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Affective memory: a little help from our imagination¹

Margherita Arcangeli & Jérôme Dokic

1. Introduction: the puzzle of affective memory

It often happens that when we remember a past situation, the emotional import of the latter transpires in a modified form at the phenomenological level of our present memory. When it does, we experience what is sometimes called an “affective memory”.

Theorists of memory have disagreed about the status of affective memories.² Defenders of the existence of affective memories claim that there is a special class of emotional phenomena that can be involved in remembering. On this view, there is an emotional way of remembering a past situation, whether or not the latter actually elicited (or is remembered to have elicited) an emotional reaction on the subject’s part.

In contrast, sceptics about affective memories argue that the relationship between memory and emotion can only be of two types: either the memory is *about* a past emotion, or it *causes* a present emotion (see Debus, 2007). In the former case, the emotion is part of what is remembered. For instance, Maria remembers having been sad, or that she was sad, yesterday. In the latter case, the emotion is a separable effect of the memory. For instance, Maria remembers her root canal operation yesterday, and is now relieved that the operation is over.

¹ We thank Christoph Hoerl and an anonymous referee for very helpful comments on an earlier version of this chapter.

² The existence of genuine affective memories was at the heart of hot debates in philosophy and psychology at the turn of the 20th century. See Trakas (2015, Ch. 5) for a helpful historical and theoretical account. As she points out, Théodule Ribot, Marcel Mauxion, François Pillon, Frédéric Paulhan, Ludovic Dugas, Paul Sollier and Ernst Heinrich Weber were among the defenders of the existence of affective memories, while sceptics included William James, Harald Höffding, Edward Bradford Titchener and Édouard Claparède. Of course, we do not want to suggest that all these authors were focusing on a single phenomenon. The more general issue was about the nature of the relationship between memory and emotion.

Her memory of the operation causes a separate positive emotion in her. In this picture, there is no room for the category of affective memories.

This chapter is a defence of affective memory as a genuine mental phenomenon. Our main claim is that affective memory is a case of episodic memory in which the past situation is represented through a special use of the imagination. When we remember a past situation, we often imaginatively re-live the situation as if it were present. In other words, we represent the situation from a specific mental perspective, which may differ from our actual present perspective. Drawing from Peter Goldie's notion of mental narratives, which covers at least memories and imaginings, we show that three levels of perspective should be distinguished (Section 2): the perspective of the represented subject (the character, if there is one), the perspective of the representing subject (the author), and the intermediary perspective of the narrator. In many cases, the narrator remains virtual; what is at stake is only a specific way of representing the situation. For instance, different narratives can truly represent the same situation in different emotional ways. As Wittgenstein put it, the world of the happy man is different from the world of the unhappy man (Wittgenstein, 1961, §6.43).

Once the three-way perspectival character of mental narratives is acknowledged, several mental phenomena can be described in terms of dependence relations between perspectives. What we call "strong immersion" involves the alignment of all three perspectives. In contrast, "weak immersion" refers to cases in which the narrator's and the character's perspectives are aligned. There is emotional contagion when the author "catches" the narrator's emotion, while imaginative resistance shows the opposite direction of influence, i.e., the author's perspective limits the narrator's perspective (Section 3). However, alignment is only one modality of dependence. Sometimes, one perspective can be coupled with another perspective even though they are not aligned. When we use our imagination to figure out what is possible or not in a given situation (for instance, whether our new sofa would fit into our living-room), the author's perspective is constrained by the narrator's perspective (Section 4).

Affective memories are precisely cases in which the narrator's emotional perspective has direct implications for the author's emotional perspective, even if the former typically differs from the latter (Section 5). Episodic future thinking, i.e., the ability to imagine in detail subjectively probable future situations, also involves constrained imaginings in this sense (Section 6). Whatever explanation is given for such asymmetry, our main point still holds, namely that affective memories are genuine and cannot be reduced to either memories about past emotions or memories causing present emotions.

2. Perspectives in narratives: a tripartite account

2.1 The notion of mental perspective

Any mental state with representational content introduces a *mental perspective* on the represented situation. The notion of mental perspective, or perspective for short, can refer to at least three types of features (Goldie, 2003; 2012). First, a perspective can be *conceptual*, in the sense that the situation is represented by means of more or less sophisticated concepts. For instance, we can think of a given geometrical figure as a chiliagon or merely as a complex polygon. Second, a perspective can be *epistemic*, in the sense that representing a situation from a perspective may require some knowledge-conducting access to the situation. Visual perspectives are epistemic, because visual perception is knowledge-conducting. It enables knowledge and not mere representation of the situation. Finally, a perspective can be *emotional*, in the sense that it reflects a specific affective evaluation of the situation. For instance, we feel sad about a situation that other subjects may feel neutral or even happy about.

