Philosophical Perspectives on Memory and Imagination

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Chapter 8

Constructing a Wider View on Memory

Beyond the Dichotomy of Field and Observer Perspectives

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1 Introduction

Personal memories of past events are often characterized as coming with a visual perspective that takes one of two forms. Accordingly, a distinction between field and observer memories is made. Field memories are regarded as memories in which one views "the remembered scene as one originally experienced it, from one's original point of view" (McCarroll 2018, 3). One might remember, for instance, playing football as if reliving the event of kicking the ball. In contrast, observer memories are taken to be memories in which "I view myself as if from the position of an observer, and 'see' myself as if from-the-outside, from a third-person perspective" (McCarroll 2018, 3). In this case, the football player might remember the past experience as an onlooker from the sidelines, seeing her own body move on the field and kicking the ball.

The distinction between field and observer memories is sometimes motivated by an analogy with imagination, where one can distinguish imagining-from-the-inside – "Zeno imagines swimming in the rough ocean" – and imagining-from-the-outside – "Zeno imagines *himself* swimming in the rough ocean," e.g., by looking down on the sea from a rock (for review, see Liefke and Werning 2021; Vendler 1982). The analogy is probably largely due to an imagistic understanding of remembering, i.e., the idea that the content of a memory is a mental image.

This received view on memory perspective has recently met with critique from both psychologists and philosophers (e.g., Dranseika, McCarroll, and Michaelian 2021; McCarroll 2018; Radvansky and Svob 2019; St. Jacques 2019). Part of the problem lies in the crucial assumption that the distinction between field and observer perspectives is a one-dimensional, binary, rather than a multidimensional gradual one. Specifically, it seems to be that the point of view of the remembering subject coincides with their visual perspective, such that seeing oneself from the outside (observer memory) corresponds to visually taking a third-person point of view. And it furthermore seems that seeing oneself as in the original experience (field

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memory) corresponds to taking a first-person visual perspective. This assumption, though, has several limitations.

First, this binary distinction is not exhaustive (Nigro and Neisser 1983). There is a form of memory that one might call a bird's-eye view where subjects in remembering neither view the remembered scenario from their original point of view, nor see themselves from the outside. Continuing our previous example, one might have an overall view of the remembered football match as if the viewer were in the sky or some other position, looking down on the play without occupying a location within the remembered scene. The subjects view the scene from a perspective that was not the original point of view but do not "add" their own bodies to the scene (Wolheim 1984, 102; see also McCarroll 2018, 12ff.). Additionally, memory researchers have argued that "there is no single third-person perspective" (Rice and Rubin 2011, 576).

Second, the characterization insufficiently acknowledges the phenomenology of some observer memories. In observer memories, there is a disconnect between the visual perspective at the time of experience and the visual perspective at the time of remembering: memorizers report looking at a scene as an observer. Yet, memories constructed from a third-person point of view may still feel like "our" memories, rather than someone else's memories or mere imaginations or dreams.[1] How is this possible given the disconnection in perspective?

Third, the exclusive focus on visual perspective neglects the fact that personal memories can also differ in terms of the stance the remembering subject takes in emotional, agential regards, or even in relation to how one's self is experienced in different social contexts. Moreover, the visual, emotional, agential, and social aspects of a perspective can, at least to a degree, independently dissociate in being first or third person (Sutton 2010b). An event may be remembered from a visual first-person point of view, but with an emotional third- (or even second-) person perspective. For instance, one may recall having insulted a close friend as a young person, and now remember the event emotionally from the friend's perspective – feeling how hurtful it was for them – while visually still taking the first-person point of view. On the other hand, one may remember an event, e.g., giving a talk, from the visual angle of the audience – "seeing" yourself behind the lectern – while recalling one's own intense emotional involvement. Another possibility is mere bystander memories, where people, in remembering, still assume a visual first-person perspective but feel emotionally or agentively detached, even though they, in the actual past event, were emotionally strongly affected and sometimes even strongly involved as an agent. While the different aspects in question might not vary in absolute independence, as we will discuss in Section 3, they may nonetheless be more independent than traditionally assumed.

Fourth, the previous assumption fails to consider that the visual point of view and the emotional and agential perspective can be dissociated not only

in memory but also in the original experience (already alluded to by Nigro and Neisser 1983). This has not only dramatically been demonstrated by psychological studies where body image and body schema fall apart as in the rubber hand illusion (Botvinick and Cohen 1998) or experimentally induced out-of-body experiences (Lenggenhager, Tadi, Metzinger, and Blanke 2007). It is also evident from studies on pain empathy (Tania et al. 2004) and, generally, empathy with the emotions and actions of others (Gallese, Keysers, and Rizzolatti, 2004; Rak, Kontinen, Kuchinke, and Werning 2013).

These limitations motivate us to develop a richer and more nuanced approach to perspectives in memory, which goes beyond the traditional dichotomy between field and observer memories. The first step of our proposal consists in highlighting the role of other dimensions beyond the visual one. More precisely, we extend our scope to include the agentive, emotional, and social dimensions of remembering. Second, we point out that each of these dimensions can be associated with a specific and different point of view, thus producing a much more complex taxonomy of perspectival memories than the original dual one. Third, we argue that different combinations of these dimensions can produce different levels of detachment from the original experience, which can be roughly classified as weak, moderate, and strong memory switches.

This new taxonomy allows us to overcome the limitations of the traditional binary approach to perspectives in memory. As for the phenomenology of observer memories, our taxonomy allows us to account for the fact that these memories feel like "ours" even though they are constructed from the visual perspective of an observer, as the agentive, emotional, and social dimensions may contribute to represent a first-person point of view also in such cases. As for the richness of our original experience, our suggested taxonomy explains why it is possible to dissociate one's point of view from one's visual perspective. In our taxonomy, the original experience may be understood as not exclusively involving a first-person, visual perspective, but as involving a perspective that varies along visual, emotional, agential, and social dimensions.

