agent's constructing and using imagery constitutive of actively imagining  $p$ .
- P3. The constraints on episodic remembering (that)  $q$  are determinates of the constraints to which actively imagining  $p$  is subject.
- C1. (From P1-P3) The constraints on episodically remembering (that)  $q$  are subject to constraints imposed ultimately by the agent's tokening an intention to remember (that)  $q$  and are satisfied as a function of the agent's constructing and using imagery constitutive of actively remembering that  $q$ .
- P4. Overlap in the constraints that are imposed by an intention among distinct possible actions fully determine the corresponding overall act-type but do not fully determine differentiating features of the performance of the tokens falling under that type or differentiating features of sub-types of that type.
- C2. (From C1 & P4) Episodic remembering is the same agent-involving process-type as active imagining.
- C3. (From C2) Episodic remembering is like active imagining in being an agential process of constructing and using imagery.

In the rest of this essay, to substantiate the premises of this argument, I consider two reciprocally related aspects that hold across active remembering and active imagining.

First, both episodic recall and sensory- or experience-like imagining exhibit possession of control by the agent over the imagistic-content that is constructed. I argue that this is a general agential feature of imagery-involving projects as a subset of the imaginative projects that, in turn, constitute the category of active imagining. Imaginative projects are processes of content construction controlled by the agent and aimed at some end ([removed for anonymity] R&R; *cf.* Dorsch, 2012, 46-47). In claiming that active imagining is comprised of imaginative projects, I am claiming that one cannot engage in a process of controlled content construction that does not aim at some end.

The inherent boundedness of imaginative projects leads to the second aspect. Namely, both episodic recall and sensory- or experience-like imagining are subject to limits on the construction of imagistic-content appropriate to the performance of the relevant mental action, (at least) so long as the agent's mental behavior is guided by her intention. These limits are constraints on her intentional constructive-imagining-*cum*-imaginative-project (on the notion of constructive imagining, see Van Leeuwen, 2013). I argue that, nonetheless, the imposition of such limits on remembering and imagining is perfectly consistent with those limits serving as standards for successful completion of the relevant mnemonic or imaginative project rather than limits on the possibility of agency (for similar arguments, see Proust, 2013, especially Chapter 7).

The pair of reciprocal aspects that remembering and imagining exhibit are indicative of sameness in kind at the level of type of agency-involving process, specifically as actions of roughly the same overall type. Once located within the broader category of active imagining, it becomes clear that the same agentially-mediated constraints are imposed on and are thereby partly definitive of mnemonic and (specifically epistemic) experiential-imaginative projects. In that case, the former project is of a kind with the latter and their successful completion calls for the same type of action, namely, agential imagistic-content construction under constraints. I consider the reciprocal aspects of remembering and imagining in reverse order. However, before getting there, however, I need to unpack the notion of constraint.

## §2 Constraints on Successful Remembering and Imagining

### 2.1 Constraints

I believe deep similarities between remembering and imagining start to show up when considering the sorts of constraints that apply to them (see also Langland-Hassan 2021).

Constraints are rules an activity adheres to or limitations applied to a process.<sup>12</sup> Constraints are partly definitional of the activities they're imposed on by delimiting the general shape of those activities. They are not fully constitutive of those activities, since the activities themselves are what satisfy the relevant constraints by taking the general shape delimited by the imposition of those constraints. Speaking somewhat metaphorically, constraints form a mold for the activities they are imposed on and the activities they are imposed on are cast into that mold.

Constraints can be applied laterally or top-down.<sup>13</sup> Lateral constraints are rules or limits imposed in the first instance by things other than the agent, say, by the structure of her psychology, by biological facts about her, by more remote aspects of the world outside of her control, and so on. For example, a lateral constraint on one's tolerance for the sensation of spiciness is the sensitivity of TRPV1 receptors in taste receptor cells. Tolerance for spice is not in the first instance something one decides or chooses—it is determined by the constitution of one's taste receptor cells. By contrast, top-down constraints are imposed in the first instance by the agent. A top-down constraint on experiencing the sensation of spiciness is intentionally ingesting or avoiding ingesting foods containing capsaicin.

The imposition of some lateral constraints can be affected indirectly by the imposition of top-down constraints both on particular occasions and over time. The imposition of the lateral constraint of TRPV1 receptor sensitivity on experiencing the sensation of spiciness can be affected on a given occasion, say, by choosing to never eat spicy food or by ingesting a spoonful

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<sup>12</sup> Hereafter I drop mention of processes except where clarity dictates.

<sup>13</sup> The distinction between lateral and top-down constraints bears some resemblance to the distinction between bottom-up and top-down (or exogenous and endogenous) processes familiar to the mind sciences. However, unlike the latter distinction, the distinction between lateral and top-down constraints does not say anything about what kind of process satisfies the relevant constraint(s) in a given instance. As the case of spice sensation suggests, both types of process within and of the whole organisms are often subject to lateral and top-down constraints. Likewise, both types of process working together across multiple timescales are often what end up satisfying the set of constraints imposed on them. Finally, as the example of top-down constraints in the case of spice sensation suggests, some processes function as constraints for others. I leave fully disentangling and systematically relating processes and constraints for another occasion.

of yogurt before ingesting anything containing capsaicin. Either way, the lateral constraint of TRPV1 receptor sensitivity is not imposed on the relevant occasion due to failure to activate or masking of the relevant mechanism(s), respectively. Similarly, the sensitivity of TRPV1 receptors can be modulated over time by repeatedly ingesting capsaicin—one can build a tolerance to spicy food by repeatedly eating it.

## 2.2 Lateral Constraints on Memory and Imagination

When applied to memory and imagination, top-down constraints are those placed directly by intending to imagine or remember, respectively. By contrast, lateral constraints on memory and imagination are those placed by properties of their neural implementation, biological or cognitive function(s), and/or phenomenology as well as by the epistemic propriety of some mnemonic or imaginative content and/or by the propriety of mnemonic or imaginative content to serve as referring to what the agent intends it to refer to. Focusing on memory, it *might* be that episodic remembering requires the activation of what is sometimes called a “memory trace” (see De Brigard 2014b). Though still a fraught notion, memory traces are nowadays thought to be the neurocognitive structures that effectively embody the encoded representations of past experiences in the form of patterns of neural activation.<sup>14</sup> Human beings cannot activate memory traces at will. If so, then, arguably, trace-activation is a lateral constraint on episodic remembering that is placed on such remembering by properties of its neural implementation and/or biological or cognitive function. Similarly, epistemic accounts of memory have it, roughly, that by virtue of being a kind of knowing, episodic memory is necessarily veridical. Aiming at truth is accordingly partly constitutive of the category of memory on these accounts. Bracketing the possibility of direct doxastic voluntarism, an agent cannot make content veridical simply by intending that it be.<sup>15</sup> In which case, veridicality is arguably another lateral constraint on episodic remembering that is placed on such remembering by the epistemic propriety (or lack

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<sup>14</sup> Not everyone agrees on the nature of traces. Some think that traces for particular events are local, while others think they are distributed in the cortex (see Thompson, 1991; Wagner, 2016; respectively). Some think that traces are or produce representations, while others think they lack content altogether but are necessary for the production of mnemonic content (Werning, 2020). Moreover, it might be that traces are not best thought of as neurocognitive structures at all. In Martin and Deutscher’s (1966) classical causalist account of memory, from which philosophical discussion of the notion of memory traces originates, traces were considered a purely theoretical posit defined by their functional role and Martin and Deutscher toyed with the possibility of extended memory traces.

<sup>15</sup> On doxastic voluntarism, see (Vitz, 2008).

thereof) of the relevant mnemonic content. Finally, it might be that Tulving (2002); and Robins (2020) are right that episodic remembering is accompanied by auto-noetic consciousness, that is, the experience of pastness related to the contents produced by mnemonic processing. Auto-noetic consciousness is likely not something human beings can confer onto contents simply by intending to. In which case, that a memory experience be accompanied by auto-noetic consciousness is yet a further lateral constraint on episodic remembering that is placed on such remembering by properties of the phenomenology of the relevant mnemonic happenings.

Determining whether all three of these lateral constraints apply or which do, if any, threatens to embroil us in a number of debates in the philosophy of memory, epistemology, and the literature on mental action. Moreover, there are further lateral constraints on memory that I haven't noted. I bracket these issues here. Moving forward, I assume that if trace-activation, veridicality, the experience of auto-noetic consciousness, and so on are lateral constraints on episodic remembering then they are limits on the success of intentional recall (for a similar claim, see Proust, 2013, Chapter 7). And I'll leave it open whether any of them are actually lateral constraints. In what follows, I focus on a distinct lateral constraint on memory, namely, that the content of the remembering experience appropriately matches that of the corresponding remembered experience.<sup>16</sup> I leave open whether such content-matching suffices for veridicality and I leave open whether the propriety of the match between contents is due to an appropriate causal link between the remembering experience and the remembered experience by way of

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<sup>16</sup> An anonymous reviewer worries that this formulation of the lateral constraint on memory on which I'm focused leaves it open whether relearning or veridical confabulation are kinds of remembering, since, in both kinds of case, the content relearned or confabulated happens to match the content of a past experience. I include "appropriate" to stave off such worries. But I acknowledge that this is not enough on its own, as I haven't said what "appropriate" amounts to in this context. I'll say this: because I want to remain neutral regarding accounts of memory, what constitutes an "appropriate" match between mnemonic content and the content of a corresponding past experience will depend on one's account of memory. If one is a causalist then appropriateness of content is a function of appropriate causation by, say, trace-activation, well-functioning metamemory, and/or background beliefs. If one is a simulationist then appropriateness of content is a function of the well-functioning of the episodic construction system (aided, presumably, by well-functioning metamemory). If one is a relationalist then appropriateness of content is a function of the instantiation of the relevant relations between the event of remembering and the event remembered. And so on. It's part of my argument that the agent has the same amount of *indirect* agential control over the obtaining of the conditions for the appropriateness of mnemonic content as she does over, say, the obtaining of the conditions for the instantiation of limb dynamics constitutive of her raising her arm. What's important here is that whether relearning or veridical confabulation count as remembering given the specific lateral constraint on mnemonic content on which I'm focused depends on what view of memory one has. This isn't to mention that this lateral constraint is not the only one imposed on remembering. One's account of memory brings with it commitments concerning what lateral constraints are imposed (and satisfied) in at least paradigmatic instances of remembering. Thanks to the anonymous reviewer for pressing me to clarify this point.

memory trace, the proper functioning of metamemory, background beliefs, etc. (see Langland-Hassan 2021a,b, 2023).

