



# Situated authenticity in episodic memory

Roy Dings<sup>1</sup> · Christopher J. McCarroll<sup>2</sup> · Albert Newen<sup>1</sup>

Received: 6 February 2023 / Accepted: 17 August 2023 / Published online: 1 September 2023  
© The Author(s) 2023

## Abstract

A recalled memory is deemed authentic when it accurately represents how one experienced the original event. However, given the convincing research in cognitive science on the constructive nature of memory, this inevitably leads to the question of the ‘bounds of authenticity’. That is, how similar does a memory have to be to the original experience to still count as authentic? In this paper we propose a novel account of ‘Situated Authenticity’ which highlights that the norms of authenticity are context-dependent. In particular, we show that each of the three core functions of episodic memory (self, social and directive) is correlated with patterned changes in levels of conceptualization (e.g., concrete construal versus abstract construal of the event). We support this theoretical account with existing empirical data. We conclude the paper by showing how our account of Situated Authenticity supplements ongoing discussions on memory contextualism, and providing an outline of how our account, which is currently elaborated targeting a phenomenological level, may also be elaborated on a processing level using the concept of representational format.

**Keywords** Episodic memory · Memory authenticity · Memory accuracy · Functionality · Scenario construction

---

✉ Roy Dings  
r.p.j.m.dings@gmail.com

Christopher J. McCarroll  
chrismccarroll@nycu.edu.tw

Albert Newen  
Albert.newen@rub.de

<sup>1</sup> Institute of Philosophy II, Ruhr-Universität Bochum, Universitätsstrasse 150, 44801 Bochum, Germany

<sup>2</sup> Institute for Philosophy of Mind and Cognition, National Yang Ming Chiao Tung University, Linong Street, Taipei 112, Taiwan

## 1 Introduction

What does it mean for an episodic memory to be *successful*? Typically, accuracy is considered one of the core conditions for successful remembering. Following Bernecker (2010) we can further distinguish between two forms of accuracy: roughly, a memory is *true* when it represents the original event accurately; a memory is *authentic* when it represents one's experience of the original event accurately. Yet everyday experience, as well as extensive findings from cognitive science on the constructive nature of memory, show that any useful notion of authenticity cannot be too strict: memories typically diverge, to a greater or lesser extent, from the original experience. Thus, Bernecker poses the question "What are the bounds of authenticity" (2015, p. 455)?

The current paper addresses this very question by proposing an account of 'situated authenticity'. Here is our answer in a nutshell: Any account of authenticity has to acknowledge the fundamental ambiguity inherent in the idea of an 'event'. Roughly, there are different ways to describe the same event. Philosophy of action has further clarified the different levels of conceptualization of any given event, where these conceptualizations have structural features and interdependencies (e.g., Goldman, 1970). These conceptualizations play a role in both how people experience the world (Vallacher & Wegner, 1989) as well as how they recall those experiences (Dings & Newen, 2023). Because of this, the question of when a memory is authentic has to take into account the various levels of conceptualizations. Existing research on memory(-authenticity) has assumed a default level of conceptualization which serves as the benchmark for authenticity—but this default level is not argued for. Settling on the 'right' level, to determine whether a memory is authentic, does indeed require a *norm*. In our proposed account of 'Situated authenticity', we derive this norm from situational demands on the function of episodic memory. As we will show, memory functions converge on particular levels of conceptualization. Thus, we argue that 'authenticity' should take into account memory functionality and associated conceptualizations, such that we can recall an event on a (slightly) different level of conceptualization while it still meets the norm of being authentic (due to associated changes in memory functionality). The core claim of this paper is thus that accuracy (including authenticity) forms only *one* function of memory and that other functions (e.g., self, social, directive) may modulate and constrain accuracy (including authenticity). Considering *how* these other functions may modulate and constrain accuracy is pivotal for any account of successful remembering.

The paper proceeds as follows. In Sect. 2 we briefly review discussions on accuracy and authenticity in memory. We also briefly summarize an ongoing debate on observer perspectivity in memory, which exemplifies the relevance of discussions on memory authenticity. Given the role of functionality of memory in our argument, Sect. 3 reviews the literature on functions of (episodic) memory. In Sect. 4 we introduce the concept of Situated Authenticity and show how memory functionality is intertwined with levels of conceptualization, and how this offers us a novel account of authenticity. Section 5 concludes the paper by showing how our proposal relates to adjacent work on this topic.

## 2 Accuracy and authenticity in episodic memory

A discussion of accuracy in episodic memory must first begin with a description of the content of episodic memory. What is it that episodic memories are about? Episodic memories seem to be about, on the one hand, *events* in the personal past (Michaelian, 2016). On the other hand, part of the content of episodic memory also seems to be about our *experiences* of those past events (Hoerl, 2018).<sup>1</sup> These seem to be two aspects of the content of episodic memory (Rowlands, 2018).

This duality of content gives us two conditions on the accuracy of episodic memory: truth and authenticity. A memory is *true* when it is accurate with respect to the objective event that occurred in the past.<sup>2</sup> A memory is *authentic* when it is accurate with respect to one's original experience or perception of that event (Bernecker, 2010).<sup>3</sup> We can think of truth as, in a sense, an external or third-personal criterion, tracking objective reality. Authenticity, on the other hand, is an internal criterion, tracking how an event was represented by a subject in the past.

If we consider the content of episodic memory as primarily about past events, we can say that episodic memories should aim at truth (Michaelian & Sant'Anna, 2022). Thinking of the content of episodic memory as primarily about experiences one had in the past, rather than objective events, then accuracy in memory is determined by authenticity—the match between one's present and past representations.<sup>4</sup> Finally, if we think that both aspects of content are important, namely past events and our experiences of those events, then genuine episodic memories must satisfy both the truth and authenticity conditions. How one thinks of accuracy in episodic memory will depend on exactly what one thinks episodic memory is tracking or representing: past experiences, objective events, or both.

Given that there are different theories of memory, there are different answers to the question of accuracy in episodic memory. For example, Sven Bernecker (2010,

<sup>1</sup> In the literature, theorists seem to sometimes use the notion of 'experience' in different ways. On the one hand, it can be taken to mean the content of one's original representation during an episode of perception, where this content can be understood as involving a mix of internal information (e.g., emotions) and external information (aspects of the world one is attending to) (McCarroll, 2020a; 2020b). On the other hand, it can also be more specific, meaning something like phenomenal character (Hoerl, 2018). While these notions may be related, our primary target is experience in the first sense.

<sup>2</sup> Truth seems appropriate to evaluations of propositional content. It is not clear that episodic memories involve propositional content (Sant'Anna, 2018); at least part of the content of episodic memory is sensory and non-propositional, and accuracy should be considered as a more graded notion. Nonetheless the term 'truth' is used in the debate on accuracy in episodic memory.

<sup>3</sup> The notion of 'authentic' at play here is narrow and relates to a form of accuracy in memory. There is a long tradition where the notion of 'authentic' is employed in a different sense, in relation to the moral agent (e.g., Taylor, 1991).

<sup>4</sup> There might be different ways of understanding this claim. It might be that authenticity can be thought of in terms of the relationship between retrieved content and experienced content, or it might be thought of in terms of the relationship between retrieved content and encoded content (Michaelian & Sant'Anna, 2022). Our paper is primarily targeting the *phenomenological level*, so it is authenticity in the sense of the relationship between experience and retrieval. Nonetheless we outline an additional hypothesis (in terms of representational formats) in Sect. 5 that target a *processing level* equivalent, where here the appropriate relationship might be between encoding and retrieval. Given that the content of experience and encoding may differ it is important to ultimately establish the precise relation between them, but this is a task that is beyond the scope of this paper.

