

## Emotions and Memory\*

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Pre-theoretically, it seems obvious that there are deep and multifarious relations between memory and emotions. On the one hand, a large chunk of our affective lives concerns the good and bad events that happened to us and that we preserve in memory. This is one amongst the many ways in which memory is relevant to the nature and causation of emotions. What does recent research teach us about these relations? § 1 surveys some key issues in this regard. On the other hand, which events we happen to preserve in memory very much depends on how we affectively reacted to them when they took place. Emotions are relevant to the nature and causation of memory in this and many other ways. Key issues regarding these relations are surveyed in § 2.

To keep the discussion manageable, I shall presuppose the following evaluative approach to the emotions. Emotions have a complex intentionality. First, they have a *particular object*: one is afraid of the dog nearby, hopeful to win the prize or sad that a friend did not visit us. To target particular objects, emotions have to build on other mental states that can be described as their *cognitive bases*: they target the dog one sees, the prize one imagines or a missed opportunity one remembers. Second, emotions have a *formal object*, which is a distinctive value for distinct emotion types. In fear, that value is the dangerous or the threatening; in hope, it is the value of positive prospects and, in sadness, it is loss. I shall not presuppose anything about the way this evaluative aspect of the emotions is realized and shall rest content with referring for illustrative purposes to different approaches along the way (for discussion, see Deonna and Teroni 2014).

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## §1 How is Memory Relevant to the Nature and Causation of Emotions?

Three issues will be discussed in this section. a. Are there types of emotions that are exclusively related to memory? This issue concerns the *individuation* of emotion types. b. Do emotions in general have privileged links with types of memory (e.g., perceptual memory)? This is a question about the *format of representation* in emotion. c. Do emotional evaluations have privileged links with memory? This issue concerns the way in which the *evaluative aspect* of the emotions is *realized in the subject's psychology*.

### a. *Memory and Emotion Types*

Are there emotion types that require memory as their cognitive base? Nostalgia and regret are obvious candidates, since remembering an event looks like a precondition for being nostalgic or regretful about it. What does that reveal regarding the relation between memory and emotions?

Well, it seems that nostalgia and regret are the types of emotions that they are thanks to memory. This is right, but how far-reaching this observation is depends on how one understands the relation of nostalgia and regret to other emotion types. For instance, nostalgia may be understood as a complex emotion involving two distinct simpler emotions that co-exist or perhaps rapidly alternate: joy (about the goods that befell us) and sadness (at the realization that they are gone and may not be recoverable) (e.g. Prinz 2004). Given that joy and sadness do not always build on memory, this “blending” approach to nostalgia suggests that, in this case at least, the relation between the emotion type and memory is inconsequential. Consider regret, now. Regret, it may be said, is just a label we use to single out for special attention the episodes of sadness that we feel toward specific events: past events in which we are implicated for the worse. According to this “calibration” approach (Prinz 2004), regret is simply sadness calibrated to specific types of past events. If this is on the right track, then the relation between regret and memory is also inconsequential: it just happens that we dignify sadness, when it targets specific objects that we remember, with the label “regret”. In some other social contexts, it may happen

that “steegret” singles out the sadness one feels at the loss of one’s steed. The interest in past events in which we are implicated may be more widely shared across history and cultures than the interest in horses, but neither regret nor “steegret” turns out to be a privileged entry point into the nature of emotions. Or so this line of thought concludes.

That being said, there are at least two ways to secure a fundamental role for memory vis-à-vis emotion types. The first, modest way consists in showing that there are emotion types that have exclusive links to memory for which neither the blending nor the calibration strategy works. To stick with our examples, one may for instance argue that the blending approach does not work for nostalgia, since we should leave room for basic “bittersweet” evaluations or feelings that display a kind of unity inconsistent with the idea of a blend of joy and sadness. As to the calibration approach, one may think that it does not apply convincingly to regret: the evaluations or feelings characteristic of regret may be essentially determined by the fact that *we* are implicated in *irreversible* negative events and so cannot come from sadness. While these strategies raise a number of issues, the jury is still out in this regard (Scarantino and Griffiths 2011).

The second, more ambitious way to secure a fundamental role for memory is to deny a presupposition of the above discussion: that some emotions are simpler or more basic than others, in particular insofar as they would not exclusively build on memory. Some forms of constructionism go this ambitious way (e.g., Barrett 2005): according to them, which emotion we undergo depends on how we happen to categorize relatively amorphous feelings. Suppose you experience an unpleasant feeling and feel quite aroused. The ambitious constructionist claim is that you will undergo anger, say, if you categorize these feelings as symptomatic of your being angry, where this categorization may in turn be explained by your belief that you have been insulted. Alternatively, you will undergo fear if you happen to categorize these same feelings as symptomatic of your being afraid, for instance because you think that the situation is

threatening. Insofar as these categorizations depend on memory (building on recognitional capacities, perhaps), then memory would play a key role in the individuation of emotion types.

