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Felt reality and the opacity of perception*

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1. Introduction: Presence in perception

Philosophers of perception from quite different traditions have emphasized that our ordinary perceptual experience involves a *sense of presence* with respect to what is perceived or perceptually experienced.¹ For instance, Edmund Husserl claimed in *Thing and Space* that “[i]t is the essential character of perception to be a ‘consciousness’ of the object’s presence in the flesh [*Leibhaftigkeit*]” (Husserl, 1907, p. 15). In a similar vein, Mohan Matthen argues that “[i]n normal visual perception [...], the scene is not simply imaged, but seems to present the perceiver’s own surroundings as so. I will refer to this as a ‘feeling of presence’” (Matthen, 2005, p. 305).

In this essay we use the phrase “sense of presence” in the most neutral way possible, as referring to some phenomenologically distinctive experience to the effect that perceived objects are present. Independently of its positive nature as it is experienced in ordinary perception, the sense of presence is commonly described in terms of phenomenological contrasts with other kinds of mental states. When we merely *believe* (even truly) that there is a thief behind the curtains, with no accompanying perceptual experience, we do not normally have the sense that the thief is present. When we *visually imagine* a pink elephant charging at us, we do not normally have the sense that the imagined elephant is present. Finally, when we *see* François 1st in Titian’s portrait, we do not normally have the sense that François 1st is present. Thus, neither mere belief nor visual imagination nor pictorial seeing (also called “seeing-in”; see Wollheim, 1980) normally involves the sense of presence characteristic of perceptual objects. We can believe, imagine or see in a picture that an object is present, but this does not (or at least need not) yield the sense that the object *is* present, which we have when we perceive it.

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¹ Here we shall follow standard terminology and use the phrases “perceptual experience” and “perceptually experiencing” in a non-factive way, as referring to both veridical experiences (i.e., perceptions) and non-veridical (illusory or hallucinatory) sensory experiences. Moreover, we shall use the phrase “perceptual objects” to refer to what is perceived or at least perceptually experienced.

Given the foregoing contrasts, the sense that perceptual objects are present is an obvious phenomenological datum. An additional claim, endorsed by Husserl, Matthen, and many others, is that the sense of presence is *essential* to, or *constitutive* of, perception. On this claim, any genuine perceptual experience, whether veridical or not, inevitably comes with the sense that the perceptual object is present.

One way of fleshing out this claim is to argue that the sense of presence is inherent to perceptual content itself. It seems to follow that perceptual content cannot be exactly the same as the content of sensory imagination or belief. If what is perceived is partly constituted by the sense of presence, then it must bear some essential difference with what is believed or imagined. On Matthen's alternative view, the sense of presence is constitutive of perception but it is not a feature of perceptual content. Rather, what Matthen calls "the feeling of presence" marks the psychological mode or "attitudinal force" of our perceptual experience (2005, 2010). Perception involves the sense of presence at the level of mode rather than content. The feeling of presence arises because perception somehow "states" or "asserts" that something is the case. This paves the way to the claim that the same content apprehended in perception can figure in imagination or even in belief – a claim that is happily endorsed by Matthen.

This essay is structured as follows. In the next section, we argue that the notion of a sense of presence can be given two interpretations, and corresponds either to the sense that the perceptual object is real or to the sense that we are acquainted (i.e., directly presented) with the perceptual object. In the remainder of the essay we focus on the former interpretation. In Section 3, we claim that the sense of reality is dissociable from the spatial and sensory (or what we call the "spatio-sensory") contents of experience. We motivate our claim by reference to phenomena such as derealization disorder, Parkinson's disease and studies on virtual reality and hallucinations. In Section 4, we suggest that the sense of reality is in fact best conceived as an affective experience akin to what psychologists call "metacognitive feelings", such as the feeling of confidence or the feeling of knowing. Finally, in Section 5, we describe a potentially important implication of our account of the sense of reality, which concerns the debate between Naïve Realism and Intentionalism in recent philosophy of perception.

2. Two senses of presence

In the current literature, the phrase “sense of presence”, as used in the context of a perceptual experience, has been given at least two different meanings. First, there is what we shall call “the sense of reality”, which is the sense that the perceptual object is *real*, i.e., belongs to the actual world rather than a merely possible world or even an impossible world. Second, the term “presence” is sometimes used, especially in the literature on virtual reality, to refer to a different kind of subjective experience (see Pasquinelli, 2012). In experiencing an object, we may have the sense that we are *acquainted* with the object itself rather than a surrogate or representation of the object. Let us call this “the sense of acquaintance”. The sense of acquaintance involves the sense that our experiential access to the perceptual object is *unmediated*. In ordinary perception, we have the sense that what we perceive is directly given to us, in flesh and blood so to speak.