2015) holds that genuine memory must satisfy both truth and authenticity conditions. Kourken Michaelian, however, rejects this view. For Michaelian (2020), the claim that episodic remembering requires truth *and* authenticity is implausible. The constructive nature of episodic memory, where content is not merely preserved from a past experience but is reconstructed from various sources of information, means it is improbable that memories are ever authentic: constructive memory means that ‘it is unlikely that retrieved memories are ever wholly accurate with respect to the corresponding experiences; it is likely, in fact, that they are often highly inaccurate with respect to them’ (Michaelian, 2020, p. 137). That leaves us with truth. Even if *authentic* episodic memories are improbable, the truth condition on successful remembering can still be satisfied. On the simulation theory, ‘memory may aim at truth, but it does not aim at authenticity’ (Michaelian, 2020, p. 137).

One way in which this debate about truth and authenticity plays out in the literature is in relation to the notion of observer perspective memories (Sutton 2010). Observer perspectives are memories in which one sees oneself in the remembered scene, from an external or detached point of view. Intuitively, because there is a divergence between the original visual point of view and the point of view when remembering, it seems hard to account for observer perspectives in terms of authenticity (cf. Dranseika et al. 2021). There appears to be a mismatch between how one experienced the event and how one remembers the event. Nonetheless, following a claim made in Nigro and Neisser’s (1983) foundational study about perspective in memory, such that observer perspectives may have actually been encoded in this format, some have argued that such memories can satisfy the authenticity condition (McCarroll & Sutton, 2017). The idea is that, at least in some instances, observer perspectives may be constructed from information that was available at the time of encoding, but that was translated into visual imagery in which one sees oneself from the outside (McCarroll, 2017; McCarroll, 2018). In this sense, despite the appearance of an apparent divergent point of view, there is in fact no mismatch between encoding and retrieval and observer perspectives can be authentic memories.

This view has recently been challenged, however. According to Michaelian and Sant’Anna (2021), while observer perspectives may in principle involve the kind of translation necessary to satisfy authenticity, in practice this is extremely unlikely to happen. The general idea is that an observer perspective image in which one sees oneself from the outside either involves the wrong kind of content for the translation process to work, or would require much more information than is probable during the original experience. Authentic observer memories, on this view, may be possible, but they are extremely improbable.

One of the main motivations behind Michaelian and Sant’Anna’s attack on authenticity is that it is too strict a condition to place on successful remembering. Remembering the past from an observer perspective is common and quotidian, but if successful remembering requires authenticity, then many ordinary memories, such as those that are recalled from a detached point of view, will be unsuccessful. What if the condition on authenticity was relaxed somewhat, however? What if we could show that memories, such as those recalled from an observer perspective, can still show some departure from one’s original experience, and yet still be classed as authentic memories? We might be need to work out the ‘bounds of authenticity’ (Bernecker,

2015)—the limits to which a memory may still be considered accurate but which nonetheless departs somewhat from one’s original experience.<sup>5</sup> It is to this task that we turn in the rest of this paper. The task begins with a discussion of the various functions of episodic memory. How we think of the accuracy conditions on successful remembering may depend on the purpose for which we are remembering.

### 3 Functions of episodic memory

Functionalist approaches to memory are common and influential (Conway & Pleydell-Pearce, 2000). Such approaches start from the assumption that the content, structure and phenomenology of memory is always dependent on the function that memory fulfils in a particular context. Indeed, memory may be adaptive in various respects, meaning that it is not always (primarily) geared towards representing events accurately, or the precise notion of accuracy and its limits that we employ might depend importantly on the context in which we are remembering (cf. Campbell, 2006; Conway et al., 2004; Robinson & Swanson, 1993). In other words, overemphasizing accuracy means missing out on other crucial aspects of memory (Neisser, 1978). We think that this is precisely where debates on authenticity have gone wrong: they treat the function of accuracy in isolation from other memory functions. Here we aim to adopt a broadly functionalist approach to memory authenticity. Following the pioneering work of Susan Bluck (e.g., Bluck, 2003) we can distinguish three main functions of episodic memory: self, directive and social (for a recent overview and discussion, see Bluck et al., 2019).

The self-function of memory involves using memory to establish and maintain a sense of self (e.g., Conway & Pleydell-Pearce, 2000; Neisser, 1978). In general, this involves all processes that are concerned with comparing one’s current self to a previous self, or assessing previous selves (Wilson & Ross, 2003). In doing so one might establish a sense that one is the same person, but such self-comparisons may also be used to create or alter a self-narrative (Singer & Blagov, 2004). In that case, so called self-defining memories are pivotal. The self-function of memory also plays a role in processes of self-*enhancement*, where one seeks to establish a more favourable concept of self in relation to a previous self (Wilson & Ross, 2001). In both processes of self-enhancement and maintaining a self-narrative, the rememberer is selective in which memories are recollected and also *how* they are recalled, thus illustrating that accuracy and authenticity are not the main norms at play in these practices. The relevant processes of how a narrative self influences episodic recall (Dings & Newen, 2023) are typically automatic and often unconscious. This also holds for the realizations of the following functional roles.

The directive function of memory involves using memories to guide behaviour in the present but also to predict and plan for the future (Pillemer, 2003). Thus it involves usage of memory for problem-solving or for determining an (adaptive) course of

---

<sup>5</sup> Note that our aim is just that—to provide an account of situated authenticity that clarifies the ‘bounds of authenticity’. Our goal is not to settle the ongoing debates on the question of truth versus authenticity as the appropriate criterion of accuracy, but rather to establish the bounds of authenticity which seems to be a prerequisite for the debates to advance.

action in a particular context. At first glance it may seem that the directive function in particular requires memories to be accurate (and authentic), as accurate memories are best suited to guide action. However, as we will illustrate in Sect. 4, the directive function of memory may still modulate authenticity.

The social function of memory is at play when a person uses memory to establish and maintain relationships (e.g., Alea & Bluck, 2003). Sharing a funny anecdote may foster friendships, and telling stories about your youth may enable others to understand you better. Moreover, the practice of sharing memories may help you to empathize with others and may also be a source of knowledge or learning new skills. With respect to the social function, memory accuracy is sometimes dependent on the audience, as people who share memories tend to adapt their story to their particular audience (Echterhoff et al., 2005). We want to argue that similar processes affect memory authenticity, i.e., that the social function together with the audience tuning effect also sets a norm for authenticity. We return to this in Sect. 4.

Before we proceed, three further remarks are in place. First, even though these three functions have been studied for decades and are relatively uncontroversial, there are still some outstanding issues that remain a topic for debate (cf. Bluck et al., 2019). According to some, the self and social functions might be subsumed under the more general directive function (Schacter et al., 2012). Others suggest that there might be four main functions rather than three, as for instance memory for initiating social relationships is different than memory for maintaining social relationships (Bluck et al., 2005). Unsurprisingly then, there are alternative, sometimes competing frameworks that differ from the threefold functions outlined here (e.g. Harris et al., 2014). For present purposes, we think this admittedly coarse-grained overview of three memory functions suffices.

Second, in line with recent work by Bluck et al. (2019), we argue that in addition to the three functions outlined above, how memories are recalled is also dependent on the ecological context in which those memories are recalled.

