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Immersing oneself into one's past

Subjective presence can be part of the experience of episodic remembering

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Abstract
A common view about the phenomenology of episodic remembering has it that when we remember a perceptual experience, we can relive or re-experience many of its features, but not its characteristic presence. In this paper, we challenge this common view. We first say that presence in perception divides into temporal and locative presence, with locative having two sides, an objective and a subjective one. While we agree with the common view that temporal and objective locative presence cannot be relived in remembering, we argue that subjective locative presence – the feeling of being immersed in a certain scene – can be so. Our argument for this claim starts by determining independently the underpinning mechanisms of subjective locative presence in quasi-perceptual imagination. These mechanisms are self-projection, imaginative pretence, and attentional focus. We then proceed to establish that they have been found to underpin conscious states of episodic remembering too. We conclude that episodic remembering can bring us to relive the subjective locative presence characteristic of a perceptual experience, and that the common view is mistaken. Our view – 'mnemonic immersivism' – has important consequences regarding the relationships between memory and imagination and the phenomenology of episodic remembering.

Keywords
Episodic memory · Imagination · Immersion · Phenomenology · Presence

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1 Introduction: The issue of perceptual presence in episodic remembering

Episodically remembering the perceptual experience of a scene[1] does not consist in undergoing it literally as it was undergone in the past, obviously.[2] Yet, in contrast with semantic memory, episodic memory is reputed to be the privileged mnemonic capacity we have to bring us back to such past perceptual experience and to relive it. As Tulving has famously said: "episodic memory's function is to make it possible for the rememberer to travel back in his or her mind to an earlier occasion [...] and *to mentally relive the experienced and thought-about happenings*" (2005, p. 14, our emphasis). This triggers a question about the phenomenology of the experience of remembering:[3] when we episodically remember the perceptual experience of a scene,[4] which components of this experience exactly can we mentally relive? Appealing to a common metaphor: about which components of this experience can we say that episodically remembering involves mental time travel towards the past?

Episodic memory involves both *retrieval-linked* and *encoding-linked* phenomenological features. The *retrieval-linked* phenomenological features, like the feeling of pastness or causality, are the features that occur only at retrieval. The *encoding-linked* phenomenological features, like the perspectival character of remembering or quasi-sensory experience of remembered qualities, are the features that have been features of the past perceptual experience, and for this reason, that can be said to be retrieved, even if there is mere similarity instead of strict identity between the ways they occur at encoding and retrieval. Obviously, many of the encoding-linked features re-occur as one is remembering. For instance, one very often readopts the same field perspective had while undergoing one's past perception, and one often experiences again in memory the colours and shapes of remembered objects. But – so becomes the above question – which of these features of our past perceptual experiences exactly can remain in our memories of them? As Soteriou puts it:

[1] We want to stay neutral on the object of an episodic memory. So, we will talk of a 'past perceptual experience of a scene' (sometimes, for short, of a 'past perceptual experience' or of a 'past perceived scene') with this expression taking no stand about whether we remember mere perceptual experiences, the experienced world, or both. Similarly, 'scene' is intended to cover any possible complex perceptual object (e.g., someone doing something, a landscape, a sequence of events, etc.) typical of our perceptual experiences.

[2] In pathological cases, episodically remembering might consist in literally undergoing the remembered experience as it was undergone in the past, as in strong forms of PTSD. However, such a case would no longer be episodic memory, but would be something like hallucination.

[3] We do not claim that the phenomenology we will talk about in this paper is a necessary feature of episodic remembering, just that it is characteristic of it.

[4] Without any claim of necessity, we restrict ourselves to the case of episodic memories of perceptual experiences given that it is the topic of this paper. Of note, similar questions to the one we ask about presence have been asked about pain (Montero, 2020; Mulligan et al., 1997) and emotions (Debus, 2007; Trakas, 2021).

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"What sense can be made of this idea that episodic recollection makes possible the 're-experiencing' of past events?" (2018, p. 295).