Turning to imagination, it might be that, say, visualization requires activation of a number of brain-areas, including left superior parietal lobule, supplementary and cingulate as well as frontal eye fields, fusiform gyrus, etc. (Winlove et al., 2018). Neurally intact adults under normal conditions do not (usually) knowingly activate these areas when they set themselves to visualize. This means that activating these areas as part of intentionally visualizing is a lateral constraint on that visualizing. Because sensory and experiential imagining is multimodal, likely involves distinct modes of presentation or formats across modalities, and can be accompanied by distinct phenomenal experiences, it is difficult to pin down lateral constraints on imagining generally like that relating memory to trace-activation or autoegetic consciousness. However, there are some lateral constraints imposed on imagining regarding the propriety of the content constructed as well as the epistemic propriety of such content.

For instance, Kind (2016) has recently argued that, when put to epistemic use for obtaining modal knowledge, episodic counterfactual and hypothetical thought are ideally governed by (at least) two lateral constraints. The first requires the agent to hold fixed the relevant details about the actual world that she does not modify in the imagined scene. Kind calls this the “reality constraint.” The second requires the agent to imagine the logical consequences of any modification she does make. Kind calls this the “change constraint.” The reality and change constraints are lateral rather than top-down because the agent does not impose nor satisfy them merely by intending to imagine, say, attempting to fit her suitcase in the trunk of her car. In such a case, the relevant top-down constraint is that she imagine such an attempt. The imposition of this top-down constraint, in turn, indirectly imposes the reality and change constraints relative to her epistemic imaginative project. And she satisfies (or fails to satisfy) this top-down constraint by virtue of her imaginative activity satisfying (or failing to satisfy) the reality and change constraints relative to this project.<sup>17</sup> Of the plausibly many lateral constraints on imagining, my focus moving forward will be on the reality and change constraints. Their role in securing modal knowledge is analogous to that played by the constraint that the content of an episodic memory appropriately matches that of the corresponding remembered experience.

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<sup>17</sup> Thanks to an anonymous reviewer for pushing me to clarify this point.



It might seem, then, that remembering is of a kind with experiential imagining by virtue of the former's being subject to the reality and change constraints. In the good case, remembering results in a representation of a past experience. The content of the memory represents the actual past experience (and, so, refers to the corresponding past event). The agent intending to remember must thus hold fixed all of the relevant details about the actual world concerning her past experience. It might seem that enforcement of the reality constraint is total in this case because the relevant details consist in any that the agent might come to represent in satisfying her intention to remember. Nonetheless, the change constraint might still be imposed on remembering. That is, despite there being little or no modification of mnemonic content, the agent intending to remember must represent the logical consequences of any other type of modification she makes. Remembering from an observer's perspective is a case-in-point (on observer-memories see McCarroll, 2018). Representing a past experience from a perspective other than that from which you experienced that event arguably constitutes a modification of that experience with respect to perspective. However, because the imposition of the reality constraint keeps the content of the experience fixed, what follows logically from changing perspectives is just that—the content of the experience remains the same while the perspective from which it is experienced differs.

### **2.3 The Veridicality of Memory and Epistemic Imaginative Projects**

This makes remembering look like an exceedingly stringent kind of imagining. Sant'Anna (2023) denies this. According to him, remembering is not subject to the reality and change constraints because the agent cannot knowingly modify the content of her memory.<sup>18</sup> He agrees that attending to constraints can clarify the relationship between memory and imagination. However, from this Sant'Anna argues for distinguishing them as distinct kinds of process in terms of the control we can exercise in intervening on the content of our imagining but which we cannot exercise in intervening on the content of our memory. This apparent difference in ability stems from lateral constraints imposed on the content we can construct in remembering. The content of what we imagine appears to be under our direct control throughout the process of

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<sup>18</sup> However, Sant'Anna could allow that observer memories involve modification on the assumption that the modification involved is not that of the content of the memory.

imagining. In imagining, the agent can produce or select whatever content she wants and still count as imagining. By contrast, control over the content of episodic memory appears limited to constructing imagery of what one (experiences as having) actually experienced. The agent can initiate or terminate retrieval, just as she can initiate or terminate her acts of imagining. And she can be selective about what of the available mnemonic content she brings to mind, the order she represents the events as occurring in, and the perspective she represents herself as having on the event(s). However, unlike imagining, the agent cannot select what content comes about with impunity, lest she threaten lapsing from memory into mere imagining. This is just what we should expect given the constraint that the content of the imagery in remembering appropriately match that of the corresponding experience-to-be-remembered.<sup>19</sup>

Carrying the objection further, the imposition of this lateral constraint on remembering is inconsistent with the imposition of the reality and change constraints. As stated, the reality and change constraints are constraints on the construction of content, specifically as it regards the agent's ability to (knowingly) modify at least some of the content of her imagining. If we dropped mention of the agent's capacity for (knowingly) modifying content from the reality and change constraints, then there would be no reason to think that the resulting constraints—call them reality\* and change\* constraints—are not enforced in every cognitive process that operates over content and that aims at veridicality. Perceiving would then be a form of imagining. To avoid this absurd result, we should hold onto the idea that the reality and change constraints impose limits on the agent's (knowing) modification of content. In which case, that imagining is free from the lateral constraint that its content stem from a previous experience and, thus, may be subject to the reality and change constraints suggests that imagining is a distinct kind of agency-involving process from remembering.

In response, even granting that imagining and remembering are not subject to exactly the same constraints on content, it might still be that agentic control over remembering is no more limited than that over any imaginative project that aims at veridicality. Recall that imaginative projects are processes of content construction controlled by the agent and aimed at some end (*cf.*

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<sup>19</sup> The claim that memory is so restricted is often discussed under the heading of “the previous awareness condition” (see Openshaw 2023). Adherence to the previous awareness condition does not assume an epistemic account of memory. Even accounts of memory on which memory is not factive must allow that remembering is at least often enough a matter of representing actual past experiences or is often enough good epistemic grounds for believing that what is remembered is an actual past experience.

Dorsch, 2012, 46-47). Lateral constraints on what content is available for imagining are clearly in force at least when the aim of the relevant imaginative project is epistemic. Following Kind (2016), if, as seems to be the case, imagination is at least sometimes involved in subjunctive and hypothetical reasoning then the consequents of conditionals inferred from that reasoning ought to have content that is entailed or implied by the content of their respective antecedents and by whatever regularities, contingent or otherwise, are being held fixed (see also Williamson, 2008, 141-155; Dorsch, 2012, 66-68). The imposition of this part of the change constraint is a function of the epistemic propriety of the content the agent constructs and is satisfied by her constructing epistemically appropriate content.

One cannot claim to know, say, that if they had thrown the rock then the window would have shattered if one's episodic counterfactual thought randomly interjects invisible goblins that break the window when a rock is thrown at it with sufficient force (Langland-Hassan, 2016; Kind, 2018; Myers, 2021a,b; Williams, 2021; Gauker, forthcoming). To arrive at that knowledge, one must adhere to the reality and change constraints. Yet, these constraints are in some respect constraints on where her imagery can stem from. They are not just constraints on content. They are source constraints as well. To obtain modal knowledge about relatively nearby counterfactuals, then, one's imagery must stem from the appropriate region(s) of modal space (more on this in §3.3). The relevant region presumably does not include possible worlds wherein invisible goblins randomly pop in and out of existence.

Remembering might be no more constrained than this (De Brigard 2014a). In which case, remembering as an agency-involving process might be an imaginative project alongside episodic counterfactual or hypothetical thought. Such mnemonic projects would be constituted by content construction as a means of intentionally exploring a highly circumscribed region of modal space, namely, the actual past. The restriction to the actual past is much tighter than the restrictions imposed on the regions of modal space to be explored in instances of either episodic counterfactual or episodic hypothetical thought. Nonetheless, even if mnemonic projects are not subject to the reality and change constraints just as such, the restriction to the actual past is of a piece with those constraints in virtue being veridicality-oriented and enforced ultimately in virtue of the agent's intention. In particular, the lateral constraint that mnemonic content appropriately match the content of a corresponding past experience is a determinate of the reality constraint. And lateral constraints imposed by the epistemic or referential propriety of the

relevant mnemonic content in cases where the agent initiates remembering, selects particular details, rearranges the order of events, or changes perspective are all determinates of the change constraint.

Recall that the agent can exercise some selective control over the imagery she constructs in remembering, even if she cannot produce whatever she wants in attempting to complete her mnemonic projects. This restriction is mirrored in imagination at least with respect to those imaginative projects that aim at veridicality.<sup>20</sup> The agent cannot produce whatever she wants in attempting to imagine what likely could have been or what is likely to be. Such restriction is part of the imposition of the reality and change constraints on episodic counterfactual and hypothetical thought. In all three cases, the agent's projects' being constrained in this way is consistent with her being selective concerning what she constructs within the appropriate region of modal space. Even if the reality or change constraint is not imposed on remembering, strictly speaking, remembering might nonetheless be continuous with imagining at the level of agency-involving process by being subject to determinates of these lateral constraints on content and/or sourcing. I take it that remembering is of a kind with imagining in the sense that both involve the imposition and satisfaction of lateral constraints over appropriate content consistent with selection of that content by the agent.<sup>21</sup> That is, she exercises her agency in determining contents appropriate to the completion of the relevant imaginative project. The imposition of the relevant lateral constraint(s) functions as a standard of success for the completion of the corresponding imaginative project. In the following section, I unpack these two latter claims.

Before getting there, however, I want to address a worry, namely, that my response to the objection from Sant'Anna commits me to the claim that reference in memory is secured purely by the agent's intention. There are at least two problems with this commitment. First, such a commitment implies that unbidden memories are not of the same kind as intentional rememberings because of a difference between them concerning how reference is fixed. Second,

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<sup>20</sup> Elsewhere [removed for anonymity] (2024), I argue that all imaginative projects save for merely imagining for its own sake are subject to lateral constraints on content whose imposition and satisfaction exclude the agent from producing just any imaginative content. On my view, mere imagining for its own sake constitutes a limit on imaginative agency, not the standard by which we judge whether other instances of imagining sufficient to complete other kinds of imaginative project are really instances of imagining.

