

## The Intentionality of emotions and the possibility of unconscious emotions

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**Abstract** Two features are often assumed about emotions: they are intentional states and they are experiences. However, there are important reasons to consider some affective responses that are not experienced or only partly experienced as emotions. But the existence of these affective responses does not sit well with the intentionality of conscious emotions which are somehow geared towards their object. We therefore face a trilemma: either these latter affective responses do not have intentional objects and we should renounce intentionality as a defining feature of emotions; or we have to explain how they actually have intentional, though unconscious, objects; or after all we must deny that they are really emotions. I suggest that the second option is the correct one: we can provide an account of the intentionality of unconscious emotions and its relation to the intentionality of conscious emotions. To do this, I rely on neuropsychological studies that distinguish two kinds of attention: salience as enriched treatment, and focus as a way of turning our attention. Then, given that only salience is always present in unconscious emotional phenomena, I suggest that emotions are intentional because they involve an object being made salient. I further argue that this feature of emotions explains why unconscious and conscious emotions can be taken as organized around their object. Finally, I defend this account against several objections, showing that the account can be applied whatever the cognitive base of the emotions may be and is not falsified by the fact that attentional aspects of emotions may vary in other dimensions.

### 1. Introduction

An emotional syndrome is characterized by a set of responses: a physiological response, a bodily response, a motivational response, some cognitive and plausibly attentional responses. However, emotions plausibly constitute a certain natural kind of mental phenomena. A reason why is that an emotion is not just a sum of responses, but an organized set of responses, responses that somehow call for one another. Moreover, they are organized around an object and this is plausibly why they are described in ordinary language as attitudes towards intentional objects: we say that we fear the aggressive dog and that we enjoy our success. It follows that a scientific account of the nature of emotions should explain what makes emotions *coherent responses* but also what makes them coherent responses *oriented towards an intentional object*. One natural way to go is to take emotions as conscious experiences involving an object. Views going in this direction have attracted philosophers since Descartes. However, and as I will argue below, there are good reasons to admit the possibility of unconscious and partially unconscious emotions. Therefore, it may be preferable to look for

an account of emotions that allows for these emotions. But this concession raises in turn a difficulty: how can we understand the unity of emotions around an intentional object if these emotions are unconscious or without conscious object? The positive aim of the paper is to explain how this can be done. In a nutshell, my proposal is to look at the attentional responses that emotions involve. If my view is correct, then it will provide a minimal account of emotions as a certain natural kind of mental state having a content. It will be minimal insofar as it will not settle further questions about emotions such as whether they represent values, are reactions to representations of value, have correctness conditions in terms of values, should be taken as motivations or analogous to actions, etc.

The paper has four sections beyond this introductory one. In the second, I specify the account of natural kinds on which I will rely and explain why we should accept that some emotions are unconscious. In the third, I will briefly consider a deflationary account of the intentionality of emotions, reject it and present what I take to be a better account that relies on the role of attention in emotions. In the fourth, I will assess several objections before offering a short conclusive section.

## **2. Emotion as a natural kind and consciousness**

### ***2.1 The emotional process and the nature of emotions***

As a start into an enquiry on the nature of emotions, it is useful to describe the causal process that is responsible for their existence. According to a view that is shared by most philosophers and psychologists, emotions result from the representation of a certain object. This cognitive state which is often called the cognitive base of the emotion (see Teroni 2007) triggers a process that is itself responsible for a set of responses: physiological, behavioral, motivational, cognitive, attentional. This set of responses is then consciously represented. The main point of disagreement is the nature of the process that is responsible for the emotional response. The majority view is that this process involves an assessment, an appraisal or evaluation of the content of the cognitive base. It is held by philosophers who adopt cognitive (Solomon 1976), perceptual (Tappolet 2016), and reactive (Massin 2021) theories of emotions but also by psychologists defending appraisal theories of emotions (Scherer, Schorr and Johnstone 2001) and neuropsychological constructivists about emotions (Barrett and Russell 2014). However, others deny that anything that deserves to be called cognitive happens. This latter view is upheld, for instance, by William James (1884) who contends that this process is akin to a reflex. Contemporary thinkers leaning towards this

view contend that the emotional responses are due to low level processes that would be improperly described as cognitive assessments of their cognitive base (Prinz 2004, Ekman and Cordero). In any case, these disagreements will not be my concern here.