*b. Do Emotions in General Have Privileged Links with Types of Memory?*

Our second issue concerns the format of representation that is necessary or important in triggering emotions. Can emotions be indifferently triggered by conceptual (the format of many beliefs, for instance) and experiential (the format of perception, of course, but also of imagery) representations? One widely shared assumption is that, for most emotions, the foundational case involves a cognitive base that is perceptual. Such emotions are tailored to react to experiential representations. If so, emotions elicited in the absence of perception of the relevant objects or events must have bases that somehow retain crucial traits of the foundational case. By mimicking this foundational case, the types of memory that recruit imagery (and more generally mental states that do so) make it possible for the emotional system to be put into motion (Holmes and Matthews 2005, 2010; Robinson 2005; Salmela 2014; Siedlecka and Denson 2019). The idea can be defended across the whole emotional domain, or for some emotion types more specifically (Siedlecka and Denson 2019). One may think for instance that disgust, as opposed to, say, regret, essentially involves visual or olfactory perception or imagery.

It is fair to say that there is to date no systematic exploration of how imagery relates to emotions in general or to different emotion types. The available studies support the intuitively convincing picture on which imagery (and memory imagery in particular) makes it more likely that we undergo emotions, but that it is not required to engage our emotional system. As Holmes and Mathews put it, “images appear to act as ‘emotional amplifiers’” (2010: 353). So, if the cognitive bases of nostalgia and regret have privileged or exclusive links to memory, then they are more likely to be triggered by memory imagery than by purely semantic/propositional memory.

c. *Do Emotional Evaluations Have Privileged Links with (Types of) Memory?*

According to an evaluative approach to the emotions, (specific) emotions have privileged links with (specific) values. Emotions are or presuppose evaluations of their particular objects: in an episode of fear, a dog is evaluated as dangerous, for instance. What psychological shape do these evaluations take? Do they relate in interesting ways to (types of) memory?

Exploring, however briefly, this issue requires that we anchor the discussion in a specific approach to the nature of emotional evaluations. Since I referred to constructionism in § 1.a., let me draw here on an influential variant of the appraisal theory (e.g., Scherer 2001). According to this theory, emotional evaluations consist in a series of discreet appraisal checks along different dimensions: is the event novel or already known? Is it goal conducive? Is it intrinsically (un)pleasant? Can I cope? etc. Fear of the dog would rest on the appraisal of the dog's nearness as a novel, goal unconducive and unpleasant situation that one cannot cope with. Obviously, a sensible answer to any of these appraisal checks will have to rely on information preserved in memory, be it semantic or encoded in imagery (see § 1.b.). This is not the issue that interests us here. What interests us is whether emotional evaluation must always involve an *actual sequence of occurrent appraisal checks*, or whether it can *itself* be a memory.

It seems to many that it would be too taxing for the subject's cognitive resources to require that the series of appraisal checks be actually computed "online" at each occasion. With experience, shortcuts or summary evaluations become possible. These shortcuts take the shape of memory schemas or the application of recognitional concepts (Clore and Ortony 2000; Leventhal and Scherer 1987). The fifth time one meets a growling dog, say, there is no need to check again whether the presence of a nearby dog is goal conducive, intrinsically (un)pleasant and something one can cope with – previous experience allows one to immediately recognize the threat, be afraid and take to one's heels. This evaluative recognitional capacity is essentially similar to what happens in non-evaluative domains of cognition (e.g.,

moving from a series of checks to categorize a tree as a birch tree to the immediate recognition of a tree as such).

Appealing to such evaluative shortcuts seems to be a mandatory move for an attractive appraisal theory.

And it raises some key and underexplored issues, especially if one thinks that evaluations (partly) constitute the emotions (Moors et al. 2013). First, it suggests that a kind of memory-based appraisal is constitutive of many emotions. Is a specific kind of memory involved? Or can these shortcuts indifferently take the shape of episodic, semantic or procedural memory? Second, consider the online process that consists in moving sequentially from one appraisal check to another to reach the complete evaluative verdict specific to fear. Compare it to the triggering of a recognitional capacity to pass that same evaluative verdict. It stands to reason that these are quite distinct psychological phenomena, if only because they occupy time and consciousness in different ways. If so, what unifies the episodes of a given emotion type that involve an actual sequence of occurrent appraisals with the episodes that involve memory-based evaluative shortcuts? Does the fact that emotional evaluations can be realized in such different ways mean that this unity, if any, cannot be found in the evaluative aspect of the emotions? If so, in which other aspect(s) is it found?