<sup>21</sup> I take it that this is the continuity between remembering and imagining to which Hopkins (2014, 2018), Arango-Muñoz and Bermúdez (2018), and [removed for anonymity] (2022) are committed.

such a commitment implies the impossibility of inadvertently remembering an event, say, remembering one's 21<sup>st</sup> birthday when one intended to remember one's 18<sup>th</sup> birthday.

I grant that this commitment would have the first unsavory result. I'm not sure that one can successfully inadvertently remember one event when intending to remember another. But, in any case, I resist the commitment. A lateral constraint is not imposed *in the first instance* by the agent. But it can be imposed and satisfied by the agent indirectly. A lateral constraint is imposed indirectly by the agent when its imposition is a function of the imposition of a corresponding top-down constraint. In such a case, the agent's having a certain end calls for some appropriate means and its calling for some appropriate means just is the imposition of a corresponding lateral constraint that some such means be implemented. A lateral constraint is satisfied indirectly by the agent when its satisfaction is a function of the performance of an action that aims to satisfy a corresponding top-down constraint. In such a case, the agent's taking the relevant means to her end involves her doing something by which she satisfies the relevant lateral constraint. In the arm-raising case to be discussed in the following section, the lateral constraint that the agent's arm take some trajectory among a subset of trajectories sufficient for raising her arm is imposed indirectly as a function of her imposing the top-down constraint that she raise her arm and this she imposes by intending to raise her arm. It is imposed directly (presumably) by parameter-fixing in the motor system, where such parameter-fixing is downstream of the agent's intending to raise her arm. The lateral constraint is satisfied indirectly by her in the act of raising her arm in accordance with her intention. It is satisfied directly (presumably) by the complex interaction of mechanisms within the motor system whereby the agent's limb dynamics are implemented and modulated in accordance with the relevant parameters. So, while the imposition and satisfaction of lateral constraints are not in the first instance the agent's doing, when such imposition and satisfaction partly underwrite her performance of an action, she is ultimately (read: indirectly) the one imposing and satisfying them.

The same goes for remembering: reference is not fixed entirely by the intention. It is fixed by the imposition and satisfaction of the relevant lateral constraints. And, in cases of intentional remembering, these constraints are imposed indirectly as a function of the agent's intending to remember the relevant event and satisfied by her constructing the appropriate scene in accordance with her intention. In such cases, the intention goes some way to fixing reference

by at the very least providing a subject matter, a limit on the referential propriety of the content to be constructed. It sets out the region of modal and temporal space to be explored. But that part of the space has to be there: the agent has to have experienced the relevant past event. And that part of the space has to be navigable by the agent: she has to be able to exploit whatever mnemonic mechanisms are required for constructing a scene of the relevant event (just as she has to be able to exploit whatever motor mechanisms are required for raising her arm when she intends to). What this means for unbidden memories is that they are either habitual navigations of the actual past, slips into such navigation by imposition and satisfaction of the relevant lateral constraints in the absence of a corresponding top-down constraint, non-malfunctional misfires of the relevant mnemonic mechanisms sufficient for such navigation, or breakdowns in such mechanisms (see fn.11).

What this means for inadvertently successful rememberings is that they are slips into navigation to one part of temporal and modal space in violation of the intention to remember a different event or are mischaracterizations of that event as a different but usually related event. In such cases, I am committed to saying that the agent misremembers, e.g., her 18<sup>th</sup> birthday as her 21<sup>st</sup> so long as she fails to recognize that she has remembered her 21<sup>st</sup> birthday. That is, she mischaracterizes her 18<sup>th</sup> birthday as her 21<sup>st</sup> until she recognizes that this is what she has done. Whether she also thereby counts as successfully inadvertently remembering her 21<sup>st</sup> birthday depends on whether authenticity is a requirement on successful remembering. If it is, then she does not count as remembering her 21<sup>st</sup> birthday until she recognizes that she has, in fact, remembered that birthday. If it isn't, then she might. She satisfies lateral constraints on content construction that are not being imposed in her intending to and attempting to remember her 18<sup>th</sup> birthday but would be were she to intend to remember her 21<sup>st</sup>. And, for reasons I discuss elsewhere ([removed for anonymity] R&R), I think such mistakes depend on the agent's having the power to engage in such mnemonic projects without making those mistakes. I would classify this mistake as an action slip or an unbidden memory.<sup>22</sup>

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<sup>22</sup> Thanks to an anonymous reviewer for raising these worries.

## §3 Agential Imposition and Satisfaction of Constraints in Memory and Imagination

### 3.1 Determination and Its Relation to Constraints

I begin by highlighting what I take to be an essential feature of intentional agency. I call this feature “determination.” The idea is this: when performing an intentional action, the agent does two things. First, she intentionally tokens some act-type,  $\varphi$ , to the exclusion of other act-types incompatible with  $\varphi$ -ing,  $\{\psi, \rho, \dots\}$ . Consider intentionally raising an arm. In intentionally raising her arm, the agent determines that her arm rises rather than lowers. But this isn’t all that she does. She also fixes some of the properties,  $\{F, G, \dots\}$ , which, in the context of action, are both partly constitutive of and at the same time sufficient for tokening the act-type. In intentionally raising her arm, the agent not only determines that her arm rises but properties of its trajectory, that is, at least part of *what* her arm raising consists in. She could swing her arm by shoulder flexion or abduction in a sweeping motion without bending her elbow, bend her elbow inward and then push upward, make a scaption motion and hold her arm(s) out at a 30-45° angle, and so on. So long as she fixes at least one set of these kinematic properties in the relevant context, her doing so suffices to be an intentional arm-raising in that context.<sup>23</sup> She thereby fixes the content of her action in the midst of occasioning its occurrence.

Determination is the paradigmatic form of control the agent possesses over initiating, intervening on, and completing or terminating intentional action (for a similar claim in application to mental action, Wu, 2011a,b, 2013a,b, 2014, 2016, 2019). After all, the agent can initiate a sweeping abduction and decide mid-swing to bend her elbow before pushing up with her tricep. Her doing so is a matter of fixing the relevant kinematic properties in real time in accordance with a dynamically evolving intention. More importantly for my purposes, determination is also the paradigmatic way in which the agent satisfies constraints imposed on the processes that constitute the performance of the relevant action. Exercises of agency involve the agent’s imposing constraints on her behavior and the satisfaction of those constraints by her behaving in accordance with what she thus imposes on herself. Determination is that in virtue of which she behaves in

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<sup>23</sup> Determining these kinematic properties need not be done consciously or in deliberation prior to acting. They can occur as a result of what is sometimes called “intentions-in-action”, i.e., to, in the act of raising one’s arm, intend to raise the arm thus-and-so (Searle, 1983; cf. McDowell, 2010, 2011).

accordance with the constraints she imposes on herself. That is, action involves self-constrained movement, where self-imposed constraints form a mold and the agent's fixing the properties of the relevant movements in performance casts those movements into the mold.<sup>24</sup>

Returning to our example, the top-down constraint that the arm goes up and some of the lateral constraints imposed by available trajectories and limb dynamics are ultimately in force because of the agent's intention. For instance, if squeezed into a crowded elevator, lateral constraints imposed by her physical situation might preclude the agent's raising her arm by abduction or scaption. Nonetheless, she could free herself of these constraints at any point during the act simply by abandoning the intention to raise her arm. She might also affect lateral constraints on her movement indirectly in performance, say, by shoving those around her while making an abduction or scaption motion.<sup>25</sup> However she modulates her intention or her movement, the agent satisfies the constraints thereby placed on her by determining her behavior in accordance with that intention.

Another way to put the point is that determination concerns the way(s) in which an action is performed. The imposition of both top-down and lateral constraints as well as their subsequent satisfaction in an instance of  $\varphi$ -ing are the agent's applying her knowledge(-how) of some way of  $\varphi$ -ing through determination and in light of her intention (on knowledge-how, see Fantl, 2008; Bengson and Moffett, 2011; Carter and Poston, 2018; and Pavese, forthcoming). This applies to basic actions. Raising one's arm is a case in point: though basic, one can intentionally raise their arm in a multitude of ways. Yet, any instance of intentional arm raising involves one's determining one such way, imposing and then satisfying the relevant constraints on raising their arm in that way. Moreover, because the way(s) the agent performs a non-basic action is partially constituted by the means required or chosen for their performance and those means arguably bottom out somewhere in some basic action(s), determination extends to such non-basic actions. Assuming this is right, determination is a general feature of intentional agency and, in fact, the paradigmatic form of control in expressions of that agency. I now move to argue that imagining

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<sup>24</sup> Note: I am not here giving an analysis of action. Rather, I am pointing to a structural feature of intentional agency that I take to be exhibited in instances of remembering and active imagining. See O'Brien (2017) for some explication of this feature.

<sup>25</sup> A limiting case is one in which there is only one way for the agent to  $\varphi$ . In such a case, her determining what her  $\varphi$ -ing consists in collapses into her determining that she  $\varphi$ 's. Her control is minimal but exists insofar as she can  $\varphi$  or to abstain from  $\varphi$ -ing in accordance with the relevant intention.



and remembering are both subject to determination with respect both to their occurrence and content and that they should thus be subject to the same kind of agentially-mediated constraints.

### 3.2 Determining the Imagistic-Contents of One's Acts of Imagining

Starting with mental action generally, it is a property of mental actions that they have their specific contents (Proust, 2001). It is a property of the act of remembering her last birthday party that the agent's memory is about that party. Likewise, it is a property of the act of judging that  $p$  that this judgment is about  $p$ . Now, any occurrence of an imagistic process for which the agent can determine not just that it occur but also what its occurrence consists in, specifically with respect to the imagery it contains, is an instance of imagining (for a similar claim, see Dorsch, 2012, especially Chapters 13-14). That imagining is subject to the agent's determination both with respect to its occurrence and with respect what imagistic content is constructed should be clear. After all, we can visualize dancing bananas as a non-deviant effect of intending to do so. In doing so, the imagining agent is free to determine the content of her imagery, for instance, aspects of the banana's shape and size, some shade of yellow, whether it has bruises, whether it is facing her or in profile, and so on. As Dorsch (2012: 389) puts it "imaginative activity involves the voluntary determination of which entities are represented as instantiating which properties."<sup>26</sup> Hopkins (nd) goes a step further here: *everything* about the relevant imagery is determinable by what the agent is committed to in imagining thus, even if she only actively conjuring some of what she is committed to.