Third, and basically combining the previous two points: although we may conceptually distinguish three functions of memory, in everyday life they may be closely related and even inextricable. Moreover, one and the same memory may differ in its function as time passes. This was emphasized by Pillemer (2003, p.195), who notes that traumatic memories, for instance, may first have a directive function (to prevent future harm), then a social function (to foster recovery from the traumatic event), and finally a self-function (to incorporate the event into one's self-narrative).

#### **4 Situated authenticity: How memory functionality modulates authenticity**

The task at hand is the following: how can we establish an account of memory authenticity that is not *too strict* (because memories in everyday life may rarely be fully authentic) nor *too loose* (as we want to avoid the idea that any deviation from the original experience in a recalled memory can be labelled authentic). In other words, what are the 'bounds of authenticity'?

#### 4.1 Levels of conceptualization

Recall that the working definition of authenticity was that “a memory is authentic when it accurately represents the experience of the event”: we take this more precisely to mean that the content of the memory (the representation underlying the experienced recall) matches or strongly overlaps with the content of the experience of the event (the representation underlying the original experience). Our account of situated authenticity starts by exploiting the fundamental ambiguity that is inherent to the term ‘event’ in this working definition. This ambiguity entails that there are multiple possible descriptions of the same event. If someone would now ask me what I am doing, I could reply by saying “I am typing on a keyboard”, “I am writing a paper”, “I am doing philosophy”, “I am working” or “I am trying to convince the reader of my ideas”. As philosophers of action have noted for some time, which of these descriptions is relevant or apt requires a *norm*. The most commonly asserted norm to determine which action I am performing (from this set of behaviours) is to turn to the agent’s *intentions* (e.g., Goldman, 1970). Thus, what I am doing depends on what I intend to do. For instance, I might intend to write a paper on memory but only inadvertently be doing philosophy. Simply turning to intentions is, however, not always sufficient to determine an action, if only because intentions are themselves complex and often intertwined with other features of agency and mind (for a discussion see Gallagher, 2020). The take-home message for now is twofold. First, that there are different possible descriptions of the same behaviour; second that a norm is required to determine which description is relevant or apt.

The work in philosophy of action was the basis for psychological research on action. In particular, *Action Identification Theory* (AIT, e.g., Vallacher & Wegner, 1987, 1989, 2011) sought to operationalize and empirically investigate the fact that there are different descriptions of behaviour impact human agency. AIT confirmed that in everyday life, people do not struggle to determine, from a first-person perspective, which description is apt to describe their behaviour. Rather, people have a *sense of what they are doing* (cf. Vallacher & Wegner, 1987). AIT labels the various descriptions as ‘action identities’ and found that agents typically identify their behaviour with *one* particular action. Crucially, these action identities are hierarchically organized: lower level action identities (or descriptions) focus on concrete details of the behaviour whereas higher level action identities (or descriptions) abstract away from the details and instead embed the behaviour in a broader context such as a long-term action plan or a self-narrative. Thus, “typing on a keyboard” is a low-level description *in comparison* to “writing a paper”, as the former provides more concrete details and behaviours whereas the latter is embedding the behaviour in e.g., an academic context. As a general rule, lower-level descriptions answer ‘how’ questions, whereas higher-level descriptions answer ‘why’ questions. This illustrates that these descriptions are interrelated: one writes a paper *by* typing on a keyboard; one types on a keyboard *in order to* write a paper. Or: ‘Why are you typing on a keyboard’, answer: ‘to write a paper’. Or: ‘How do you write a paper’, answer: ‘by typing on a keyboard’. As



will be shown below, these structural relations are crucial for our account of situated authenticity.<sup>6</sup>

Importantly, AIT has also been put to work in research on memory. In particular, so called *Construal Level Theory* (CLT, e.g. Trope & Liberman, 2010) adapts the AIT framework to memory. They switch from ‘action identities’ to ‘construal levels’, but the gist remains the same: there are various possible descriptions (or action identities or construal’s) of the same event or behaviour, and people shift between those depending on e.g., contextual factors. For instance, research found that the more temporal distance between encoding and retrieval of the event, the more likely the construal has shifted towards a higher level. In other words, a recent event is more likely to be recalled with concrete details whereas a less recent event is more likely to be recalled in an abstract construal. Moreover, high-level construals foster global or holistic processing of information, whereas low-level construals foster detailed or feature-based processing (cf. Wyer et al., 2010).

How does this research on philosophy of action, action identification and construal levels tie in to the question of memory authenticity that this subsection started out with? There are two crucial points we want to make here. First, memory research has not sufficiently acknowledged this fact, i.e., that there are different levels of description and that a norm is required to determine which description is most apt or relevant. Instead, it seems that memory researchers have implicitly adopted a default level of description. But this is not argued for. Indeed, the relevant norm at stake is not explicated. This is problematic for memory *accuracy* as the status quo *assumes* (but again, has not been argued for) that a particular level of description serves to determine whether a memory is accurate.

<sup>6</sup> As the editor rightly noted, there is a *prima facie* similarity between our emphasis on different conceptualizations that are structurally related to one another, and the idea of ‘entailment’ in Bernecker’s (2010) account of preservationism. That is, allowing for authenticity in shifts of conceptualization may be analogous to allowing for authenticity in cases where someone remembers something scarlet as being red, given that being scarlet *entails* being red. Here we would like to add two remarks. First, that our proposal is (depending on how one looks at it) either more precise or more liberal. It is more precise to the extent that there seem to be different ways in which a particular conceptualization may be ‘entailed’ by another. Philosophers of action have offered elaborate analyses on these structural relations. To illustrate, Goldman (1970) discusses four forms of what he calls ‘generative’ relations: *causal generation* (e.g. flipping the switch > turning on the light), *conventional generation* (e.g. extending one’s arm out of the car window > signaling for a turn), *simple generation* (e.g. asserting that *p* > contradicting an earlier assertion), and *augmentation generation* (e.g. extending one’s arm > extending one’s arm out of the car window). Bernecker’s example of ‘being scarlet’ entailing ‘being red’ seems most similar to augmentation generation. The point is that we also want to allow for the other structural relations and in that sense we are more liberal. (This becomes especially clear when we acknowledge that conventional generations involve structural relations that are sensitive to sociocultural norms. We see no reason to limit structural relations merely to logical relations and instead see it as an advantage of our account that it stays close to people’s everyday practices of memory. Thus, if a society agrees that conceptualization A is related to conceptualization B in a structured manner, then a shift from experiencing it as A and remembering it as B does not threaten the authenticity of this memory. Note also that conventions are of course dynamic: Goldman’s example of a conventional relation, namely that ‘signaling for a turn’ is generated by ‘extending one’s arm out of the car window’ rests on a convention that most societies would no longer hold). A second point that we would like to add concerns the scope of our claim. Philosophers are still debating structural relations amongst actions, and how to best think of these (see e.g. Gallagher, 2020 for a recent example). In this paper we do not want to argue in favor of any particular structural relation. We simply do not have the space available to accommodate such a complex analysis. Rather, our claim is that structural relations (whichever one favors) offer a promising way of developing an account of authenticity that is not ‘too loose’.



Second, this talk about levels of description is not only relevant for debating accuracy but also for debating *authenticity*. The reason for this is that events and our experiences of an event are two sides of the same coin. That is, if one shifts their level of description of an event, then this impacts their experience as well. This goes for perception (i.e., the *specific* conceptualization of what I am doing impacts my experience, cf. Vallacher & Wegner, 2011) as well as memory (i.e., my *specific* conceptualization of what has happened impacts memory phenomenology, cf. Trope & Liberman, 2010).