In this paper, we will contest a common answer to this question. According to it (Barkasi, forthcoming; Barkasi & Rosen, 2020; Boyle, 2019; Martin, 2001; Matthen, 2010b; Soteriou, 2018; Tulving, 2002), while many features of past perception are relived in remembering, the phenomenology of *presence* characteristic of perceptual experience cannot be relived. A further distinction will help refine this view. Although proponents of the common view don't distinguish clearly between them,[5] the characteristic 'presence' of a perceptual experience has two components (Barkasi, forthcoming). Firstly, there is *temporal* presence ('presentness'), in which the components of a perceptual scene are present to the effect that they are experienced as existing now rather than in the past or in the future.[6] Secondly, there is *locative* presence ('being there'), in which the components of a perceptual scene are present to the effect that they appear as standing in the perceptual scene rather than as being absent from it.[7] As a consequence, asking whether perceptual presence is relived in episodic remembering can be answered by saying (1) that both temporal and locative presence is relived, (2) that neither of them is relived, (3) that temporal presence is relived, or (4) that locative presence is relived. Temporal presence reliving is unlikely, since a characteristic feature of remembering is that what is remembered is conscious as past (Matthen, 2010b, 2010a; Perrin et al., 2020; Russell, 1921; Taylor, 1938).[8] This leaves us with either (2), the no-presence-reliving option, which is the common view, and (4), the locative-presence-reliving option, for which this paper will argue.

According to the common view's main objection against any attempt to make room for presence in remembering,[9] neither the temporal nor the locative presence of a past perceptual experience can be involved in episodic remembering because

[5] See in particular Soteriou (2018), who contrasts presence in its temporal meaning with absence, and Matthen (2010b) who contrasts the pastness characteristic of episodic memory with presence in its locative sense. See Hoerl (2018) for a critical analysis of this lack of conceptual clarity.

[6] This is the sense that Matthen (2010a, p. 25, our emphasis) has in mind when he says: "[the] striking metaphor of 'mental time travel' is misleading. Time travellers have no special experience of the past—when Dr. Who steps out of his TARDIS in the Silurean Period he experiences the events going on then *as present*. But in episodic recollection events appear as past." See also (Byrne, 2010, p. 25).

[7] This is the sense that Boyle has in mind when she says: "(…) perceptual experiences are, and experiences of mental reliving are not, characterised by *a feeling of 'presence.'* It is characteristic of perceptual experience that its objects seem to be 'present or there' (…). By contrast, 'one aspect of the phenomenology of episodic recollection is the current absence of its object' (Soteriou, 2008, p. 475)." (Boyle, 2019, pp. 3–4, our emphasis) Soteriou (2018), Matthen (2010b), and Barkasi (forthcoming) claim the same thing.

[8] Another way of making the same point is to note, with Soteriou, that assuming that temporal presence is relived, the "conscious act of simulation will thereby represent that past event as concurrent with the episode of recollection" (2018, p. 296).

[9] The proponents of the common view have presented their target in different guises, for instance as the 're-enactment' view in (Soteriou, 2018), and as the 're-presentation' view in (Fernández, 2019).

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the characteristic phenomenology of the latter involves both the pastness and absence of what is remembered. Being conscious of what is remembered as temporally or locatively present would exclude experiencing the current mental state as a state of remembering. The main claim of this paper is that while the common view is right regarding temporal presence, it is wrong regarding locative presence. On our diagnosis, the common view restricts mistakenly locative presence to its *objective* side, i.e., it thinks of locative presence as a phenomenal feature of the things that are perceived by a subject.[10] But locative presence is also a phenomenal feature of the *perceiving subject*, a notion we will name 'subjective locative presence', or, following a common usage in the philosophical literature, 'immersion'.[11] After all, being experienced as 'being there' is a characteristic of both perceived objects and perceiving subjects. Now, we claim, feeling subjectively present in a remembered perceptual scene (subjective locative presence) can be and actually is sometimes a feature of the experience of episodic remembering. If this is correct, the common view is wrong and a certain version of the locative-presence-reliving option must be endorsed, a view we dub 'mnemonic immersivism'. Encoding-linked phenomenological features are richer than usually thought.[12]

Taking seriously the idea of episodic remembering as potentially involving a rich reliving of past perceptual experiences has important consequences. Although we will not be very detailed about this, we will give an account on which the immersive phenomenology of reliving is a distinct *success condition* of remembering. In our view, though not always, subjects often expect their episodic remembering states to bring them to relive in a strong immersive way the remembered scene, whether for epistemic, semantic, affective, or entertainment reasons. Should their memories not provide this phenomenology, subjects will consider they were not wholly successful, despite the fact that their memories are genuine and accurate.

[10] Barkasi (forthcoming) is an example of someone supporting the common view without restricting locative presence to its objective side.

[11] We say more about this below.