Features of a perspective are determined either by the mode of the mental state (the psychological attitude) or by its representational content. The conceptual feature is clearly determined by the content, whose constituents are or involve the relevant concepts. In contrast, the other features, epistemic and emotional, are determined by the mode. Our epistemic perspective is different when we know or merely conjecture about a state of affairs, but the representation involved can be the same. Similarly, the emotional perspective is different whether one is sad or happy about a given represented situation.

Mental perspectives can be either real or simulated. When Maria feels happy about her success in the tennis match, the emotional perspective on the represented situation is determined by her real state of happiness. Now a type of mental state can also be simulated or “re-created” via imagination (see Currie & Ravenscroft, 2002, and for a taxonomical exploration of the types of re-created mental states in imagination, Dokic and Arcangeli, 2015a). As an opponent to Maria, Sam does not feel happy about her success in the match, but he can *imagine* Maria being happy. Via imagination, Sam re-creates a state of happiness, which he attributes (rightly, in this case) to Maria. This simulated state involves a specific emotional perspective, which is different from the emotional perspective introduced by Sam’s actual state of mind, which can be, say,

anger at having lost the match. Note that Sam's emotions have different cognitive bases: his simulated happiness arises from his imagining the world according to Maria, whereas his real anger is triggered by his belief that he has lost the match.

Even among philosophers sympathetic to the general view that mental states can be re-created through imagination, there is a specific issue about the nature of re-created emotions. Some argue that re-created emotions are ordinary emotions (Carroll, 1990; Currie and Ravenscroft, 2002; Weinberg and Meskin, 2006), whereas others claim that they are intrinsically imaginative or "as if" emotions (Goldman, 2006; Velleman, 2000; Walton, 1994). We can remain neutral on this issue here. If re-created emotions are ordinary emotions, then we should allow for a rational subject to be in several emotional states at once (provided that their cognitive bases are distinct), or at least successively in the course of a dynamic imaginative narrative.

2.2 External vs internal perspectives

To the extent that they are perspectival, representational mental states can be described as *mental narratives* (Goldie, 2003; 2012). A mental narrative involves some perspective on what is represented, but it need not be narrated – if it is, the result will be a linguistic narrative, i.e., a *story* about the represented world. Unlike linguistic narratives, though, which are propositions or statements, mental narratives need not have linguistic vehicles or conceptual contents.³

Peter Goldie has pointed out that all narratives involve two kinds of perspective, which he calls "external" and "internal":

A narrative, *whether or not narrated*, always involves an external perspective, and any external perspective is necessarily distinct from any internal perspective. This is so even where, as in autobiographical remembering, the two perspectives are those of one and the same person. (Goldie, 2003, pp. 310-11)

³ The explanatory or at least clarificatory role of the notion of narration in an account of representational mental states has been acknowledged by several authors, including Ricoeur (1983) and Wollheim (1984).

The notion of internal perspective is reasonably clear. Some narratives introduce *characters* who are represented as having various mental states, for instance as being happy. The mental perspectives that the characters have on the represented situation are internal perspectives. In contrast, Goldie's notion of external perspective is trickier. It seems to refer to the perspective of the *author* of the narrative. If Sam remembers a past situation in which he was happy, the external perspective is the present perspective of the remembering subject. It differs from the internal perspective that Sam occupied in the past. For instance, Sam may be presently nostalgic in remembering his happiness as a young adult. These emotional perspectives differ even if, as Goldie points out, they are occupied by the same person, namely Sam. Sam is both the author and the character of his memory.

So far so good, but Goldie also defines the external perspective as "a perspective that is external to the actions and events that are narrated" (Goldie, 2003, p. 302). Now we want to suggest that the author's perspective is not the only external perspective in this sense. Consider *observer* memories (as opposed to *field* memories; see below, Section 3.1, and Nigro and Neisser, 1983; Sutton, 2010). An observer memory represents the past situation from a point of view that differs from and encompasses the past subject's point of view. For instance, Sam remembers the last time he climbed his favourite mountain, by adopting the point of view of a virtual observer, who can see him climbing from sideways or somewhat behind. In this case, three epistemic perspectives should be distinguished. First, there is the internal perspective of the narrative, namely the visual perspective that Sam occupied in the past situation. Second, there is the visual, sideways perspective of the *narrator*, which differs from the internal perspective. Finally, there is Sam's (the author's) present epistemic perspective, which is obviously different from both the character's and the narrator's perspectives.