## **§2 How Are Emotions Relevant to the Nature and Causation of Memory?**

Four issues will be presented in this section. a. Is there a relation between the formation of memories and emotions? This is the issue of *selectivity*, which concerns the role of emotions at the time of encoding. b. Is there a relation between the capacity to access a memory and emotions? This question targets the role of emotions at the time of remembering and relates to the phenomenon of “*mood congruence*”. c. Is there a type of memory content that is distinctively related to the emotions? This is the issue of *affective memories* and their nature. d. Is the *attitude* of remembering (as opposed to what one remembers) emotional in nature?

*a. Selectivity*

The relation between the formation of memories and emotions is best approached through their respective links to attention.

On the one hand, there are intimate relations between emotions and attention. It has been regularly emphasized that the main function of emotions is to capture and focus attention and in so doing help the subject deal with the emotional situation, and that variations of emotional intensity are related to variations in the amount of cognitive resources that are devoted to the emotional situation (Finucane 2011; Harmon-Jones et al. 2013; Brosch et al. 2013).<sup>1</sup>

On the other hand, available evidence supports the claim that the encoding of emotionally arousing material is enhanced: enhanced encoding is specific to the emotionally salient object, which is then better remembered (Hamann 2001; LaBar and Cabeza 2006; Phelps 2004; Yonelinas and Ritchey 2015).<sup>2</sup>

Combining these two claims means that attention mediates interesting relations between emotions and memories: emotions tend to focus the subject's attention on to significant events and objects, which enhances encoding and, subsequently, the possibility of remembering.

*b. Mood Congruence*

Let us now turn to the capacity to access memories – is there an interesting relation between this capacity and emotions? Yes: this is the so-called “mood congruence effect”. The label refers to a well-documented phenomenon: when in a given emotional state, subjects are more likely to remember

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<sup>1</sup> This raises the further issue as to the exact function of attention in emotion. For two different approaches, see Brady (2013) and Evans (1970).

<sup>2</sup> Interesting special cases of this phenomenon are the so-called “flashbulb memories”, on which see Hirst and Phelps (2016).

events of a similar emotional “quality” compared to events of different emotional qualities or neutral events (Blaney 1986; Gaddy and Ingram 2014; Loeffler et al. 2013; Matt, Vásquez and Campbell 1992). While mood congruence is a well-documented phenomenon, its impact on important philosophical issues is rarely discussed. Let me briefly mention three of these issues. First, there are *epistemological* issues. According to influential approaches, the justification of our beliefs is a function of the evidence that we can access (for discussion, see Dougherty 2011). If our emotional states influence the kind of information we have access to, this suggests that the epistemic standing of many beliefs is significantly influenced by the emotional state we happen to be in. This effect is likely to be magnified for evaluative beliefs, given the connection between emotion and evaluation. Second, there are issues regarding the kind of *control* that we have on our affective and, more generally, mental lives (e.g., Millar 2004). How serious is the impact of mood congruence on our conative states and basic orientations regarding what life has in store for us? Does it foster a picture in which we are basically the hapless victims of the affective states that we undergo, or does it leave room for a robust kind of agency? Third, there are issues regarding our *diachronic identity*. According to neo-Lockean approaches (e.g., Parfit 1984), personal identity is determined by diachronic psychological connectedness, within which memory is always given pride of place. If we endorse such an approach, mood congruence suggests that our personal identity is, if not a strictly affective affair, at least profoundly influenced by the affective states we are in.

c. *Affective Memories*

One of the most intriguing issues regarding the relations between memory and emotions concerns the purported existence of memories that are distinctively affective in nature. “Distinctively affective” in the following sense: their affectivity would neither consist in the fact that they were selected or are now retrieved because of the emotions they elicit(ed) in us, nor in the fact that they simply refer to past



emotions (as when we remember that we were proud of winning a prize). The existence of these phenomena is not disputed, as opposed to the existence of distinctively affective memories.

The best strategy to understand what affective memories are supposed to be is to draw a parallel with what happens when memory targets other, non-emotional experiences. This will put us in a position to appreciate why the existence of affective memories is controversial. Consider visual experiences and how one may remember them. One may remember *that* one saw a given river from such and such a vantage point, say. But one may also remember *the visual experience*, where this is not (merely) a matter of retained knowledge that the experience was so and so, but a memory of the experience itself by somehow “reliving” it. At the time of memory, it is, as we colloquially say, “as if” one were seeing the river again (Teroni 2017). But only “as if”: we know that we are not in a visual relation with the relevant objects, although we are in a state that bears a striking phenomenological similarity to a visual experience. In the case of visual, auditory etc. memory, there is such a similarity between the relevant perceptual experience and the memory “image”. What is controversial is whether we can extend this idea of an image or of reliving a past experience to the memory of past emotions.