Thus, memory phenomenology (and thereby the question of authenticity) is modulated by levels of description. In our account of situated authenticity, the relevant *norm* of determining levels of description is derived from the three main functions of memory discussed in Sect. 3. Below we will argue that particular memory functions converge on particular levels of description. This enables us to tackle the two-pronged challenge of authenticity. On the one hand, our account of situated authenticity holds that ‘authenticity’ should take into account memory functionality and associated conceptualizations, such that we can recall an event on a (slightly) different level of conceptualization but that our memory still meets the norm of being authentic (due to associated changes in memory functionality). It thereby clarifies how a recalled episode may be experienced slightly differently to the originally experienced episode but still be deemed authentic. On the other hand, it withstands the risk that ‘everything goes’ due to the structural relations amongst the various conceptualizations or levels of description. If I have a particular (relatively low) level of description at the time of experiencing the event (e.g., ‘typing on a keyboard’) and I shift towards a higher level of description at recall (e.g., ‘doing philosophy’) then this latter description is tied to the former in a structural manner: one does philosophy *by* writing papers, which one does *by* typing on keyboards. Now the point here is not to downplay human creativity: many people are skilled in self-deceptive practices (cf. Marchi & Newen, 2022) to the extent that they may find many ways of shifting towards levels of conceptualization that favour them and that are quite different from the originally experienced event. However, *not everything goes*, due to the structural relations of levels of description: if one has a recalled memory with a description that is *not* structurally related to the description that was used in the original experience, then there is no memory authenticity and arguably even a false memory.

Let us now turn to the various memory functions and their role for authenticity.<sup>7</sup>

## 4.2 Memory authenticity and self-function

As a general rule, memories that are recalled in the light of the self-function are more likely to be recalled from relatively high-level descriptions (Dings & Newen, 2023).

<sup>7</sup> In what follows we outline ways in which the content of one’s memory representation may be structurally related to the content of one’s original experience, and in this way satisfy the authenticity condition on successful remembering. The mnemonic content still needs to be represented as content that was previously experienced, however. While we don’t have space to go into the details, we suggest that this additional representation will involve metacognition (which need not be propositional metacognition but may plausibly be just a metacognitive feeling). Such metacognition represents the content *as previously experienced* (see, for example, Sant’Anna forthcoming).

It thus typically involves shifts to more abstracted representations.<sup>8</sup> One explanation for this is that processes of integration or distancing (which are pivotal to maintaining self-narratives or engaging in self-enhancement) are more easily accomplished via representations that have abstracted away from any concrete details that might pose an obstacle for integration. Moreover, any temporally extended self has to relate the given event to other events in one's life and still keep a minimally consistent self-model.

To illustrate, Wood and Conway (2006) investigated self-defining memories (which are crucial building blocks for self-narratives) and found that the impact of such memories was strongly related to their role in meaning-making, i.e., of the extent to which these memories enabled the person to 'take a step back from the event' and to clarify why something had happened. In a similar vein, Boucher & Scoboria (2015) studied 'transitional events' and the extent to which people adopt a so called 'coherence focus' in which they construe the event more abstractly which "promotes adaptive self-reflection by affording people the cognitive means with which to reconcile transitional experiences" (p. 361). Demblon & d'Argembeau (2017), investigated 'self-defining initiating events' and found that in recalling such events people tend to focus on elements that are central to their identity (e.g., meaning or implications for long-term goals). Grysman and Hudson (2011) similarly emphasized how memories are sometimes recalled through the lens of self-understanding and how this impacts the memory: "A memory of tearing ligaments in one's leg will have different salience for a student who spends most of his time in the library than for an athlete who knows that important scouts will be at the next game. The meaning of the event is transformed based on the implications that the individual perceives" (ibid., p. 502).

This quote by Grysman & Hudson also hints at the fact that recalled events may differ both in terms of content as well as in terms of phenomenology (see also Dings & Newen, 2023). Aside from differences in salience, the athlete may also recall different details or elements in contrast to the student. For instance, the athlete may recall who was present at the occasion (e.g., a scout) while the amateur student would have no recall at all of who was present. In terms of memory authenticity, this means that the self-function may modulate not only what is represented about the original experience but also how it is represented, e.g., as salience or not, or from a particular visual perspective.

Regarding visual phenomenology of memory recall, Lisa Libby and colleagues have extensively investigated the impact of levels of description, in particular in relation to the self-function of memory. In doing so, they adopt Nigro and Neisser's (1983) distinction between *field* perspective (i.e., visual phenomenology from one's own eyes as it were) and *observer* perspective (i.e., visual phenomenology from a third person point of view). Memory recall from a field perspective typically involves a greater sense

<sup>8</sup> Memory authenticity is lost when the representation underlying the original experience of the event differs substantially from the representation underlying the experience of that event in memory. However, Vallacher & Wegner (1989) showed that people differ in their personal dispositions concerning the extent to which they have low- or high level action identities in general. They call such a disposition 'Personal Agency'. Now someone may have a disposition to adopt mainly high-level action identities in general including the tendency to involve them in standard cases of encoding events. This means that in those people who recall an event under the influence of the self-function of memory, and thus recall the event with a high level description, accurately represent the original experience (rather than shift from a low-level original experience to a high-level recall).

of ‘reliving’ the episode (Libby & Eibach, 2002) and such a perspective enables people to recall more bodily sensations and psychological states associated with the original event (Libby & Eibach, 2011). As for the self-function, an exploratory correlational and experimental study by Libby and Eibach (2002) showed that participants shift to an observer perspective when they visualize a memory of performing an action that is conflicting with their current self-concept. Moreover, Libby et al. (2005) showed that the extent to which one adopts a field or observer perspective affects one’s assessment of self-change. An important factor at play here is the person’s motivation: if a person is looking for differences between their current and past self, adopting an observer perspective increases judgments of self-change. Conversely, if a person is looking for similarities, then adopting an observer perspective decreases judgments of self-change. Based on their many studies, Libby and Eibach (2011) label visual perspectivity a ‘representational tool’ and suggest that:

Imagery perspective functions to determine whether people understand events bottom-up, in terms of the phenomenology evoked by concrete features of the pictured situation (first-person), or top-down, in terms of abstractions that integrate the pictured event with its broader context (third-person). (p.188)

Importantly, most of the research discussed in this subsection focuses on what one might call a narrative self or conceptual self. This is important because shifting towards higher-level descriptions of an event seems particularly important for self-narratives (which are themselves relatively abstract). However, we have recently argued that memory research should be sensitive to the multifaceted nature of selves (cf. Dings & McCarroll, 2022). That is, selves are not mere narratives but may also involve other self-aspects such as the body, cognitive features, values, social roles and so forth. Which of those that is foregrounded by the self-function at stake may differentially impact the level of description.

### 4.3 Memory authenticity and directive function

The directive function of memory entails using recall to guide one’s current actions and to plan and organize future behaviour. As a general rule, we might expect memories recalled under the guise of the directive function to be recalled with a relatively *low* level of description. That is, levels of description that emphasize concrete details about the context of the action but also personal characteristics. To return to the example of a memory in which an athlete tore his ligaments: in the previous section we focused on high-level description in recall for the sake of integration into the athlete’s self-narrative. But the same memory may be recalled with a low-level description under the directive function. For instance, the athlete may recall precise details how his knees were bending in a certain way or at which phase of the race the ligament-tearing occurred, for the sake of preventing similar accidents in subsequent races. The elements that are central to a directive recall are often irrelevant for a self-function-recall.