[12] As a reviewer suggests interestingly, there is a view that might naturally come to mind as an alternative to our mnemonic immersivism. On this view, what we describe as immersion or subjective locative presence in the past should be described as *representing* what it was like to feel subjectively located in that scene at a past time, with remembering being exclusively past-directed. We reply with two things to this suggestion. Firstly, independently from our argument, it has been argued that amongst human cognitive abilities, one can shift from one's actual perspective to occupy a distinct one, for instance as one imaginatively adopts the spatial perspective of someone else, or as one imagines oneself occupying the perspective of a future experience by anticipation. In these cases, while imagination is the capacity that renders such simulations possible, the resulting conscious state is not merely one of imagining what it is like to occupy the target perspective, but the experience of such an occupation by simulation. Moreover, such self-projection ability has been said to operate in remembering too (Buckner & Carroll, 2007; see McCormack & Hoerl, 1999). If this is correct, we submit, there is no reason to restrict remembering to the representation of what it was like to feel subjectively located in that scene at a past time. What we say below about the screening off by attention of the attitude of pretence while the effect of the attitude on its content remains comes as an additional reason to contest the reviewer's suggestion.

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Moreover, given the account we will argue for, a certain *imaginative attitude*, pretence, will turn out to play a potential key role in the phenomenology of remembering, countering the idea that the attitude of remembering would exclude any role for attitudinal imagination.

Our argument for mnemonic immersivism goes as follows. We argue first that the notion of locative presence on which the common view draws must be enriched by distinguishing between objective locative presence and subjective locative presence ('immersion'), and that subjective locative presence within quasi-perceptual scenes is achieved via self-projection (section 2). Drawing on the current debate about the phenomenon of immersion, we proceed to explain two mechanisms that enrich the immersiveness of self-projection: imaginative pretence (section 3) and attentional focus (section 4). Next, we address the objection that presence requires sensorimotor coupling, along the way distinguishing embodied immersion based on sensorimotor coupling from unembodied immersion based on self-projection (section 5). We then show that self-projection, imaginative pretence, and attentional focus can be or usually are involved in the experience of remembering, and conclude accordingly that episodic remembering can be and sometimes is immersive (section 6). Like we suggested, our case for mnemonic immersivism has some important consequences concerning the relationship of memory and imagination and about the phenomenology of remembering. We consider them in section 7.

2 Enriching and projecting locative presence

In this section, we argue that the locative presence[13] characteristic of perception includes not only an objective side, but also a *subjective* side. We also argue that subjective locative presence can be induced through *self-projection*, and thus is not restricted to perceptual experience of a scene. Proponents of the common view either consider only objective locative presence, neglecting subjective locative presence, or they miss the projectibility of subjective locative presence. This both explains their rejection of locative presence from remembering and weakens this rejection.

For most philosophers of perception, presence is a characteristic feature of standard perceptual experience. Here is Husserl in *Thing and Space*: "[i]t is the essential character of perception to be a 'consciousness' of the object's presence in the flesh." (1907/2010, p. 12) But presence, we argue, comprises two sides: an objective and a subjective side (Barkasi, 2021; Slater, 2009).

Objective locative presence (or 'presence of') – the notion of presence almost exclusively considered in the philosophy of perception – refers to the characteristic of the things we perceive to appear as being themselves actually there, in our perceptual environment (Matthen, 2005, 2010b). More precisely, there is a consensus that two main features are constitutive of objective locative presence in

[13] In what follows, when we talk of 'perceptual presence', we refer to locative presence. We leave temporal presence aside.

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perception.[14] The first is the experienced *mind-independence* of what is perceived, in contrast to something that is imaginatively visualised in one's environment. But mind-independence is not sufficient. For instance, seeing an object in a picture involves being conscious of it as having an existence that is not dependent on one's mind, to be sure, but not as being present in one's actual environment. A second necessary feature is thus the *ergonomic significance* of what is perceived, in contrast with something merely seen in a picture. In other words, what we perceive appears as things which we could in principle physically reach out and physically interact with. In total, being objectively locatively present means for something to appear in experience as being there itself in such a way that the perceiving subject can in principle interact with it.

Despite objective locative presence being an important feature of perceptual experience, it does not exhaust perceptual locative presence. Here we wish to suggest that perceptual locative presence is not just about *things appearing to the subject as being there* in the perceiver's perceptual environment (objective locative presence), it is also about *the perceiver feeling there*, 'immersed' in their perceived space (Barkasi, 2021; Rosen & Barkasi, 2021, p. 103). As Barkasi puts it (forthcoming, p. 3, emphasis added), describing both kinds of locative presence: "As you look around yourself now, you experience yourself as present in the sensed space: *you experience yourself as immersed in it* while the co-present objects strike you as ergonomically significant and mind-independent (Husserl, 1907/2010; Matthen, 2005)." Despite being much less studied, subjective locative presence ('presence in' or 'immersion in') is also constitutive of perceptual presence. So, what is it?