Those who deny that we can argue that alleged cases of affective memory always turn out to be either cases of memory that one had an emotion, or of memory about a past emotional situation that elicits an actual emotion at the time of recall (Debus 2007). One argument in favour of this conclusion is phenomenological. For can we make sense of “as if emoting”? Of course, the answer very much depends on what one takes emotions to be. But there is a widely accepted aspect of the emotions that creates a *prima facie* problem for extending the idea of an image to our relation to past emotions. Emotions are valenced, i.e. they are pleasant or unpleasant (Colombetti 2005; Teroni 2018). Now, can we make sense of the idea that one is in a state that bears a striking phenomenological similarity to a (un)pleasant state, but where it is only “as if” one were (dis)pleased? It is actually not easy to make sense of it, although the reason why it is so is difficult to pin down. Is the difficulty here just a consequence of our contingent

psychological make-up, or does it reveal something essential about affective states? If the latter, is it because valence is an experiential property and that there is no appearance vs reality distinction for these properties? Alternatively, is it because the specification of a state that is “as if” (un)pleasant is contradictory: to be phenomenologically similar to a (un)pleasant state would imply that it actually hurts or feels good, but the “as if” locution is meant to deny that this is the case? And how does that compare to the readily accepted idea that, in memory or imagination, it can be as if one were seeing the relevant objects?

The answers to these difficult and underexplored issues are likely to have important theoretical consequences. To name just one, are popular approaches according to which affective states are or contain perception-like experiences of value defensible in light of the difficulty in making sense of as if emotions? Most if not all perceptual experiences make room for as if counterparts – if the idea of as if emotions turns out to be contradictory, should we conclude that the experience of value in emotions is not perception-like?

#### *d. The Attitude of Remembering*

The final issue I wish to discuss concerns the attitude of remembering as opposed to what we remember – is this attitude partly emotional? We say that we “seem to remember”, and many philosophers think that this expression often refers to our capacity to know in a privileged way that the psychological state we are in claims to relate us to objects and events in a memory (as opposed to a perceptual, imaginative, doxastic, etc.) way. In that sense, we may seem to remember that Napoleon crossed the Alps. What underpins this capacity and, in particular, does it rely on a “signature” of the attitude of remembering that we can access from the first-person point of view? If so, what is its nature? This is obviously not the place to explore this issue in any detail (see Teroni 2017). Let me simply say a few words about the intriguing and recurrent idea that the attitude of remembering involves a feeling of familiarity (Matthen 2010; Russell 1921) and its relation to emotions.

Maintaining that the attitude of remembering makes itself manifest in a phenomenology of familiarity is quite attractive: it not only allows for a cognitively undemanding and unified account, it also explains typical mistakes of self-attribution, which are often due to illusions of familiarity. But what is the feeling of familiarity? It bears some similarities with emotional experiences. First, both vary in intensity: one may feel more or less afraid of a dog, as an object may feel more or less familiar. Second, feelings of familiarity depend on a specific type of appraisal. As we have seen, an influential theory claims that emotional evaluations follow a typical sequence that starts with assessing whether the stimulus is novel (Scherer 2001). We might thus insist that a similar appraisal process underscores emotions and feelings of familiarity; in the latter case, the object or event is appraised as having been previously met.

These similarities do not add up to a strong case for assimilating feelings of familiarity to emotions. The final verdict is likely to depend on one's stance regarding whether two further aspects of the emotions that we already had the occasion to discuss also characterize feelings of familiarity. The first aspect is *valence*. Is the feeling of familiarity (un)pleasant? Titchener, for one, describes it as a "glow of warmth, a sense of ownership, a feeling of intimacy" (1910: 410), hardly the hallmarks of a neutral experience. A significant body of empirical data supports this idea (Garcia-Marquez and Mackie 2000; Winckielman and Cacioppo 2001; Zajonc 1968). The second aspect is *evaluation*. When we describe something as familiar, do we evaluate it? Some insist that feelings of familiarity are subtended by a positive evaluation, which indicates "the availability of appropriate knowledge structures to deal with a current situation" (Winkielman and Cacioppo 2001: 990). One may go even further and maintain that familiarity and unfamiliarity have, in and of themselves, different consequences regarding the capacity for coping (Frijda 1986: 350). Familiarity would manifest itself in a positive feeling reflecting one's capacity to cope with the relevant object or event, unfamiliarity in a negative feeling manifesting one's difficulty in coping with it. If this is along the right track, then the attitude of remembering may turn out to be emotional.

## Conclusion

In the foregoing, I have briefly presented some important relations between emotions and memory. These relations go in both directions and, despite their important theoretical consequences, many of them are surprisingly underexplored.

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