Now before assessing how we should identify emotions within this sequence of events, we need to specify the notion of natural kind we will work with. On a narrow conception of natural kinds, only objects having a certain essence belong to natural kinds. Thus, water is a natural kind insofar as its essence is given by the molecular composition of its main or unique component. Unfortunately, this narrow understanding of natural kinds can hardly be applied to mental states as they can't be applied to natural species for which definitions in terms of necessary and sufficient conditions are inappropriate insofar as the belonging to a species involves some vagueness. This is why the authors who have tried to understand emotions as a natural kind like Griffiths (1997) or Prinz (2004), have relied on a homeostatic understanding of natural kinds that has been defended by Boyd (1989). Its core idea is that objects or events belong to a natural kind to the extent that they instantiate a certain cluster of co-instantiated properties that are causally correlated. Thus, the reference to a cluster of properties avoids the idea that an object or event belongs to a natural kind insofar as it instantiates a certain set of necessary and sufficient properties. According to the homeostatic definition, any two objects, states or events that belong to a natural kind need not share a certain given set of properties. On the other hand, the causal conditions on the cluster of properties avoids taking any arbitrary set of properties as a natural kind. It also guarantees that the natural kind refer to something that is real, that is mind-independent.

Given this account of natural kinds, how should we understand emotions? One important divide between the different possible responses to this question is the one between theories that claim that emotions are experiences of a certain sort and those that deny this claim. In the remainder of this section, I will provide reasons to reject this claim. Before turning to that, it is crucial to distinguish between two ways in which emotions may be taken as conscious events. According to a first understanding of emotions as conscious events, one may claim that emotions are conscious events because we are always aware of them as emotions or even as emotions of a given type. I will call *reflexive* this kind of consciousness. It relies on the ability to represent oneself as having an emotion, or even as having a certain type of emotion like, say, anger. Moreover, it requires the ability to represent oneself and the mastery of a concept of emotion or of emotion types that allows us to categorize what happens to us as an emotion. It is clear that under this reflexive understanding of what a conscious emotion is, we surely have unconscious emotions (Lacewing 2007). It is well-

known that one may shout out of anger that one is not angry. And surely, we are not necessarily contradicting ourselves in such circumstances.

However, that emotions may be reflexively unconscious does not preclude them being phenomenally conscious, that is, being experiential states. This view is more tempting since the emotions we report must be experienced. Indeed, the view has attracted philosophers from Descartes to James and neo-jamesian views such as the evaluative attitudinal view of Deonna and Teroni (2012: 16-18). The idea here is not that having an emotion implies that one knows that one has this emotion but that emotions are by nature felt states. As it can be said that colors are by nature experienced, the idea may be that it is meaningless to speak of unfelt emotions. However, I think there are good reasons to reject this idea.

## ***2.2 Conscious emotions without conscious intentional object and unconscious emotions***

I will now suggest that we may have unconscious emotions in the phenomenal sense and also conscious emotions without conscious objects. It will be open to the defenders of the necessary consciousness of emotions to deny that these states are emotions. However, given that these states share numerous features of fully conscious emotions and these states show the same cluster of emotional responses, I will argue that we have good reasons to claim that these states are emotions.

I start with conscious emotions without conscious objects. In fact, here again, we need to distinguish between two senses in which the intentional object of an emotion is conscious. On a first understanding, we may mean that we have an emotion while its object is not identified as the object of our emotion. For instance, after an evening spent in discussion with a friend, I may feel somewhat sad on my way back without knowing the object of my sadness. Should we conclude that it is not an emotion? Well, suppose that after wondering why I am feeling so and rehearsing the conversation during the evening, I conclude that my friend has been indifferent to something I said, and which, as I now understand, was of importance to me. Surely, in some circumstances, such a *post hoc* reflection on what happened is mistaken or just an invention. But it seems hard to believe that on looking back I could never be able to point to the precise topic of the conversation or the attitude of the person to whom I spoke which is the true intentional object of my sadness. After all, not all emotions are like fear in front of a bear. In some circumstances, there is a lot going on and this may render it more difficult to point out the object of one's emotion. Moreover, if the onset of the emotion is less sharp for sadness than it would be for fear or disgust, especially if the former is rather weak,

then the object responsible for our emotional response may not be obvious to us. Or consider again a case in which a certain conversation with my boss has made me angry. It might be correct to say that the intentional object of my anger is the whole conversation. But, on some occasions, it might be something much more specific that I am not immediately able to point out. Was it his way of speaking, what he said at a certain point, was it something in his attitude? Upon reflection, I may believe that it was a slightly despising attitude at a certain moment. Can this belief be correct? Again, I do not see why it could not. This is why it makes sense to say that we have experienced an emotion while its intentional object, though existing, was not identified — at least at the moment at which my emotion was triggered in the examples offered above. These armchair style arguments are reinforced by empirical works insofar as it has been shown that patients who cannot focus their visual attention but who are not visually blind respond emotionally to objects that are presented despite being unaware of these objects (Vuilleumier et al. 2002).