This chapter contributes to ongoing debates between preservationist (Bernecker 2010; Martin and Deutscher 1966) and simulationist theories of memory (Michaelian 2016), as detailed in the next section. Since we come to the conclusion that neither is able to fully account for the multiple perspectivity of memory, as well as its reliability, we propose an account that favours the scenario construction account (Cheng, Werning, and Suddendorf 2016) of episodic memory on the basis of minimal memory traces (Werning 2020) in the subsequent sections.

2 Memory Perspective in Recent Philosophical Debates

Current philosophical work on memory perspective is spurred on by debates between preservationists and simulationists about memory. A crucial

question in these discussions on the role of perspective concerns its contribution to the veracity of memories. Recently, Chris McCarroll (Dranseika et al. 2021; McCarroll 2018) developed a remembering-from-the-outside account of memory that argues observer memories can be as genuine as field memories. Remembering-from-the-outside positions itself as an alternative to standard preservationist and simulationist accounts. Thus, in what follows, we first examine the latter two positions, before turning our eye to McCarroll's account, arguing that all three approaches to memory perspective face difficulties that motivate a wider view on memory.

For the preservationist, the veracity of memory recall depends on the thesis that the mental contents of a remembering at the time of recall are transmitted by a memory trace that has representational content (at least partially) entailed by the experiential contents at the time of encoding. But this thesis is in tension with two sets of empirical findings.

First, a shift from field to observer memory is problematic for traditional causal-preservationist approaches to memory since such approaches assume a strict preservation of sensory input to memory retrieval. A different perspective on a remembered event is at odds with a mere recollection of the bare sensory input since such input presumably has been encoded from the point of view the memorizer had at the past event, and strict preservation is therefore not achieved.

Second and more importantly, observer memories are often reported to involve a view on oneself as a participant in the past event. This finding is even more problematic for preservationist approaches than the first issue, as the addition of content involves not only a change in one's perspective on the retrieved sensory input but also suggests that content (of oneself) has been added to the memory of the past event. Since a shift in perspective, as well as the addition of content, is incompatible with a strict view on content preservation, causal theorists have often concluded that memories involving a perspective shift are not genuine, reliable memories. Given the ubiquity of shifts in memory perspective, this is a hard pill to swallow, as it demotes a great number of memories that otherwise seem to be faithful representations of a past event to the status of false memory.

The canonical, preservationist account (Bernecker 2010; Martin and Deutscher 1966) makes a number of assumptions that can each be questioned. These are as follows:

1. Perception is the main source for remembering, where perception is here confined to veridical sensory experience.
2. The content of perception is always egocentric and, if visual, comes with a first-person point of view.
3. Memory is for the preservation of content.

The existence of observer memories poses a problem for memory theorists who hold fast to these assumptions. For, if memory consists in the

preservation of content and perception is the main source of this content, then the putative egocentric nature of perception necessarily results in the content of remembering also coming with a first-person perspective. Furthermore, rich and important content elements, such as one's own body viewed from the outside, can impossibly be included therein.

Preservationism is furthermore plagued by other problems, most prominently by psychological experiments showing that remembering is not a literal reproduction of past events (Schacter and Addis 2007), neuroimaging studies revealing a large overlap in brain structures involved in memory and imagination (Addis 2018), and philosophical analysis arguing that episodic memory is epistemically generative (Werning and Cheng 2018). These issues have motivated the development of an alternative view of memory, namely, simulationism (Michaelian 2016).

Simulationists about memory resist the conclusion that observer memories are further removed from a past event than field memories. For example, Michaelian (2016) altogether rejects the third preservationist assumption that the contents of an event need to be stored and retrieved in order to speak of a faithful memory. Instead, he argues that field and observer perspectives are the result of reconstructive, simulative processes and thus puts both perspectives on equal footing when it comes to judging the veracity of a memory; what counts is that its constructive process is reliable. But "rejecting the idea that memory involves a causal connection to the past event has counterintuitive consequences" (McCarroll 2020b, 2). Specifically, simulationists who deny the need for memory traces, face a hard challenge in explaining how episodic memory can explain how we remember particular episodes from our personal past.

Moreover, Werning (2020) has argued that the simulationists' rejection of the need for a causal link between experience and remembering is hardly reconcilable with the requirement of memory being a truth-approximating reliable process – a property of memory that simulationists want to hold on to. The reason is that simulationism fails to honour the tight relationship between causal and probabilistic dependencies among (classes of) events. This relationship is widely acknowledged in the philosophy of science and known as the Reichenbach principle (Arntzenius 2010; Reichenbach 1956). The reliability of an episodic memory amounts to a probabilistic dependency relation between the event of remembering and the event remembered. This probabilistic dependency relation, in turn, requires a direct or indirect causal connection between the remembered event and the episodic memory.

It is within the context of the debate between causal-preservationists and radical simulationists that McCarroll (2018) develops his dual-faceted framework of constructive encoding and reconstructive retrieval of remembering. His account rejects the second assumption, that sensory perception provides an egocentric, visual experience as input for our memory systems. Instead, McCarroll advances a non-egocentric view, arguing that

we should look beyond mere visual aspects and consider not only other sensory modalities but also one's emotional state when considering what is encoded at the time an event is experienced.

While this framework acknowledges the reconstructive nature of remembering, it distinguishes itself from a pure simulationist approach by reserving room for a special kind of preservationism. McCarroll argues that the context of encoding at the time of experience guides one towards either a field or observer perspective at the moment of recollection. For McCarroll, construction plays a central role from experience to recall, as remembering on this account is not only reconstructive recollection but *also* constructive encoding. Crucial in his account, is the idea that *both* the field and the observer views may be encoded at the time of experience. We dub this move the "enrichment" of the memory trace, as the trace putatively is able to encode both types of perspectives, instead of just the field one.[2] Thus, McCarroll puts the observer perspective on equal footing with the field perspective.