That said, some lateral constraints are imposed on imagery in acts of imagining. If she intends to imagine a dancing banana then the agent should not conjure an image of, say, a talking orange. But, just like raising her arm, even these lateral constraints can be enforced or relaxed at will at any point during the act. After all, she can simply decide to abandon her imaginative project. Or she might affect lateral constraints, say, on the upper-bound of the vividness of her imagery by inhaling nitrous oxide or by training her imaginative faculties through deliberate practice (on training imagination, see Kind, 2020, 2022 and [removed for anonymity] R&R). With the exception of project abandonment, these are ways in which she

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<sup>26</sup> That said, Dorsch is here conceiving of imaginative activity as including imagining with propositional or affective contents (see fn.9).

determines what she imagines by affecting some lateral constraints imposed on her imaginative projects while satisfying others.

That it is *only* imagining that is subject to the agent's determination with respect to both occurrence as well as what imagistic-content is constructed is more difficult to see (however, for a similar claim, see Dorsch, 2012, 396-403). The principal alternative imagistic mental processes are those of perceiving or dreaming (McGinn, 2004; Ichikawa, 2009; Nanay, 2010, 2016; Briscoe, 2018; *cf.* Windt, 2010; Briscoe, 2011, 2018). But neither perceiving nor dreaming are subject to determination by the agent either with respect to their occurrence or with respect to what their occurrence consists in. Perceiving is not subject to determination because its content derives from stimuli in the perceiver's local environment, upon which both the occurrence of her perceiving and the content that she perceives causally depend. And although the content of dreams is not so derived, one cannot (usually) fix the contents of one's dreaming merely by intending to dream such-and-such.<sup>27</sup> When one is perceiving or dreaming or does whatever other things one needs to do in order to bring it about that one perceives or dreams, one does not thereby determine the content that one perceives or dreams. This is because the properties relating the agent's states of perceiving or dreaming to their contents cannot be brought about by her intending or by her fixing those properties in an attempt to perceive or dream. They are brought about by the functioning of the relevant perceptual or dream-inducing mechanisms, mechanisms which are insensitive to her goals such that they necessarily make any intention to perceive (that-) *p* or dream of *q* at most an indirect cause of perceiving (that-) *p* or dreaming of *q*. Such mechanisms produce the relevant contents ballistically, where ballisticity in content-production precludes the agent's fixing those contents (see Strawson, 2003; Wu, 2013b; Arango-Muñoz and Bermúdez, 2018). Assuming this is right,

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<sup>27</sup> Partly due to considerations of space, I don't consider lucid dreaming, that is, the phenomenon in which a dreaming person becomes aware that they're dreaming and can then shape the content of their dream. I also don't consider what's sometimes called "seeing-as", that is, aspect seeing. Finally, I do not consider perceptual expertise, that is, the phenomena in which a perceiver develops a highly tuned, conceptually-ladened recognitional capacity by practicing spotting certain patterns or features. However, I take it that any instance in which the agent determines the contents of her lucid dreaming or of her aspect-seeing are ones in which she is taking hold of her imagination. Moreover, the exercise of perceptual expertise (if not aspect-seeing as well) is arguably receptive or passive at least with respect to its content (see Chudnoff 2021).

it appears that imagining is the only type of imagistic mental process subject to determination by the agent both with respect to occurrence and content.<sup>28</sup>

At this point, one might object that the lateral constraint on remembering that its content appropriately match that of the corresponding remembered event is sufficient to distinguish it from imagining. In that case, it is false that any occurrence of an imagistic process subject to determination with respect both to occurrence and content is an instance of imagining. Remembering, then, constitutes a unique category of determinable imagistic mental process.

In response, the additional lateral constraint on content in remembering is insufficient to pick out a unique role in the mental economy calling for a distinct kind of process. Indeed, the constraint that the content which the agent constructs appropriately match that of a corresponding past experience is, again, a determinate of a lateral constraint imposed on imaginative projects that aim at veridicality, namely, the reality constraint (Kind, 2016). That the agent can knowingly modify some of the content in an instance of remembering is shown in her ability to be intentionally selective in what content she constructs. The opportunity for knowingly modifying content is present even though the agent can modify (much) less than when she engages in episodic counterfactual or hypothetical thought. In which case, her remembering is subject to a correspondingly stringent lateral constraint that the content that results from her (knowledgeable) modification of mnemonic content refers to (at least) a mereological part of the remembered event. This lateral constraint is, again, a determinate of the change constraint. Both sets of constraints function as conditions of successful agential construction of the relevant imagistic content. This is the kind of agentially-mediated constraint they are. The difference between them, as reflected in each pair, is the end towards which that imagistic content construction aims.

The imposition of the constraint on remembering that its content appropriately match that of the relevant past experience is perfectly consistent with remembering's filling the same role as episodic hypothetical and counterfactual thought. In all three, the agent self-probes for (veridical) information through imagery in the absence of stimulus-driven information. This

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<sup>28</sup> Emotional processes like grieving are another category worth noting. However, such processes aren't subject to determination by the agent. What one experiences emotionally depends in large part on what one is aware of or on what one is thinking about. But even if we assume that imagery is involved in the latter case as, say, Morton (2013) does, one cannot simply intend that grieve and thereby grieve. Such processes therefore fail Trying. Causing oneself to grieve requires that one do something else, say, think of a personal loss or tragedy.

self-probing role is one that all three kinds of imaginative projects play. Which project is called for in a given instance will depend on what information the agent is after: information about the possible, necessary, or actual future (episodic hypothetical thought), the counterfactual past or present (episodic counterfactual thought), or the actual past (remembering). I connect this role to imaginative projects and active imagining in general in the next subsection.

So long as all three projects play the same role, only one type of agency-involving process is required. And so long as only one type of agency-involving process is required, there is no reason to claim that remembering is a unique category of agency-involving process of imagery construction.<sup>29</sup> Whether there is an additional role in the mental economy that distinguishes remembering as a process depends on whether the constraints imposed on it correspond to a unique role unfulfillable by other kinds of episodic thought. While addressing this further question is of obvious import to the claim that remembering is of a kind with imagining, it goes beyond the scope of the present essay.<sup>30</sup> My aim here is to make room for the claim that the lateral constraints applied to the process of remembering—specifically the constraint that the content constructed in an act of remembering match that of the remembered experience—don't preclude it from fulfilling role(s) fulfilled by the completion of other imaginative projects.

### **3.3 Determining the Imagistic-Contents of One's Act of Remembering**

Recall that, according to accounts of memory as a mental action, neurally intact adults under normal conditions can episodically remember an event as a non-deviant effect of intending to

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<sup>29</sup> In fact, De Brigard (2014a) and Michaelian (2016a,b, 2021, forthcoming) make similar claims levying the biological and/or cognitive function and implementation of memory in favor of a view of memory as one dimension of what they call "mental time travel." My main argument seeks to provide support for the claim that imaginative projects in general involve agentive content construction under constraints. Mental time travel is only a triplet of such projects.

<sup>30</sup> I suspect that any process discontinuist argument to the effect that remembering is subject to constraints that correspond to a unique role in the mental economy would in the end give up the claim that remembering is a mental action. That said, I invite arguments that the lateral constraint(s) on memory that I bracketed in §2.2 are sufficient to pick out a unique role in our mental economy that goes unfulfilled by other kinds of episodic thought. For instance, assuming memory is indeed factive and doxastic voluntarism of any kind is false, one can mount an argument that it follows that memory is discontinuous with imagination at the level of process. That is, one can argue that mnemonic processes by their nature aim at truth, whereas imagining can contingently aim at truth in the actual world but need not. The latter can just as well aim at truth in possible or imaginary worlds. Thanks to AC for bringing up factivity in particular. On the determination of truth in imaginary worlds, see Chasid (2017, 2019, 2021a,b).

remember that event. Remembering satisfies M-Trying. We can explain remembering's satisfying M-Trying by appeal to determination. When the agent intends to remember her last birthday party and succeeds, she determines *that* she remembers the party and *what* her remembering that event consists in, that is, imagery that reflects her past experience of, say, the presence of her friends, her blowing out the candles, her eating the cake, and so on. In this case, the way that she remembers amounts to the imagery that comes to conscious awareness when she casts her mind back.<sup>31</sup>

Given that remembering satisfies M-Trying in virtue of being subject to determination by the agent in the way imagination is, at least part of the imagery that comes to mind when the agent intends to remember is fixed *by her* as part of her successfully intentionally remembering. In standard cases of intentional remembering, a top-down constraint the agent imposes on remembering her last birthday party is that it be *that* birthday party that she remembers. A lateral constraint that she thereby enforces by setting that intention is that the imagery that she constructs represent experiences she actually had at that party and, thereby, refer to that party. Nonetheless, the agent can satisfy this lateral constraint by determining the (appropriate) content of her imagery—she *can* choose what she remembers—so long as that content veridically represents her last birthday party in part by remaining authentic to her experience of that party. The imposition of this lateral constraint is not a limit on her agency. Rather, it is a condition of her successful recall that she imposes on herself ultimately in virtue of intending to remember. That it is a condition of success is evinced by the fact that it makes sense for her to try to remember and by the fact that she can relax constraint at will, say, by abandoning this her mnemonic project on this occasion.<sup>32</sup>

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<sup>31</sup> The way she remembers can also include the method she uses to retrieve the memory. All M-Trying says is that the agent has the ability to remember as a non-deviant effect of merely intending or trying to remember. Again, this is consistent with her intentionally remembering by way of asking an attendee for a prompt or looking around her house for a cue. In these latter cases, her act of intentionally remembering includes as a means that it is prompted by a friend or cued by, say, tasting a Madeleine cookie (*cf.* Lynch, 2019).

