

ORIGINAL ARTICLE

Seeing Absence or Absence of Seeing?

Jean-Rémy Martin¹ & Jérôme Dokic²¹Université Paris VI, Institut Jean-Nicod²École des Hautes Études en Sciences Sociales, Institut Jean-Nicod

Imagine that in entering a café, you are struck by the absence of Pierre, with whom you have an appointment. Or imagine that you realize that your keys are missing because they are not hanging from the usual ring-holder. What is the nature of these absence experiences? In this article, we discuss a recent view defended by Farennikova (2012) according to which we literally perceive absences of things in much the same way as we perceive present things. We criticize and reject the perceptual interpretation of absence experiences but we also reject the cognitive view which reduces them to beliefs. We propose an intermediary, metacognitive account according to which absence experiences belong to a specific kind of affective experience, involving the feeling of surprise.

Keywords seeing absence; perception; metacognition; metaperception; feelings of surprise

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Introduction

Imagine that you are looking at a series of photographs hanging on a museum wall. While you are looking at each photograph in turn, surprisingly your eyes meet a gap between, say, the 10th photograph and the 11th one: there is no photograph at this place (Farennikova 2012). This kind of situation may trigger a specific experience, which reflects the absence of the photograph. But what exactly is the nature of this absence experience? At first glance, there seem to be two main alternatives.

On the first alternative, defended by Farennikova (2012), you literally *saw* the absent photograph in the same way as you saw the other present photographs. Let's call this account the *Perceptual View*. The Perceptual View states that absence experiences instantiate a perceptual phenomenology just as experiences of present objects. Within the framework of the representational theory of perceptual experiences (e.g., Tye 1995), endorsed by Farennikova, this means that perception represents absences as it represents present objects. Here is another instance of absence experience as described by Farennikova:

You've been working on your laptop in the café for a few hours and have decided to take a break. You step outside, leaving your laptop temporarily unattended on the table. After a few minutes, you walk back inside. Your eyes fall upon the table. The laptop is gone! (2002, p. 2)

Correspondence to: E-mail: jeanremy08@gmail.com

Farennikova argues that in this situation, your experience has a striking phenomenology constituted by an immediate, non-inferential impression of the laptop's absence.

On the second alternative, absence experiences do not have a distinctive or proprietary perceptual phenomenology.¹ The perceptual phenomenology of absence experiences collapses with the phenomenal character of sensible qualities instantiated by the background: the perceptual experience of the wall is the same whether an absence is noticed or not. Therefore, one might argue that we do not literally perceive absences; instead, 'we come to believe [or judge] that something is absent on the basis of what we do perceive' (Farennikova 2012, p. 2). For this reason, we may call this account the *Cognitive View*.

Farennikova rejects the Cognitive View on the basis of three objections: (i) It does not do justice to the phenomenology of absence experiences. The production of a judgment takes some time and conscious effort while 'many experiences of absence feel instantaneous and lacking in conscious effort' (Farennikova 2012, p. 7); (ii) If absence experiences were reducible to the belief that something is absent, they should vanish as soon as the belief is updated in the light of new evidence. For instance, imagine that a museum employee tells you that in fact there is a photograph just there where you came to believe that a photograph was absent and that this illusion was created by a subtle arrangement of mirrors. Intuitively, while you lose the belief that the photograph is absent, your absence experience still persists; (iii) The ability to detect absences, as the absence of a predator in a particular place, may confer an adaptive advantage. To be reliable, this adaptive advantage may require automaticity, 'which is a function of blocking interference from beliefs and higher cognitive states' (Farennikova 2012, p. 7).