By emphasizing memory construction at both encoding and retrieval, McCarroll's account provides two ways for grounding memory perspective. To illustrate, the constructive encoding approach aligns with findings that suggest observer memories are often associated with events where the memorizer experienced a high degree of self-awareness, such as during public speaking (Nigro and Neisser 1983). This could be explained by appealing to the context of encoding, where the relatively intense emotions guide encoding towards an observer perspective (McCarroll 2018). Similarly, the reconstructive retrieval approach may help explain perspective shifts when recalling temporally distant events. Since remembering such events often involve a loss of perceptual detail, "the observer perspective imagery can be reconstructed from the more enduring non-egocentric information that was an unconscious element at the time of the original event" (McCarroll 2018). By acknowledging that memory is non-egocentric and constructive from the onset, the constructive encoding view can explain perspective shifting without necessarily claiming that content is added or altered.

Though remembering-from-the-outside is the most advanced theory of memory perspective on offer, it faces some issues. Notably, emerging empirical evidence suggests that information about one's visual perspective might not be encoded in memory traces at all (Jainta et al. 2022). We will review these and other findings in the next section. For now, we conclude that McCarroll's suggestion to move from an egocentric to a non-egocentric view at the time of memory encoding is a step in the right direction, though we are sceptical of his "enrichment" of the memory trace given the available empirical data.

3 Empirical Literature on Memory Perspective

Emerging empirical evidence shows that there is space for a broader understanding of memory perspective. In addition to the visuospatial aspect of

an experience at the time of encoding, agential, emotional, and social aspects of one's experience have been shown to influence the way people recall an event. In the following, we will briefly review the current scientific literature on the topic, aiming to support the broader understanding of the memory perspective that we develop in response to dominant philosophical narratives.

3.1 Vision

In their landmark study on memory perspective, Nigro and Neisser (1983) contrasted what they dubbed the "field perspective", roughly corresponding to the field of view at the time of the remembered event, with the "observer perspective", corresponding to the field of view of an onlooker at the past event. The results of their experiments show a number of correlations. First, the field perspective during recall occurs more often than the observer perspective. Second, remembered events that are emotionally intense but in which the memorizer was less self-aware most often involve the field perspective. Third, emotionally intense events in which the memorizer was highly self-aware tend to be recalled from an observer perspective, supposedly to distance oneself from the affective aspects of the past event. Fourth and finally, the situation at and intention of recall can influence the perspective of remembering. Notably, people tend to remember from a field perspective if they are asked about the feelings they had at the time of the past event, but they will more likely remember from an observer perspective if instructed to report the concrete, objective past circumstances. These findings have shaped the landscape of memory perspective research since (Rice and Rubin 2011).

There is a line of research on bodily experience that has recently been connected to episodic remembering (Rice 2010). The findings originate, perhaps surprisingly, in the classic studies on the rubber hand illusion (Botvinick and Cohen 1998). These studies have shown how people can be manipulated to experience tactile sensations outside their own body, for example, in a fake rubber hand. The findings on this illusion have been extended to the investigation of full out-of-body experiences, spearheaded by the lab of Olaf Blanke (Blanke and Metzinger 2009; Lenggenhager et al. 2007). Blanke and colleagues have shown that the experience that we have of our self as localized within our bodies is supported by active neural processes. These processes may be intervened upon by virtual reality manipulation: participants can experience a complete out-of-body sensation when presented with an avatar that shows being touched at the same time as the participant is.

In a recent study, these findings on bodily self-awareness have inspired the investigation of the role of embodied perspectives in episodic remembering. A study found that the co-perception of one's own body during the encoding of a memory may increase the strength of neural connections

associated with episodic memory (Gauthier et al. 2020). It is worth noting that the authors suggested that future studies "should investigate not only body view effects but also other factors of [bodily self consciousness] during encoding (associated with changes in body ownership, self-location and first-person perspective)" (Gauthier et al. 2020, 9).

It comes as no surprise, then, that Blanke (2012) concludes that while visual perspective is intimately linked to bodily self-awareness, their relation is fluid and may come apart in some instances. Drawing on these findings, Peggy St. Jacques (2019) argues that visual perspective in memory is a result of constructive processes. She furthermore suggests that shifting one's visual perspective may serve an emotional-regulating function to distance oneself when remembering emotionally intense episodes. More on this in Section 3.3 (but see also McCarroll 2017; Sutin and Robins 2008).

Several conclusions can be drawn from the previous discussion of the visual aspects of episodic remembering. First of all, the experiments by Blanke and colleagues show that the experience of oneself as residing in one's body does not follow directly from having one's sense organs residing in said body. Active neural processes produce this seemingly seamless feeling, and this feeling may thus come apart in special cases. Second, bodily self-awareness at the time of encoding may directly influence the vividness of resulting episodic memories.

Third, as McCarroll (2018, 128) suggests following a similar line of thought, the active process of aligning body awareness and self-location implies that visual perspective might be more fluid than previously thought. In this light, visual perspective in remembering ought not to be understood as a dichotomy between first and third person. Rather, visual perspective may turn out to be a matter of degree expressed in the amount of overlap between the location of one's body and the experience of where the self is located (see also Lin, 2018, 2020).

3.2 Agency

In recent work investigating the role of agency in episodic remembering, Jainta et al. (2022) reveal findings that run counter to McCarroll's (2018) enrichment proposal. Their study investigated the level of prediction error in episodic recall. In particular, participants were tested on two conditions. First, the role of agency in recall was compared between cases where the participants had performed an action as instructed by video themselves or when they merely saw an action on video. In both cases, videos were shown from the first- and third-person perspectives. Second, the role of visual perspective was tested by cueing recall from the first person and the third person through the use of videos with different views on the scene to be remembered.