<sup>32</sup> An anonymous reviewer worries about how reference is fixed in memory, citing Campbell's (2002: 170-180, 191-193) as providing some reason to think that reference in memory is fixed in a bottom-up manner. If I understand correctly, the worry is this: reference of mnemonic content to some event is achieved through the agent's having experienced that event in the past and through the obtaining of an appropriate link between that past experience and the instantiation of the mnemonic content. The latter condition on reference in memory seems to be something that's satisfied at least somewhat independently of the agent's intention to remember. And if that's right then it seems that this makes for a fundamental difference between memory and counterfactual or hypothetical episodic thought. In response, first, I don't read the relevant parts of Campbell as suggesting that reference in memory occurs "bottom-up" in the sense that such reference is fixed independently of the agent's control. My understanding of these passages is that the shift from merely entertaining an image in an attempt to remember and successful memory is a shift from

Episodic remembering is subject to what I've been calling determination. This suggests that it is subject to the same kind of agency-mediated constraints as, for instance, imagining what could have been or what could be. Just as she can release herself from both top-down and lateral constraints on imagining by abandoning her imaginative projects, so too can the agent release herself from both top-down and lateral constraints on remembering by abandoning her mnemonic projects. Her completing both, satisfying top-down and lateral constraints in both cases, involves her constructing the appropriate imagery. These constraints are conditions of success on the completion of her mnemonic/imaginative projects. In attempting to satisfy these conditions of success, the agent can intervene on the content of both processes as she carries them out.

In the case of imagining, the agent can, say, rotate the dancing banana or give it a top hat. It is obvious that neurally intact adults under normal conditions can determine these content-based features of their imagery. They can also scaffold their imagery construction by enlisting others in joint acts of imagining or by using prompts or cues. Nonetheless, the agent can just as well prematurely terminate or even fail to complete her imaginative project if she conjures imagery as of a talking orange or starts to imagine, without any imagery, what a world populated only by talking oranges would be like (*cf.* Dorsch, 2012). In cases of episodic hypothetical and counterfactual thought aimed at gaining modal knowledge, the reality and change constraints make termination or failure more likely. But this is consistent with those constraints acting as more stringent conditions on successful completion of the relevant imaginative project.

Likewise, with respect to remembering, the agent can focus on specific details of the experience to the exclusion of others, play with the temporal order of events, or adopt an

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the causal link upon which the imagery depends for its reference, either another person's description or, say, the rememberer's possible exploitation of imagery construction to activate a memory trace (178-179). Or it might be that the shift is due to the rememberer's coming to be directly acquainted with the remembered object. But Campbell does not elaborate what this acquaintance consists in. So, it's left as a possible explanation of demonstrative reference in memory. Similarly, his discussion of top-down and bottom-up demonstrative reference in memory does not seem to me to be an argument against the claim that reference can be achieved by an act of scene construction. Rather, it seems to me to be an argument to the effect that memory demonstratives are not a fundamental type of singular reference. I agree with that. One must have experienced the event in order to remember it. My claim is only that the imagery an agent constructs with the aim of remembering and, therewith, the mnemonic content, is something she chooses, albeit under the imposition of stringent constraints on what she can choose to construct. That some (causal) relation obtain between the past experience and the present memory does not preclude the agent's exploiting scene construction so as to instantiate that relation. The same can be said of the success of other epistemic imaginative projects. Thanks to the anonymous reviewer for raising this worry.

observer's perspective of the event by combining imagery of her appearance on that day, say, as seen through a mirror, with her experience of blowing out the candles. She can likewise scaffold her imagery construction in remembering by enlisting others in acts of joint recollection or searching for prompts or cues. Like other imaginative projects, success in remembering depends on the agent's actively constructing the appropriate content. Nonetheless, the agent can just as well prematurely terminate or fail to complete her mnemonic projects if she constructs the wrong imagery or abandons the project. Such selectivity of content and the ability to attempt, elaborate, or abandon reflect the agent's control in embarking on and/or completing her mnemonic projects.<sup>33</sup>

Given that the sort of agentic control exhibited in determining imagistic mental processes is restricted to acts of imagining, that intentional episodic remembering exhibits determination by the agent suggests that it is of a kind with imagining at least at the level of agency-involving process. That is, remembering is an imaginative project alongside episodic subjunctive or hypothetical reasoning at least, if not also visualization, imaginative engagement with fiction, and so on (Table 1). Its being so determinable thus counts in favor of the claim that

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<sup>33</sup> An anonymous reviewer points out that McCarroll (2018: 150ff.) suggests that changes in perspective in memory are not changes in content but, rather, are changes in mode of presentation of the same content. In which case, constructing imagery sufficient to instantiate an observer memory of an event does not count as an agent's selecting or modulating mnemonic content. I grant that this is at least a plausible interpretation of what the difference between visual field memories and observer memories. I will say two things in response. First, the imagery constructed is different between observer memories and visual field memories. So, at least in that sense, the content between them differs. Second, while the "content" of the memory might well be the same across visual field and observer memories, the sense in which it is the same "content" is that it has the same referent, namely, the past experience or the past event experienced. And, of course, I agree that the content, in this sense, is the same. But, as the reviewer points out, this is true of all of the modifications an agent can make to her mnemonic content in constructing it. What the reviewer misses, I think, is that the same can be said about any epistemic imaginative project concerned with the same thing, especially so in cases where the aim is to imagine some particular. Suppose an agent is aiming to figure out whether her suitcase will fit in her trunk tomorrow after she has packed it to the brim for her upcoming vacation and imagines trying to fit the suitcase into the trunk tomorrow. And suppose her travel-buddy engages in the same bit of hypothetical episodic thought. Finally, suppose that both succeed. By hypothesis, the content of their imaginings is the same. Both represent the future state of affairs that will result from the agent's attempt to fit her suitcase into her trunk tomorrow. Yet, they can still modulate their imagining by selecting distinct imagery. The agent or her travel-buddy can imagine the situation from her or her friend's perspective or from the perspective of being inside the trunk. They can imagine the attempt in reverse order. They can imagine seeing through the trunk to consider its internal dimensions and the dimensions of the suitcase or can imagine seeing through the suitcase to consider how best to back it so that it will fit in the trunk. And so on. All of these modifications are due to the agent's selecting different imagery. And this is consistent with both agents imagining the same thing and, thus, their hypothetical episodic thought having the same "content." I see no reason to think that the fact that the same is true of remembering means that the agent cannot select the imagery she constructs in constructing a scene of a past experience. Thanks to the anonymous reviewer for raising this worry.

remembering and other forms of active imagining are of a kind in virtue of being processes of agential construction of imagistic-content.

At this point, one might insist that, unlike in remembering, the agent can imagine whatever she likes. More specifically, the agent can voluntarily relax any constraint on content in imagining and still count as imagining. By contrast, she cannot voluntarily relax the lateral constraint on remembering that its content appropriately match that of some corresponding past experience and still count as remembering. Even if we restrict scope to active imagining, what is at issue is whether remembering is of a kind with (active) imagining, not whether remembering bears the hallmarks of some epistemic imaginative project(s). Thus, showing that remembering is in some ways like these projects is insufficient as a defense of the claim that remembering is of a kind with imagining in a way relevant for agency.<sup>34</sup>

<b>Imaginative Project</b>	<b>Lateral Constraint(s)</b>
intentional visualization*	- content of the imagery matches what is intended - content of the imagery features visual properties**
intentional experiential imagining	- content of the imagery matches what is intended - content of the imagery is appropriate to all sense modalities involved
intentional affective imagining	- content of the imagery matches what is intended - content of the state is appropriately valenced
imaginative engagement with fiction/art	- follow principles of generation applied by conventions of the medium
(episodic) future-oriented thought	- reality constraint - change constraint - content is represented as obtaining in the possible or necessary future
(episodic) counterfactual thought	- reality constraint - change constraint - content is represented as obtaining in the counterfactual past or present
(episodic) actuality-oriented imagining	- reality constraint - change constraint - content is represented as obtaining in the actual world
episodic recall	- content of the imagery appropriately matches that of a corresponding particular past experience - content resulting from modification refers to a mereological part of the particular past event - content of the imagery is represented as obtaining in the actual past

<sup>34</sup> Thanks to SA for providing this objection. A related form of it claims that remembering is at most of a kind with actuality-oriented imagining, e.g., imagining the number of windows your house actually, currently has (on actuality-oriented imagining, see Munro, 2021a,b). Although I have been for the most part concerned with episodic hypothetical and counterfactual thought as the types of imaginative project with which remembering is on a par, I acknowledge that of the three only remembering is necessarily actuality-oriented in the sense that it by definition aims at representing the actual past. That said, I take it that all four types of imaginative project are of a kind in virtue of their having certain epistemic aims.



**Table 1:** Imaginative projects and the lateral constraints applied to them. On the distinctions between sensory imagining (including visualization), experiential imagining, affective imagining, intellectual imagining (including hypothetical and counter-factual thought), and imaginative projects, see Dorsch (2012). On imaginative engagement with fiction and principles of generation involved therewith, see Walton (1990). On actuality-oriented imagining, see Munro (2021a,b). \*  $\approx$  can be extended to sensory imagining in any modality. \*\*  $\approx$  content is appropriate for the relevant sense modality.

In response, I contend that an agent's active imagining (at least) is exhausted by the imaginative projects that she has the ability to engage in (cf. Dorsch, 2012, Chapter 13; see [removed for anonymity] R&R). That is, when an agent's constructing content is something she determines both with respect to its occurrence and its content—when she is actively imagining—she is ipso facto engaged in some imaginative project. And when she is engaged in some imaginative project, she is ipso facto actively imagining. I tie active imagining to imaginative projects by appeal to the notion of a means. A means is an action performed for the sake of some further action or end. At least according to Anscombe (1957) and her followers (for instance, Thompson, 2008; Ford, 2015), intentional agency is purposive in virtue of the agent's behavior fitting a means-end structure where the end is something the agent (implicitly or explicitly) aims at in acting. Intentional actions are an agent's  $\varphi$ -ing in order to  $\psi$ .<sup>35</sup> Applying this to active imagining as I have characterized it so far, I propose the following account:

(A-Imagining) An instance of an agent's constructing some content is her actively imagining that content just in case her determining that she constructs some content and her determining the content that she constructs together constitute a means of intentionally exploring some region of modal space.<sup>36</sup>

This account of active imagining elaborates the agent's determination in her acts of imagining by positioning it within the means-end structure of intentional agency. The account's building in this structure makes imaginative projects primary. Any active imagining is by definition an instance of content construction that is controlled and aims at some end. By virtue of aiming at some end, any instance of active imagining is the agent's engagement in some imaginative project. By virtue involving as a proper part the agent's determining the relevant imagistic content, her engagement in any imaginative project is also thereby an instance of active imagining.