Therefore, Farennikova argues in favour of the Perceptual View and proposes that absence experiences result from a mismatch between an image or template of the expected object and external incoming information. Templates (Bar 2004; Kumaran and Maguire 2006) are activated in visual working memory and amount to a kind of representation of expected objects. These (potentially coarse) representations have a perceptual format and preserve some visual attributes of the expected object, as well as its topological organization. Finally, templates can be subpersonally activated and, as such, do not necessarily consist in intentionally formed mental images. In accord with this mismatch hypothesis (Bar 2004; Kumaran and Maguire 2006), Farennikova positively characterizes the phenomenology of absences as the experience of the mismatch itself:

We can hypothesize that mismatches are not mere vehicles and sometimes surface qua mismatches in our phenomenology of absence. The phenomenology of absence is the experience of incongruity. (2012, p. 17)

While agreeing with Farennikova that absence experiences are not reducible to high-level cognitive states such as beliefs, we reject the Perceptual View. Instead, we claim that absence experiences are neither strictly perceptual nor strictly cognitive. In particular, we propose that these experiences belong to the category of *metacognitive* (specifically *metaperceptual*) feelings, which reflect a specific kind of affective experience caused by subpersonal monitoring of (perceptual) processes (see, e.g., Dokic and Martin 2012).

Accordingly, we shall call our account the *Metacognitive View*. As we shall see, the Metacognitive View occupies a position in logical space intermediary between the Perceptual View and the Cognitive View.

Absence experiences do not instantiate a special phenomenology

The Perceptual View claims that the phenomenology of absence experiences is peculiar and specific to what strikes the subject as an absence. Indeed, the experience of incongruity posited by Farennikova is individuated by its content, which explicitly involves the absence of a thing. Our main argument against the Perceptual View will proceed in two steps. First, we shall highlight the fact that a unified type of phenomenology is at stake in both absence experiences and, for instance, our experiences of mere unexpected changes. This is the feeling of incongruity or surprise, a type of affective experience which we shall refer to by the abbreviation “FoS.” Second, we shall argue that the FoS in fact *constitutes* the experience of incongruity Farennikova is interested in, which is then compatible with a variety of perceptual contents, including but not restricted to what we will call “absence situations,” namely situations in which the perceiver is struck by the absence of a thing.²

Take as a working case a variant of the thought experiment presented at the beginning of this article. You are presented with two series of 15 successive boxes. In the first series, the first 10 boxes contain red marbles but the 11th box surprisingly reveals a green marble while you implicitly expected a red marble. The second series is like the first, except that the 11th box surprisingly reveals nothing while you expected a red marble.

Although both series instantiate a quite different perceptual phenomenology at the 11th step, we can accept that they share a common experiential component, namely a FoS. A mismatch of the relevant kind occurs in both cases giving rise to an experience of surprise. Farennikova should claim that in addition to the FoS, the second series elicits a specific *perceptual* experience: you *see* the absence of the red marble. Now this is where the second step of our argument comes in. Try to subtract the FoS from both series; what happens? In the first series the perceptual phenomenology associated with the presence of a green marble will remain. What about the second series? Intuitively, nothing will remain except the perceptual phenomenology associated with the bottom of the box. It is hard to admit that we experience something other than the sensible background itself when the FoS is withdrawn. We want to suggest that in such cases there are no phenomenal properties over and above the FoS in a case of absence. Both series elicit similar affective phenomenological experiences, that is, a FoS, suggesting that absence situations are not associated with a peculiar phenomenology as claimed by the Perceptual View.

One could argue that both series actually give rise to the same perceptual phenomenology of absence, on the grounds that in the first series subjects also experience the absence of a red marble. After all, presences and absences may co-exist at the same time and place. However, even if this is true, it seems obvious that the experience of incongruity at stake in this series is fully explained by the *presence* of a marble with a different colour from the one that was expected. Imagine a similar situation in which a

sound is played instead of there being a green marble. We are still very much inclined to say that the resulting experience of incongruity is due to the unexpected *presence* of a sound and not to the unexpected absence of a red marble.

Consider another variant of this example. You are now presented with a series of 20 boxes with the following sequence: two red marbles, nothing, two red marbles, nothing, two red marbles, nothing and so on (you are not aware at the beginning of the sequence of the number of steps and the kind of displayed sequence, you learn what happens as the sequence is unrolling). At the 18th step, while you expected nothing (i.e., an absence of marble) a red marble is displayed. In this case, a FoS arises owing to the unexpected presence of a red marble. Should we admit that we experience, in addition to this FoS, the absence of the absence of the red marble? That seems hard to swallow. A similar thought experiment applies to the laptop case too. Suppose that after you realized that your laptop was absent you glimpsed through the window of the café and you thought you saw someone running with your laptop under their arm. Then you began to head towards the café door but, surprisingly, you saw your laptop right there on the table while you expected it to be absent. Is your experience triggered by the seeing of the absence of the absence of the laptop? It seems that the FoS is less demanding.