The sense of acquaintance excludes two kinds of apparent mediation. First, consider the situation in which we are acquainted with an iconic representation of the object. For instance, when we see a painting of François 1^{er}, we can see François 1^{er} *in* the painting, but because our access to François 1^{er} is manifestly mediated by the painting, we do not have the sense of being acquainted with him. Second, consider the situation in which we are trying a new virtual reality device. We may start experiencing a virtual object before having the sense of being acquainted with it. In other words, the use of the device may not be immediately transparent to us. This case is different from the previous one because we may not be manifestly acquainted with any vehicle or representation (like a picture) of the virtual object, but we lack the sense of acquaintance nonetheless.²

The sense of reality and the sense of acquaintance are at least conceptually distinct, but are they in fact dissociable? One might argue that the sense of acquaintance with respect to an object must involve the sense that the object is real. If we have the sense of being acquainted with an object, we might be wrong about what we are acquainted with. For instance, we might believe that we are acquainted with a cat, while in fact we are facing a convincing hologram of a cat. However, we still have the sense that we are acquainted with something real. If the perceptual object ceases to be experienced as real, it seems that we cease to experience being acquainted with it.

² One might suggest that derealization disorder (see Section 3.1) involves the second kind of mediation. Derealized subjects do not perceive any vehicle or representation that stands for the perceived object, but they still lack a sense of acquaintance with respect to the latter.

In various studies on virtual reality, Mel Slater (Slater, 2009; Slater et al., 2010) draws a distinction between the sense of “being in the place depicted by the VE [virtual environment]” (sense of acquaintance) and the sense that “what is apparently happening is really happening” (sense of reality). He then gives the following example as involving the former sense but not the second: “You enter a room and see a person standing at the far end, and you wave to them. Later you realize that there was no person there but that it was a shop dummy” (Slater et al., 2010, p. 2). This is an interesting example, but it does not show that the sense of acquaintance can be dissociated from the sense of reality. In our terminology, the subject in this example has the general sense of being acquainted with an environment, the general sense that the environment is real, the more specific sense of being acquainted with an object (the shop dummy), and the more specific sense that the object is real. What she lacks is any sense of reality with respect to a man (whom the shop dummy somehow stands for).

The other dissociation is much more plausible. The sense of reality with respect to an experiential object does not seem to *require* the sense that we are acquainted with the object, as our description of the second, non-representational kind of mediation already suggests. In other words, we might have the sense that a virtual object is real (whether or not we believe it) while lacking a sense of acquaintance. Perhaps some cases of teleoperation (such as remote surgery), in which we knowingly interact with a distant environment using a non-transparent device, involve a (veridical) sense of reality but no sense of acquaintance with respect to the distant environment.

In this essay, we do not want to enquire further into the relationship between the sense of reality and the sense of acquaintance, because we would like to focus on the former sense. The main question we are interested in here is whether the sense of reality is constitutive of a genuine perceptual experience. On the basis of both conceptual analysis and empirical considerations, we shall eventually give a negative answer to this question.

3. Perception and the sense of reality

While perceiving the world we have a host of experiences with spatio-sensory contents – we see shapes, colours, movements, we hear treble or bass sounds with more or less intensity, objects can feel rough or smooth, warm or cold and food can taste sweet or bitter and smell bad or good. These experiences are a pervasive part of perceptual phenomenology (i.e., what it is

like to have such experiences). Now, together with experiencing spatio-sensory contents, we also experience things around us as being real rather than, for instance, mere projections of our imagination or mere holograms. In other words, we have a sense of reality. We are going to show that the sense of reality can, in some cases, be dissociated from the spatio-sensory contents of perception. Based on these considerations we shall claim that the sense of reality is not conveyed by the spatial or sensory contents of perception.³

3.1. Derealization disorder

As Jaspers noted, the sense of reality tends to be taken for granted until it is “disturbed pathologically and so we appreciate that it exists” (1963, pp. 93-94). Now a striking experiential condition in which the sense of reality seems to be lacking is derealisation disorder (Shorvon et al., 1946). This disorder has multiple causes, including psychiatric and neurological disturbances but is also quite common in the general population (Sacco, 2010). For instance, hypnosis (Wineburg & Straker, 1973), sensory deprivation (Reed & Sedman, 1964), drug or alcohol abuse (Melges et al., 1974) can all trigger derealization experiences.⁴

Derealized patients experience an affective detachment from the world in the sense that the world does not feel actual anymore. As stated by Parnas & Sass (2001): “[their perception is not] lived but is more like a mechanical, purely receptive sensory process, unaccompanied by its affective-tone” (p. 105). In characteristic reports, patients state that in looking at the world it is as if it were just like a picture or a dream. As an illustration, a derealized patient said: “In fact, the people and things around you seem as unreal to you as if you were only dreaming about them” (Shorvon et al., 1946, p.7 84). Shorvon et al. (1946) reports another patient’s description: “Through the eyes I look out at a world that might be a picture of the world” (p. 784). It is as if patients were confronted with a mere representation of the world.⁵

³ In previous work (Dokic and Martin, 2012; Martin and Dokic, 2013; Dokic and Martin, 2015), we argued that the phenomenology of perception is dual: one dimension is constituted by spatio-sensory contents while the other dimension consists in various feelings having to do with familiarity, confidence, but also reality (see Section 4).