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<sup>35</sup> This includes cases where  $\varphi=\psi$ .

<sup>36</sup> Thanks to TW and SA for helping me clarify some of my thoughts around active imagining here.

I suggest that the boundary of ends towards which active imagining and imaginative projects may aim is the exploration of regions of modal space (understood as sets of worlds). Circumscribing regions of modal space to be explored sets a minimal lateral constraint on what content is to be constructed in an act of imagining. The imposition of this minimal content constraint sets a corresponding minimal constraint on where such content stems. Call these constraints the minimal content constraint and the minimal source constraint, respectively. Anytime an agent engages in active imagining, she thereby embarks on an imaginative project that at minimum is subject to the minimal content constraint and minimal source constraint. More demanding imaginative projects are subject to more demanding lateral constraints that, in turn, reflect tighter restrictions on the region of modal space to be explored. Nonetheless, types of imaginative project and the agentially-mediated constraints whose imposition partly individuates those types form a continuous whole by virtue of being, respectively, instances of and conditions of success for the agent's constructing content as a means of exploring the relevant region(s) of modal space.

Exploration distinguishes active imagining and imaginative projects from unbidden imagery or passive instances of imagining which can be thought of in terms of discovery or non-intentional, unintentional, or even compulsive rereading. Similarly, region-specific exploration distinguishes active imagining from the familiar lateral constraint on imagining that stems from the conceivability literature, namely, that content represent some metaphysical or conceptual possibility (for overviews, see Gendler and Hawthorne, 2002; Evidentiary, 2008). On the one hand, regions-specific exploration is less restrictive than this constraint because, by itself, it does not say that an agent cannot intend to imagine the (metaphysically) impossible. Yet, region-specific exploration is more restrictive by claiming that anytime an agent intends to imagine something or intends to do something for which her imagining serves as a means, she self-imposes a restriction on modal space at least as tight and no looser than the set of worlds where the content-to-be-constructed specified in her intention is true. The agent cannot intentionally imagine *simpliciter*. She always intentionally imagines *something*.

Another way to put the point is that the constraint that the agent not imagine what is metaphysically or conceptually impossible is a constraint on the capacity to imagine. If it is a genuine constraint, it sets a limit on the total modal space that the agent can explore (or discover or reread). By contrast, region-specific exploration involves the imposition of, at minimum, the

minimal content constraint and the minimal source constraint on agent-guided exercises of that capacity. Guidance by the agent implies some amount of self-imposed narrowing of the total available modal space. Such narrowing determines the boundary of the source of the content of her imagining. However, it does not pick out a structural feature of that space.

Active imagining is nothing more than embarking on imaginative projects aimed at the exploration of some regions of modal space—or so I have just claimed. Assuming I am right, the agent imposes at minimum the minimal content constraint and minimal source constraint in actively imagining. In cases where the agent fails to satisfy even these minimal constraints, her lapsing from guided exploration of the relevant region of modal space results in her lapsing into unguided exploration, discovery, or rereading of some other region. This simply reflects the fact that agents do not enjoy complete control over the unfolding of their imaginative projects, not that imagining is unconstrained. Importantly, that imaginative projects impose limits on what region(s) of modal space the agent can draw on in her imagining means that, assuming I am right, any instance of active imagining is subject to some source constraint. All imaginative projects thus share with their mnemonic kin a lateral constraint on the source of the content-to-be-constructed.<sup>37</sup>

That said, not every imaginative project is like episodic counterfactual or hypothetical thought in having an epistemic aim. As such, not every imaginative project is subject to the reality and change constraints nor to the constraint that mnemonic content appropriately match the remembered experience. Yet, this isn't a problem for the account of active imagining just presented. Additional lateral constraints on content like the actuality and change constraints call for more stringent restriction than the minimal content constraint and the minimal source

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<sup>37</sup> An anonymous reviewer points out that, given the way I've characterized active imagining in terms of the means-end structure of intentional agency, any constraints set on imagining by an intention turn out to be lateral constraints. I think this is right except for the top-down constraints set out by the content of the agent's intention. If the agent intends to imagine a dancing banana then the top-down constraint on her imagining is that she imagine a dancing banana. If she intends to pretend that the floor is lava then the top-down constraint on her imagining is that she imagine that the floor is lava. And so on. It's important to note that, for every instance of an intentional imagining (or remembering), there's a top-down constraint set by the intention. It's important because my argument depends on the claim that the agent is the one who ultimately imposes the lateral constraints on imagining (and remembering) by virtue of her intending to do something the doing of which must be in accordance with or limited by the relevant lateral constraints. And it's important because my argument depends on the claim that the agent is the one who ultimately satisfies the lateral constraints on imagining (and remembering) by virtue of her doing what she intends. So, the imposition and satisfaction of top-down constraints have to play a role in my account. They play the role of indirectly imposing lateral constraints and of being satisfied by behavior that satisfies those lateral constraints. Thanks to the anonymous reviewer for pushing me to clarify this point.

constraint. In fact, such additional constraints are arguably determinates of these minimal lateral constraints. When embarking on an epistemic imaginative project, these constraints reflect elaborations of the agent's intention. Her intention to imagine, truly, what would or will happen sets more stringent veridicality-related conditions of success on her completing the relevant project. These constraints reflect tighter restrictions on the content appropriate for the agent to conjure in imagining what could have been or what could be. They constitute a restriction on the modal space to be explored.

The agent relaxes or imposes these constraints and others through modulation of her intention. She relaxes or imposes these additional constraints by resolving to change, simplify, or elaborate the relevant imaginative project she has embarked on. She relaxes the minimal constraints only by abandoning embarking on or completing any imaginative project and imposes them by deciding to embark on the most minimal of such projects, say, imagining a dancing banana for fun or for its own sake. Even in cases of directed daydreaming, the agent guides what she conjures in accordance with her intention. Her intention in such cases is merely open-ended: she deliberately lets her mind wander. Yet, in deliberately letting her mind wander, she stands ready to intervene if the imagery that comes is not to her liking. The extensive control we enjoy over what we imagine is reflected in the constraints imposed on the content that we construct.<sup>38</sup>

Active remembering is an extension of that control, not a limit on it. The lateral constraint on the content of remembering is arguably a further determinate of the minimal constraints in virtue of being a further determinate of the actuality and change constraints. It

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<sup>38</sup> By restricting focus to remembering and imagining as agency-involving processes, I have not considered how passive imagining or the occurrence of unbidden imagery might impact the arguments of this article. Following Dorsch (2012, Chapter 13) I am inclined to reject passive imagery-involving episodes as genuinely imaginative. Yet, one might think, mind-wandering—the occurrence of imaginative content-production that is not obviously tied to the current task or environment—is not a kind of *active* imagining as I have defined it (on mind-wandering, see Irving and Glasser, 2020; Peiss, Cosmelli, and Kaufman, 2020). If so, one might wonder whether or how it bears on my argument. Although I do not have the space for a full consideration of mind-wandering here, I can provide the following sketch of a reply: mind-wandering might be a kind of habitual imagining or open-ended imaginative project. As the agent gets better at completing imaginative projects like considering possible futures, exercising prospective memory, engaging imaginatively in fiction, visualization, etc. she develops habits for content-production. In the good case, those habits continue to serve as means. Unguided mind-wandering might well be a case in which the habit is triggered without completing any project or without any project to complete. In which case, I contend that it is parasitic on the form of active imagining I put forward in this subsection. Active imagining thus has downstream effects beyond content-construction appropriate for completing an imaginative project that the agent knowingly pursues. But this is what we should expect if we model an account of imagining as a process on intentional action. Thanks to AS, AR, and AC for providing the objection and to both AR and AS for pushing me to clarify my response.

reflects an elaboration of the agent's intention to imagine that sets a stringent veridicality, actuality-oriented, and past-oriented condition of success on her completing that imaginative-cum-mnemic-project. Given that active imagining is the agent's constructing content with the aim of exploring some region of modal space, her mnemic projects are simply those that involve making good on a commitment to exploring a subregion (a sliver, really) of the actual, namely, some particular past event. Bracketing a complete defense of the account of active imagining just introduced,<sup>39</sup> continuity between the constraints imposed on active imagining on the one hand and those imposed on intentional episodic hypothetical thought, intentional episodic counterfactual thought, and intentional episodic remembering on the other suggests a corresponding continuity of the category of imagining as an agency-involving process and the category of remembering as an agency-involving process.

### **Conclusion**

I have argued that episodic remembering is subject to the same kind of agentially-mediated lateral constraints as imagining what could have been or what could be. In all three cases, these constraints function as conditions of success for the corresponding mental action, that is, for the completion of the relevant veridicality-oriented imaginative project. Episodic remembering is therefore the same type of action as episodic counterfactual or hypothetical thought. This result is evinced by the agent's determining not just that she imagines or remembers but also the content of her imagery in imagining or remembering. Determination by the agent with respect to occurrence and content is tempered by the need to satisfy the top-down and lateral constraints imposed on her mnemic and imaginative activity once she has set herself to complete the relevant project. Nonetheless, she can release herself from those constraints by abandoning the relevant mnemic or imaginative project. And her satisfying those constraints is just her successfully engaging in active imagining, including her determining in what way she goes about exploring the relevant circumscribed region of modal space. The present argument for the claim that remembering and imagining are of a kind at the level of activity provides support for the claim that remembering is a mental action. It substantiates the assumption that episodic

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<sup>39</sup> Despite, leaving a full defense of the view of active imagining just presented for another occasion (see [removed for anonymity] R&R), it fits well with accounts of imagination that center action, e.g., Dorsch (2012); Hopkins (nd).

remembering is the same kind of process as sensory or experiential imagining in a way relevant for agency. The claim that remembering satisfies Trying depends in part on this assumption. So, given that I have successfully substantiated the assumption, I have provided needed support for the claim that remembering satisfies Trying and, so, is a mental action. Moreover, in the process, I have provided a sketch of a novel agent-centered approach to imagination, a full account of which I leave for another occasion (see [removed for anonymity] R&R).