We might go further and argue that in cases of *non*-perceptual mismatch the subject's experience will be the same as in absence situations. Imagine the unbidden thought, 'I hate God', popping up in the mind of a strong believer. This thought will create a mismatch between her implicit expectations about what she is able to think given her past experience and her actual thought, 'I hate God'. This mismatch will give rise to a FoS that is very likely qualitatively similar to the FoS triggered in perceptual situations. This last example might show that we are unwilling to grant perceptual status to the experiences associated with absences, because such experiences seem equally associated with non-perceptual situations.

The metacognitive view of absence experiences

Our claim up to now is that the experience of incongruity targeted by Farennikova is not specific to absence situations but is constituted by a FoS which can be caused by various types of mismatch. This claim in itself is *prima facie* compatible with both the Perceptual View and the Cognitive View. On the one hand, the friend of the Perceptual View might insist that the FoS adds something to the contents of perception, so that absences are literally perceivable as incongruities.³ On the other hand, the friend of the Cognitive View might suggest that the FoS either is a belief or emanates from beliefs about what to expect, and thus that the experience of incongruity is cognitive after all.

In what follows, we substantiate the claim that the FoS is reducible neither to perception nor to belief, but should be conceived as a type of metacognitive feeling. Eventually, both the Perceptual View and the Cognitive View will be rejected in favour of the Metacognitive View of absence experiences.

Let's make a brief detour *via* the psychology of metacognition. Koriat (2000, 2007) draws a distinction between two sources of metacognitive judgment, that is, judgment

about our own knowledge, cognitive skills and so on. On the one hand, *theory-based* judgments are conclusions of explicit inferences from encyclopaedic background knowledge or from knowledge that we have about our own cognitive skills. On the other hand, *experience-based* judgments result from an affective experience, particularly what is referred to as a metacognitive feeling. Metacognitive feelings are caused by specific metacognitive processes, which monitor the quality of our first-order informational states and processes.⁴

Consider the following illustration from the domain of metamemory. The judgment that one knows what the capital city of Peru is can be based either on reasoning (from the premise that one has learned all capital cities at school, or that one has an excellent memory), or on the “gut feeling” that one knows the answer. This feeling belongs to so-called *feelings of knowing*, which are outputs of monitoring processes involving implicit inferences from a set of internal cues, such as availability of partial information or the fluency with which such information is retrieved (see, e.g., Koriat, 2007). In this respect, the level of availability of partial information or the level of fluency will modulate the quality (e.g., the intensity) of the corresponding feeling.⁵

Now, we argue that the experience of incongruity is affective rather than perceptual. It belongs to metacognitive and more specifically metaperceptual feelings. More precisely, we propose that the mismatch described by Farennikova gives rise, not to a perceptual experience of absence, but to a metaperceptual *feeling of surprise* or *unexpectedness*. Interestingly, it has been shown that the FoS arises from the monitored discrepancy, that is, mismatch, between the subject’s expectations and the actual state of the world (Teigen and Keren, 2003).⁶ In addition, note that the affective experience constituted by the FoS can be rather unspecified with respect to its significance. As we have seen above, the same qualitative experience of surprise can occur in very different situations. So, we agree that the laptop example involves a striking phenomenology, but the latter is best described as an affective experience, in particular, as constituted by a (strong) FoS. In coming back from your break, you expected to see your laptop again but you are *surprised* by its absence, even before you form a judgment of absence.

An important feature of metacognitive feelings is that they are *process*-based rather than *content*-based experiences. For instance, Koriat (2007) argues on numerous empirical grounds that feelings of knowing ‘rely on *contentless* mnemonic cues that pertain to the quality of processing, in particular, the fluency with which information is encoded and retrieved’ (pp. 19–20; our italics). Now if we are right and the experience of incongruity amounts to a specific kind of affective, that is, metacognitive experience, it is also process-based. In other words, the FoS relies on contentless perceptual or cognitive cues that pertain to the quality of processing. In the case in point, the quality of processing will be affected by the presence or absence of a mismatch independently of what elements the mismatch is actually concerned with (i.e., the contents of the relevant templates and expectations and the incoming information at stake). When such a mismatch occurs outside absence situations, there is no reason to think that it will generate any qualitatively different experience.