In the experiment, participants first imitated or just observed short "toy story" videos, where they saw a pair of hands acting out a scene using dolls.

In the recall phase, the brain activity of participants was being measured through fMRI, while they were watching either the original videos, a slightly modified, or a completely novel version. Alterations of the modified videos included exchanging one object for another or swapping adjacent steps in the procedure of acting out the scene. The participants observed each scene both from the first and third person during training, while during the fMRI recall, they saw each scene from only one of the two perspectives.

For both perspectives presented in the recall phase, the researchers expected increased activity in the brain regions typically associated with either of the two perspectives. However, this turned out not to be the case. The researchers observed that contrasting novel videos with previously encountered episodes yielded a strong effect for first person versus third person. They hypothesize that viewing novel videos from the first person formed a sharp contrast to what the participants expected from their own perspective and therefore leads to a larger prediction error (i.e., a larger BOLD signal in fMRI, Jainta et al. 2022).

Their fMRI results on cueing perspective furthermore show that this strong first-person effect can disappear when the action is part of the participants' current expectancy repertoire. "As participants experienced each story from both perspectives, they *presumably encoded episodic memories in a form in which perspective was no longer critical to the generative process of episodic memory retrieval*" (Jainta et al. 2022, 15, emphasis added). The fact that the expected prediction error increase does not or need not occur in circumstances where a familiar scene from an unfamiliar angle is presented supports the notion that memory perspective is not necessarily a part of the memory trace for the reconstruction of a past experience. Finally, this suggests that action and perspective can be dissociated in the episodic memory process.

Kinesthetic and proprioceptive information about bodily properties such as position, movement, and muscular tension may also contribute to the feeling of agency. Internal embodied imagery such as kinesthesia is often associated with a field perspective, whereas observer memories are thought to be more disembodied (e.g., Vendler 1984). This is consistent with findings by Eich et al. (2011), who show decreased activity in brain regions involved in emotion and the monitoring of one's interoceptive states during the recall of observer memories.

However, embodied imagery should not be tied exclusively to field perspective memories. Morris et al. (2005) reported that participants were equally able to form kinesthetic images with both field and observer perspectives and that for some tasks kinesthetic imagery may be associated more strongly with observer perspectives than field perspectives. Kinesthetic and other forms of embodied imagery may be translated into a representation of the self in the visual modality and match or mismatch the information derived from other sensory modalities (especially, vision) to form a

spatial representation of one's body and, ultimately, one's self-representation (McCarroll 2018; for an opposing view, see Michaelian and Sant'Anna 2021a). For instance, when a person is shopping for a new couch, they may recall the time when they moved their current couch into the apartment. By taking an observer perspective on the past experience of carrying the furniture through the door, the person is in a better position to judge whether a new couch would similarly fit.

These findings suggest that memory perspective is not encoded in the memory trace, and we instead suggest that it may be the result of post hoc scenario construction. However, memorizers may be predisposed to construct a past episode from a certain perspective depending on the circumstances of both the past experience and present situation. More research is required to elucidate the nature of the relationship between both and we provide a proposal for how to do so in Section 4.

3.3 Emotions

As mentioned, Nigro and Neisser's (1983) classic series of studies provided an interaction effect concerning emotional valence and memory perspective. The results are presented as one-dimensional. Emotionally intense situations where one is highly self-aware tend to be remembered from the observer perspective, while similarly laden situations where one is not self-aware tend to be remembered from the field perspective.

Interestingly, Nigro and Neisser's experiment also showed that intention at the time of recall influences visual perspective. Participants who are asked to recall a particular type of experience and focus on the accompanying emotions tend to take a field perspective, while participants who are asked to recall the concrete, objective circumstances of the experience lean towards the observer perspective. This supports the idea that the visuospatial perspective is the outcome of constructive processes, as similar experiences can be readily recalled from either perspective (Rice and Rubin 2011).

The findings from Nigro and Neisser have contributed to the received story that remembering from an observer perspective correlates with less intense emotions at the time of recall. This is corroborated by many subsequent studies (Holmes, Coughtrey, and Connor 2008; Kenny et al. 2009; McIsaac and Eich 2002, 2004; Williams and Moulds 2007, 2008).

However, the relation between visual perspective and the emotion-ladenness of episodic recall is more complex than the received story suggests. Instead of presenting low emotional valence at the time of recall as covarying with a third-person perspective and high emotional valence with the first-person, Lisa Libby (2021; Libby, Shaeffer, and Eibach 2009) argues that emotional valence is better seen as independently varying. In doing so, she opposes the received view and distinguishes emotional valence as its own dimension in memory perspective, separate from the visuospatial

dimension. She draws on a number of experiments that show that third-person imagery in recall may actually sometimes coincide with increased emotions (Hung and Mukhopadhyay 2012; Katzir and Eyal 2013; Spurr and Stopa 2003).

To illustrate how emotional and visual aspects in memory perspective may come apart, let us look at one recent behavioural experiment by Govind Krishnamoorthy et al. (2021). They asked participants to remember a recent event that brought on feelings of shame. Participants who identified as prone to feelings of shame reported different results depending on the perspective and attitude they took towards the past event. If such participants were asked to take a third-person perspective and reappraise the event in a positive light (e.g., Levine, Schmidt, Kang, and Tinti 2012), for example, by focusing on how the experience made them grow as a person, the intensity of the level of shame experienced decreased. However, if they were asked merely to take a third-person visual perspective and ruminate on the experience without further instruction, the intensity of shame associated with the experience *increased*. In stark contrast to these two cases, participants who identified as not prone to feelings of shame reported no increase or decrease in levels of shame when remembering from a third-person visual perspective, regardless of whether they had to positively reappraise the past event or not.[3]

Furthermore, there is some empirical evidence suggesting that the type of emotion involved when recalling a past experience influences matters, with self-referential or self-conscious emotions having different effects than other types (Bornstein, Katzir, Simchon, and Eyal 2021). Based on this and the aforementioned evidence, we, therefore, reject the claim that the visual and emotional dimensions of memory perspectives linearly map onto each other.