## References

- Addis, D., R. Musicaro, L. Pan, and D. Schacter (2010). Episodic simulation of past and future events in older adults: Evidence from an experimental recombination task. *Psychology and Aging* 25, 369–76.
- Addis, D., A. Wong, and D. Schacter (2007). Remembering the past and imagining the future: Common and distinct neural substrates during event construction and elaboration. *Neuropsychologia* 45, 1363–77.
- Andrews-Hanna, J. R. (2012). The brain’s default network and its adaptive role in internal mentation. *The Neuroscientist* 18(3), 251–270.
- Anscombe, G. E. M. (1957). *Intention*. Harvard University Press.
- Arango-Muñoz, S. and J. P. Bermúdez (2018). Remembering as a mental action. In K. Michaelian, D. Debus, and D. Perrin (Eds.), *New Directions in the Philosophy of Memory*, pp. 75–96. Routledge.
- Aronowitz, S. (forthcoming). Semanticization challenges the episodic-semantic distinction. *British Journal for the Philosophy of Science*.
- Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology*. Cambridge University Press.

- Bengson, J. and M. A. Moffett (2011). *Knowing How: Essays on Knowledge, Mind, and Action*. Oxford, England: Oxford University Press USA.
- Bernecker, S. (2010). *Memory: A Philosophical Study*. Oxford University Press.
- Bernecker, S. (2015). Visual memory and the bounds of authenticity. In A. Coliva, V. Munz, and D. Moyal-Sharrock (Eds.), *Mind, Language and Action: Proceedings of the 36th International Wittgenstein Symposium*, pp. 445–464. De Gruyter.
- Berntsen, D. and A. Bohn (2010). Remembering and forecasting: The relation. *Memory Cognition* 38(3), 265–278.
- Briscoe, R. (2011). Mental imagery and the varieties of amodal perception. *Pacific Philosophical Quarterly* 92(2), 153–173.
- Briscoe, R. (2018). Superimposed mental imagery: On the uses of make-perceive. In F. Macpherson and F. Dorsch (Eds.), *Perceptual Imagination and Perceptual Memory*, pp. 161– 185.
- Carter, J. A. and T. Poston (2018). *A Critical Introduction to Knowledge-How*. New York: Bloomsbury Academic.
- Cavedon-Taylor D. (2022). Aphantasia and psychological disorder: Current connections, defining the imagery deficit and future directions. *Front. Psychol.* 13:822989. doi: 10.3389/fpsyg.2022.822989
- Chasid, A. (2017). Imaginative Content, Design-Assumptions and Immersion. *Review of Philosophy and Psychology* 8(2): 259-272.
- Chasid, A. (2019). Imagining in response to fiction: unpacking the infrastructure. *Philosophical Explorations* 23(1): 31-48.

- Chasid, A. (2021a). Not by Imaginings Alone: On How Imaginary Worlds Are Established. *Journal of the American Philosophical Association* 7(2): 195-212.
- Chasid, A. (2021b). Imaginative immersion, regulation, and doxastic mediation. *Synthese* 199 (3-4): 1-43
- Chudnoff, E. (2021). Two Kinds of Cognitive Expertise. *Noûs* 55(2): 270-292
- Danto, A. C. (1965). Basic actions. *American Philosophical Quarterly* 2(2), 141–148.
- D'Argembeau, A. and M. Van der Linden (2004). Phenomenal characteristics associated with projecting oneself back into the past and forward into the future: Influence of valence and temporal distance. *Consciousness and cognition* 13, 844–58.
- D'Argembeau, A. and M. Van der Linden (2006). Individual differences in the phenomenology of mental time travel: The effect of vivid visual imagery and emotion regulation strategies. *Consciousness and Cognition* 15(2), 342–350.
- Davidson, D. (2001). *Essays on Actions and Events*, 2nd Edition. Oxford: Clarendon Press.
- Dawes AJ, Keogh R, Robuck S, Pearson J. (2022). Memories with a blind mind: Remembering the past and imagining the future with aphantasia. *Cognition*.105192. doi: 10.1016/j.cognition.2022.105192. PMID: 35752014.
- De Brigard, F. (2014a). Is memory for remembering? Recollection as a form of episodic hypothetical thinking. *Synthese* 191(2), 1–31.
- De Brigard, F. (2014b). The Nature of Memory Traces. *Philosophy Compass* 9(6): 402-414.
- De Brigard, F., D.R. Addis, J.H., Ford, D.L. Schacter, and K.S. Giovanello (2013). Remembering what could have happened: neural correlates of episodic counterfactual thinking. *Neuropsychologia* 51, 2401–2414.



- De Brigard, F. and K.S. Giovanello (2012). Influence of outcome valence in the subjective experience of episodic past, future, and counterfactual thinking. *Consciousness and Cognition* 21(3), 1085–1096.
- Debus, D. (2008). Experiencing the past: A relational account of recollective memory. *Dialectica* 62(4), 405–432.
- Debus, D. (2014). Mental time travel: Remembering the past, imagining the future, and the particularity of events. *Review of Philosophy and Psychology* 5(3), 333–350.
- Debus, D. (2016). XV-shaping our mental lives: On the possibility of mental self-regulation. *Proceedings of the Aristotelian Society* 116(3), 341–365.
- Dorsch, F. (2009). Judging and the scope of mental agency. In L. O'Brien & M. Soteriou (Ed.), *Mental Actions*. Oxford University Press. pp. 38-71
- Dorsch, F. (2012). *The Unity of Imagining*. De Gruyter.
- Dunlosky, J., and R.A. Bjork, (2008). *Handbook of metamemory and memory*. Psychology Press.
- Dunlosky, J., and S. Tauber, (2016). *The Oxford Handbook of Metamemory*. Oxford University Press.
- Evnine, S. (2008). Modal epistemology: Our knowledge of necessity and possibility. *Philosophy Compass* 3(4), 664–684.
- Fantl, J. (2008). Knowing-how and knowing-that. *Philosophy Compass* 3(3), 451–470.
- Fernández, J. (2017). Intentional objects of memory. In S. Bernecker & K. Michaelian (Ed.), *The Routledge Handbook of Philosophy of Memory*, pp. 88–100. Routledge.
- Fernández, J. (2019). *Memory: A Self-Referential Account*. New York, NY, USA: Oxford University Press.

- Ford, A. (2015). The arithmetic of intention. *American Philosophical Quarterly* 52(2), 129–143.
- Fridland, E. (2017). Automatically minded. *Synthese* 194(11): 4337–4363.
- Gauker, C. (2021). Imagination constrained, imagination constructed. *Inquiry: An Interdisciplinary Journal of Philosophy*.1-28.
- Gendler, T. S. (2000). The puzzle of imaginative resistance. *Journal of Philosophy* 97(2), 55.
- Gendler, T. S. (2006). Imaginative resistance revisited. In S. Nichols (Ed.), *The Architecture of the Imagination*, pp. 149–173. Oxford University Press.
- Gendler, T. S. and J. Hawthorne (2002). *Conceivability and Possibility*. Oxford University Press.
- Goldman, A. I. (1970). *A Theory of Human Action*. Englewood Cliffs, NJ, USA: Princeton University Press.
- [removed for anonymity]. (2022). Memory as skill. *Review of Philosophy and Psychology*, 1–24.
- [removed for anonymity]. (2024). Imagining as a skillful mental action. *Synthese* 204 (38): 1-33.
- Hassabis, D. and E. A. Maguire (2009). The construction system of the brain. *Philosophical Transactions of the Royal Society B: Biological Sciences* 364(1521), 1263–1271.
- Hoffman, K. L. and B. L. McNaughton (2002). Coordinated reactivation of distributed memory traces in primate neocortex. *Science* 297(5589), 2070–2073.
- Hopkins, R. (2014). Episodic memory as representing the past to oneself. *Review of Philosophy and Psychology* 5(3), 313–331.
- Hopkins, R. (2018). Imagining the past: On the nature of episodic memory. In F. M. F. Dorsch (Ed.), *Memory and Imagination*, pp. 46–71. Oxford University Press.
- Hopkins, R. (nd). *The Profile of Imagining* [Unpublished Manuscript].

- Hornsby, J. (1980). *Actions*. Routledge and Kegan Paul.
- Ichikawa, J. (2009). Dreaming and imagination. *Mind and Language* 24(1), 103–121.
- Irish, M. and O. Piguet (2013). The pivotal role of semantic memory in remembering the past and imagining the future. *Frontiers in Behavioral Neuroscience* 7.
- Irving, Z. C. and A. Glasser (2020). Mind-wandering: A philosophical guide. *Philosophy Compass* 15(1).
- Kind, A. (2016). Imagining under constraints. In A. Kind and P. Kung (Eds.), *Knowledge Through Imagination*, pp. 145–159. Oxford University Press.
- Kind, A. (2018). How imagination gives rise to knowledge. In F. Macpherson and F. Dorsch (Eds.), *Perceptual Imagination and Perceptual Memory*, pp. 227–246. Oxford University Press.
- Kind, A. (2020). The skill of imagination. In E. Fridland and C. Pavese (Eds.), *Routledge Handbook of Skill and Expertise*, pp. 335–346. Routledge.
- Kind, A. (2022). Learning to imagine. *British Journal of Aesthetics* 62(1), 33–48.
- Klein, S. (2016). Auto-noetic consciousness: Re-considering the role of episodic memory in future-oriented self-projection. *Quarterly Journal of Experimental Psychology* 69(2), 381–401.
- Klein, S. B., J. Loftus, and J. F. Kihlstrom (2002). Memory and temporal experience: the effects of episodic memory loss on an amnesic patient's ability to remember the past and imagine the future. *Social Cognition* 20(5), 353–379.
- LaBar, K. S. and R. Cabeza (2006). Cognitive neuroscience of emotional memory. *Nature Reviews Neuroscience* 7(1), 54–64.