Consider what it is like to experience the space around you now. You, of course, experience the objects in this space as available for, or relevant to, action. For example, you feel as if you can reach out and grab what's nearby. This is objective locative presence. However, there is more to your experience of the space. You also experience yourself as having a position in the space, as standing in spatial relations to the other occupants of the space. This is subjective locative presence, or immersion. Note that the two are conceptually different: it is conceptually possible that one could experience themselves as spatially related to objects in a scene without also experiencing those objects as affording possibilities for action. Specifically, suppose that objective locative presence was produced by a neural system which tracks environmental affordances by representing object locations in a coordinate system based around body movements: e.g., the apple is such-and-such shoulder, elbow, wrist, and finger movements away. If subjective locative presence is produced by a different neural system tracking distal objects in a different set of egocentric or allocentric coordinates (e.g., the apple is up and to the right, or next to the bowl), then the proper functioning of the system producing subjective locative presence would not entail the proper functioning of the affordance-tracking system producing objective locative presence. It is less clear to us whether

[14] Given our argument, we will not discuss these criteria and take them for granted. For more details, see (Dokic & Martin, 2017; Riccardi, 2019).

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the converse conceptual possibility also holds, i.e., whether there can be objective locative presence without subjective locative presence. After all, conceptually, the affordance-tracking system would still represent spatial relations between the subject and things in the environment. We will leave this question, as our argument to follow only depends on the possibility of subjective locative presence without objective locative presence. However, one way objective locative presence might not yield subjective locative presence would be for the spatial representations produced by the affordance-tracking system to be unconscious, not yielding to the subject any awareness of the movement-encoded spatial locations of objects, only yielding to the subject the feeling the object can be acted on.

Beyond a mere conceptual possibility, two empirical cases suggest that subjective locative presence can be had without objective locative presence. First, in derealization cases, while subjects still perceive their environment as usual, they do not feel themselves as being in this environment any more. Sierra talks of:

> a sense of being cut-off, alienated from themselves and surroundings. For example, patients would often talk about being in a bubble, or being separated from the world by an invisible barrier such as a pane of glass, a fog or a veil (Schmidt, 1951). (2009, p. 24)

While a speculative interpretation, we believe this sounds like the experience of being located in a space (subjective locative presence) while "being cut-off" from possibilities of action (a lack of objective locative presence). Second, Barkasi (2021) argues that dreaming driven by body-twitch feedback often involves subjective locative presence without objective locative presence.

Our goal is to argue that subjective locative presence can be a feature of episodic remembering, and that its being so does not entail that objective locative presence is also a feature. To begin making that case, consider one mechanism for inducing subjective locative presence: self-projection. Subjective locative presence is *projectible*. For example, in out-of-body experiences, subjects feel themselves as occupying a position different from the actual position of their physical body. As Blanke et al. (2004, p. 243) observe, typically: "During an out-of-body experience (OBE), the experient seems to be awake and to see his body and the world from a location outside the physical body." This phenomenon suggests first that subjective locative presence can be detached from the actual location of the physical body of the subject and projected to another location within one and the same perceptual scene. There are reasons to think, however, that subjective presence is not only projectible within a perceptual scene, but also from such a scene to a merely quasi-perceptual scene. Quite naturally, examples offered by dreams or VR environments could come to mind first. But on reflection, such examples exhibit cases of *apparent perceptual* experience, that is cases whose sensory component is subjectively indistinguishable from genuine perception – for instance, Windt (2010, p. 304) categorises dreams as hallucinatory experiences, and it seems reasonable to characterise good VR environments as producing quasi-hallucinatory experiences

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– therefore apparent cases of subjective locative presence as one experiences it in perception – or even perceptual experiences.[15]

Now there are cases of self-projection towards scenes experienced as *quasi*-perceptual, that is states whose sensory component is similar to genuine perception but subjectively distinguishable from it, and are typically produced by perceptual imagination. Take the case of someone who is daydreaming of themselves climbing Kilimanjaro, a feat the person in question craves to achieve. We can suppose that the person closes their eyes and completely immerses themselves into the simulated scene, feeling fresh wind on their face, the sensation of cold on their hands, the difficulty of moving their legs in thick snow, etc. A natural way of describing such a state is to say that the person 'loses themselves' into the quasi-perceptual scene or 'is absorbed' into it. As McGinn notes, the apparently perceptual/quasi-perceptual difference notwithstanding, such episodes of immersion are very similar to the ones experienced by a dreamer:

> The dreamer becomes so absorbed in the dream story that his responses mimic what he would think and feel if really witnessing the events in question. This notion of absorption or immersion is familiar to us in more diluted forms, as in our response to fictional works of different types—theatrical productions, films, novels, and so on. (2004, p. 103)

If these remarks are on the right track, then immersion understood as subjective locative presence into a merely quasi-perceptual scene is a rather common phenomenon.[16] We want to suggest that it is common because self-projection is itself a common mechanism for inducing subjective locative presence. When you project yourself into a scene, whether in out-of-body or daydreaming experiences, you are not only representing a perspective on a scene, but also representing yourself as occupying that perspective. Of course, this does not mean that self-projection by itself could produce strong forms of immersion. But it can produce minimal ones, to which pretence and attention can apply to produce stronger ones.

It is understandable that this latter representation could induce the experience as of yourself being spatially related to the things in the scene. After all, part of what it is to represent yourself as occupying a perspective on a scene is to represent yourself as in certain sorts of spatial relationships to those objects. It is also plausible that this sort of perspectival representation would not induce objective locative presence. One can represent themselves as occupying a different perspective without taking the objects experienced from that perspective to be real. Further, ergonomic significance isn't implied either, as one could represent themselves as

[15] See Chalmers (2022).

[16] Echoing their suggestion addressed in footnote 12, a reviewer observes that there is a natural alternative here to our account. Instead of saying that a subject *feels present* in the imagined scene, one might say that the subject merely *imagines* being present in the scene. As we said earlier, there are empirical arguments to say that beyond merely imagining being present in the scene, one has the ability to feel present in an imagined scene.

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occupying a different perspective without taking it to be their actual present body that's occupying that perspective, and thus without implying that objects experienced from that perspective have ergonomic significance for one's present body. The person daydreaming their climbing of Kilimanjaro need not represent their actual body as wind-blown and cold; they can represent their hypothetical future body as wind-blown and cold.

Given that we can self-project into merely quasi-perceptual scenes, and remembered scenes are merely quasi-perceptual scenes, is self-projection a mechanism that ever operates in episodic memory? When you, for example, remember a beautiful landscape you saw last summer, can you, or do you ever, self-project into it in a way similar to the way someone having an out-of-body experience projects to a perspective that looks down on their body? We're not aware of anyone who has studied this question (empirically, or philosophically). However, we don't see why this should be impossible. If someone claims to find themselves sometimes spatially immersed in one of their memories, self-projection could be part of the explanation of what they are doing. When you remember a scene, you represent a perspective on that scene. Even if the normal case is for you to not represent yourself as occupying that perspective, it seems plausible that you can, in fact, do so.

On our diagnosis, the common view rejects locative presence in remembering because it considers exclusively the objective side of it. Objective perceptual phenomenology is too degraded in remembering for objective locative presence to occur, as we have just argued for.[17] However vivid a remembered scene is to one's mind, it can hardly be said to be conscious as objectively locatively present. But according to the common view, this would imply that no locative presence at all is relived in remembering, whereas (if we are right) there is still a subjective side of locative presence that can be so. Two notional points are in order before going further.

Firstly, the term 'immersion' has been used by different literatures (anthropology, aesthetics, psychology, philosophy of mind, and philosophy of arts) and it has been given different meanings,[18] with no clear and systematic definition so far. In particular, it has happened to be used to refer to what we have called objective

[17] One could object at this point that some of our memories are particularly vivid, and since vividness is a feature of the objects that appear in our memories, one might suggest that vividness provides objective locative presence. We resist this move, however, given that vividness refers to the intensity of phenomenal features different from mind independence and ergonomic significance, which are (to recall) necessary for objective locative presence. One could insist, then, that even if vividness is distinct from the features of mind independence and ergonomic significance, it is one of the factors that induce subjective locative presence. But arguably, we reply, one can feel transported to a past scene even if the scene is represented without any particular vividness. So, while we do not exclude vividness as a factor favouring immersion, it is not necessary.

[18] It should be added that there are various other terms referring more or less to what we call 'immersion'. See Harris (2000, pp. 48–49): 'absorption'; Schellenberg (2013): 'imaginative immersion'; Kampa (2018): 'imaginative transportation' and 'attentional displacement'; Walton (1990, p. 209): 'participation'.