3.4 Self and Social Environment

How we view ourselves and how we relate to our social environment influences how we remember. Again, Nigro and Neisser's (1983) classic study provides some clues concerning this relation, as their investigation concerning self-awareness was implemented by having participants recall events in which they stood out from their environment, for example during jogging or being in a group performance, with the results being as described in the previous subsection.

Personal change can also influence memory perspective. In a number of experiments, Libby and Eibach (2002) show that people who consider themselves having gone through some kind of personal transformation – going so far as to claim they are now "a different person" – remember their past pre-change differently from their past post-change. Specifically, people who have gone through such a transformation, for example, if they used to be religious but have since lost their faith, tend to remember the

experiences of their old, other self from a third-person perspective. This suggests a distancing effect when people fail to identify with the person they used to be.

In a follow-up study, Libby, Eibach, and Gilovich examine the same relation in the other direction. Their guiding question is: "Does memory perspective influence assessments of self-change" (2005, 50). The question is answered in the affirmative, as participants who are instructed (and are able) to recall personal past events from a third-person perspective, report more self-change than those who use the first-person perspective. This indicates that there is less self-identification in the former case than in the latter.[4] Furthermore, taking a third-person perspective on a past experience caused participants to judge themselves as having changed more if they had previously been instructed to write down differences between their present and past selves, rather than similarities. This effect did not occur in the first-person condition and thus, the effects of memory imagery depend at least in part on what self-theory guides memorizers when interpreting their past (see Libby and Eibach 2011, 205).

The open question that needs addressing, then, is how our sense of self and our relation to our social dimension ought to be grounded when considering memory perspective. The concept of "self" is notoriously hard to delineate, and philosophers have attempted to capture it in such wide-ranging terms as embodiment, social construction, narrative, and, of course, memory, or even as an amalgamation of all of these (Gallagher 2013; Newen 2018). Rather than falling into the trap of providing a condensed definition of self that will inevitably fall short of capturing its pluralistic nature, we think that the multifarious forms of the self deserve a richer account than we can provide here. However, it is useful to further elaborate on one proposal that understands self along narrative lines, as it helps frame the empirical research just discussed.

In a recent paper on the relation between the narrative aspects of the self and episodic memory, Roy Dings and Albert Newen (2021) develop a three-pronged understanding of the influence of self on memory. They understand the narrative self to be an ongoing pattern of processes that integrate information across different time scales according to personally held values, beliefs, goals, and the like. Their account utilizes the scenario construction model, which we discuss in more detail in the next section. But speaking in general terms, Dings and Newen state that these narrative self-aspects may influence remembering along three routes: (1) evaluation and interpretation of the constructed memory, (2) constraint of the information that feeds into the constructive memory system, and (3) attenuation to specific retrieval triggers.

The first route is of particular relevance for our discussion of memory perspective, as Dings and Newen (2021) use it to frame the previously discussed research by Libby and Eibach (Libby and Eibach 2002; Libby, Eibach, and Gilovich 2005). The level of identification that participants

have with their past experience after a self-transformation determines the visual perspective on the past experience: participants reported a closer (first-person) perspective on the scene with more identification and a further (third-person) perspective with less. As we saw, the relationship works both ways. Dings and Newen explain the resulting change in visual memory perspective at the level of a (re)evaluation of the constructed memory (route 1) in terms of the narrative self.[5]

Now, the putative tight relation between self and visual perspective, where increased self-identification leads to a visual perspective closer to the experienced event, raises the question of whether these aspects can vary independently. If they do not, there might not be a need for differentiating these two as separate factors. However, there is evidence in the literature suggesting that self and visual perspective come apart when considered in different cultural contexts. In particular, people with an Asian background are more inclined to recall past experiences from a third-person visual perspective than people from Western backgrounds (Sutin and Robins 2007). A prominent hypothesis for this is that the self and one's individual behaviour in Asian cultures is often captured in relation to others, while Western cultures emphasize personal responsibility and individualism. This is supported by a cross-cultural study that asked people with Asian backgrounds and those with Western backgrounds to remember past experiences where they were at the centre of attention – for example, by telling a story or giving a skilled performance (Cohen and Gunz 2002). The former tend to remember such experiences from a third-person visual perspective, while the latter tend to do so from the first person. However, no difference was found in terms of immersion between the groups.

In terms of the routes of influence of the narrative self on remembering, we might explain this phenomenon by appealing to the different cultural values informing the narrative self. In cultures that emphasize self in relation to others, remembering a past experience will tend to "zoom out" the visual perspective so that both self and other are in the scene, while in cultures that emphasize individualism a similar past experience will tend to be much more "zoomed in" in comparison. Arguably, however, as immersion in such cases is similar across cultures, similar levels of self-identification might be expected in both types of recall. Self and visual perspective thus seem to co-vary independently according to the (cultural) values one holds.

As mentioned, providing a comprehensive account of the role of the self in memory goes beyond the scope of the present paper. But the empirical literature provides ample incentive to include the self and the social environment as an important contextual factor in memory perspective. One challenge is that the self is by nature hard to operationalize in experimental designs. Yet, self-identification, as seen previously, might be one potential measure. More work needs to be done on disentangling how different social aspects figure in memory perspectives, but for our present purposes, it is sufficient to flag it as a potential social memory perspective dimension.