One clear example of how low-level conceptualizations are crucial when recalling events from a directive function, is instances of *learning*. When a novice tennis player wants to practice a particular slam that he was taught during last week’s training,

it makes sense to recall this with a low-level description (foregrounding the exact movements he has to make) as opposed to a relatively high-level description (in which e.g., social or meaningful elements would be more centerstage). Importantly, AIT also underscored that adaptive shifting between levels of action identification is a hallmark of *expertise* (Vallacher & Wegner, 2011). That is, what makes an expert an expert is that (s)he unreflectively shifts from one level of description to another, depending on which level provides the most optimal information. Similarly, solving a problem by means of memory (which also falls under the directive function), is best done with a low-level description which highlights the precise detailed steps one previously took to solve this problem. More generally, people organize their agency according to various shifts in levels of description. That is: it is difficult to understand human agency at all if we don't take into account shifts in level of description (Dings, 2021; Gallagher, 2020).

A final example of recalling memories with a directive function is to get oneself motivated (cf. McCarroll, 2022). Thinking back to moments that caused pain or distress (or feelings of pride or joy) may spark the same feelings during recall, thus serving as an important motivation for current actions. Pillemer (2003) provides tons of examples of this, including the following quote by basketball player Michael Jordan on being rejected early on in his career:

It was embarrassing, not making that team. They posted the roster and it was there for a long, long time without my name on it. I remember being really mad, too... Whenever I was working out and got tired and figured I ought to stop, I'd close my eyes and see that list in the locker room without my name on it, and that usually got me going again. (quoted in Pillemer 2003, p. 196)

Note that this particular memory could also be retrieved with a self-function. If Michael Jordan is self-narrating his life, this particular episode may have been recalled with a higher-level description that, for instance, has less visual imagery of the roster without his name on it, and instead abstracted away from such details and turning the gist of that memory into something abstract such as a 'turning point' in his career. The point for now is that in most (but perhaps not all!) cases of recalling a memory for the sake of directing action, it will be retrieved with a relatively low level description.

#### 4.4 Memory authenticity and social function

In contrast to the self-function (where one typically favours abstract high-level descriptions for the sake of establishing temporally extended meaningful connections) and the directive function (where one typically favours detailed low-level descriptions for the sake of guiding action), the social-function spans all levels of description. The reason for this is that when people recall memories with a social function, they tend to *tune* their memory to their audience. More specifically, they tune their memories in an attempt to achieve a 'shared reality' (Echterhoff et al., 2005). Thus, it is the situational constraint of audience characteristics that makes people retrieve low-level of high-level descriptions of the recalled event.

What is crucial here is the distinction between *recalling* and *retelling* (cf. Marsh, 2007), where recalling is geared towards accurately recalling an event but retelling is recalling an event with a particular goal other than accuracy, such as entertainment. In other words, when a police officer asks you what you were doing last Friday night you will probably be engaged in recalling the events of Friday night, whereas when a group of friends asks you what you did on Friday night you'll select the events and tell them in a way that is entertaining. Similarly, Hyman (1994) found that sharing a story about an event with peers includes more interpretations, whereas sharing a story about that same event with the experimenter tends to be more factual.

There is quite some research on the impact of audiences in retelling (for an overview see Hirst & Echterhoff, 2012). For instance, Dudukovic et al. (2004) showed that memories that are shared for the sake of entertainment contained fewer events in the first place, but also less sensory details and more intrusions than instances of recall. In our terminology here, this would mean that entertainment shifts towards higher-level descriptions. When recalling a memory for the sake of sharing it with someone else, people are also sensitive to other characteristics of their audience, such as their level of attentiveness. Roughly, the more attentive the audience is, the more detailed the description and the more dense the information that is included (cf. Pasupathi et al., 1998). Background knowledge of the interlocutor is also crucial. In this respect, Vandierendonck & Vandamme (1988) found that people share an abundance of details when talking to a hypothetical Martian, presumably because this Martian lacks a lot of background knowledge about how things work here on Earth. To turn once more to the example of the athlete recalling the event of his ligaments tearing, we can easily imagine that he shares this event with multiple people, and that with different audiences he switches to different levels of description. Talking to a family member he might emphasize the impact of this event in his overall life, abstracting away from particular details. In contrast, when talking to his physical therapist he might zoom in on those details as these might tell the physical therapist exactly what went wrong and bring to light what the best course of treatment might be.

#### 4.5 The bounds of authenticity?

Taking stock of the paper so far, we have been arguing that people may retrieve memories with a level of description that differs from the level of description in which it was encoded, due to constraints offered by memory functionality. Think here of the athlete who may recall the event of tearing his ligaments with different levels of description, depending on whether he is revising his self-narrative due to this event, talking to his family about this event, or recalling the event when practicing for a subsequent race. In each instance of recall, different elements of the event (e.g., his posture, the audience, the weather) may be omitted, reinterpreted or highlighted. His (visual and emotional) phenomenology may differ in each case as well.<sup>9</sup>

<sup>9</sup> Research has found that a memory that is often shared tends to, over time, increasingly being retrieved in the manner in which it was shared (Echterhoff et al., 2005). Does this mean the memory becomes inauthentic? On the account proposed here, it remains authentic as long as there are adaptive shifts in level of description in relation to the function of memory recall.

The task at hand is to determine the ‘bounds of authenticity’. That is, experience of the recalled event need not be identical to the originally experienced event in order to be authentic, yet it should also not be radically different. So, what are the bounds of authenticity? Our theoretical answer has been that this is determined by the structural relations amongst the levels of description. Thus, if one has a recalled memory with a description that is *not* structurally related to the description that was used in the original experience, then there is no memory authenticity and arguably even a false memory. In other words, the functionality of memory (self, social, directive) enables us to ‘stretch’ the bounds of authenticity, in the sense that different functions correlate with different levels of description and as such provide different norms to determine authenticity. However, structural relations amongst those levels of description *constrain* the bounds of authenticity, i.e. make it such that we cannot ‘overstretch’ these bounds. They ensure that ‘not everything goes’. Let us say a bit more about that.

Our proposal relies on a conceptual understanding of relations amongst descriptions of events. This means that *theoretically*, one may experience an event with a high-level description and recall it with a low-level description, where the latter includes *any* particular detail that the former neglected. But this seems counterintuitive. It seems unlikely that one could fetch *any* detail from memory. Therefore we ask: to what extent can the bounds of authenticity be determined on empirically informed grounds? To address this question, recent research by Wyer et al. (2022) is relevant. They relied on the CLT framework and conducted a total of 15 studies to investigate the impact of construal level (i.e., levels of description) on memory for social events. Clearly it goes beyond the scope of this paper to elaborately discuss all 15 studies. Instead, we wish to highlight what we think is relevant to our discussion on the bounds of authenticity. When does construal level (i.e., levels of description) impact memory recall? Wyer et al. (2022) highlight two factors.

First, they.

[P]ropose that a critical factor in determining whether construal level affects memory outcomes is the extent to which elements of an event are *encoded* at multiple levels. Some elements of a social encounter are readily amenable to encoding at multiple levels. For example, behavioral episodes are likely to convey both specific details (what was done) as well as abstracted inferences about goals, traits, and emotions (why it was done). Both levels of meaning are likely to be encoded when a behavior is observed (...). Likewise, when encountering faces, perceivers encode both their features and holistic aspects (...). As such, these elements of a social stimulus are more likely to be influenced by shifts in construal which can alter the nature of the memory that is reported. However, as noted above, there is little evidence from which to speculate that objects and other aspects of the physical environment are routinely encoded at multiple levels. Thus, the extent to which memory for those elements might be affected by construal level at retrieval is less certain. (p. 1241, italics added)

Second, they consider *personal involvement* to be a crucial factor in determining the impact of construal level. According to Wyer et al., (2022, p. 1242) ‘we should expect that the effects of construal level should be particularly strong when personal involvement is high, but weak or non-existent when personal involvement is low’.