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locative presence as well as to what we have called subjective locative presence, as in the literature on VR and AR environments. As far as this paper is concerned, 'immersion' refers to subjective locative presence, and covers cases in which this presence is non-projected as well as cases in which it is projected, whether to apparently perceptual scenes or to quasi-perceptual scenes.

Secondly, the immersive reading-of-a-novel case and the immersive daydreaming case differ markedly. Typically, while in the latter the subject feels themselves in the scene as one of its components occupying a particular perspective, there is no such thing in the former. Perhaps immersion can refer to both cases, and the processes we will appeal to can certainly account for both. However, given the goal of our paper, we will restrict 'immersion' to the latter case, with the former possibly referred to by 'absorption'. Similarly, Kampa (2018) distinguishes between 'imaginative immersion' (Schellenberg, 2013) and 'imaginative transportation', a notion that he borrows from Kaufman & Libby (2012), see also (Currie & Ravenscroft, 2002, p. 8). He takes imaginative transportation to be a close synonym of 'immersion' as we have specified it, since it involves the immersed subject putting themselves within a certain quasi-perceptual scene and taking the perspective thereof.

3 The role of imaginative pretence in immersion

In the previous section we speculated that self-projection can be a mechanism that sometimes induces subjective locative presence in episodic memory. In the present and the next sections, we discuss two mechanisms which would enrich immersion during self-projection. These mechanisms are invoked by existing approaches to explaining immersion in perceptually imagined (that is, quasi-perceptual) scenes independently from our own argument.

In this section, we consider the *attitudinal* approach, on which imaginative immersion is due to a certain imaginative attitude, *pretence*, under which a subject projects themselves into a quasi-perceptual scene. In the next section, we consider the *attentional* approach, on which imaginative immersion is due to attention. We will argue that the best candidate explanation of imaginative immersion combines these two approaches. Later we will show that both imaginative pretence and attentional focus underpin episodic remembering too.

Quite obviously, one can perceptually imagine being in a certain place while projecting oneself to that place. But while self-projection can confer some degree of immersiveness to the representation of the place in question, imaginative self-projection can occur *without* feeling immersed in any strong sense. Now, drawing on the examples introduced above, it is important to make it clear at this stage of our argument that there can be strong as well as weak cases of immersion into a quasi-perceptual scene, a variety that any satisfactory account should be able to accommodate therefore. Given that, perceptual imagination does not seem to be sufficient to get the variety of immersion. Something more is needed. Pretence offers itself as a plausible candidate. Arguably, as one feels being in a certain place that

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one is perceptually imagining, one imagines themselves *as if* they were actually there. While mere perceptual imagination is not sufficient, *imaginative pretence*[19] would be thanks to the as-if mode it contributes. For instance, as one produces a mental image of a scene while daydreaming where they crave to be, one would feel there by relating to the scene as if one was actually there. A natural way of fleshing out this attitude towards the scene is to say that imaginative pretence somehow involves *belief*. Let's adopt a minimal notion of belief on which to believe that *p* is to take *p* to be true (Schellenberg, 2013). On this notion, imaginatively pretending to be in a certain place is to imagine being there and taking this (namely: being in that place) to be true. The idea is then that this belief component is what in the imaginative pretence attitude secures the immersive character of an episode of perceptual imagining. About a child who is getting ever more immersed into a make-believe game, Schellenberg notes: "The subject's mental state may start having similarities to belief. […] The distinctive cognitive role of the relevant representation [for immersion] is to some extent belief-like and to some extent imagination-like." (2013, p. 509) According to her account, therefore, immersion consists of a state involving both the attitude of belief, which explains how one is conscious of standing in an imagined scene as true, and of imagination, which explains how one remains aware of the scene as non-actual.

However interesting, this proposal raises two issues that have to be addressed before going further. Firstly, one might wonder how exactly belief is involved in imaginative pretence. An unpromising option, certainly not endorsed by Schellenberg, is to say that *actually and fully* believing that one is in the perceptually imagined place is part of the immersive state. In effect, one would then be in a delusive state. This implies that one would undergo a representationally erroneous state, one could happen to not be aware of the erroneous character of one's state, and one would have poor control over changing that state. But this is obviously not the case as one is immersed. In an immersive episode of daydreaming, for instance, one is not in an erroneous state, simply because one does not intend to represent reality as it actually is. Moreover, one is perfectly aware that one's state does not represent reality as it is, which is shown by the fact that if one is withdrawn from one's daydreaming, one is not surprised that actual reality is what it is. This suggests that one has kept track of it all along. Finally, one can cease daydreaming at will (see Kampa, 2018; Liao & Doggett, 2014, for similar lines of thought).