⁴ Note that derealization is most often accompanied by depersonalization in which patients feel an affective detachment from their own body. Some of the quoted literature deals more with depersonalization than with derealization.

⁵ A referee suggested that dreams may involve a sense of reality, since dreamers may believe that what they dream about is real. This is debatable. One might claim that dreamers do not have genuine beliefs but only, at best, dreamt beliefs. Independently of this point, though, the dreaming metaphor used by derealized patients could be understood as referring to lucid dreams, which do not involve beliefs that what is dreamt is real.

It seems clear that derealized patients do not have the sense that what they experience is real. Indeed, we might even operationalize the sense of reality as what is lacking in derealisation disorder. Still, we would like to argue that derealized patients have intact perceptual competences. They do not seem to have any problems pertaining to the identification or recognition of the perceived object (their ventral systems are functioning well) and their sensorimotor abilities are apparently impeccable (their dorsal systems are also functioning well). They do not have any known perceptual deficit, such as a form of agnosia or ataxia. It is empirically plausible that they have genuine perceptual experiences of the world. At least, the burden of proof is on the sceptic who claims that derealized patients do not have such experiences. Now if our account of derealization is right, the sense of reality is not constitutive of perception. It is a specific experience that is enjoyed over and above the perceptual experience itself.

In this sub-section, we have suggested that a genuine perceptual experience can occur without the sense that its perceptual object is real. In the following sub-sections, we are going to argue for the converse truth, namely that the sense of reality can occur without a genuine perceptual experience. To show this, we shall present three relevant cases: Parkinson's disease, virtual reality and hallucinations.

3.2. Parkinson's disease

Parkinson's disease is a degenerative disorder generating movement impairments (e.g., rigidity, slowness, shaking). Also, Parkinson can generate psychotic states such as delusions, hallucinations and, of particular relevance here, false senses of presence (Fénelon, 2008; Diederich et al., 2009).

In the context of Parkinson's disease, the sense of presence is defined as: "a vivid sensation that somebody is present nearby, when in fact there is no one there. In most cases, the sensation is precisely located, behind or to the side, or occasionally in another room. The perceived presence is that of a person, who is either identified (a living or, less frequently, a deceased relative or spouse) or unidentified" (Fénelon, 2008, p., 19). In addition, such senses of presence are not associated with sensory contents (Nielsen, 2007), although in rare cases they can lead to or are accompanied by vague visual sensations (Diederich et al., 2009). So a patient

with Parkinson's disease can have the sense that a person is present without either seeing, hearing, touching or smelling the person.

Arguably, the sense of presence in Parkinson's disease involves at least what we have called "the sense of reality". In particular, the Parkinson patient who experiences the presence of a nearby person seems to behave, at least sometimes, as if a real person were present. Consider Oliver Sacks's description of the relevant experience as he observed it in two of his patients: "Ed W. often describes a persistent feeling of a 'presence' – something or someone he never actually sees – on his right. [...] The sense of someone there is so strong that [Professor R.] sometimes wheels round to look, though there is never anyone to be seen" (Sacks, 2012, p. 81). It seems clear that what Professor R. experiences is a strong sense of reality, which might not lead to the actual judgment that someone else is in the room (in general Parkinson patients are not deluded), but which tends to trigger spontaneous behavior as if this were true.⁶

Of course, one might doubt that the sense of presence experienced by subjects with Parkinson's syndrome is the very same sense of presence that is associated with normal perceptual experience and is absent in derealized subjects. An obvious difference is that it is not bound to sensory objects as in normal perception. Admittedly, more discussion is needed at this point, but we should at least acknowledge the intelligibility of the notion of a non-perceptual sense of presence. It seems that the sense that an object is present does not require that the object be perceived. In this context, it is worth exploring whether the sense of presence experienced in ordinary perception is itself perceptual or not.

3.3. Virtual reality and hallucinations

In some conditions, such as in virtual reality, we can experience a strong sense of presence in the absence of the kind of sensory content that is present in normal perceptual conditions. Virtual reality is an artificial environment simulated by computer. In the context of a virtual environment, participants can experience a sense of presence with respect to the virtual

⁶ Could we not say, as a referee suggested, that the subject imagines that someone is around? We are not convinced. First, one might wonder how mere imagination could directly produce the behavioral reaction described by Sacks. Perhaps the suggestion is that the subject mistakes an imagining for a genuine perception. However, parkinsonians are not known to have source monitoring disturbances. Second, if the sense of reality experienced by the subject lacks sensory content, it is not clear what kind of imagination is involved – presumably not sensory (i.e., visual, auditory, tactile, etc.) imagination.

environment as a whole or to specific objects in such environment, at least in some conditions (Sanchez-Vives & Slater, 2005).