The author's and the character's perspectives are necessarily occupied, both by Sam in this example. What about the narrator's perspective? Although this is controversial, we are sympathetic to the view that the narrator's perspective can be empty. Sam's memory involves the re-creation of a visual experience that someone could have enjoyed in the past, but this visual experience need not be attributed to any real person in the past or in the present. As an analogy, consider Berkeley's famous example in which a subject tries to visually imagine an unseen tree. In both cases (*pace* Berkeley himself), the situation is represented from a visual

perspective that nobody occupies.⁴ Moreover, the fact that the narrator's perspective in Sam's memory is empty shows that observer memories need not be *distorted* memories (*pace* Fernández, 2015). The relevant visual perspective itself might have been available in the past situation, even if no actual observer has had the relevant experience. In principle observer memories can be fully veridical (for a similar point, see McCarroll, 2017).

The example of observer memories shows that we should go beyond Goldie and acknowledge two "external" perspectives beside the internal perspective of the narrative. The narrator's perspective is external relative to the character, but it is still internal, so to speak, to the narrative itself. Now there is a perspective that is external to both the narrator and the character, namely the *author's* perspective. For the sake of commodity, let us give a label to these three perspectives:⁵

P1. The perspective of the *character* (the represented subject)

P2. The perspective of the *narrator* (the way of representing)

P3. The perspective of the *author* (the representing subject)

Although the author's and the narrator's perspectives are at least notionally distinct, they do not always differ. A visual experience or a belief, for instance, does not involve the perspective of a narrator distinct from the author. We suggest that the narrator's perspective emerges as a distinct perspective only when the author re-creates a mental state that is not attributed to the character. It follows that **P2** differs from **P3** only when the mental state is an imagining, or involves an imagining. Although we do not think that memories are imaginings (*pace* Hopkins, forthcoming), some memories clearly involve or depend on imagination. Sam's observer memory is a case in point. It involves imagining Maria from a visual perspective that also encompasses Sam himself.

Of course, the example of Sam's observer memory only shows that a single narrative can involve three distinct *epistemic* perspectives. We are going to suggest that an ambitious notion of affective memory goes hand in hand with the possibility that a memory involves three

⁴ For a defence of the possibility of unoccupied visual perspectives in imagination, see Williams (1976), Noordhof (2002), and Dokic and Arcangeli (2015b). For critical discussion, see Peacocke (1985) and Martin (2002).

⁵ We have offered a preliminary account of these perspectives in Arcangeli and Dokic (2015).

distinct *emotional* perspectives. Thus, you might accept our description of Sam's observer memory but insist that no example can be given of a single narrative involving three distinct emotional perspectives. For instance, you might want to argue that the narrator's emotional perspective can be reduced to either the author's or the character's emotional perspective. When a memory concerns a happy situation, the narrator's happiness may just belong to the character, i.e., the subject need not be presently happy but can represent the situation from her own affective point of view in the past. When the narrator's happiness does not belong to the character (because the latter was not happy in the past situation), then it may be nothing but the author's happiness, i.e., the subject is happy in remembering the past situation.

Admittedly, the idea of a three-way emotional perspectival gap is controversial, and needs to be defended carefully. In the next section we shall discuss cases of mental narratives involving various alignments or collapses of emotional perspectives. Then we shall come back to the notion of affective memory and suggest a definition in terms of a dependence, but not an alignment, between the narrator's and the author's emotional perspectives.

3. Imaginative immersion and other perspectival alignments

3.1 Strong vs weak immersion

The most radical form of alignment is what we call "strong immersion". In strong immersion, all three perspectives (**P1**, **P2**, and **P3**) are aligned, so that the subject is apparently living through the represented situation. In the field of memory, so-called "flashbulb memories" might illustrate such an alignment (Conway, 1995). When one has a flashbulb memory of a past scene (often emotionally loaded), one has the impression of actually re-living the scene – the past is falsely represented as present, so to speak. In other words, the subject is temporarily deluded in actually having the re-created experience.

A more modest form of alignment concerns only the narrator's (**P2**) and the character's (**P1**) perspectives. The situation is represented exclusively from the point of the view of the character, while the author's perspective remains distinctive. When there is such an alignment of perspectives without strong immersion, we shall say that the representing subject is *weakly immersed* in the character's perspective.

The notion of weak immersion at stake here can be illustrated by means of the notion of *field memories* (Nigro and Neisser, 1983; Sutton, 2010). Unlike observer memories, field memories are cases in which the past situation is remembered from the subject's original point of view. As we saw in the last section, observer memories illustrate the epistemic gap between the narrator's and the character's perspectives: the narrator's perspective (**P2**) is that of the virtual observer, and it is distinct from the character's perspective (**P1**), which is the perspective that the subject has actually occupied in the past. In contrast, field memories are characterised by an alignment of these perspectives: the past situation is represented from the point of view of its main character, the subject herself. There is not strong immersion, because the author's perspective is not aligned with the perspective shared by the narrator and the character. The remembering subject is only weakly immersed in her past self's perspective.