To avoid concluding that these responses are emotions, it might be argued that they are only moods. However, there are at least two reasons to reject this suggestion. The first is that it seems a good starting point to divide emotions from moods in virtue of their having an object or not, or at least as having a specific object rather than a very general one. But if such a divide is accepted, then the examples considered above fall clearly on the side of emotions. Second, these affective responses have the temporal profile of emotions rather than moods: they have a neat onset and are in general short episodes whereas moods last longer. In other words, if there is a line to draw between moods and emotions, the existence of a *conscious* particular intentional object does not seem to be the proper way to discriminate the two categories. Affective events having all the characteristics of emotions and triggered by particular objects must be taken to be emotions even though we are unaware of their object. Notice finally, that this is precisely how we are tempted to describe the cases above, as emotions of sadness and anger.

Furthermore, emotions may also lack a conscious object in the phenomenal sense. In these cases, the claim is not that the intentional object of the emotion is not identified as such. Rather, it is the stronger claim that the object of the emotion is not even *phenomenally* experienced at all. This claim is backed by empirical research. Several studies have shown that subliminally presented negatively valenced words or images can induce typical emotional responses. It has also been shown that the subliminal presentation of money increases skin conductance and motivation in a subsequent task in which the subject is asked to exert force on a handgrip, both in proportion to the amount of money presented (Pessiglione et al. 2007).

Finally, when blind patients who have no visual experience due to large damage in the primary visual cortex are presented with images of houses which are either in flames or not, they express preference for the house that is not burning (Marshall and Halligan 1988), something that may be taken as the motivational component of an emotional response. In sum, there are converging evidences that the presentation of objects is able to trigger emotional responses in the absence of a conscious visual representation of these objects, something that is in the end not very surprising since unconscious perceptual representations are known to keep part of their downstream consequences.

The possibility of affective states that involve most of the emotional syndrome but with no phenomenally conscious intentional object seems to plead heavily against a definition of emotions as conscious states involving a conscious intentional object. Now, as a response, one might defend the view that emotions, while being conscious experiences, need not involve a conscious intentional object. Such a view could be attributed to James (1884) since he identifies emotions as perceptions of bodily responses to a triggering object and plausibly assumed that perceptions are necessarily conscious. More generally, one might be tempted to claim that emotions are experiences of a certain subset of the affective responses triggered by an object.

The very plausible existence of fully unconscious emotional syndromes seems however to militate against such views. This plausibility is indeed backed both by conceptual and by empirical considerations. To start, emotions vary in intensity. We have strong and weak emotions. Strong emotions are felt even if not categorized as emotions, and many weaker emotions are also felt. But at a certain point, it seems plausible that a very weak emotion may not be experienced at all. If fear involves a response to threat or danger, why would it not be possible to consider weaker danger up to a point at which there is still the emotional response though we have no experience of it? Moreover, empirical studies seem to show that this is not just a possibility. Winkielman and colleagues (2005a) have shown that subliminally presented happy and angry faces produce a set of responses that are typical of emotions while subjects do not report a difference in their experience. Although the rating of their conscious feelings was unaffected by the presentation of happy versus angry faces, it appears that psychophysiological measures such as affective startle, skin conductance and electromyography measuring the activity of facial muscles at rest indicate an emotional response. In addition, behavioral measures have shown that « participants consume more beverage after happy rather than after angry faces » and « rated the beverage more favorably » (Sher and Winkielman 2009: 237), which seems to indicate a change in motivation. In short, it

appears that typical emotional responses may be produced when these responses are triggered by subliminally presented objects and are not, as responses, experienced by the subjects themselves. Again, defenders of the idea that emotions are necessarily experienced can say that these unexperienced affective responses are not emotions. However, this objection looks stipulative given precisely that physiological, motivational, behavioral and especially facial responses are so similar to those that occur when one consciously experiences an emotion. Moreover, there are certainly intermediate cases in which some aspects—or even one aspect—of the emotional response are experienced while others are not.