3.5 Preliminary Conclusion

The brief review in this section clears the ground for taking two ideas seriously. First, the idea that memory perspective is better approached as consisting of more than the mere visuospatial perspective. Agential, emotional and social aspects at the time of experience and recall all influence the way we remember. It has been shown that in some cases, these other aspects can vary independently from the visual perspective at least to a degree. This suggests that an account of memory perspective may be best captured along at least the four mentioned aspects as separate dimensions. Articulating the precise independence of these aspects requires further experimental investigation, for which we provide a suggestion at the end of Section 5.

The second idea that has been shown to deserve consideration is that all four aspects may play a guiding role in the way we remember at the time of recall. This supports the idea that remembering is the result of a constructive process that depends or draws on the different internal and external resources available to the memorizer. We further develop this idea in the next sections.

4 Memory Perspective as the Result of Scenario Construction

As Nigro and Neisser nicely put it: "Observer memories do occur. We are inclined to agree [...] that they are often produced by a process of reconstruction in memory" (1983, 481). Given the suggestion by the empirical literature that the visual, agential, emotional, and social aspects of memory perspective are driven by fluid, constructive processes, we now turn to the scenario construction model of memory. We argue that the scenario construction model better fits the empirical data and can better meet the philosophical challenges of memory perspective.

The scenario construction model (Cheng and Werning 2016; Cheng et al. 2016; Werning 2020) proposes that episodic memory is best understood in terms of the generation of past scenarios based on an integrative interplay of minimal memory traces and general semantic information (see Figure 8.1). This approach contrasts with causal theories of memory (Bernecker 2010), as the construction frame does not cast remembering as the storage and retrieval of contentful representations. It also departs from simulationist competitors (Michaelian 2016), who claim that memory traces are not a necessary component of episodic recall. Instead, Markus Werning (2020) understands memory traces as the causal link between fragmentary information of a subject's brain state at the moment of experience and the neural process underlying the construction of a scenario of the past. These "minimal traces" do not transmit representational contents, but only sparse neural information encoded through connections between neocortex and hippocampus.

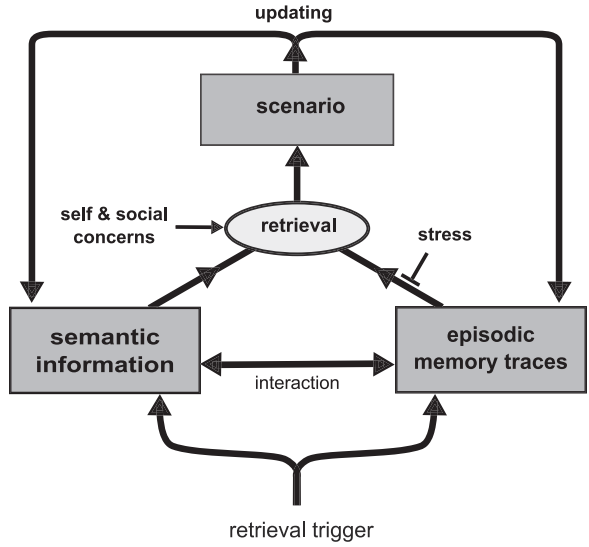

Figure 8.1 Scenario construction model
(Adapted from Cheng, Werning, Suddendorf 2016)

When looking at McCarroll's (2018) proposal on memory perspective through the lens of scenario construction, we conclude the following. We agree with the idea that field and observer perspectives should be considered as being on par. Neither one gets priority over the other when memory traces are created. But we disagree with McCarroll's suggestion to enrich the memory trace and let it encode perspective (or even, on a more moderate reading of McCarroll's proposal, let certain aspects of the encoded information constrain perspective). We propose a move in the opposite direction: instead of enriching the trace, we develop a view that impoverishes the trace, ridding it of the need for either an observer or field perspective.

Impoverishing the memory trace of encoding a particular perspective follows straightforwardly from the scenario construction view. As mentioned, scenario construction accounts make a distinction between two contributions to remembering. First, though such accounts acknowledge the presence of a causal trace between the encoding event and the remembering event, such minimal memory traces do not necessarily provide any content implying visual aspects of a past experience (Werning 2020). Second, when recalling a past episode, the sparse information of the minimal trace is augmented by general semantic information acquired through statistical learning on various levels of abstraction. For example, when recalling a specific birthday, the minimal memory trace provides sparse information on the sequence of events, which is then supported by the knowledge that the memorizer has concerning parties, birthday cakes, blowing out candles, and so on. The screenplay that directs the construction of the scenario is

provided by the hippocampal minimal trace. Trace minimalism entails that there is a causal link between fragments of the distributed neural activation pattern of a previous experience and no transmission of representational content. At the moment of recall, the sparse information from the minimal traces is integrated with top-down semantic information in a process akin to the predictive processing approach to perception. This can be seen as a way of "predicting the past". The gist provided by the hippocampus is augmented by the bodily factors and situatedness of the agent at the time of recall (Clark 2013; Shapiro 2019; Sutton and Williamson 2014).[6]

The minimal trace approach readily accommodates the (emerging) empirical evidence on the constructive nature of memory perspective. The emotional, agential, and social circumstances of a past experience may predispose a later recall event to reconstruct it from a specific perspective. And though it is possible that some sparse visual information is retained in the trace, the perspective itself need not be part of the encoding. Our proposal incorporates McCarroll's (2018) contribution that the context and knowledge at the time of recall influence memory perspective while avoiding the empirical issues that his account struggles with. It furthermore readily incorporates empirical data that suggests visual perspective and immersion might not only come apart at the moment of recall but also at the moment of experience, with one study showing that experiences from an observer point of view need not lack vividness when compared to field experiences (Iriye and St. Jacques 2021).