Beside strong and weak immersion, two other examples of perspectival alignments are worth discussing, namely *emotional contagion* and *imaginative resistance*, which can also be described in terms of our tripartite account.

3.2 Emotional contagion⁶

In our account, there is emotional contagion when the representing subject irrationally “catches” the narrator's virtual emotion, i.e., where **P2** becomes **P3** through a confusion between the subject's represented situation and the actual (or present) situation. A famous and dramatic example of emotional contagion is provided by Gustav Schwab's popular story of the Horseman and the Lake of Constance (later mentioned by Freud in a letter to Minna Bernays).⁷ A rider crosses the frozen Lake of Constance by night without knowing it. When he reaches the opposite shore, and is told by a villager whence he comes, he dies of terror. In this story, the rider starts by remembering (or perhaps just imagining) a past situation from the point of view of a virtual narrator terrorised by the fact that what appears as land covered with snow is in fact a lake with a thin layer of ice. Then, the rider actually experiences the fear of the narrator. Such

⁶ We focus on cases of emotional contagion in which what is emoted originates from the imagination (which may or may not be associated with a memory). Whether emotional contagion always involves the imagination (in contrast to, say, perception) is something that we can leave open here.

⁷ Freud's letter is reproduced in Longfellow (2011)'s anthology.

emotional contagion is of course irrational or at least inappropriate because the rider is now on safe grounds, so that there is presently nothing to fear about.

Note that **P3** is contaminated by **P2** and not **P1**: the perspective of the character himself is not terror, but focus and determination to find a place to rest. One might wonder whether other cases of emotional contagion involve a contamination of **P3** by **P1**. For instance, Maria becomes sad just by imagining someone (maybe herself) sad. However, we surmise that emotional contagion is always mediated by the perspective of the virtual narrator, namely **P2**. In the latter scenario, Maria becomes sad by imagining someone sad only because the virtual narrator paints the imagined situation black, so that **P3** is contaminated by **P2** after all, which in the case in point is emotionally commensurate with **P1**.

What is the relationship between emotional contagion and the two kinds of immersion introduced above? To the extent that emotional contagion does not directly depend on the character's perspective (**P1**), it is compatible with, but does not entail, strong immersion. For instance, emotionally loaded flashbulb memories illustrate both emotional contagion and strong immersion. In contrast, emotional contagion is trivially incompatible with weak immersion since their combination would imply strong immersion (a collapse of all three perspectives).

3.3 Imaginative resistance

In *Of the Standard of Taste* (1757), Hume famously observed that it is subjectively hard to imagine situations incompatible with one's actual moral perspective. For instance, we may feel uneasy to imagine a world in which infanticide is morally permissible (Walton, 1994; Moran, 1994; Gendler Szabó, 2000). Like emotional contagion, we surmise that imaginative resistance involves a porosity between the perspective of the representing subject (**P3**) and the narrator's perspective (**P2**). However, there are two important differences. First, the direction of influence is different. While emotional contagion involves a contamination of **P3** by **P2**, imaginative resistance involves a contamination of **P2** by **P3**. The imagining subject's moral beliefs influence the narrator's way of representing the imagined situation. The imagined situation is easier to represent if the narrator's epistemic and emotional perspectives are closer to the imagining subject's actual perspectives. (In this sense, as many have observed, imaginative resistance is not restricted to moral beliefs.) Second, it is not obvious that imaginative resistance is like emotional contagion in being an irrational phenomenon.

Imaginative resistance prevents us from constructing a world in imagination that reflects morally unacceptable beliefs. This indicates a cognitive limitation on our part, but not necessarily a failure of rationality.

Imaginative resistance can prevent both weak and strong immersion. Weak immersion is compromised if the character’s perspective (**P1**) involves morally unacceptable beliefs. In such a case, the narrator’s perspective (**P2**) cannot easily be aligned with the character’s perspective. For instance, many readers might have experienced unease while reading novels such as *American Psycho* by Bret Easton Ellis, which is told exclusively from the point of view of a (fictional) sociopath. As a consequence, the world as represented in such novels is morally so distant from our world that immersion in fiction becomes hard, if not impossible, to achieve. A fortiori strong immersion, which requires the alignment of all three perspectives, is compromised as well. (Fig. 1 summarises the different cases of alignment just discussed.)