I conclude that the prospect for defending that the nature of emotion is to be a certain sort of phenomenally conscious experience looks rather dim. Given the similarities between what we are tempted to see as conscious emotions, conscious emotions without a conscious object, and fully unconscious emotions, there are serious reasons to suggest that we really have emotions in all three cases. However, this conclusion faces a difficulty which is to make sense of the intentionality of emotions in all three kinds of cases just presented. How can we provide a unitary account of the intentionality of emotions given that conscious emotions appear as unified experiences geared towards a conscious intentional object whereas other emotions have no conscious intentional object and may even be fully unconscious. This difficulty raises a trilemma: if it were impossible to offer a unitary account of the intentionality of emotions, then either we would have to renounce the idea that emotions are intentional after all or, if we wanted to stick to the intentionality of emotions, then we would have a good reason to deny the existence of unconscious emotions or conscious emotions without conscious object.

Confronted with this trilemma, I attempt in the next section to show that it is possible to provide an account of the intentionality of emotions that is able to explain why unconscious or partly unconscious emotions are also intentional.

### **3. The intentionality of unconscious emotions**

Given the similarities between conscious emotions and some physiological, behavioral, motivational and cognitive responses, it seems that we have two different ways to account for the intentionality of emotions. An object is the intentional object of an emotion either because it is responsible for triggering the emotional responses, or because it plays a certain central role in the affective responses themselves. I consider briefly the former hypothesis in the first subsection before turning to the latter in the next.

### *3.1 A deflationary account of the intentionality of emotions*

If we renounce the idea that emotions are necessarily conscious events, how could we make sense of their intentionality and in particular of their intentionality towards objects? One solution is to claim that the sense in which emotions are intentional boils down to the fact that an emotion is always triggered by a cognitive base that has itself an intentional content. Prinz holds precisely this view: « Saying that my sadness is about the death does not mean that my sadness represents the death; rather it means that the death is what has caused me to become sad. » (2004: 62). This is why he can coherently claim that « [w]hile there is a sense in which emotions are directed at particular events, that does not mean that they represent those events » (2004: 62). In short, if emotions are thought of as having intentional objects, this should not be understood literally as when we conceive of beliefs as attitudes having intentional contents. Rather, this just means that they are (partly) triggered by a content, more precisely, the intentional content of the cognitive base of the emotion.

However, this deflationary account of the apparent intentionality of emotions is unsatisfying. While it may help understand the intentionality of unconscious emotions, it does not do justice to conscious emotions and the way in which they are oriented towards their intentional object. Even though it may be true that in at least some cases we are aware of the intentional object of our emotions as being their cause, the claim that emotions are intentional cannot be reduced to a merely causal consideration. This is because, if this were the case, then it would be possible for emotions to be experienced as a set of unrelated responses. But this is precisely not the case. When emotions are fully conscious, we experience their intentional object as being at the center stage of our emotional responses. Emotions are towards objects because the behavioral response is related to them, the attentional response is focused on them and the motivational response takes them as part of its content.

Now, one possible response to this objection would be to distinguish the intentionality of conscious and unconscious emotions. Fully conscious emotions would be unified experiences oriented towards objects in a way that can be specified whereas unconscious emotions would have objects only as causes. The problem with this proposal is however that the unity of unconscious emotions would not be given any explanation. Moreover, it may be argued that even unconscious emotions have intentional objects in a sense that is close to the sense in which conscious emotions are intentional. And if this is the case, then it seems that



we need to turn to the set of affective responses in order to account for the intentionality of emotions and their unity. This is precisely the proposal to which I now turn.

### *3.2 Emotions as complex responses*

Before presenting a novel understanding of the intentionality of emotions, it will be useful to recall the causal unfolding of an emotional episode that I have described in Section 2.1 and to locate the part of this sequence that constitutes the emotion. Given that we are here assuming that emotions need not be conscious, we exclude the phenomenal experience of the emotional responses as being the emotion. On the other hand, given that the triggering object should certainly be also excluded as being the emotion, the remaining question is whether we should claim that the emotion is the assessment process, the set of affective responses or their conjunction. There are two reasons against the first option. First, if the assessment does not trigger any emotional response, then it seems strange to say that there is nevertheless an emotion. Second, there is now converging evidence that the regions of the brain that assess objects and trigger the complex emotional response (that is, the amygdala, the ventral Striatum, the Orbito-frontal cortex, and the anterior Insula) are also involved in making decisions or preference judgments. In fact, neuroscientists presently converge on the idea that these areas constitute a Brain Value System (Lebreton et al. 2009) that is involved both in value judgments, decisions and emotions (see also Levy and Glimcher 2016, Chib et al. 2009, or Roy et al. 2012 and Wager et al. 2008 to compare for a meta-analysis on the neuroimaging of emotions). Hence, it makes sense to consider it a multi-purpose evaluative system that among other things contributes to producing emotional responses. Does this show that emotions involve the output of the assessment process rather than the output plus the process? I am not sure. In any case, it is hard to see how the latter characterization would make interesting differences. Therefore, at least for simplicity's sake, I will adopt the former characterization of emotions as complex responses, while insisting, that it must be triggered by the assessment of a represented object.<sup>1</sup> Once again, I do not take this idea as especially original. Numerous approaches to emotions imply at least that emotions involve this complex response. The sole views with which it is immediately incompatible are those that take emotions as essentially conscious experiences. But, apart from that, I will not try to decide whether we should understand ultimately emotions in analogy with perceptions, attitudes