Therefore, we argue for impoverishing the concept of the memory trace, divorcing it of the task of encoding a specific perspective. This challenge calls for a reconsideration of how to understand the memory perspective. In the next section, we develop a proposal for how to reconceptualize perspective in episodic recall.

5 A New Conception of Memory Perspective

With the scenario construction model in place, we now turn towards proposing a richer account of memory perspective. Our vantage point is that memory perspective is best viewed as a dynamic construction depending on at least four main dimensions: vision, emotion, agency, and social. This will help unify the myriad of approaches in current debates on memory perspective.

An advantage of our proposal is that it inherently allows for independent variation between the different dimensions. On our model, for example, vision may vary independently from emotion when categorizing different memory perspectives. This is perhaps best explained with a visualization. In Figure 8.2, we present the memory perspective of two hypothetical remembering events in a radar chart. The dotted graph depicts a perspective on a birthday memory and the continuous graph a perspective on a driver's license exam.

To compare the two perspectives, we may look at the different axes. The agential axis for the birthday memory scores relatively low, while the exam

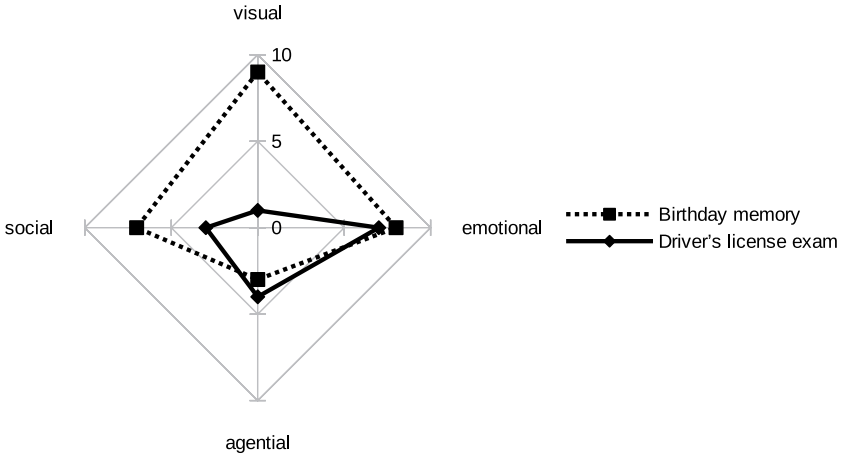

Figure 8.2 Radar chart of two memory perspectives in a constructed scenario of a past event

memory scores relatively high. This could be explained by keeping in mind that, for a driver's license, the memorizer is in control of a car, with the steering wheel, hopefully, ready-to-hand. The birthday memory depicts a more passive environment, where things happen to the memorizer (e.g., people singing songs for them). The other axes can be interpreted similarly.

The axis depicting the visual dimension requires additional explanation. In line with what we discuss in Section 3.1, we move away from the idea that the visual perspective is binary: either depicting a first- or a third-person perspective. Instead, we follow Blanke (2012) and propose that the visual aspect is best characterized as the amount of overlap between visual perspective and body location or awareness. A large overlap between the two would be something akin to the traditional first-person perspective, while no overlap between the two would be like a third-person view. Crucially, our characterization of the visual aspect of memory perspective is a gradual, not a binary scale.

Thus, in the case of Figure 8.2, the visual axis of the birthday memory indicates a high overlap between body location and visual perspective. The memorizer remembers the birthday from the point of view of their own body. In the case of the driver's license exam, however, there is no overlap, indicating that the memorizer views the scene as an observer of their own actions. Note that in both cases, this may change. It is to be expected that when there is a change in self-awareness, the visual aspect is likely to shift. Thus, if the memorizer remembers the embarrassment of being sung "Happy birthday!" to, the overlap between body location and visual perspective may change. Conversely, if the memorizer recalls being very confident in their driving skills at the end of the exam, the overlap may increase.

It bears noting that what is traditionally understood as memory perspective, namely the visual aspect, is in our account subsumed under a broader class of aspects. As a logical possibility, each of these aspects can vary independently from the other. In practice, there will be some interaction between the aspects, as explained in Section 3.3 for example. This requires some terminological adjustment. What on binary approaches is usually called a field perspective, would on our account require some kind of agreement in terms of the four different aspects. Likewise for the observer perspective.

Additionally, there may be cases such as we described in our introduction, where one remembers a past event and feels more emotionally aligned with another person in that event than with oneself. This implies that when describing our dimensions, they might actually require some sort of indication to show whether they are oriented towards ourselves (likely the standard case) or towards someone else, as per the example (for a related discussion about perspectival centres in the domain of semantic, see Liefke and Werning 2018). Speculating on the exact implementation of this mnemonic feature requires more empirical investigation and agreement on how to model this, which is likely best gained through consensus by the scientific community.

Another advantage of our framework is that it provides an answer to a challenge put forward by Heather Rice and David Rubin (2009). They argue that field and observer perspectives might not exclude each other but, in addition to on-the-fly switching between both, possibly allow for *simultaneous* adoption by memorizers. If one accepts the traditional dichotomy between the two perspectives, this conclusion is hard to explain. Not so on our framework. The multifarious constellations that our framework allows can capture different levels of attachment to the original experience for each dimension and enable memory switches in weak, moderate, and strong terms, depending on the variation along the different axes. Participants reporting simultaneous adoption of field and observer perspectives is not inconsistent with our view, as this might precisely be the result of this independent variation. Thus, our framework meets the challenge put forward by Rice and Rubin.