Fig. 1: Varieties of perspectival alignments (in grey)

	P1 Character	P2 Narrator	P3 Author
Strong immersion			
Weak immersion			
Emotional contagion		⇒	
Imaginative resistance		⇐	

4. Free vs constrained imagination

Let us say that our imagination is *free* if the narrator’s perspective (**P2**) can vary freely without much affecting the imagining subject’s perspective (**P3**). In contrast, our imagination is *constrained* if **P2** directly affects **P3**, i.e., the imagining subject spontaneously or unreflectively updates her actual model of reality on the basis of what she is imagining.

When imagination is constrained, a question arises as to the nature of the relevant constraint. The latter can be merely causal, or it can reflect the subject’s rational sensitivity to the actual world. Emotional contagion, where the representing subject’s perspective blindly

takes on the narrator's perspective, clearly involves a mere causal, irrational constraint. If I am terrorised just by imagining a random non-actual terrorising event, my emotion is inappropriate. It is also inappropriate as a direct response to my remembering a past terrorising event, although of course my memory can make it appropriate for me to fear similar present dangers.

In contrast, epistemic uses of imagination involve the narrator's perspective rationally constraining the subject's perspective. Suppose that Maria wants to buy a new sofa for her living room. She goes to the furniture store and spots a nice sofa. She is now using her imagination to determine whether the sofa would fit in her living room. She imagines the sofa with its actual shape and size at a particular place in the living room. Maria's use of her imagination is epistemically constrained since what she imagines has immediate consequences on what she believes, for instance, that a particular sofa would not fit her living room. Moreover, the beliefs that Maria acquires through imagination can amount to knowledge or at least be justified. Thus, the dependence of her present perspective on the narrator's perspective is rational.⁸

Episodic memory typically involves an epistemic use of imagination. When we use our memory and mentally re-live an episode of our own past, the narrator's perspective represents the episode as present but we form past-tense beliefs whose contents systematically depend on the contents of the narrator's re-created mental states. Since some of these beliefs are justified and can amount to knowledge (episodic memory, even when it involves imagination, is a source of knowledge about one's own past), the dependence of the subject's perspective on the narrator's perspective can be rational.

In the remainder of this chapter, we shall focus on the affective dimension of episodic memory. We are interested in cases where the narrator's emotional perspective directly influences the remembering subject's emotional perspective, even when these perspectives are distinct. In these cases, the narrator's emotional way of representing the past situation is not neutral for the remembering subject, and modulates her actual emotional state. We argue that the subject then has a genuine affective memory.

⁸ See Kind (2016) and other essays in Kind and Kung (2016). Other examples of rational constraints in imagination include imagination-based modal reasoning (see, e.g., Gendler Szabó and Hawthorne, 2002) and mental simulation (see, e.g., Goldman, 2006).

5. Affective memory

We are now in the position to see how the tripartite account of the perspectival character of mental narratives leads to a clarification of the notion of affective memory. In a nutshell, affective memory is a case of episodic memory that hinges on emotionally constrained imagination.

Consider the following example of an affective memory. Last night Maria was driving on the highway heading home. As she was very tired, she fell asleep on the wheel for only a few seconds. As a consequence, her car was about to hit the crash barrier, but fortunately she was soon back in control and her trajectory adjusted at the last minute. When Maria now remembers the scene, she represents it as an extremely dangerous episode. However, fear was not part of her original experience. On the contrary, she remembers having been relaxed and sleepy, not afraid of hitting the crash barrier. Fear is not part of her present experience either. Maria is not now afraid of hitting the crash barrier. On the contrary, she is relieved by the fact that a serious accident has been avoided. Thus, the present example clearly differs from examples involving emotional contagion, where the author's perspective is aligned with the narrator's perspective. Here, all three emotional perspectives seem to be distinct. The author's perspective (**P3**) involves relief, the virtual narrator's perspective (**P2**) involves fear, and the character's perspective (**P1**) involves calmness and peace of mind.

In parallel with Sam's observer memory (see Section 2 above), Maria's memory seems to involve a perspective on the represented situation that remains unoccupied: nobody is or was afraid of hitting the crash barrier. The idea of an empty emotional perspective is perhaps harder to envisage than that of an empty visual perspective. We believe that it is possible to represent certain values, such as danger, from emotional perspectives that are merely re-created, and that re-created mental states in general need not be attributed to anyone in the real or represented situation. Consider a character-free imagining; for instance, Sam imagines what the earth would be like after the next world war. Sam might construct his imagined world in such a way that humanity is extinct. No emotion can be part of the content of his imagining. Nevertheless, Sam might paint the situation in a gloomy or depressing way. The narrator's emotional perspective makes a phenomenological contribution to the imagining, and it might differ from Sam's present emotional perspective. Although Sam might himself be gloomy or depressed just by imagining this possible future situation, he might also be more sedate, perhaps because he is too optimistic to consider the situation as a probable future one.