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<sup>1</sup> I think all that I am going to say in the remainder of the paper could be easily adapted if the other option is preferred.

(evaluative or not) or actions, or anything else. My aim is merely to provide an understanding of the intentionality of emotions once it is agreed that emotions are constituted by these complex responses.

### *3.3 Attention as salience and as focus*

I will now argue that empirical data about the attentional response that is part of the set of affective responses that constitute emotions explains their intentionality. The general idea is simple and somewhat obvious: if emotions seem geared towards their objects, why not say that this is because they involve the subject paying attention to their objects. Now it may be thought that the idea is a dead end since fully unconscious emotions and conscious emotions without an identified or even phenomenally conscious object seem precisely *not* to be focused on objects. But as we will see, this worry can be answered by a better understanding of attention. More precisely, I will rely on the distinction between two forms of attention that may be called *salience* and *focus*. The distinction is justified by empirical works in the neuropsychology of attention and emotions.

To begin with, salience is the enhanced neural processing of the sensory representation of an object within the primary sensory cortex (area V1 for vision, primary auditory cortex for audition, etc.) and the higher sensory cortices. An example of the latter takes place in the fusiform facial area and allows the identification of facial expressions of emotions which typically produce emotional responses. The production of salience can be intentional, i.e. endogenous, but it is exogenous when triggered by an emotional stimulus (i.e. a stimulus that triggers an emotion). In both cases, the function of salience is to have a richer representation of the emotional stimuli in order to improve its assessment and thus the response it may call for. There is now a large agreement that the exogenously produced salience of an emotional stimulus within sensory cortices is the result of a first assessment of this stimulus that occurs downstream from the sensory representation of the emotional stimulus. In particular, this assessment takes place within the amygdala and seems to involve both the nucleus accumbens and the amygdala for positive emotional stimuli. It may also involve the OFC. In any case, an emotional stimulus reaching the amygdala and/or the ventral striatum (where we find the nucleus accumbens in humans) and the OFC triggers a top-down enhancement of the processing of the stimulus in primary and higher sensory cortices (Pessoa and Ungerleider 2004, Anderson 2005, Vuilleumier 2005, Pichon et al. 2012). Importantly, this enhanced processing occurs in response to both negative and positive emotional stimuli (Lang et al.

1998, Bradley et al. 2003). All this being said, it is crucial to notice that attention as salience does not account for another kind of attention that we experience intuitively as if we were orienting toward a spot in a certain region of, for instance, our visual field. As we know by experience, this kind of attention may also be endogenous or exogenous and it is typically exogenous in emotions: we know that objects of emotional importance attract our attention.

Now, what is of interest in the present context is that even though the two kinds of attention mostly come together, it is possible for an emotional stimulus to become salient while attention as focus is not turned towards it.<sup>2</sup> This has been demonstrated with the attentionally blind patients to whom we have already referred. As we said earlier, these patients are not blind but are unable to focus their attention. However, and this is presently the crucial point, the presentation of an emotional stimulus triggers the salience response: the processing of the emotional stimulus is enhanced in the visual cortex. Yet, in virtue of their spatial neglect, these patients remain unaware of these stimuli. The explanation seems therefore to be that because the cortical structures that monitor the focus of attention are injured, they cannot turn their attention to a certain part of their visual field, and this in turn makes them unaware of what is there (Vuilleumier et al. 2002). Interestingly, the same dissociation may occur in normal subjects under certain conditions. In order to demonstrate this dissociation, Vuilleumier and collaborators have given subjects a visual task in which they have to focus their attention on a certain target. In addition, a face expressing a negative emotion is presented next to the target. The results confirm the dissociation: although the subjects are unaware of the facial image presented, they still show an attention as salience response in their visual primary cortex and in the fusiform facial area (Vuilleumier et al. 2001).