As already suggested in Section 2, the relevant sense of presence referred to in studies on virtual reality includes at least the sense of reality. The sense of reality in the context of virtual reality has been measured in different ways. For example, experimenters can use subjective methods such as questionnaire-based measurements (e.g., Barfield & Hendrix, 1995). Owing to the obvious limitations of subjective methods, more objective methods have also been proposed such as behavioral measurements: the fact that participants act in the virtual environment as they would act in the actual world suggests that they have a sense of reality with respect to the virtual environment. As an illustration, one can measure the level of “swaying in response to a moving visual field or ducking in response to a flying object” (Sanchez-Vives & Slater, 2005, p. 335; see also, Prothero et al., 1995). Another approach is to use physiological measures such as heart rate, particularly in the simulation of stressful situations (e.g., the subject has the impression of being at the edge of a pit) (Meehan et al., 2002). If the physiological responses of participants in the virtual setting are identical or very similar to the physiological responses in the actual world, participants arguably have some sense of reality with respect to the virtual environment.

Interestingly, when examining the factors that influence experienced reality, the level of spatio-sensory realism seems to have a very weak impact (Usoh et al., 2000; Zimmons & Panter, 2003). For example, Zimmons & Panter (2003) used the pit room paradigm and varied the level of spatio-sensory realism of the virtual scene (e.g., absence or presence of textures). Results revealed that both the participants in the high-realism condition and the participants in the low-realism condition showed an increase in heart rate at the edge of the pit. Moreover, we can surmise that such an increase reflects the outset of a sense of reality since the study revealed no differences between conditions in heart rate and reported experiences of reality. These results suggest that the level of spatio-sensory realism has no impact on experienced reality.⁷

Another situation showing that the level of spatio-sensory realism has no impact on experienced reality is the phenomenon of hallucinations. Hallucinatory experiences can have many sources (see e.g., Peyroux et al., 2013). Among them we find specific neurological

⁷ Of course, as an anonymous referee pointed out to us, this kind of behavioral measures should be specific to the sense of reality in contrast to, e.g., mere empathetic experiences in which the subject puts herself in the shoes of someone at the edge of a pit without actually having the sense that the pit is real. Empathetic experiences without the sense of reality can also involve physiological responses, but it is an empirical issue whether these responses are the same as the responses that accompany the sense of reality.

conditions such as Parkinson's disease (e.g. Diederich et al., 2009), migraine or epilepsy (e.g., Russell & Olesen, 1996); sensory deprivations (Pascual-Leone & Hamilton, 2001) or sensory impairments including Charles Bonnet syndrome (Fenelon, 2013); substance abuse, for example lysergic acid diethylamide (LSD), peyote (cactus from Mexico) or mescaline (peyote alkaloid); transitional states to and from sleep (i.e., hypnagogic and hypnopompic hallucinations respectively) and, finally, psychiatric conditions like schizophrenia (Esquirol, 1838).

Not all hallucinations generate a sense of reality with respect to what is experienced. There may be cases in which subjects hallucinate something (e.g., an imaginary friend) that is not experienced as part of the real world. On the other hand, subjects may hallucinate a quite unrealistic entity, such as a horrible yet two-dimensional creature, while having a strong sense that the entity is real (Shanon, 2002). In addition, as Shanon (2002) points out, the subjects can be perfectly aware that they are hallucinating. This indicates that realistic spatio-sensory contents are not what determine the sense of reality. If this were the case, experienced reality and objective spatio-sensory realism should systematically correlate and co-vary.

To sum up, there is converging evidence that the sense of reality is causally independent from the generation of specific spatio-sensory contents. Thus, there is a double dissociation between having a genuine perceptual experience and having a sense of reality with respect to what is experienced.

4. The affective nature of the sense of reality

As advocated in the previous section by reference to the dissociation cases described there, the sense of reality and the spatio-sensory contents of perception are causally independent from each other. It follows that the sense of reality cannot be explained at the level of perceptual content or in terms of the psychological mode of perception. It is extrinsic to perceptual experience.

An obvious alternative is that the sense of reality is purely *cognitive*; it is constituted by beliefs or judgments of reality based on perceptual experiences (see Arango-Muñoz, 2014, and Farkas, 2014). The sense of presence would then belong to so-called “cognitive phenomenology” (see Bayne & Montague, 2011). However, we have already given several examples in which the sense of reality falls short of belief. In other words, the sense of reality

is belief-independent. For instance, we may have the sense that a perceptual object is real but not believe that it is real, perhaps because we believe that we are hallucinating. Similarly, we may have the sense that a scene presented by means of a virtual reality device is real but believe otherwise, because we remember that we are using such a device. Perhaps there are cases in which mere beliefs causally lead to a sense of reality, but the sense of reality in itself need not be or rest on a belief.