To make these points more concrete, the athlete who tore his ligaments has high personal involvement and may thus shift construal level during memory recall. But any other person who was on the track at the time and who noticed the accident but did not pay a lot of attention to it, will be less likely to shift in construal level when recalling the event. In addition, when shifting in levels of description during recall, details such as body posture may be omitted (when engaged in self-function) or emphasized (when engaged in directive function) but other details such as the weather, which were irrelevant at the time of encoding, are unlikely to be included in any *authentic* memory of the event. (Of course, the recalled scenario may include details about the weather, but these are likely derived from semantic knowledge, e.g., it was in July so it was probably sunny, cf. Cheng et al., 2016).

## 5 Contextualism and representational formats

In this final section we wish to position the scope and claims of this proposal in relation to existing, adjacent work. Although our account of Situated Authenticity foregrounds the contextual dependency of memory recall by stressing the various functionalities of memory, existing accounts have similarly emphasized pragmatic and situational constraints when it comes to memory accuracy.

An important form of contextualism is *epistemic*. On this view, memory involves truth, but this ‘truth condition for remembering is pragmatically sensitive in that it depends on the context whether memory requires literal reproduction of previously encoded representations or whether it allows for some moderate reconstruction’ (Bernecker, 2008, p. 169). In certain contexts, memory may require a representation that is more or less the same (type-identical) in content to one’s initial representation. In other contexts, however, it ‘suffices if the encoded information and the retrieved information are similar’ (Bernecker, 2008, p. 174). In other words, context ‘alters our attitudes to and standards for truth and accuracy in memory’ (Sutton, 2003, p. 145). For instance, ‘The kind of similarity in memory which matters in legal contexts, for example, often differs dramatically from the relevant notion of similarity in the context of ordinary social exchange, or therapy, or reminiscence about shared experiences’ (Sutton & Windhorst, 2009, p. 87).<sup>10</sup>

So how does our proposal of Situated Authenticity differ from this existing work that similarly highlights that memory recall is co-determined by situational elements?

<sup>10</sup> There are other forms of contextualism, but a full discussion of those would take us beyond the scope of this paper. One form is reliabilist contextualism (Michaelian, 2016). Michaelian notes that there are two senses in which reliability in episodic memory is context-relative: ‘First, the reliability of memory depends on how we as observers individuate the process of remembering, which is in part a matter of which contexts we take into account... Second, the reliability of memory varies according to the subject’s context and goals, with accuracy sometimes taking a back seat to social and identity-related factors’ (2016, p. 55). This latter notion of reliabilist contextualism aligns with the issues we discuss in the main text in relation to epistemic contextualism. Another form of contextualism is *explanatory contextualism* (e.g., McCarroll et al., 2022; cf. Craver 2020), about how different theories of memory, causal and simulation theories, may be more apt for explanations of memory in different contexts. The causal theory may be more appropriate for certain normative contexts in which memory is making a claim on the past (e.g., in cases of eye-witness testimony), whereas the simulation theory (Michaelian, 2016) may be more apt for descriptive (or empirical) contexts, those in which the mechanisms of memory are at stake.



Overall, we think our proposal offers a *supplement* to this existing work, in several ways. First, the aforementioned research shows how memory accuracy is flexible due to contextual constraints, but seems primarily geared towards *truth* in memory rather than *authenticity*. Our proposal explicitly investigates authenticity and may as such contribute to a more encompassing understanding of situational influences on episodic memory. Second, we offer a more full-fledged account of different memory functions (that some of the discussed work hints at). That is, we have provided a more elaborate discussion of how the self, social and directive function (and their correlated levels of description) may modulate memory authenticity, arguing that these functions of memory provide the norms by which to measure the bounds of authenticity. Further, we have embedded these ideas in existing findings from cognitive science. Third, and finally, our account of Situated Authenticity provides a starting point for studying the dynamics of memory accuracy (and the impact of situational demands) on different levels. Thus, we think that our account of Situated Authenticity, which in the current proposal concerns the *phenomenological level* of memory recall, can be fleshed out further on a *processing level*. It goes beyond the scope of this paper to offer a full picture of this, but we do wish to present a sketch of what this may look like.

For the purposes of investigating the ‘bounds of authenticity’, we should rely on models for constructive memory. In particular we presuppose the model of *scenario construction*, according to which episodic recall is based on an activation of a (minimal) memory trace and an enrichment of this information via semantic memory which results in a scenario (cf. Cheng, Werning & Suddendorf, 2016; Dings & Newen, 2023; Werning, 2020). In addition, for any mental representation we may distinguish the vehicle (a brain state), the content (what it is representing) and a format of representation (e.g., perceptual, symbolic) (Newen & Vosgerau, 2020). Thus, within the process of scenario construction, different *representational formats* can be used to create different scenarios about the same experienced content. What we need for authenticity is *sufficient similarity* of the original experience and experienced recall. For this task, we think representational formats provide a counterpart to levels of description, where the difference is that the former concerns the level of processing and the latter concerns the phenomenological level.

For present purposes, we may distinguish the following representational formats: a sensory format concerning specific sensory information, a perceptual format concerning perceptual object units (object/property/event units), a semantic (conceptual) format concerning the relevant category the perceptual object unit belongs to, and a narrative format of embedding the sequences of actions and events constituting an episode into a narrative description. Under ideal conditions we can activate the information of all formats during an episode of recall but often we have only access to information of one or a few formats. Following Axmacher (2019) we expect each representational format to tie in with specific neural correlates of the typical information processed in each format, i.e., specific neural processes responsible for the sensory information, the perceptual unit information, the semantic information, and the narrative information.

To illustrate these formats, consider recalling a memory of a car crash. A person may only have access to information in a sensory format because she only heard the accident but did not see it: then her recall in a sensory format involves noises

of breaks, the crash and screams of people. A 1-year-old infant may have seen the accident but may not yet have learned the relevant concepts to semantically classify it. Its recall has a perceptual format and involves the relevant perceptual units, e.g., the cars and their trajectory until they crashed on the crossing but it does not involve any semantic classification. A 3-year-old infant may have learned the relevant semantic classifications such that the recall on the semantic format includes the classification of the cars as a red car from the left and a blue car from the right which crashed on the crossing. An adult may rely on a narrative format and in addition embed the observation and the classification just described into a story, e.g., the red car was speeding while the blue car was approaching the crossing very slowly. Then, the red car ignored the traffic rules which resulted in an enormous crash. (Again, under ideal conditions of recall, we might integrate the information of all formats into one episodic recall).

The basic idea, then, is the following: both contents, of the original experience and the recall of the episode, can be characterized as scenario contents and these contents can be represented in different formats, resulting in more fine-grained and detailed or more coarse-grained and abstract characterizations of the scenario. Crucially, since the information involved in the different formats of representation is anchored in the same experienced content, we can see how a recall of an event can be modified (during scenario construction) without becoming inauthentic: the recall may involve information in different representational formats, e.g., someone may have first a vivid memory mainly based on a perceptual format and later may only recall the same memory in a narrative format. Then this change of the recall from a perceptual to a narrative format does not make the memory inauthentic because the information of each format is related to the content of the experienced scenario with a homomorphic structural relation.