It is important to note that the Metacognitive View cannot be seen as a variant of the Cognitive View. Metacognitive feelings are not beliefs. First, if metacognitive feelings were beliefs, they would have sophisticated, metarepresentational contents. For instance, the FoS would be the higher-order belief that there is an incongruity between one's experience and beliefs. However, there is ample reason not to tie metacognitive feelings too tightly to explicit metarepresentational abilities. *Pace* Davidson (1982), having a FoS does not require exercising or even possessing the concept of belief (or for that matter that of experience). Second, many metacognitive feelings are belief-independent in the sense used by Farennikova in connection with perceptual experiences. For instance, the FoS exhibits resilience to belief change (at least to some extent). You can have a FoS caused by the absence of a photograph even if you independently believe that the photograph is in fact there. Since belief-resilience is one of the main arguments invoked by Farennikova against the Cognitive View, the Metacognitive View cannot be assimilated to the latter.

Feelings of surprise specified as absence experiences

We have argued that absence experiences are qualitatively identical to experiences of unexpected changes in that both involve the metaperceptual FoS. Now one might object that we do in fact have specific experiences of absence that are not merely experiences of unexpected changes. According to this objection, the Metacognitive View fails insofar as it purports to be an explanation of absence experiences.

Our response to this objection is that we have in fact the same resources as the friend of the Perceptual View to identify specific experiences of absence within the more general class of experiences of incongruity. Farennikova points out that in order for an experience to be specified as representing an absence rather than, for instance, a mere change, the mismatch between the object-level template and the actual state of the world must be interpreted in a certain way. More precisely, she claims that 'we experience absences of objects when we take the detected cues to be incompatible with persistence of those objects' (2012, p. 15). For instance, perhaps the first series would have triggered an experience of absence and not simply an experience of colour-change, if it had not been part of your set of expectations that the presented marbles could change their colour.

Consider another example. Suppose that you enter your childhood home for the first time since two years. While you arrive in the main room you declare, 'Something is lacking here!' In such a case, it seems that your experience does not merely reflect a FoS but involves something more specific, for instance an experience of absence.

We maintain that in all these cases the subject experiences some feeling of surprise or unexpectedness. The differences between them pertain to the specificity of the subject's expectations. In the first example, your expectations will be more specific if they include the expectation that all the presented marbles will be red. In the second example, you had a set of not very specific expectations about the general look of the main room or about the general effect that it should have on yourself. This kind of example differs from the laptop example, which involves a much more specific expectation, about the presence of a particular familiar object (your laptop).

A plausible suggestion is that the same FoS (or FoSs of various strengths) will be interpreted differently by subjects given their expectations. Thus, a given FoS can be interpreted as the feeling that something has changed, that some object is lacking, or that a particular object is lacking. For instance, if you have general expectations about the number of objects present in the room, the ‘Something is lacking’ interpretation will be favoured. In contrast, general expectations about the *kinds* of object present in the room will favour the ‘Something has changed’ interpretation, and much more specific expectations about the presence of a particular object will trigger something like ‘My favourite toy is lacking’, that is, what Farennikova is describing as an absence experience.

The fact that the same type of metacognitive feeling can give rise to various interpretations depending on the context in which it occurs is well-known to students of metacognition. For instance, the metacognitive feeling caused by processing fluency can be interpreted in different contexts as reflecting the aesthetic properties of the stimulus, the truth of a statement or the validity of an inference (see, e.g., Unkelbach and Greifeneder 2013). In the same way, the FoS will be interpreted in more or less specific ways depending on the type of expectations at stake.

Non-surprising absences

We have focused on the most striking cases of absence experiences, which involve incorrect expectations. However, Farennikova briefly introduces another purported class of absence experiences, which involve correct expectations:

Tourists traveling to a desert will expect to see no trees there. An observer will expect the sun to disappear behind the ocean line. Their expectations about absences [. . .] are accurate and upon confirmation will result in experiences of absence. (2012, p. 18)

In such situations, Farennikova argues, absence experiences can result from (non-surprising) mismatches between object templates and the actual state of the world. The idea is that the presence of these templates still contrasts with the actual absence of the relevant objects, even though there is no violation of the subject’s expectations.