Instead of appealing to actual and full belief, Schellenberg proposes to phrase the involvement of belief in imaginative immersion in terms of a functional similarity to belief, or a belief-like feature. She says: "In cases of imaginative immersion, the imagining subject has mental states that are *belief-like* in that the imagining subject *comes close* to taking the subject matter of her imagination to be true."

[19] As it has been argued for, imaginative pretence must be contrasted with behavioural pretence. On the behavioural sense, it is all too obvious that pretence does not imply immersion. Though a child can immerse themselves in their robber part, a spy can pretend to be an office worker without feeling being so (see Kampa, 2018). On imaginative pretence, see (Liao & Gendler, 2011).

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(2013, p. 509, emphasis added) According to Schellenberg, one's attitude towards a scene can fall on a continuum between pure belief and pure imagination, akin to how a colour can fall on a continuum between yellow and red. Yet, while the colour metaphor is compelling, we are unsure whether the more literal proposal that imaginative immersion involves *coming close* to, or *starting*, taking what's imaged to be true is correct, even if it is phrased in terms of a functional similarity between imaginative immersion and belief. As an example, Schellenberg (2013, p. 510) mentions actors, who "swiftly move up and down the continuum between imaginings and beliefs, that is, to swiftly slip in and out of character". However, it's unclear that even the deepest method actors are ever *close* to believing that they are their characters. An actor is, in some sense, no more prepared to believe they are their character when in character than when out of character – as noted above, being so would make them delusional. Overall, there is a needle to thread here: Talk of "coming close" to taking as true must be cashed out in a way that avoids the threat of delusion without watering the notion down so much that it no longer explains how this state leads to immersion.

While we acknowledge that there might be some way to thread this needle, there is an alternative proposal for how beliefs are involved in imaginative immersion which avoids these issues. This alternative appeals to *imaginative analogues of belief* ('imaginative beliefs', for short), and does the job smoothly (Currie & Ravenscroft, 2002; Fish, 2022). Imaginative beliefs are mental representations that are used *as if* they are true without actually being taken to be true. In effect, given the simulated character of imaginative beliefs (e.g., the imaginative belief, held while daydreaming, one is climbing Kilimanjaro), they hold within the imagined scene, while our ordinary beliefs (e.g., the belief one is lying lazily in one's bed while daydreaming) hold in the actual world (Chasid, 2017, p. 11). There is no contradiction here. Imaginative beliefs stand out as much more promising, therefore. Note that this falls nicely in line with a natural reading of the as-if mode characteristic of imaginative pretence, since considering something *as if it were true* suggests that no belief is held about the actual world. Instead of taking *as true* (Schellenberg) their being in an imagined scene, the subject takes it *as if it were true* (Kampa, 2018, p. 2). Imaginative pretence involves imaginative beliefs, therefore, not real beliefs.

The first issue raised by the attitudinal approach was the type of belief involved in imaginative pretence. The second is that it seems that one can perceptually imagine themselves being in a quasi-perceptual scene and take this as if it were true *without* feeling strongly immersed into that scene in a strong sense. Arguably, imaginative pretence is still not sufficient either to get the whole variety of immersion (Liao & Doggett, 2014, p. 7, and fn 14; Kampa, 2018, p. 10). Take the example in which in order to organise a party, one wants to anticipate the party. For that, one perceptually imagines being in the place where the party will occur, imagines that the invited people are there, and tries to figure out whether there will be enough space. In such a case, in order to anticipate the event efficiently, one

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can pretend that one is in the place in question. But obviously, one need not be absorbed or lose themselves strongly in the imagined scene as we are, and do, in some of our immersive imaginings. For instance, one can remain perfectly aware of the fact that one is currently organising a party and carrying out an act of mental self-projection under pretence for that. A clear way of making the same point is to say that taking-as-if-it-were-true can consist merely in *supposing* that something is the case. In our example, as they are perceptually imagining the party, the subject can merely suppose that they are in the place during the party through perceptual imagining. Therefore, though pretence can provide us with stronger immersion than mere self-projection, there is still a difficulty from insufficiency for an account based on imaginative pretence.