Finally, note that as we have been arguing throughout the paper, *sufficient* similarity of original experience and recalled episode (i.e., authenticity) requires a norm or standard. For scenario construction, this seems to be essentially a standard of relevance: what information should feed into the scenario construction, and which representational format is most suitable? Here we circle back to the account of Situated Authenticity proposed in Sect. 4, where it was argued that these standards may be derived from both (a) pragmatic and situational constraints (in line with epistemic contextualism mentioned earlier) as well as (b) the various memory functionalities (self, social, directive).

## 6 Conclusion

In this paper we have put forward a novel account addressing the ‘bounds of authenticity’ in episodic memory. This account of Situated Authenticity highlights the contextual modulation of authenticity norms. More specifically, it investigated how different functions of memory (self, social, directive) may affect patterns in levels of conceptualization and thereby modulate authenticity conditions for memory. We offered a survey of empirical research to support this account, and provided a sketch for how it may not only be spelled out on a phenomenological level but also on a processing level (by turning to the concept of representational formats). Future research

could address both levels, e.g. (i) offering more fine-grained analyses of the interplay between memory function and conceptualizations on the phenomenological level and (ii) a more elaborate account at various levels of processing.

**Acknowledgements** We thank the editor and two anonymous referees for their thorough and helpful feedback. R. Dings and A. Newen gratefully acknowledge the following funding: Gefördert durch die Deutsche Forschungsgemeinschaft (DFG) – 419046236 (DFG-FOR2812) und das DFG-Graduiertenkolleg Training Group “Situated Cognition” (GRK 2185/2); Funded by DFG (German Research Foundation) – 419046236 (Research Unit: FOR2812 ‘Constructing scenarios of the past’) and the Research Training Group “Situated Cognition” (GRK 2185/2). C.J. McCarroll would like to thank Paloma Muñoz for helpful comments and support during the writing of this paper. He would also like to thank the members of the Centre for Philosophy of Memory for their help in thinking through issues about accuracy in memory. His work on this paper was supported by a project funded by Taiwan’s National Science and Technology Council (Grant number: 112-2410-H-A49-084-MY3).

**Author contributions** RD wrote the first draft of sections 1, 3, 4, 5 + 6 and provided feedback on section 2. CjM wrote the first draft of section 2 and provided substantial feedback on sections 1, 4 and 6. AN wrote a secondary draft of section 5 and provided substantial feedback on sections 1 and 4.

**Funding** Open Access funding enabled and organized by Projekt DEAL. Gefördert durch die Deutsche Forschungsgemeinschaft (DFG) – 419046236 (DFG Forschungsgruppe FOR2812 ‘Szenarien der Vergangenheit’); GRK-2185/2 (DFG-Graduiertenkolleg Situated Cognition) Funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) – 419046236 (DFG Research Unit FOR2812 ‘Constructing scenario’s of the past’); GRK-2185/2 (DFG Research Training Group Situated Cognition).

**Availability of data and material** Not applicable.

**Code availability** Not applicable.

## Declarations

**Conflict of interest** All authors declare that they have no conflict of interest.

**Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

## References

- Alea, N., & Bluck, S. (2003). Why are you telling me that? A conceptual model of the social function of autobiographical memory. *Memory*, *11*(2), 165–178.
- Axmacher, N. (2019). Representational formats in medial temporal lobe and neocortex also determine subjective memory features. *Behavioral and Brain Sciences*. <https://doi.org/10.1017/S0140525X1901882>
- Bernecker, S. (2010). *Memory: A philosophical study*. Oxford: Oxford University Press.
- Bernecker, S. (2015). Visual memory and the bounds of authenticity. In D. Moyal-Sharrock, V. Munz, & A. Coliva (Eds.), *Mind, language and action: Proceedings of the 36th international Wittgenstein symposium* (pp. 445–464). De Gruyter.

- Bernecker, S. (2008). *The metaphysics of memory* (Vol. 111). Springer Science & Business Media.
- Bluck, S., Alea, N., & Mroz, E. L. (2019). Form follows function. In Mace, J. (Ed.), *The organization and structure of autobiographical memory* (Vol. 93).
- Bluck, S., Alea, N., Habermas, T., & Rubin, D. C. (2005). A tale of three functions: The self-reported uses of autobiographical memory. *Social Cognition*, 23(1), 91–117.
- Boucher, C. M., & Scoboria, A. (2015). Reappraising past and future transitional events: The effects of mental focus on present perceptions of personal impact and self-relevance. *Journal of Personality*, 83(4), 361–375.
- Campbell, S. (2006). Our faithfulness to the past: Reconstructing memory value. *Philosophical Psychology*, 19(3), 361–380.
- Cheng, S., Werning, M., & Suddendorf, T. (2016). Dissociating memory traces and scenario construction in mental time travel. *Neuroscience & Biobehavioral Reviews*, 60, 82–89.
- Conway, M. A., Singer, J. A., & Tagini, A. (2004). The self and autobiographical memory: Correspondence and coherence. *Social cognition*, 22(5: Special issue), 491–529.
- Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological review*, 107(2), 261.
- Craver, C. F. (2020). Remembering: Epistemic and empirical. *Review of Philosophy and Psychology*, 11(2), 261–281.
- Demblon, J., & D'Argebeau, A. (2017). Contribution of past and future self-defining event networks to personal identity. *Memory*, 25(5), 656–665.
- Dings, R. (2021). Meaningful affordances. *Synthese*, 199(1), 1855–1875.
- Dings, R., & McCarroll, C. J. (2022). The complex phenomenology of episodic memory. Felt connections, multimodal perspectivity and multifaceted selves. *Journal of Consciousness Studies*, 29(11–12), 29–55.
- Dings, R., & Newen, A. (2023). Constructing the past: The relevance of the narrative self in modulating episodic memory. *Review of Philosophy and Psychology*, 14, 87–112.
- Dranseika, V., McCarroll, C. J., & Michaelian, K. (2021). Are observer memories (accurate) memories? Insights from experimental philosophy. *Consciousness and Cognition*, 96, 103240.
- Dudukovic, N. M., Marsh, E. J., & Tversky, B. (2004). Telling a story or telling it straight: The effects of entertaining versus accurate retellings on memory. *Applied Cognitive Psychology*, 18(2), 125–143.
- Echterhoff, G., Higgins, E. T., & Groll, S. (2005). Audience-tuning effects on memory: The role of shared reality. *Journal of Personality and Social Psychology*, 89(3), 257.
- Gallagher, S. (2020). *Action and interaction*. Oxford University Press.
- Goldman, A. I. (1970). *Theory of human action*. Princeton University Press.
- Grysmann, A., & Hudson, J. A. (2011). The self in autobiographical memory: Effects of self-salience on narrative content and structure. *Memory*, 19(5), 501–513.
- Harris, C. B., Rasmussen, A. S., & Berntsen, D. (2014). The functions of autobiographical memory: An integrative approach. *Memory*, 22(5), 559–581.
- Hirst, W., & Echterhoff, G. (2012). Remembering in conversations: The social sharing and reshaping of memories. *Annual Review of Psychology*, 63(1), 55–79.
- Hoerl, C. (2018). Episodic memory and theory of mind: A connection reconsidered. *Mind & Language*, 33(2), 148–160.
- Hyman, I. E., Jr. (1994). Conversational remembering: Story recall with a peer versus for an experimenter. *Applied Cognitive Psychology*, 8(1), 49–66.
- Libby, L. K., & Eibach, R. P. (2011). Visual perspective in mental imagery: A representational tool that functions in judgment, emotion, and self-insight. In *Advances in experimental social psychology* (Vol. 44, pp. 185–245). Academic Press.
- Libby, L. K., & Eibach, R. P. (2002). Looking back in time: Self-concept change affects visual perspective in autobiographical memory. *Journal of Personality and Social Psychology*, 82(2), 167.
- Libby, L. K., Eibach, R. P., & Gilovich, T. (2005). Here's looking at me: The effect of memory perspective on assessments of personal change. *Journal of Personality and Social Psychology*, 88(1), 50.
- Marchi, F., & Newen, A. (2022). Self-deception in the predictive mind: cognitive strategies and a challenge from motivation. *Philosophical Psychology*. <https://doi.org/10.1080/09515089.2021.2019693>
- Marsh, E. J. (2007). Retelling is not the same as recalling: Implications for memory. *Current Directions in Psychological Science*, 16(1), 16–20.
- McCarroll, C. J. (2018). *Remembering from the outside: Personal memory and the perspectival mind*. Oxford University Press.