In any case, if we are wrong and the narrator's perspective must be occupied in the represented situation, then affective memories will necessarily be *distorted*. On this view, Maria's memory is not fully veridical because it brings in an imaginary observer who is afraid of events and actions in the represented situation. From an epistemological point of view, this would be an unfortunate consequence, but it would leave intact the claim that there are genuine affective memories.

Note that the dangerousness of the situation is represented *experientially* and more specifically emotionally. The fact that the car was about to hit the crash barrier is presented as *fearsome*, rather than in more neutral terms. If we leave out this emotional dimension of the memory, Maria's present emotional response would be hardly intelligible: Maria feels immediate relief at least partly *because* the situation is represented as fearsome. In contrast, the move from re-creating the emotion of fear to Maria's present relief makes perfectly sense, even though Maria does not, indeed cannot remember having been afraid at the time. In other words, the subject's perspective (**P3**) and the narrator's perspective (**P2**) are coupled at the emotional level. Maria's relief is a rational response to the virtual narrator's fear. What makes Maria's memory affective is the fact that it involves emotionally constrained imagination.

Here is another example of affective memory. Sam feels presently nostalgic in remembering his life as a young adult, which he now pictures in a more happy and favourable light than he would have admitted at the time. In this example, the subject's emotional perspective (**P3**) is nostalgia, the narrator's emotional perspective (**P2**) is happiness or joy about the events and actions in the past situation, while the character's perspective (**P1**) is more akin to recklessness or unconcern. Again, Sam's memory does not involve either weak immersion or emotional contagion, and the narrator's perspective seems to make a special contribution to its phenomenology.

On the present account, a given memory can be affective even if the remembered situation did not involve the character's having an emotion. What makes a memory affective is the dependence of the author's emotional perspective on the narrator's (not the character's) emotional perspective. Now, in some cases there will be in addition an alignment between the narrator's and the character's perspectives. In other words, affective memories can be either field or observer memories, depending on whether the narrator's perspective is aligned on the character's perspective.

What is the nature of the dependence involved in affective memory? Maria is not merely imagining the event but also remembers it. Thus, the narrator's perspective is controlled by episodic information. The extent to which Maria's relief is an appropriate response and reflects her rational sensitivity to the remembered event depends on the existence of principles of emotional rationality. As a first approximation, her present emotion of relief is appropriate only if, in the situation remembered, the emotion of fear had been appropriate (irrespective of whether that emotion was actually felt then), which in turn is a matter of whether what happened then actually put the subject in danger.⁹

Independently of the latter issue, we can now see what is wrong with the argument of the sceptics about affective memory. Once the existence of three separable perspectives is properly acknowledged, there is room for the category of affective memories. When the narrator's perspective (**P2**) is emotional and constrains the subject's emotional perspective (**P3**), there is a special emotional way of remembering an event. On this view, memories are affective when the narrator's perspective is emotionally loaded and directly affects the subject's emotional perspective, independently of whether a past emotion is part of what is remembered.

One might object that on our account, affective memories are not genuine memories but rather combinations of memories and imaginings. Affective memories are just ordinary memories combined with affective imagination. Correspondingly, one might acknowledge cases of imagination that involve three-way emotional perspectives, but argue that memories do not exhibit the same structure.

In answer to this objection, we agree that we have not shown that affective memories are genuine *kinds* of memory, rather than memories that are only contingently associated with imaginings. This is not a problem, because we want to account for a phenomenologically salient mental phenomenon that may or may not correspond to a mental essence. What the objection underestimates is the nature of the relationship between affective memories and the imaginings they are based on. Affective memories are not just memories that happen to be accompanied by imaginings. Rather, the relevant imaginings are *constrained* by episodic information possessed by the subject. When we have an affective memory, we may enjoy a unified conscious experience, at least if our possession of the relevant episodic information is not manifested in a

⁹ Thanks to Christoph Hoerl for suggesting this formulation. The general claim that there are principles of emotional rationality is controversial but (we think) plausible.

separate, memory experience, but is used only in the course of our imagining the past from a certain (narrator's) perspective. What makes the subject's whole experience a memory experience is that her imagining (and more precisely the narrator's perspective) is controlled by episodic information, in a way which enables rational constraining of the subject's perspective.¹⁰

6. Mental time travel

As we have seen, episodic memory typically involves the imaginative capacity to re-live an episodic of one's own past. According to recent work in cognitive science, the same imaginative capacity is also at work when one mentally pre-lives an episode of one's anticipated future (Schacter and Addis, 2007; Michaelian, 2016a). In other words, a single mental capacity labelled "mental time travel" has both past-oriented and future-oriented exercises. Episodic memory involves the former exercises, while the latter are cases of so-called "episodic future thinking" (Atance and O'Neill, 2001).