Given what we know about the cognitive underpinnings of the sense of reality, the best explanation is that it is an affective experience, and more precisely a *feeling*. The exact nature of this feeling and its etiology are still controversial, though.

Here, we propose that the sense of reality is akin to metacognitive feelings. Metacognitive (or noetic) feelings are phenomenological reflections of implicit *monitoring* and *control* processes (Koriat, 2006; 2007; Proust, 2013). Metacognitive monitoring “refers to the subjective assessment of one’s own cognitive processes and knowledge”, while metacognitive control “refers to the processes that regulate cognitive processes and behavior” (Koriat, 2006, p. 85).

Metacognitive control includes control over one’s judgments, or better one’s spontaneous *inclinations* to form judgments, whether or not the latter are actually formed. For instance, if the subject has a strong *feeling of confidence* about what she perceives, she will be inclined to form flat-out perceptual judgments (“This is a cardinal”); otherwise, she will prefer more cautious judgments (“This may be a cardinal, but I’m not quite sure”).

More precisely, it has been proposed that metacognitive feelings constitute the output of monitoring processes, which involve implicit inferences from a set of internal cues. For instance, in the study of metamemory, it has been argued that the *feeling of knowing* (the feeling that we know something even before we are able to retrieve it) is based, at least in part, on the availability of partial information or processing fluency.⁸ In this respect, the level of availability of partial information or the level of processing fluency will modulate the quality of the corresponding feeling (Koriat, 2000, 2007; Dunlosky & Bjork, 2008; Dokic and Martin, 2012). It has also been shown that modulating experimentally the level of processing fluency can give rise to illusory feelings of knowing (for a review see, Koriat, 2000).

⁸ The notion of processing fluency refers to the ease with which an operation is processed. It appears that many metacognitive feelings are a (more or less direct) function of processing fluency. See, e.g., Wurtz et al. (2007), and Oppenheimer (2008).

In this context, we propose that the sense of reality is a specific metacognitive feeling based on various *reality-monitoring* processes, and processes that control one's spontaneous judgments of reality. Reality-monitoring usually refers to the set of processes that allow us to distinguish between memories of internally generated events (e.g., an imagining) and memories of externally generated events (e.g., a perception; Johnson & Ray, 1981). In other words, reality-monitoring in this sense allows us to discriminate the cognitive mode of a particular memory. An extension of the notion of reality-monitoring is the notion of *source-monitoring* which includes the ability to discriminate between internally and externally generated events but also between memories of any two (or maybe more) internal or external sources (for a review see Johnson et al., 1993). For instance, I can ask whether it was Jean or Anne who told me that there is a good movie on show (external source-monitoring). I can also ask myself whether I asked Jean whether there is a good movie on show or if I only thought of asking him (internal source-monitoring).

However, in this essay we are talking about *online* reality-monitoring processes which, we argue, monitor a set of internal cues. One of these cues could be the fluency of perceptual processing and production. What distinguishes, *inter alia*, a perception from an imagining is processing *versus* production. The perception of an elephant is simply “processed” while in imagination it is produced and the production part adds a supplementary “difficulty” for the system. In addition, If we consider that imaginations are simulations of perceptions we are committed to the fact that imaginations are *degraded* (i.e., imperfect) (re)productions of perceptions: my imagining of an elephant is not as clear, detailed, vivid as my perception of an elephant. As a result, the additional processing of some aspects of the elephant is more costly for the system than the sensory processing of an actual elephant. For instance, the focus of the subject's attention to different parts of the elephant will be far easier in the case of perception than in the case of imagination. Of course, the difference here has to do with how the task is difficult to the subject, but her experienced difficulty is arguably grounded on sub-personal processing dysfluency due to the ongoing construction and development of the sensory images.⁹

In the previous section we saw that, in the context of virtual reality, the sense of reality does not necessarily depend on the degree of spatio-sensory realism conveyed by the virtual

⁹ We do not want to say that feelings of reality always depend on the fluency of actual perceptual processes. As we have seen above (section 3.2), the feeling of reality in Parkinson's syndrome is generated independently of perceptual processes. There is probably more than one kind of cues underlying feelings of reality, and there is also the possibility of monitoring failure (the system over-generates a feeling of reality in the absence of the relevant cue).

environment. However, it appears that “the graphics frame-rate is positively correlated with reported [reality]” (Sanchez-Vives & Slater, 2005, p. 333), in that purportedly a well-suited frame rate improves processing fluency. Similarly, the case of the hallucinated two-dimensional creature could be a simple case of mental imagery but generated with such easiness (fluency) that it cannot be treated as mental imagery by the system but, instead, as a case of veridical perception no matter the degree of spatio-sensory realism conveyed by the hallucination (see Barnier & Mitchell, 2005 for a similar explanation of the sense of reality in the case of hypnotic hallucinations).