- McCarroll, C. J. (2017). Looking the past in the eye: Distortion in memory and the costs and benefits of recalling from an observer perspective. *Consciousness and Cognition*, 49, 322–332.
- McCarroll, C. J. (2020a). Construction, preservation, and the presence of self in observer memory: A reply to trakas. *Analisis Filosófico*, 40(2), 287–303.
- McCarroll, C. J. (2020b). Remembering the personal past. Beyond the boundaries of imagination. *Frontiers in Psychology*, 11, 585352.
- McCarroll, C. J. (2022). Memory and imagination, minds and worlds. In A. Berninger & Í. Vendrell Ferran (Eds.), *Philosophical perspectives on memory and imagination*. Routledge.
- McCarroll, C. J., Michaelian, K., & Nanay, B. (2022). Explanatory contextualism about episodic memory: Towards a diagnosis of the causalist-simulationist debate. *Erkenntnis*, 1–29.
- McCarroll, C. J., & Sutton, J. (2017). Memory and perspective. In S. Bernecker & K. Michaelian (Eds.), *The Routledge handbook of philosophy of memory* (pp. 113–126). Routledge.
- Michaelian, K. (2016). *Mental time travel: episodic memory and our knowledge of the personal past*. MIT Press.
- Michaelian, K. (2020). Confabulating as unreliable imagining: In defence of the simulationist account of unsuccessful remembering. *Topoi*, 39(1), 133–148.
- Michaelian, K., & Sant'Anna, A. (2022). From authenticity to alethism: Against McCarroll on observer memory. *Phenomenology and the Cognitive Sciences*, 21, 835–856. <https://doi.org/10.1007/s11097-021-09772-9>
- Michaelian, K., & Sant'Anna, A. (2021). Memory without content? Radical enactivism and (post) causal theories of memory. *Synthese*, 198(Suppl 1), 307–335.
- Neisser, U. (1978). Memory: What are the important questions?. *Practical aspect of memory*, 3–24.
- Newen, A., & Vosgerau, G. (2020). Situated mental representations: Why we need mental representations and how we should understand them. In J. Smortchkova, K. Dolega, & T. Schlicht (Eds.), *What are mental representations* (pp. 178–212). Oxford University Press.
- Nigro, G., & Neisser, U. (1983). Point of view in personal memories. *Cognitive Psychology*, 15(4), 467–482.
- Pasupathi, M., Stallworth, L. M., & Murdoch, K. (1998). How what we tell becomes what we know: Listener effects on speakers' long-term memory for events. *Discourse Processes*, 26(1), 1–25.
- Pillemer, D. (2003). Directive functions of autobiographical memory: The guiding power of the specific episode. *Memory*, 11(2), 193–202.
- Rivadulla Duró, A. Manuscript. Simulationism, reliability, and the phenomenology of episodic memory.
- Robinson, J. A., & Swanson, K. L. (1993). Field and observer modes of remembering. *Memory*, 1(3), 169–184.
- Rowlands, M. (2018). The remembered: Understanding the content of episodic memory. In K. Michaelian, D. Debus, & D. Perrin (Eds.), *New directions in the philosophy of memory* (pp. 279–293). Routledge.
- Sant'Anna, A. (Forthcoming). Metacognition and the puzzle of alethic memory. *Philosophy and the Mind Sciences*.
- Sant'Anna, A. (2018). Episodic memory as a propositional attitude: A critical perspective. *Frontiers in Psychology*, 9, 1220.
- Schacter, D. L., Addis, D. R., Hassabis, D., Martin, V. C., Spreng, R. N., & Szpunar, K. K. (2012). The future of memory: Remembering, imagining, and the brain. *Neuron*, 76(4), 677–694.
- Singer, J. A., & Blagov, P. (2004). The Integrative Function of Narrative Processing: Autobiographical Memory, Self-Defining Memories, and the Life Story of Identity. In D. R. Beike, J. M. Lampinen, & D. A. Behrend (Eds.), *The self and memory* (pp. 117–138). Psychology Press.
- Sutton, J. (2010). Observer perspective and acented memory: Some puzzles about point of view in personal memory. *Philosophical Studies*, 148(1), 27–37.
- Sutton, J., & Windhorst, C. (2009). Extended and constructive remembering: Two notes on Martin and Deutscher. *Crossroads: An Interdisciplinary Journal for the Study of History, Philosophy Religion, and Classics*, 4(1), 79–91.
- Sutton, J. (2003). Truth in memory: the humanities and the cognitive sciences. In Iain McCalman & Ann McGrath (eds.), *Proof and Truth: the humanist as expert*. *Australian Academy of the Humanities*, 145–163.
- Taylor, C. (1991). *The ethics of authenticity*. Harvard University Press.
- Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological review*, 117(2), 440.
- Vallacher, R. R., & Wegner, D. M. (1987). What do people think they're doing? Action identification and human behavior. *Psychological Review*, 94(1), 3.

- Vallacher, R. R., & Wegner, D. M. (1989). Levels of personal agency: Individual variation in action identification. *Journal of Personality and Social Psychology*, *57*(4), 660.
- Vallacher, R. R., & Wegner, D. M. (2011). Action identification theory. In P. Van Lange, A. W. Kruglanski, & E. Tory Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 1, pp. 327–349). Sage.
- Vandierendonck, A., & Van Damme, R. (1988). Schema anticipation in recall: Memory process or report strategy? *Psychological Research Psychologische Forschung*, *50*(2), 116–122.
- 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.
- Wilson, A., & Ross, M. (2003). The identity function of autobiographical memory: Time is on our side. *Memory*, *11*(2), 137–149.
- Wilson, A. E., & Ross, M. (2001). From chump to champ: people's appraisals of their earlier and present selves. *Journal of personality and social psychology*, *80*(4), 572.
- Wood, W. J., & Conway, M. (2006). Subjective impact, meaning making, and current and recalled emotions for self-defining memories. *Journal of Personality*, *74*(3), 811–846.
- Wyer, N. A., Hollins, T. J., & Pahl, S. (2022). Remembering social events: A construal level approach. *Personality and Social Psychology Bulletin*, *48*(8), 1238–1254.
- Wyer, N. A., Perfect, T. J., & Pahl, S. (2010). Temporal distance and person memory: Thinking about the future changes memory for the past. *Personality and Social Psychology Bulletin*, *36*(6), 805–816.

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.