Episodic future thinking is not merely a case of imagining a situation which might be our future situation. When mental time travel is impaired, as in certain forms of amnesia, the patient is still left with the ability to imagine general facts about the future. What is not preserved is the ability to imagine detailed episodes of one's subjectively probable future. Episodic future thinking thus involves a specific way of representing one's own future.

In our view, episodic future thinking involves a constrained use of the imagination. When the relevant constraint is emotional, episodic future thinking directly modulates our present emotional states. Just like episodic memory, episodic future thinking can be and is often affective. Suppose that Maria anticipates an important examination that she must take next week. She believes that she is well prepared for this, and imagines herself answering an apparently simple question with a strong feeling of *confidence* (**P1**). However, Maria imagines such a situation from the perspective of a virtual narrator who knows that Maria is overconfident, and gives the wrong answer. The narrator colours the imagined future situation

¹⁰ Our account is compatible with a view defended by one of us (Dokic, 2014), according to which a memory experience typically involves in addition a metamemory feeling that tags the relevant contents as coming directly from one's past experience.

with *shame* and *embarrassment* (**P2**). As a consequence, Maria presently feels *anxious* about the prospects of a not so well-prepared examination (**P3**). What makes this example a case of episodic future thinking in contrast to other cases of imagining the future is the emotional dependence of the subject's perspective on the narrator's perspective. What Maria imagines has direct consequences on her present emotional state, without the mediation of beliefs or other conceptual representations.¹¹

Let's contrast the examination example with another one involving emotionally *free* imagination. This time, Maria imagines herself being a candidate for Presidency and waiting for the results of the elections. In real life, Maria is not motivated whatsoever to become the President; she imagines such a situation merely for the fun of it. However, she can imagine herself being motivated to be the President, so that she is highly anxious about the results. This is the internal perspective of the mental narrative (**P1**). Now the virtual narrator can represent Maria as being in a favourable situation, i.e., as having won the elections (even though she does not know the results yet). In other words, the narrator's virtual emotion (**P2**) is happiness or satisfaction, which colours the imagined scene. **P2** is clearly distinct from **P1**, at least epistemically and emotionally. Emphatically, **P2** is also *not* the perspective of the imagining subject, who is completely indifferent to the issue about being the President. The emotional perspective of the imagining subject (**P3**), is *indifference* or perhaps *amusement*, while the narrator's perspective is *happiness* and the character's perspective is *anxiety*. Now Maria's imagining is free, since it is done for the mere fun of it, and does not lead to any adjustment in her actual view of reality. What she imagines has no or low impact on what she believes or feels about the actual world.

An interesting question is whether the dependence of emotional perspectives in episodic future thinking is rational or not. As in the case of episodic memory, the answer depends on the existence of principles of emotional rationality. For instance, de Sousa (2007, 2008) discusses what he calls "Philebus Principle", according to which a pleasure taken in anticipation of a future event should be proportional to the pleasure that will be actually yielded when

¹¹ The claim that episodic future thinking involves constrained (and not free) imagination has affinities with Gerrans and Mulligan (2013)'s account of what they call "hybrid imagination". They suggest that in episodic future thinking, "we try to work out what *might* happen by imagining the future within contextual constraints supplied by propositional knowledge" (p. 254). However, they seem to reduce hybrid imagination to *de re* imagination, and we surmise that not all cases of imagination *de re* have to be constrained in our sense.

experiencing the event. On this view, “it is irrational to take great pleasure in the expectation of something that one knows will bring little or no pleasure when it comes [and] it seems quite reasonable to dread the prospect of future suffering” (2007, p. 151). Arguably, Maria’s present anxiety is a rational response to the narrator’s perspective in the future. It seems to be an emotion that is in a relevant sense proportional to the emotion experienced by the (virtual) narrator.¹²

There is still an important issue left, which concerns the precise relationship between episodic memory and mental time travel. On the *continuist* hypothesis, episodic memory and episodic future thinking are nothing but exercises of the same psychological natural kind, namely mental time travel. Both past-oriented and future-oriented mental time travel are controlled by episodic information, but such information is always the result of a construction by the brain. We make up our own past just as we do for our own future. On the alternative, *discontinuist* hypothesis, episodic memory involves more than just mental time travel. Episodic memory is tightly controlled by reliable episodic information about the past. Future-oriented mental time travel is still sensitive to episodic information (since the imaginative construction of detailed situations is known to involve episodic information), but only loosely so, by reflecting subjective probabilities about future events.¹³