A last example is the case of *sensory substitution* in which people are equipped with specific devices enabling the extraction of information normally conveyed by a specific modality (substituted modality) by means of another modality (substituting modality). For instance, the *Tactile Visual Sensory Substitution* device (henceforth, TVSS) makes use of a head-mounted video camera capturing environmental information, which is transduced into pin vibrations on one part of the body (Bach-y-Rita et al., 1969). After a certain amount of practice with such a device an experiential shift happens (Martin and Le Corre, 2015): subjects acquire a sense of reality in that they have the impression that proximal sensory information delivered by the device refers to actual objects in the world (e.g., Bach-y-Rita, 1969; Bach-y-Rita, 2004; Guarniero, 1974). Interestingly, the experiential shift occurs only if the subject is allowed to move the camera at will *versus* it is the experimenter herself who moves it; in which case the experiential shift does not happen (Bach-y-Rita et al., 1969 and Hurley & Noë, 2003). This shows the importance of sensorimotor interactions in the production of feelings of reality. In virtual reality the contribution of sensorimotor interactions in the production of feelings of reality with respect to the virtual environment is also strongly recognized (e.g., Casati & Pasquinelli, 2005). We argue that after training with a sensory substitution device, the fluency of sensorimotor interactions increases up to a level close to the level of fluency usually reached in normal conditions so that reality-monitoring processes are ‘fooled’ and tag the objects at the source of proximal sensory events as having actuality.

One might wonder whether metacognitive feelings are really affective experiences. For instance, do they have a *valence*, just as more central cases of affective experience (e.g., emotions)? This issue is indeed discussed in the literature on metacognitive feelings (see, e.g., the introduction by Arango-Muñoz and Kourken, 2014). For instance, the feeling of forgetting could have a negative valence (Arango-Muñoz, 2014) and the absence of felt reality (or the presence of feelings of unreality) in derealization could also involve a negative valence. In

contrast, processing fluency gives rise to metacognitive feelings with a positive valence; “high fluency feels good” (Reber et al., 2004). However, we can leave this issue aside here and introduce the idea of an affective phenomenology in a rather minimal way, as reflecting a contrast between two kinds of metacognitive judgments (e.g., Koriat, 2007). Metacognitive judgments can be based either on explicit beliefs and encyclopedic knowledge about our cognitive abilities, or on mere unarticulated feelings: as an illustration, the belief that we know who was the first King of France can be based either on the reasoning that we have learned the names of all Kings of France at school (and/or that we have an excellent memory) or on the gut feeling that we know the answer. Similarly, imagine a situation where we have some doubts about whether we are really perceiving the current object of our perceptual experience or whether we are, e.g., hallucinating it. The judgment that we are perceiving rather than hallucinating can be based on explicit beliefs (e.g., I do not have schizophrenia, and I did not take hallucinogens) or on feelings of reality (i.e., I feel the present object as being real) even if such feelings can fool the subject (i.e., the subject is in fact hallucinating). For our purposes, we could also construe feelings of reality, as other metacognitive feelings, not as actual judgments or beliefs (which would blur the difference between two possible kinds of metacognitive judgments), but as spontaneous inclinations to form such judgments, even when these inclinations are resisted because of the subject’s specific cognitive background. This minimal characterization of feelings of reality is enough to secure their belief-independence as described above.

To sum up, feelings of reality are distinct from both perceptual experiences and beliefs. On the one hand, at least some of the cues capable of generating a feeling of reality are *two-way independent* from the instantiation of genuine spatio-sensory contents. Even if feelings of reality are probably quite good predictors of the instantiation of such contents, we have given some evidence that the relation between the two is likely to be contingent. On the other hand, feelings of reality can be experienced in the absence of any judgment or belief to the effect that the perceived object is real.

5. The opacity of perception

In this essay, we have argued that the sense of reality cannot be extracted from perception itself, either at the level of content or at the level of mode. Perception is intrinsically *opaque* with

respect to the metaphysical nature of its object.¹⁰ The point is not that we cannot *know*, by having a perceptual experience, whether its object is real or not. Rather, it is that a perceptual experience of an object, whether it is veridical or not, does not in itself involve the *sense* that the object is real. As a consequence, perception is not intrinsically tied to judgments of reality or even inclinations to form such judgments.

Of course, we usually feel that a perceptual object is real, but the facts that generate our feeling are distinct from the facts that make us perceptually related to a real object in the world. Thus, a given perceptual experience can home in a real object without the feeling that it does, and the feeling that a perceptual-like object is real can be generated independently of the perceptual character of the experience.

Our account of the sense of reality has implications for the crucial debate between *Naïve Realism* and *Intentionalism* (Martin, 2002; 2006; Crane 2006; Nudds, 2009). *Naïve realism* contends that the phenomenal character of a given veridical perceptual experience is constituted by the perceived objects and properties in the world. It follows that the phenomenal character of a veridical perceptual experience cannot be exactly the same as the phenomenal character of any non-veridical perceptual experience, and that a veridical perceptual experience is essentially veridical.

