The Nature of Epistemic Feelings

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Abstract: Among the phenomena that make up the mind, cognitive psychologists and philosophers have postulated a puzzling one that they have called “epistemic feelings”. This paper aims to 1) characterize these experiences according to their intentional content and phenomenal character, and 2) describe the nature of these mental states as nonconceptual in the case of animals and infants, and as conceptual mental states in the case of adults living beings.

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Introduction

Among the different phenomena that make up the mind, cognitive psychologists have postulated a puzzling one that they have called “epistemic feelings” or “noetic feelings” (henceforth “E-feelings”). As with other feelings, their main characteristics are that they are phenomenal experiences and that they have a specific intentional content. Some instances of E-feelings are the feelings of knowing (henceforth “FOK”), of confidence, of uncertainty, of forgetting, and the tip-of-the-tongue phenomenon (henceforth “TOT”). Philosophers and psychologists have become interested in these experiences not only because of their puzzling character, but also because of the role they might play within the cognitive architecture and mental life of a subject.

To understand why these kinds of experiences seem puzzling, think about the feeling of forgetting (henceforth “FOF”). Almost every person has experienced once the experience of being caught by a sudden FOF before leaving a place. This experience seems puzzling because it indicates that something, to which the subject does not have access, is missing. It indicates that something is lacking, a gap, and at the same time it indicates it in a very precise way; that is, only a precise object would relieve the subject from this feeling. So, it is of interest to understand how this kind of feeling is produced and how it can point to an absent object, an object of which the subject is unaware.

This paper aims to 1) characterize these experiences according to their intentional content and phenomenal character, and 2) describe the nature of this kind of mental states as nonconceptual in the case of animals and infants, and as conceptual mental states in the case of adults living beings.

“Feeling” will be used to refer to the conscious, phenomenal or qualitative experience that a subject undergoes when faced with a given stimulus or a given circumstance, and which can be characterized according to the concept of “affect” (Carver 2003) as something being to some degree pleasant or painful and motivating behaviors such as approach and avoidance (Carver and Scheier 1998).

1. The Intentional Content of Epistemic Feelings

Intentionalist or representationalist theories claim that feelings are defined as particular experiences about an object or state of affairs that may or may not exist (de Sousa 1987; Dretske 1995; Tye 1995; Goldie 2000). Two ingredients make up these representational experiences: “bodily feelings” and “feeling towards” (following Goldie’s 2000, 2002). The former are perceptions or experiences of an internal condition inside (or on the surface) of the subject’s body, such as limb positions, muscular reactions and organ pressures; they are caused by certain bodily reactions. The latter are experiences directed towards an external object in the world such as a thing, person, event, action or state of affairs that may or may not exist. Thus, the basic idea is that feelings always have a bodily change as their representational vehicle: your feeling of hunger consists of the unpleasant contractions of your stomach together with a feeling of hunger towards some food. I will adopt the representational theory as a framework to analyze E-feelings without committing my account to the strong thesis that claims that the phenomenal character of all conscious experiences is totally determined by the representational content. Even if E-feelings lack an articulate or specific content, they are not experiences that lack content altogether. In the next lines, I will mainly characterize E-feelings as feelings towards.

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1 Many psychologists and writers also use other terms such as “intuitions” or “hunches” to refer to this kind of experience (Volz, Rübsamen and Von Cramon 2008; Gladwell 2007). I will avoid using these terms because, in contrast to “epistemic feelings”, they are philosophically loaded.
Let us start analyzing the FOK as a feeling towards. It is an experience the subject undergoes when she faces a question and is about to recall some information. For example, the experience that she undergoes when asked: “What is the capital of Brazil?” Assuming that the subject has a FOK, this experience seems to indicate to the subject that she has the appropriate information to answer the question and that she will be able to recall it (“Brasilia”) at some point in time. Consider, for example, the experience that you underwent in school when the teacher asked a question to one of your classmates and you felt that you would have been able to answer it, even before you or your classmate could even retrieve the correct answer (Reder 1996).

Psychologists studying memory retrieval have noticed that subjects often are able to accurately determine whether they are going to be able to recall the information or not by means of the FOK before they can even try to recall it. Paynter, Reder and Kieffäber (2009), for example, estimate that the production of the feeling happens in the 300-500 ms time window, whereas the retrieval of an item from memory happens in the 400-800 ms time window. In other words, subjects’ FOKs seem somehow to accurately predict the future cognitive performance and motivate the subject to act accordingly. In everyday life, this phenomenon is pretty well illustrated by TV games where participants compete with others to answer general-knowledge questions. Each participant has a button and has to press it as quickly as possible, if and only if she knows the answer to the question. Psychological studies have shown that in this case participants are guided by their E-feelings that predict their future performance allowing them to determine whether or not they will find the right answer (Reder 1996).