Does the Metacognitive View have something to say about these situations? Of course one might just deny that they involve any kind of conscious absence experiences; at least they are much less convincing, on phenomenological grounds, than situations involving incorrect expectations. Moreover, there is a risk of over-generalization; all perceptual experiences presumably involve at least implicit expectations about absences, but it is not obvious that they all generate conscious experiences of absences. Finally, although we have seen that the violation of even implicit expectations can surface in a FoS, the claim that a mismatch between a template and sensory input can give rise to a conscious experience of incongruity *independently of the violation of the subject’s expectations* is a much bolder claim, for which there is no empirical evidence, at least as far as we know. This claim is at odds with the function of the FoS, which is to help the subject to avoid

or reduce epistemic inconsistency (see footnote 5). A mere contrast between a template and sensory input does not in itself signal any such inconsistency.

In brief, we doubt that what Farennikova identifies as the specific vehicle of experiences of absence, namely mismatches at the narrow level of templates, can by itself surface in phenomenology. Rather, the adaptive function of the experience of incongruity suggests that it must be driven by whole expectations (with templates as proper parts). We suspect that whenever there is an experience of absence, there is a violation of expectations at some level. For instance, even if you *believe* that there are no trees in the desert, your perceptual system might still generate the implicit expectation that more things such as trees should be present around you (if, for instance, you have lived your whole life in densely filled environments). Insofar as these belief-independent expectations are incorrect, even though your beliefs are true, you might experience a feeling qualitatively identical to surprise, which can be seen as a false positive insofar as your whole cognitive system does not involve any serious inconsistency.

Conclusion

To recapitulate, the Metacognitive View is untouched by the objections that Farennikova has raised against the Cognitive View. To begin with, the Metacognitive View does justice to the phenomenology of absence, in that the generation of feelings is not something that needs time or conscious effort, in comparison with the production of judgments. Moreover, FoSs, like other metacognitive feelings, are belief-independent. Finally, Farennikova argues that the ability to *automatically* detect absences in the environment might confer adaptive advantages. Once again, FoSs are automatically triggered and can block interference from beliefs and higher cognitive states. Furthermore, FoSs actually constitute very good alarms, which alert us that something is inconsistent, for example, that our expectations about the presence of an object are not satisfied. In this respect, the absence of FoSs would dramatically impair the ability to detect absences in the environment.

In a nutshell, we do not see absences, but we may feel surprised when there is an absence of seeing.

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Notes

- 1 We will focus on the kind of absence experiences specifically discussed by Farennikova, which seem to have the function of veridically representing the absence of things. They should not be confused with, for example, hallucinations or experiences involving modal or amodal completion. Similarly, we follow Farennikova and leave aside perception of holes, silence or darkness (Casati 2006; Sorensen 2008a, 2008b), which may or may not involve an absence experience.
- 2 We intend to phrase “absence situation” to be neutral on the metaphysics of absences, about which we have nothing to say here.

- 3 The friend of the Perceptual View might also insist that the FoS itself is a perceptual experience because it is based on the perception of its object. However, as we shall see below, the FoS might be an objectless experience. In addition, even if the FoS had an object individuated by perception, it would not be in itself a perceptual state. In general a perception-based mental episode (e.g., a belief or an emotion about a perceived object) need not be a perception. Similarly, although the FoS is referred to as *metaperceptual* because the monitored first-order states are perceptual, it is no less purely affective for all that.
- 4 For a non-exhaustive list of metacognitive feelings, see Dokic (2012).
- 5 One might wonder why certain subpersonal monitoring processes give rise to a conscious experience. A plausible answer, which is pervasive in psychological studies on metacognition, is that this “crossover” between subpersonal and personal levels (Koriat 2000) has an important adaptive function in enabling higher-level epistemic strategies. For instance, the FoS enables the subject to avoid or reduce inconsistency pertaining to her world-view.
- 6 So by “surprise” we mean an experience essentially dependent on unexpectedness, unlike a mere startle response. On this distinction, see Roberts (2003).

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