A potential disadvantage of our proposal is that its rich account is hard to operationalize. After all, when considering four or more dimensions of memory perspective, experimental designs become increasingly complex with corresponding practical challenges. However, a recent study by Heather Iriye and Peggy St. Jacques (2021) provides inspiration for meeting this challenge. In their aim to investigate the role of visual experience in memory formation, they manipulated both the visual perspective and self-identification in immersive virtual environments. In some conditions, participants had the option of either choosing their own avatar or even utilizing a bespoke avatar that resembled their own physical appearance. One of the interesting findings was that, while experiences with a third-person perspective on the scene correlate with a third-person perspective at the time of recall, such memories are not lacking in terms of vividness.

Of particular interest to our present discussion, however, is the experimental design utilized by Iriye and St. Jacques. Investigation through immersive virtual reality provides both the freedom to present participants with experiential scenarios involving different types of avatars, perspectives, and, potentially, emotionally laden situations where they have more or less agency, as well as tightly controlled circumstances. Such a paradigm would provide an excellent stepping stone to systematically investigate our proposal, given its complexity when compared to the traditional binary view of memory perspective.

6 Conclusion

By analyzing the philosophical literature, we have questioned the justification for the traditional dichotomy between field and observer memories. The best proposal currently on the market, McCarroll's (2018) remembering-from-the-outside account, runs into issues concerning emerging empirical evidence. Recent empirical studies give reason to think of memory perspective as constructive and multidimensional. We argued that this fits well with the scenario construction model and trace minimalism. We furthermore have proposed a new model for conceptualizing memory perspective along four dimensions: visual, agential, emotional, and social.

Our proposal requires further development, but already shows several distinct advantages over the traditional view on memory perspective. It allows for a relatively straightforward way to model memory perspectives. Furthermore, it enables an objective and standardized measure for operationalizing experiments, which would in turn improve replication of results. The model may also easily accommodate potential additional aspects of memory perspective, should they turn out to be relevant for study. Crucially, our model may capture perspective shifting in quantifiable terms, for example as the slow decrease in overlap between body location and visual perspective in the recall of a past episode over time. Participants may even be asked to explicate the amount of overlap in terms of centimetres distance between their vantage point and body location. This is a novel contribution to the empirical investigation of memory perspective, as it, for one, enables easier cross-study comparison once studies adopt the framework. All these are reasons to seriously consider our proposal for a new, constructive view on memory perspective.

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Notes

1 Casey provides this relevant somewhat poignant description: "I was always *there*, somehow *in* the remembered scene, and never wholly absent from it; but I was there in a curiously diluted and dispersed form: faceless and almost bodiless, a mere onlooker who observes not himself but what is spread before him in nature" (Casey 2000, 23). He further remarks that this reported phenomenon in his patients motivated Freud to argue that "this inalienable but puzzling presence of the self in one's memories is a proof that they cannot be purely reproductive, for at the time we were not at all aware of ourselves as sheer spectators" (2000, 320, note 4).

2 While McCarroll emphasizes that remembering-from-the-outside mainly incorporates the multiple sources of information available to memory at encoding, he does not suggest that there is a fixed memory trace in the brain (though he does elsewhere, see McCarroll, 2020b). However, we argue here that, even without committing to a static view of memory traces, McCarroll's account can be considered a revised form of preservationism as he claims that (1) much memory content may be available at encoding, and (2) there is similarity between the input to memory at encoding and the output of memory at retrieval (e.g., McCarroll 2018, 45). Based on a review of the empirical literature on perspective, we will argue that neither (1) nor (2) are desirable claims. For related discussions, see Trakas (2020) the reply by McCarroll (2020a), and Michaelian and Sant'Anna (2021a).

3 Relatedly, McCarroll (2018, 128) suggests using a neurophenomenological methodology (Lutz and Thompson 2003; Varela 1996) to investigate reports of whether experimental participants project their own body onto observer memories that carry a high emotional valency. Such a methodology could benefit from emerging views that connect the role of the body in memory to the phenomenological tradition (Righetti 2021).

4 Of special philosophical interest in this study is that, for those of us capable of shifting to the third-person, there is the possibility of some measure of agency in how we remember ourselves in the past. If this agency on how to remember can somehow be operationalized, this might prove useful when investigating post-traumatic stress syndrome in patients and developing relevant therapies. This suggestion is naturally tentative but seems in line with successful work in the area of cognitive psychology, which aims to return agency back to the survivor of a traumatic event, see also the discussion of the therapeutic values of perspective switching made by Krishnamoorthy et al. (2021).

5 Looking at the two remaining routes, Dings and Newen (2021) hypothesize that the narrative self influences the semantic information used to reconstruct a memory according to the context of recall (route 2). For example, a person may remember their wedding when in conversation with their spouse, drawing on their knowledge of the family members present. But when that same person remembers their wedding in conversation with a friend from a different cultural background, specific knowledge of local wedding customs might become salient instead, as these might be peculiar or interesting when talking to the friend in question. Finally, Dings and Newen utilize recent work in situated cognition to explain how the narrative self helps persons attenuate to specific cues (route 3), for example, when we place evocative objects such as holiday photographs on our desks to commemorate events important in our lives (Heersmink 2018).

6 As least one of the authors, AP, would furthermore argue that the proposal of minimal traces is consistent with the enactive approach to memory (Caravà 2020; Hutto and Peeters 2018; Peeters and Segundo-Ortin 2019). In line with this paradigm, he suggests that the subprocesses which integrate semantic information involve sensorimotor simulation (Barsalou 1999, 2008) and are

potentially augmented by transactional interaction with other persons (Wegner, Erber, and Raymond 1991; Wilson 2017) or even evocative objects (Heersmink 2018). This suggestion is consistent with the idea of distributed memory traces, but goes further in proposing that the distribution of such traces may extend beyond the brain (Sutton 1998, 2010a). It contains a place for memory traces, but they are distributed and do not carry contentful representations. Michaelian and Sant'Anna (2021b) hint at a similar connection through the idea of procedural causality (Perrin 2018).

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