- Langland-Hassan, P. (2015). Imaginative attitudes. *Philosophy and Phenomenological Research* 90(3), 664–686.
- Langland-Hassan, P. (2016). On choosing what to imagine. In A. Kind and P. Kung (Eds.), *Knowledge Through Imagination*, pp. 61–84. Oxford University Press.
- Langland-Hassan, P. (2021). What sort of imagining might remembering be? *Journal of the American Philosophical Association* 7(2), 231–251.
- Langland-Hassan, P. (2023). Remembering and imagining: The attitudinal continuity. In A. Berninger and Ingrid Vendrell Ferran (Eds.), *Philosophical Perspectives on Memory and Imagination*. London: Routledge.
- Levy, Y. (2013). Intentional action first. *Australasian Journal of Philosophy* 91(4): 705-718
- Liao, S. and T. Gendler (2019). Imagination. *Stanford Encyclopedia of Philosophy*.
- Lynch, K. (2019). Knowing how, basic actions, and ways of doing things. *Inquiry: An Interdisciplinary Journal of Philosophy* 62(8), 956–977.
- Martin, V. C., D. L. Schacter, M. C. Corballis, and D. R. Addis (2011). A role for the hippocampus in encoding simulations of future events. *Proceedings of the National Academy of Sciences* 108(33), 13858–13863.
- McCarroll, C. (2018). *Remembering From the Outside: Personal Memory and the Perspectival Mind*. Oxford: Oxford University Press.
- McDonough, I. M. and D. A. Gallo (2010). Separating past and future autobiographical events in memory: Evidence for a reality monitoring asymmetry. *Memory Cognition* 38(1), 3–12.
- McDowell, J. (2010). What is the content of an intention in action? *Ratio* 23(4), 415–432.

- McDowell, J. (2011). Some remarks on intention in action. *The Amherst Lecture in Philosophy* 6, 1–18.
- McGinn, C. (2004). *Mindsight: Image, Dream, Meaning*. Harvard University Press.
- Mele, A. (2009). Mental action: A case study. In L. O'Brien & M. Soteriou (Ed.), *Mental Actions*. Oxford University Press. pp. 17-37.
- Michaelian, K. (2016a). Against discontinuism: Mental time travel and our knowledge of past and future events. In K. Michaelian, S. B. Klein, and K. K. Szpunar (Eds.), *Seeing the Future: Theoretical Perspectives on Future-Oriented Mental Time Travel*, pp. 62–92. Oxford University Press.
- Michaelian, K. (2016b). *Mental Time Travel: Episodic Memory and Our Knowledge of the Personal Past*. MIT Press.
- Michaelian, K. (2021). Imagining the past reliably and unreliably: towards a virtue theory of memory. *Synthese* 199(3-4): 7477-7507
- Michaelian, K. (forthcoming). Radicalizing simulationism: Remembering as imagining the (nonpersonal) past. *Philosophical Psychology*, 1–27.
- Michaelian, K., D. Perrin, and A. Sant'Anna (2020). Continuities and discontinuities between imagination and memory: The view from philosophy. In A. Abraham (Ed.), *The Cambridge Handbook of Imagination*. Cambridge University Press.
- Morton, A. (2013). *Emotion and Imagination*. Polity.
- Munro, D. (2021a). Imagining the actual. *Philosophers' Imprint* 21(17).
- Munro, D. (2021b). Remembering the past and imagining the actual. *Review of Philosophy and Psychology* 12(2).

- Myers, J. (2021a). The epistemic status of the imagination. *Philosophical Studies* 178(10), 3251– 3270.
- Myers, J. (2021b). Reasoning with imagination. In A. Kind and C. Badura (Eds.), *Epistemic Uses of Imagination*. Routledge.
- Nanay, B. (2010). Perception and imagination: Amodal perception as mental imagery. *Philosophical Studies* 150(2), 239–254.
- Nanay, B. (2016). Imagination and perception. In A. Kind (Ed.), *Routledge Handbook of the Philosophy of Imagination*, pp. 124–134. Routledge.
- O'Brien, L. (2017). Actions as Prime. *Royal Institute of Philosophy Supplement* 80:265-285.
- Openshaw, J. (2023). (In defence of) preservationism and the previous awareness condition: What is a theory of remembering, anyway? *Philosophical Perspectives* 37 (1):290-307.
- Pavese, C. (forthcoming). Knowledge-how. In E. Zalta (Ed.), *Stanford Encyclopedia of Philosophy* (Summer 2021 Edition).
- Peiss, D. P., D. Cosmelli, and J. C. Kaufman (2020). *Creativity and the Wandering Mind: Spontaneous and Controlled Cognition*. Academic Press.
- Perrin, D. (2016). Asymmetries in subjective time. In K. Michaelian, S. B. Klein, and K. K. Szpunar (Eds.), *Seeing the future: Theoretical perspectives on future-oriented mental time travel.*, pp. 39–61. New York, NY, US: Oxford University Press.
- Perrin, D. and K. Michaelian (2017). Memory as mental time travel. In S. Bernecker and K. Michaelian (Eds.), *Routledge Handbook of Philosophy of Memory*, pp. 228–239. Routledge.
- Proust, J. (2001). A plea for mental acts. *Synthese* 129(1), 105–128.

- Proust, J. (2013). *The Philosophy of Metacognition: Mental Agency and Self-Awareness*. New York: Oxford University Press.
- Raichle, M. E. (2015). The brain's default mode network. *Annual Review of Neuroscience* 38(1), 433–447.
- Rasmussen, A. S. and D. Berntsen (2013). The reality of the past versus the ideality of the future: emotional valence and functional differences between past and future mental time travel. *Memory Cognition* 41(2), 187–200.
- Robins, S. (2016). Representing the past: Memory traces and the causal theory of memory. *Philosophical Studies* 173(11), 2993–3013.
- Robins, S. (2020). Defending discontinuism, naturally. *Review of Philosophy and Psychology* 11(2), 469–486.
- Robins, S. (2022). Episodic memory is not for the future. In, A. Sant'Anna, C. McCarroll, & K. Michaelian (Ed.) *Current Controversies in the Philosophy of Memory*. Routledge (pp. 166–184).
- Rosenbaum, R. S., S. Köhler, D. Schacter, M. Moscovitch, R. Westmacott, S. Black, F. Gao, and E. Tulving (2005). The case of k.c.: Contributions of a memory-impaired person to memory theory. *Neuropsychologia* 43, 989–1021.
- Sant'Anna, A. (nd). Is remembering constructive imagining? [Unpublished Manuscript].
- Schacter, D. L. and D. R. Addis (2007a). The cognitive neuroscience of constructive memory: remembering the past and imagining the future. *Philos Trans R Soc Lond B Biol Sci* 362(1481), 773–786.
- Schacter, D. L. and D. R. Addis (2007b). The ghosts of past and future. *Nature* 445(7123), 27–27.

- Schacter, D. L., R. G. Benoit, F. De Brigard, and K. K. Szpunar (2015). Episodic future thinking and episodic counterfactual thinking: Intersections between memory and decisions. *Neurobiology of Learning and Memory* 117, 14–21.
- Searle, J. R. (1983). *Intentionality: An Essay in the Philosophy of Mind*. Oxford University Press.
- Strawson, G. (2003). Mental ballistics or the involuntariness of spontaneity. *Proceedings of the Aristotelian Society* 103(3), 227–257.
- Szpunar, K. K., J. M. Watson, and K. B. McDermott (2007). Neural substrates of envisioning the future. *Proceedings of the National Academy of Sciences* 104(2), 642–647.
- Thompson, R.F. (1991). Are memory traces localized or distributed? *Neuropsychologia*. 29(6): 571-82.
- Thompson, M. (2008). *Life and Action: Elementary Structures of Practice and Practical Thought*. Harvard University Press.
- Tulving, E. (1972). Episodic and semantic memory. In E. Tulving & W. Donaldson, *Organization of memory*. Academic Press. 381-403.
- Tulving, E. (1983). *Elements of Episodic Memory*. Oxford University Press.
- Tulving, E. (1985). Memory and consciousness. *Canadian Psychology / Psychologie canadienne* 26(1), 1–12.
- Tulving, E. (2002). Episodic Memory: From Mind to Brain. *Annual Review of Psychology* 53: 1–25.
- Van Leeuwen, N. (2013). The meanings of "imagine" part i: Constructive imagination. *Philosophy Compass* 8(3), 220–230.



- Vitz, R. (2008). Doxastic voluntarism. *The Internet Encyclopedia of Philosophy*, ISSN 2161-0002, <https://iep.utm.edu/>
- Wagner, I. C. (2016). The integration of distributed memory traces. *The Journal of Neuroscience* 36(42), 10723–10725.
- Wagoner, B. (2017). *The Constructive Mind: Bartlett's Psychology in Reconstruction*. Cambridge University Press.
- Walton, K. L. (1990). *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Harvard University Press.
- Weinberg, J. M. and A. Meskin (2006). Puzzling over the imagination: Philosophical problems, architectural solutions. In S. Nichols (Ed.), *The Architecture of the Imagination: New Essays on Pretence, Possibility, and Fiction*, pp. 175–202. Oxford University Press.
- Werning, M. (2020). Predicting the Past from Minimal Traces: Episodic Memory and its Distinction from Imagination and Preservation. *Review of Philosophy and Psychology* 11(2): 301-333.
- Williams, D. (2021). Imaginative constraints and generative models. *Australasian Journal of Philosophy* 99(1), 68–82.
- Williamson, T. (2008). *The Philosophy of Philosophy*. Wiley-Blackwell.
- Windt, J. M. (2010). The immersive spatiotemporal hallucination model of dreaming. *Phenomenology and the Cognitive Sciences* 9(2), 295–316.
- Winlove, C. I. P., F. Milton, J. Ranson, J. Fulford, M. MacKisack, F. Macpherson, and A. Zeman (2018). The neural correlates of visual imagery: A co-ordinate-based meta-analysis. *Cortex* 105, 4–25.

- Wu, W. (2011a). Attention as selection for action. In C. Mole, D. Smithies, and W. Wu (Eds.), *Attention: Philosophical and Psychological Essays*, pp. 97–116. Oxford University Press.
- Wu, W. (2011b). Confronting many-many problems: Attention and agentic control. *Noûs* 45(1), 50–76.
- Wu, W. (2013a). The case for zombie agency. *Mind* 122(485), 217–230.
- Wu, W. (2013b). Mental action and the threat of automaticity. In A. Clark, J. Kiverstein, and T. Vierkant (Eds.), *Decomposing the Will*, pp. 244–61. Oxford University Press.
- Wu, W. (2014). *Attention*. Routledge.
- Wu, W. (2016). Experts and deviants: The story of agentic control. *Philosophy and Phenomenological Research* 92(2), 101–26.
- Wu, W. (2019). Action always involves attention. *Analysis* 79(4), 693–703.