Another example is the frustrating TOT. In the TOT experience, the subject has a feeling that she is in possession of the information but is unable to access or recall it. Remarkably, even if she is unable to recall the precise object, the subject has access to partial information or characteristics of it, as the first letter, the semantic field, or what the word sounds like. Moreover, she is able to discriminate among different possible objects if confronted with them (Brown and McNeill 1966; Schwartz 2002): “If wrong names are proposed to us, this singularly definite gap acts immediately so as to negate them” (James 1890/1964: 251). These characteristics support the idea of the representational theory that feelings are always directed towards an object or piece of information and it is also this very feature of feelings that allows the subject to discriminate accurately the object of her E-feeling among other possible objects even if she is unaware of the precise object.

According to these considerations, the content of the feeling is dual. It is composed by both A) a representation of value by means of positive or negative valence and B) the object or precise piece of information. For example, in the case of memory, A) a positive valence points to the possibility to retrieve whatever the subject wants to retrieve, and B) the precise object that the subject is looking for. But in the cases described so far (FOK, TOT and FOF), the object of the feeling (B) is somehow absent because the object has not yet been retrieved in the FOK and TOT, and lost in the case of FOF; as James remarked, it seems as if they pointed to a “gap”.

E-feelings do not fulfill the transparent condition fulfilled by most of phenomenal experiences. The transparency thesis claims that experience is transparent about its object: the object constitutes the experience and the subject cannot attend anything but the object (Harman 1990; Tyé 1995, 2000; Dretske 1995). The content of conscious experience is nothing but the external objects that are presented to the subject. In contrast, in the case of E-feelings, the subject is conscious of “A)” the particular valence (positive or negative) of her feeling but not of “B)” the intentional object as such. This is not peculiar to E-feelings: you can, for example, feel anxious without knowing what you are anxious about (Roberts 2009). The difference between FOK and TOT is that in the former the subject feels that she will access easily the information, whereas in the latter she experiences that she possess the information together with the impossibility of accessing it. That means that both feelings happen at different stages of the memory retrieval: FOK happens before memory retrieval whereas TOT happens after a failed retrieval attempt.

2. The Nature of E-Feelings
2.1 E-Feelings as Nonconceptual Experiences
Some E-feelings are nonconceptual experiences. This means that the subject neither need to possess mental concepts nor need to be able to apply them in order to have this kind of experience (Roberts 2009; Tyé 2000, 2005). For example, feeling certain of something does not consist in making second-order thoughts about

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2 This kind of value has nothing to do with moral or ethical value. The value at issued is relative to the subject and the basic cognitive functions (see Seager 2002; Tyé 2008).
oneself, or self-ascribing the concept of certainty. A subject does not need to possess the concepts of CERTAINTY or UNCERTAINTY in order to undergo E-feelings such as feeling certain or uncertain about something (Proust 2007, 2009a, 2009b). Some living beings lacking mindreading capacity and mental concepts (unable to introspect), such as infants and non-human animals, are able to undergo these kinds of feelings and to exploit them in order to control some of their cognitive activities such as remembering or perceiving (see Smith 2009 for a review). In other words, undergoing an E-feeling does not constitute an exercise of introspection. A subject only needs to possess a kind of sensitivity to her cognitive processing that allows her to engage in intentional behaviors accordingly.

Bodily feelings not only point to something but also afford certain bodily actions. It has typically been accepted that pain affords avoidance behaviors and pleasure affords approaching behaviors (Carver 2003). In the same way, certain E-feelings afford certain bodily or mental action. The FOK, for example, affords trying to remember, the feeling of error affords verifying again the outcome of a mental action, and so on. Hence, we can see that E-feelings are not only intentional (in the sense of being about something), but also directional in the sense of pointing to a given way of action—for instance: remembering instead of calculating the result of a given multiplication (Reder 1996; Walsh and Anderson 2009). They do so by means of their valence, i.e., the subjective sense of positivity or negativity arising from the experience (Carver 2003; Russell 2003; Efklides 2006). Positive feelings motivate certain types of action and negative feelings motivate different ones. For instance, a feeling of uncertainty points to a lack of knowledge or indicates that something is wrong with our perceptual or mnemonic activity, allowing and motivating a subsequent correction or improvement, without the need for either a meta-belief or an introspective effort by the subject.

2.2 E-Feelings as Conceptual Experiences

Although some E-feelings such as the feeling of certainty or the feeling of uncertainty refer in a nonconceptual way, it also seems that possessing certain concepts such as the concept of FORGET, may facilitate the production of some experiences such as the FOF that would not be elicited otherwise (Koriat, Bjork, Sheffer and Bar, 2004; Finn 2008). Other conceptual E-feelings are the FOK, the feeling of error, the feeling of rightness, the feeling of wrongness, and the feeling of understanding, among others.5

The following experiment illustrates the conceptual nature of the FOF. Koriat et al. (2004) designed an experiment to investigate subjects’ sensitivity to the forgetting caused by the retention interval between the study time and the test. Subjects were presented with a list of sixty word pairs and had to estimate how many pairs will be able to remember after only one of three intervals: 10 minutes, one day, one week. They found that subjects were insensitive to the retention interval and overconfident concerning their future performance, unless they were asked to estimate recall rates for different retention intervals or when the notion of forgetting was made salient by framing the recall predictions in terms of forgetting rather than remembering. This framing effect suggests that E-feelings are not cognitively impenetrable, as perceptual experience seems to be (e.g., in the classic case of the Müller-Lyer illusion [see Döring 2008]). That is, having some beliefs about your mental abilities may trigger or modify some particular experience concerning your cognitive activity. For example, thinking about the fallibility and unreliability of your memory may trigger a strong feeling of uncertainty that might even interfere with your normal cognitive performance (Pieschl, 2010; Sanna and Schwarz 2003).