In short, three facts must be acknowledged. First, an object that triggers an emotion necessarily triggers as a component of this emotional response an exogenous attention that makes this object salient. But, second, attention as focus does not occur necessarily. Nevertheless, third, for an emotion to involve a conscious intentional object, the object must not only be salient but must focus attention. Plausibly, the exogenous focus of attention that is part of most emotions is itself triggered by the response of the amygdala and the salience response, when it is not prevented by, for instance, a voluntary focus elsewhere.

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<sup>2</sup> For the record, there is a double dissociation: patients with injured amygdala do not show the salience response to negative emotional stimuli though they are still able to turn their attention toward the stimuli and to be aware of them.

### *3.4 Attention and the intentionality of emotion*

From the three facts just presented, it appears that there is a minimal sense in which all emotions are geared towards an object, that is, as involving attention as salience to its triggering object. My proposal is therefore that this attentional response of salience may be taken as explaining in what sense all emotions are intentional. One reason to adopt this view is that the salience response is the sole component of the complex emotional response that always occurs and that involves what we ordinarily take as the intentional object of emotion. In contrast, the motivational response may be very general and more like a general approach response, as may be the cognitive response; the behavioral response may also be of the same generality and the physiological response does not involve an object. A second reason is that when emotions are consciously experienced as geared towards identified objects, this experience is a further development that is caused by the attentional response as salience. This is because the focus of attention on the intentional object is surely partly guided by the object that is already made salient. Even if a strong emotional response may systematically involve turning one's attention towards an object, the object that will be selected as the one to which the attention is turned will be determined by the already salient object. In the absence of a salient object, the focus of attention would have no specific object to which it would be exogenously turned. Thus, even if emotions may differ in their attentional components, it is important to notice that the response as focus is in general causally related to the salience response. We can thus maintain that emotions remain a natural kind understood along homeostatic lines though attention as focus is not a necessary feature for emotions. It is just one among the cluster of causally related features that constitute emotions as a natural kind.

This understanding of the intentionality of emotions grounded in attention also explains why conscious emotions are experienced as wholes turned towards objects. Indeed, the explanation is that all components of an emotion have a direct or indirect link to its salient object which is in such cases also the focus of attention: the motivational response is toward the object we are focused on; the behavioral response becomes also oriented toward or away from this object; the autonomic response is coherent with the motivation and the behavior—for instance, the heart races when we are motivated to flee or to fight but it slows down when my sadness has extinguished any motivation. In short, the unity of emotions involving a focus of attention results merely from the fact that its different components are coordinated and involve directly or indirectly the same object of our focused attention.

Now, in the absence of a focus on the salient object, this unity and orientation will be weaker. Maybe the motivation will be merely a general motivation to approach or avoid. Nevertheless, some unity will remain. For instance, the behavioral and autonomic responses will tend to be in relation to the motivational component. So, it is true that the emotion will not be in such cases as unified as a conscious emotion towards an object on which one focuses. Moreover, this partial disunity may be experienced, as when we wonder which is the object of our present emotion. But the existence of a partial disunity of the emotions and its possible experience doesn't constitute an argument against my account of their unity; it is just a fact that unconscious emotions or emotions without conscious objects are, and thus will be experienced as, less tightly unified.

#### **4. Objections**

In this section, I will finally consider several objections that may be raised against the account of the intentionality of emotions that I have proposed. The first is that the account does not make sense of the philosophically established distinction between the triggering object of an emotion and its intentional object. The second concerns the compatibility of the proposed account of intentionality with other empirical works on attention in emotions. A third and close one is that some emotions--like, especially, boredom--may not involve any kind of attention as salience or even focus on its intentional object. Finally, I will wonder whether the proposed account of the intentionality of emotions applies equally well when the cognitive base of emotion is not a perception. I will consider them in turn.

##### ***4.1 The triggering object and the intentional object of emotions***

Since De Sousa (1990), philosophers have accepted that we should distinguish between the intentional object of an emotion and the object that has triggered this emotion. Arguments for their distinctiveness rest on cases in which it seems that the intentional object of the emotion is not its triggering object. For instance, my boss severely criticizes my work, and once out of her office, I get angry with the first person I come across who asks me how it went. Another example is offered by emotions which are chemically induced. I may enjoy the usually boring conversation of my neighbour only because someone has poured a certain drug in my coffee without my knowledge. In both cases, the intentional object of the emotion does not seem to be its triggering cause. Yet, the claim of the present paper is that the intentional object of the

emotion *is* the object made salient which is in fact the triggering object of the emotion. Hence, it seems unable to make sense of a distinction that should be made.