In contrast, *Intentionalism* claims that the phenomenal character of a given perceptual experience, whether it is veridical or not, is constituted by representational properties of the experience. It follows that the phenomenal character of a veridical perceptual experience can be exactly the same as the phenomenal character of a non-veridical perceptual experience. Even non-veridical experiences have perceptual objects because the latter are determined by representational properties intrinsic to the experiences themselves. As Tim Crane very clearly puts it: “The essence of perception – perceptual experience itself – does fall short of the world.” (Crane, 2006, p. 141).

The debate between Naïve Realism and Intentionalism is often framed in terms of the issue of whether perception is a relation or a representation. According to Naïve Realism, perception is (or essentially involves) a *relation* to real perceived objects (see, e.g., Campbell, 2002). In contrast, non-veridical perceptual experiences should be considered as being or involving no such relation (see Crane, 2006), or perhaps a relation to non-real perceptual

¹⁰ This might be seen as an instance of what Travis (2004) calls “the silence of the senses”. Perception does not “tell” us whether the perceptual object is real or not.

objects. According to Intentionalism, perceptual experience is (or essentially involves) a *representation* of the world, which is true (or correct) if the experience is veridical, and false (or incorrect) if the experience is illusory or hallucinatory.

This way of framing the debate raises a question about the notion of representation at stake in the formulation of Intentionalism. If the attribution of a perceptual representation answers only minimal constraints (e.g., if the relevant notion of representation is akin to Andy Clark’s notion of minimal representation; see Clark, 1997), it is not clear why being perceptually related to an object cannot be at once a (situated) way of representing the object. In other words, the notion of perceptual representation would not obviously be in tension with the notion of perceptual relation. Defenders of Intentionalism should then define a substantial notion of representation if they want to differentiate themselves from Naïve Realism and offer an explanation of how a non-veridical experience can have a perceptual object, i.e., how it can seem to present an object when there is none.

A widely acknowledged constraint on a substantial notion of representation is that we can represent an object as such only if we possess, at least tacitly, *criteria of identity* appropriate to the object.¹¹ In other words, we must have some knowledge of what *kind* of object it is, and how it can be tracked in space and time. This knowledge could be considered as having either conceptual or non-conceptual content. Independently of the latter issue, it must be manifestable in spontaneous behavior or judgments as to whether, for instance, something encountered in different perceptual contexts constitutes the same object or not.

There are many ways to construe the relevant piece of knowledge, which yield different versions of Intentionalism. On one version, the criteria of identity are appropriate to the *sort* of object perceived (for instance, a cat). On another version, they are appropriate to the *category* of the object (for instance, an animal).¹² On yet another version, they correspond to so-called “Spelke objects”, which are defined in terms of lower-level features such as cohesion, boundedness, and rigidity (Spelke, 1990).¹³ The point that we are going to make in the

¹¹ Here we discuss only Intentionalist views that allow for singular representations (“This is F”, or “This F”; see Burge, 2010), or general representations involving free or bound variables (“*x* is F”, “There is an F”). All these representations might be claimed to rest on the possession of suitable criteria of identity. We leave to one side the different view that perceptual experience involves only *feature-placing* representations in Peter Strawson’s sense (Strawson, 1959), namely representations of the form “It’s hot”, “It’s raining”, or “Redness over there”.

¹² For the distinction between sortal concepts and categorial concepts, see Lowe (2012). For a defense of the claim that perception of an object (e.g., a cat) requires the possession and deployment of the relevant categorial concept (e.g., an animal), see McDowell (2008a).

¹³ For a defense of the claim that the concept of an object can be a sortal concept, see Xu & Carey (1997). For a dissenting voice, see Wiggins (1997).

remainder of this section does not depend on the specific version of Intentionalism that is eventually favoured.

The defense of the opacity claim that we conducted in the previous sections is in itself neutral with respect to the debate between Naïve Realism and Intentionalism. In other words, both positions can in principle acknowledge that perceptual experience is not essentially bound to the sense of reality. However, the opacity claim opens up a new *explanandum* for the philosophy of perception. A consequence of this claim is that the sense of reality cannot be invoked to differentiate perceptual experiences from non-perceptual sensory-like experiences, such as visual imaginings. Thus, the question of the *specificity* of perception arises. As we shall see, Naïve Realism seems to be in a better position to answer this question. In contrast, the opacity claim should be seen as particularly challenging for Intentionalism.

Quite independently of the sense of reality, there is an intuitive phenomenal difference between seeing a cat and visually imagining a cat. This difference is available even to derealized patients, who lack the sense of reality altogether. Although these patients are sometimes tempted to describe their perceptual experience as a dream, they can easily make the difference between seeing a cat in front of them and merely visualizing such a situation. What it is like to see a cat is different from what it is like to visually imagine a cat, even if the subject may have no idea of the ground of the relevant difference.