The penetrable character of E-feelings also suggests that they are in some way determined by the conceptual capacities of the subject and her context, i.e., the set of concepts that the subject possesses and is able to apply plus the properties of the cognitive task the subject is confronting. These factors determine the content, strength and character of E-feelings. This suggests a gradation among E-feelings: from nonconceptual feelings to conceptual ones, ranging from sheer certainty to the FOK, and from the feeling of uncertainty to the FOF or the feeling of error. On this view, concepts are not only accompanying experiences but they sometimes play a constitutive role in experience. On this view, the range of E-feelings that a subject may undergo is enriched by the range of concepts that she possesses as well as the cognitive tasks that she is able to confront.4

3 Representational theorists often draw the distinction between experiences and thoughts in terms of nonconceptual versus conceptual mental states (Dretske 1995; Tye 1995, 2000). Given that my proposal that epistemic feelings are conceptual experiences violates this distinction, this seems to create a tension between my view and classic versions of representationalism.

4 This account is quite sympathetic to Russell’s (2003) theory of the psychological construction of emotions in the claim that each emotion — E-feelings included — is the product of a contextual recreation given a set of psychological concepts. However, the main difference is that, in my view, psychological concepts do not merely redescribe the experience, as in Russell’s account, but rather constitute it.
Babies and nonhuman animals may feel the nonconceptual experience of certainty, but *stricto sensu* not the FOK, because they do not yet possess the concept of knowledge and have not yet been introduced to the social practice of justifying their own beliefs and confronting others’ beliefs. Still they can and do feel certain or uncertain concerning their own cognitive process and the implicated information. From a conceptual point of view, this kind of E-feeling is simpler. They are pleasant or unpleasant experiences caused by various sensory cues such as the perceptual fluency of a signal (Whittlesea 1999, 2001), the frequency with which a given stimulus is encountered (Reder 1996), or simply the fluency of the processing of the information (Koriat 2000).

Once the conceptual capacity is in play, the valence of the nonconceptual experience or affect – the mental affordance – is attached to an epistemic or mental concept, thus generating a conceptual experience. The content of this experience could be schematically characterized as: “Some (positive/negative) affordance + a Mental-Concept (KNOWLEDGE, REMEMBER, FORGET, etc.) + an opaque object”. The penetrable character of the E-feelings points to the essential fact that our mind “is not just a product of natural selection”, in terms of experiences selected to carry on some cognitive functions, but also of “cultural redesign” (Dennett 1996: 153; Bogdan 2010), generating experiences by means of the cultural background of the agent.5 Only after coming to possess the concept of KNOWLEDGE, which is acquired in the social practice of interaction and confrontation, a subject can undergo an experience with the property of “something being known”. One also needs to acquire the concept of ERROR before undergoing the feeling of error, the concept of FORGET before undergoing the feeling of forgetting, and so on.

We can therefore characterize the gradations of E-feelings as ranging from the feeling of uncertainty to the feeling of error. The former may be characterized as an unpleasant experience that points to a lack of information without describing it *as such* and then moves the subject to search for information; the latter may be characterized as an unpleasant experience pointing to the uncertain character of a propositional content involving mental concepts and motivating the subject to revise it. The first moves the subject to start an information-acquiring act in the world as some animals do, whereas the second motivates a more intellectual scrutiny dealing with the truth or falsity of a given representation.

**Final Remarks**

I have tried to solve some of the puzzles concerning the nature of E-feelings by determining their relation with behavior and second-order beliefs. In the first part, I have described the contents and the intentional objects of E-feelings. Then I have shown that, fundamentally, they refer in a nonconceptual and opaque way to the their objects, and only afterwards in the life of the subject they become conceptual experiences. Throughout, I have also characterized the cognitive role played by E-feelings as motivators of certain kinds of mental action, and in so doing, I have shown that they constitute an important part of the cognitive and mental life of a subject.

**References**


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5 This account of E-feelings is consistent with the bodily appraisal theory of emotions. Adopting this conceptual framework, one would classify nonconceptual E-feelings as primary emotions and conceptual E-feelings as secondary emotions: “Primary emotions are part of our evolutionary inheritance, shared by all normal humans and tied to specific types of stimuli. Secondary emotions are acquired during development, show cultural and individual variation and are sensitive to more complex and abstract features of the stimulus situation” (Griffiths 2003: 49).