In response, it is important to emphasize that the view offered here is not that the intentional object of an emotion is by definition its triggering object. Instead, the intentional object is defined as the object made salient as part of the emotional response. Therefore, the objection cannot be that I am conflating the intentional relation with a merely causal relation. Nevertheless, I concede that my account makes it contingently true that the object made salient in an emotion is always its triggering object. Is this correct? I think so. The reason why is that I think that we should not take examples as those adduced above as showing that the intentional object is not the triggering object of the emotion once we take into account the role of priming effects.

To recall, priming effects are the effects of a prior cognitive task on a subsequent one. For instance, if you are presented, even subliminally, with the word ‘doctor’, then you will take less time to recognize the word ‘nurse’. Now, not surprisingly, priming effects have also been demonstrated in the affective domain. For instance, subjects previously exposed to concepts of emotions show increased anger in a subsequent anger provocation paradigm relative to participants previously exposed to control-related concepts (Mauss et al. 2007). Interestingly, these effects in the case of emotions can last several minutes (Bargh et al. 2001) while strictly cognitive primings last no more than seconds. Similarly, facial emotional stimuli (Suslow et al. 2013) and monetary rewards have been shown to prime congruent emotions.

Now, given the existence of priming effects, my suggestion is that my anger towards the person who asked me how it went is just an instance of a primed emotion. First, I have a certain negative emotion in response to my boss’s criticisms, even if I am not aware of the object of this emotion. This is the prime, and as such it facilitates further emotions of anger. Then, the person who asks me how it went triggers an anger that is both against him or her and triggered by his or her asking which is implicitly taken as inappropriate at that time. In sum, the case does not present a unique emotion with a triggering object on the one hand and a different intentional object on the other hand but two emotions having each its proper intentional object, an object that is, for each emotion, its triggering object.

The same kind of reinterpretation in terms of priming applies when we turn to chemically induced emotions. In such cases, the drug triggers a mood. But moods facilitate the experience of congruent emotions (Eldar et al. 2016): anxiety facilitates the triggering of negative emotions; depression diminishes the effects of good news; etc. Hence, the proper

description of the enjoyment provoked by a drug must rather involve two steps. First, the drug induces a positive mood. Second, this mood facilitates congruent emotions such as my enjoyment of the conversation of my neighbour. The drug is thus a facilitating cause. Yet, the triggering cause of my enjoyment remains its intentional object: the conversation of my neighbour.

In sum, once priming effects enter the picture and we allow for unconscious emotions and emotions without conscious objects, the suggested counter-example to the identity between the intentional and the triggering object of an emotions fails.

#### ***4.2 Salience and the attentional profile of emotion types***

Second, I would like to consider empirical results showing that negative emotions and moods such as fear narrow our attention whereas positive emotions and moods broaden it.

Interestingly, such effects operate both in perception and in cognition. For instance, it has been shown that in a task in which subjects are asked to give words associated with a given word, a positive mood increases the number of remote associated words (Rowe et al. 2007). Now, how is this relevant to our present discussion? The worry is that these results may be taken as incompatible with the claim that all emotions, whether positive or negative, imply attention as salience. Thus, in line with Faucher and Tappolet (2002: 135) who claim that « the precise impact of emotion on attention might be different depending on what kind of emotions are considered », one might claim that the variability of the attentional components of emotions is such that we can't take all emotions as involving an identical type of salience.

Fortunately, more recent evidence has shown that attention as salience is independent of valence. A meta-analysis examining several hundred imaging studies (Costafredo et al. 2008) has shown that the amygdala which is responsible for the attention as salience effect is equally responsive to positive and negative emotional stimuli. After all, having succeeded in my exam, even if my joy broadens the scope of my attention, it seems still true that its central focus is on my recent success. From the fact that it opens my mind, it does not follow that it becomes absent from my mind. Moreover, the distinction between the two sorts of attentional effect seems to follow from their specific roles. On the one hand, the salience effect is produced to improve the treatment and assessment of emotional stimuli. On the other hand, the narrowing or broadening of one's visual field or cognitive exploration is plausibly more correlated to the type of action that would be appropriate under positive or negative affects. Hence, the proper conclusion to draw is that salience and even the focus of attention on an

object are fully compatible with a third dimension of attention which is its variability in terms of narrowing or broadening the scope of one's attention.