Intentionalism construes both visual imagination and visual perception as involving representations. So how can it deal with the phenomenal difference between these two kinds of experience? One strategy would be to argue that visual representations are not the same as the visual-like representations involved in imagination – for instance, the latter might be claimed to be less fine-grained than the former. However, the difference between perception and imagination seems to be one of kind rather than degree. Moreover, prominent Intentionalists have argued that perception and imagination involve the same kind of representation (see, e.g., Byrne, 2010; Matthen, 2010). So a better strategy is to explain the difference between perception and imagination at the level of psychological mode. This is where Intentionalism might have a shortage of answers. It certainly cannot give the most plausible answer available at this point, namely that only visual perception somehow “states”, or “asserts”, that the perceptual representation is *true* (or more generally correct). For this answer would lead to denying the opacity claim, and accepting that the sense of reality is constitutive of perceptual experience. The argument is relatively simple. If the perceptual object is individuated in terms of the subject’s possession of criteria of identity, the sense that it is real would be constitutive

of the perceptual experience. Our criteria of identity appropriate to concrete cats (animals, Spelke objects, etc.) are only appropriate to *real* cats (animals, Spelke objects, etc.). It follows that our perceptual experience of a cat would already be intertwined with the sense that the perceptual object is a real cat, and thus with the sense that the perceptual object is real *tout court*. Of course, our perceptual experience might be hallucinatory, and no real cat is around, but if it states, or asserts (in a non-linguistic, *sui generis* way), that the perceptual representation is true, it must generate a sense of reality with respect to its perceptual object.

Naïve Realism can explain the difference between perception and imagination as follows. Visual perception but not imagination is (or essentially involves) a relation. The fact that perception is relational contributes to the phenomenal character of the experience. (Of course, Naïve Realism still faces the notorious problem of specifying the phenomenal character of non-veridical perceptual experiences.) Then Naïve Realism can take either of two forms. One form of Naïve Realism also insists that perception requires the possession of criteria of identity. This is McDowell's view (see, e.g., McDowell, 1994, 2008a, 2008b), but also William Fish's, who writes that "the fact of something's being a cathode ray tube is enabled to feature in the presentational character of a subject's experiences only if the subject has the capacity to pick up on such facts, given that having this capacity requires the subject to possess the concept of a cathode ray tube" (Fish, 2009, p. 71). The involvement of criteria of identity in our perceptual experience need not bring in the sense of reality since perception is not conceived as a form of (non-linguistic) assertion. Another, more radical form of Naïve Realism denies that perception requires the possession of appropriate criteria of identity. This form of Naïve Realism welcomes Michael Ayers's manifesto that "we do not need 'criteria of identity' in addition to what the world and our perceptual and agent faculties give us, when it is a matter of picking out (and, maybe, picking up) *literally* discrete, concrete, durable objects" (Ayers, 1997, p. 395). On this view, we can be perceptually related to an object of a certain kind without possessing or deploying, even tacitly, any criteria of identity.

In a nutshell, Intentionalism does not have a straightforward explanation of the phenomenal difference between perception and mere imagination, which would be consistent with the opacity of perception. Intentionalism seems to be left with only two alternatives. One alternative is to reject the opacity claim, and insist that the sense of reality is constitutive of perceptual experience. Another alternative is to accept the opacity claim, but reject the view that there is an essential difference between perception and imagination. For instance, one might construe visual perception as a case of visual imagination accompanied by independent

affective phenomena, such as the sense of reality (and/or the sense of acquaintance). Both alternatives need careful argumentation. The opacity claim is well-grounded, and there is still an intuitive phenomenal difference between perception and imagination independently of the sense of reality (as suggested by the case of derealization). In contrast, Naïve Realism seems to be able to explain the specificity of perception independently of the instantiation of the sense of reality. Unlike imagination, perception is a relation to the world, and the veridicality of perceptual experience does not rest on the truth or correctness of a representation.

6. Conclusion

In this essay we have tried to elucidate the nature of the sense of presence at stake in ordinary perception. We have focused on one interpretation of “presence”, which refers to the sense that an object is real. The sense of reality has often been invoked to differentiate perception from other contentful mental states, such as imagination and belief. However, we have argued that the sense of reality is not constitutive of perception, and can even be generated in the absence of any perceptual experience. On the basis of our current knowledge about the cognitive underpinnings of the relevant phenomena, we have claimed that the sense of reality is an affective experience which should be understood at a level intermediary between perceptual experience and belief. The sense of reality is a belief-independent feeling generated from the operations of subpersonal metacognitive (e.g., source-monitoring) processes. In our view, this is an important conclusion, which raises a new challenge for the view that perception is a representation (Intentionalism) rather than a relation (Naïve Realism). Since genuine perception is possible without the sense of reality, the question arises as to how to characterize perceptual experience in contrast to other kinds of sensory mental states, such as imaginings, which are clearly representational.

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