Although we can remain neutral on this issue here, we tend to favour discontinuism. If discontinuism is true, we might wonder whether there are past-oriented exercises of mental time travel that do not involve episodic memory. If there are, then the case for discontinuism would be strengthened. Past-oriented constrained imaginings that are not memories of the past situation seem to be available. We can represent a past situation in a way which epistemically and emotionally constrains our present perspective, not because we remember the past situation but because we picture it as having very probably occurred given our present worldview. For

¹² See also Boyer (2008) for an account of mental time travel according to which it “may be functional to the extent that it provides emotions that bypass current goals as well as time discounting and, therefore, provide us with immediate counter-rewards against opportunistic motivation” (p. 22).

¹³ We borrow this terminology from Perrin (2016) and Michaelian (2016b), who favour continuism and discontinuism, respectively. One argument frequently invoked in favour of discontinuism is epistemological: whereas episodic memory is a source of knowledge about the represented past situation, episodic future thinking cannot be a source of knowledge about the represented future situation (although it can yield new knowledge, for instance about Maria’s present state of preparation for her forthcoming examination).

instance, Sam imagines Maria cheating on him while he was away last week-end. The narrator's perspective might be sensitive to episodic information in a way which constrains Sam's present emotional response. Sam might then be jealous just by imagining a highly probable past situation, even though he was not around to witness it and cannot remember it.

To sum up, whatever the fate of the debate between continuism and discontinuism, we have taken a stance on the nature of mental time travel itself. Mental time travel is nothing but the ability to engage in exercises of constrained imagination. On the one hand, episodic future thinking is itself a *case* of constrained imagination; the subject is directly affected by her future-oriented imaginings. On the other hand, the examples of episodic memory discussed here at least *involve* constrained imagination; the subject is directly affected by her past-oriented imaginings. Note that we go beyond the claim that mental time travel is *mere* imagination, oriented toward the past or the future. Mental time travel involves a special use of the imagination, which is characterised by a dependence of the subject's perspective on the narrator's perspective. (See Fig. 2 for a summary of the discussion.)

Fig 2: Varieties of free and constrained imagination

	P3 constrained by P2	P2 controlled by episodic information
Free imagination	- (not much)	- (not much)
Episodic memory	++	++
Episodic future thinking	++	+/-
Unconscious recollection ¹⁴	- (not much)	++

7. Conclusion

The puzzle of affective memory arises because it may seem hard to understand how memory can be emotionally loaded if the relevant emotion is neither the object nor the separate

¹⁴ Here we think of Martin and Deutscher's (1966) famous character, who paints a house which unknowingly to him perfectly matches his childhood house. The painter seems to freely imagine a house but the narrator's perspective is in fact controlled by episodic information.

effect of the memory. We can remember our past emotions, and our memories can cause various emotions in us, but neither phenomenon gives justice to the idea that there is an emotional way of remembering the past.

In this chapter, we have suggested a way out of this puzzle. When we mentally re-live a past situation from memory, we imagine the situation from the perspective of a virtual narrator. This perspective is neither the present nor the past perspective of the subject. Once the existence and the emotional dimension of such intermediary perspective are properly acknowledged, affective memory can be considered a genuine phenomenon. Affective memory involves a dependence (but not an alignment) between the narrator's and the subject's perspectives; more precisely, the latter is emotionally constrained by the former, in a way which can reflect the subject's rational sensitivity to the world.

Constrained imagination is what is going on in mental time travel. We have suggested that both past-oriented and future-oriented exercises of mental time travel involve an epistemic and emotional dependence of the subject's perspective on the narrator's perspective. Our account of mental time travel is relatively neutral with respect to the question of whether episodic memory and episodic future thinking belong to a single psychological kind, which would be the ability to mentally travel in time. Continuists give an affirmative answer to this question, while discontinuists claim that there is more to episodic memory than mental time travel. In our view, the continuism *vs* discontinuism debate boils down to the question of whether episodic memory as a psychological kind can be identified with past-oriented constrained imagination.

To sum up, the separate existence of the narrator's perspective and its direct emotional impact on the subject's perspective are conditions of possibility of affective memory. Moreover, our tripartite account of imaginings places affective memory within a logical space that includes other (more or less rational) mental phenomena, such as episodic future thinking, but also field and observer memories, flashbulb memories, emotional contagion and imaginative resistance.

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