### ***4.3 Boredom***

A slightly different objection would be that some emotions do not involve any kind of attention towards the object of the emotion. Boredom may be the most plausible example (2016: 32-34). After all, it seems that a boring object pulls attention away from it. But is this sufficient to provide a counter-example? One thing seems clear: it is hard to focus our attention on something that is boring. But does it follow that the object of our boredom is not made salient? As I see it, to be bored by something requires that one is somehow focused on the object of boredom. Maybe this focus is not exogenous in the case of boredom. If when attending a play, I am bored by it, it seems that the environment constrains me to focus on the play while my mind would prefer wandering, so to speak. And if by chance, my mind falls upon something that is less boring like observing the stains on the stage curtain, then I am not bored anymore. Or maybe, I remain slightly bored, but then, while the play is boring it seems that what I experience is then rather a mood, as when your child comes to you and says "I'm bored, I don't know what to do". Thus, if these descriptions are accurate, boredom as an emotion actually implies a certain focus of attention that itself implies salience whereas when this focus of attention turns away from the boring object, then boredom disappears or, at worst, remains as a mood. I conclude that if some emotions such as boredom imply a certain tendency to focus on something else, this shows by contrast that these emotions themselves rely on a certain focus of attention even though the peculiarity of those emotions is that the attention we pay to an object might be endogenous in these cases. Therefore, once again, there is no reason to deny that boredom can occur in the absence of attention as salience and focus.

### ***4.4 And if the cognitive base is not perceptual?***

Finally, one might wonder whether the account applies equally well when the cognitive base is not perceptual. For it might be thought that the notion of a representation made salient hardly applies if the content of the cognitive base is provided by an attitude of imagination, of remembrance or even a belief or judgment. Indeed, if the notion of salience is contrastive, it implies that within a certain represented scene, some specific elements, but not all, are treated more extensively. But, the objection goes, it is unclear whether it makes real sense to say that



a content that is imagined or even believed can be salient in this sense. If this were not the case, then salience would not be the ultimate ground of the intentionality of all emotions.

For sure, I concede that the question is ultimately empirical. However, there are reasons for optimism. First, several types of cognitive bases have an imagistic format, as is the case for numerous episodic memories and imaginings. Therefore, nothing precludes that within the content of certain remembered or imagined scenes a certain subpart of their content is more salient. Second, it is important to recall that the reinforced treatment that constitutes salience is not merely of low sensory representations but is also of high-level sensory representations and may even be taken to involve some conceptual representations. As I have already mentioned, salience occurs in response to facial stimuli in the fusiform facial area which is responsible for the identification of faces and facial expressions. Thus, salience also occurs at the level of recognitional concepts. Moreover, the very idea of a reinforced treatment of a certain information is independent from any format or type of representation. Hence, nothing precludes that a certain information conveyed through words may be made salient within a larger discourse, in which case this information will be the object of one's emotion.

## **5. Conclusion**

I've made three claims: the first is that certain sets of emotional responses may be taken as conscious emotions without an identified or phenomenally conscious object and that others may be taken as even fully unconscious emotions. Given the similarity of these responses to fully conscious emotions, it seems that if emotion is a natural kind, then they should be taken as emotions. However, we would have a strong reason not to take them as emotions if these sets of emotional responses could not be taken as having an intentional object towards which the emotions would be oriented. However, empirical researches on attention in emotions show that the emotional responses that are partly or even fully unconscious involve a kind of attention as salience. It may therefore be argued that all emotions share a minimal form of attention as salience, that in numerous contexts may also cause attention as focus. Moreover, the salience of an object and often the focus on this same object explain the unity of emotions as turned towards their object. From which I conclude that there is no remaining reason to limit emotions to their fully conscious occurrences and that, as a natural kind, they involve at least a coordinated set of responses functionally organized around a salient object that is most of time also the focus of attention. All this being said, I must emphasize that, if this

understanding of emotions is incompatible with accounts that make them necessarily conscious, it remains compatible with most other accounts such as the perceptual and the reactive views that make further claims about the nature of emotions. Nevertheless, it is also compatible with the falsity of these accounts. Thus, nothing I have been claiming in the present paper has clear and immediate consequences for these further debates. But I hope I have provided good reasons to claim that emotions can be fully or partly unconscious while taking their intentionality as one of their constitutive features.

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