In reply to this objection, all the party-planning case shows is that *not all* imaginative pretence results in strong immersion. Specifically, imaginative pretence can induce relatively strong immersion, plausibly, when it is directed towards spatial beliefs. For example, if you imagine the spatial layout of the party room and use that spatial representation as if it were a representation of your environment, in that case your imaginative pretence would go beyond mere supposition. In your imagination, as an act of pretence, you might "put" yourself in the room, updating your mental image in your mind's eye as you "look" around the room. In this case, it is plausible you would feel strongly immersed in the imagined scene. The key to immersion, then, is *using* a spatial representation under the attitude of pretence. Note also that treating a spatial representation as if it is a representation of your environment would seem to be equivalent to taking yourself to occupy the perspective encoded into that spatial representation. Hence, this employment of imaginative pretence would produce one form of self-projection, perhaps a form inducing rich immersion.

Against this suggestion, it might be objected that, even when pretence is employed to use an imagined spatial representation as a representation of your environment, you still have overriding perceptual representations. Even as one tries to "place themselves" in an imagined scene and take this scene as if it were one's actual environment, the perceptual scene revealed by their senses intrudes into consciousness, breaking any potential strong immersion into the imagined scene. We certainly agree that co-present perceptual representations can weaken the sense of immersion induced by pretence-mediated self-projection as characterised. Moreover, pretending to be in a quasi-perceptual imagined scene can be done while one is fully aware of carrying out an act of pretence, and this weakens the sense of immersion likewise. However, there is a second mechanism, attentional focus, which can be employed in imagination and which mitigates the extent to which co-present perceptual representations and awareness of the pretence attitude at play weaken immersion. We will discuss attention next.

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4 The role of attentional focus in immersion

The previous section ended by raising the issue of whether one can feel strongly immersed into an imagined scene merely via pretence, i.e., merely by treating the imagined space as if it is one's environment. We suggested that pretence suffices for, at minimum, a weak subjective locative presence. However, we have considered only *attitudinal* accounts of immersion so far. As some authors have argued (Kampa, 2018; Liao, 2017; Liao & Doggett, 2014), there may be other mechanisms generating immersion in imagination. On their view, immersion is due to the *attentional focus* on the imagined scene, and the consequent screening-off of any other things (e.g., the imaginative attitude through which the subject relates to it, their perceptual environment, etc.). In this section, we argue that a satisfactory account of immersion must give a role to attention. More precisely, we argue that attention to the space of an imagined scene, at the expense of attention to the space of one's perceptual scene and of the imaginative attitude, can work, either by itself or in conjunction with pretence, to induce a strong subjective locative presence.

By attention, we will refer to the cognitive capacity to select some conscious information, like a spotlight directed at the latter (see Liao, 2017), a process which renders this information more phenomenologically salient and more functionally accessible, either in a voluntary (top-down attention) or an involuntary (bottom-up attention) way (Cabeza et al., 2008). This selection process goes hand in hand with the filtering-out and screening-off of information, which can be explained in terms of the limited neurocognitive resources of a subject, of the degree of relevance of attended information, or of the competition between pieces of information.[20] To summarise, attention selects information, which renders it phenomenologically salient and functionally accessible, and thereby screens off other, possibly irrelevant, information.

Importantly, attention is not only a cognitive achievement directed at the external world. Attention is also directed at *internal* mental targets, namely internally generated information (Chun & Johnson, 2011; De Brigard, 2012). Consider again the example of the subject who is daydreaming that they are climbing Kilimanjaro. They can pay more or less attention to some specific part of their daydreaming. In particular, their attention can dynamically modify its focus, a possibility particularly relevant to our argument. As they start, the subject probably is fully aware of their perceptual environment together with the fact that they are daydreaming. But little by little, they may screen off the imaginative attitude itself as well as their perceptual environment by focusing their attention on the daydreamed climbing. The fact that they are imagining "falls out" of consciousness as the content of their imagining grabs more of their attention. However, screening off the imaginative attitude does not mean to cancel it out, quite the contrary. Someone engaged in a pretence game is all the more immersed in it that their attention leaves at the

[20] We will remain as neutral as possible with regard to the existing concurrent theories of attention. For a useful review, see (Mole, 2017).

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periphery that they are only pretending and focuses on the content of the game. In other words, screening off the attitude of pretending as such does not imply removing or deactivating the way a content appears to the pretending subject due to their attitude. In brief, the attitude can still be operating while it is dimly conscious.

Arguably, this attentional shift plays a crucial role in immersion, even on its own, apart from pretence.[21] For example, if attention is fully focused on an imagined scene to the point that the scene delivered by perception falls out of consciousness, then we would expect relatively strong immersion into the imagined scene with or without an explicit attitude of pretence.[22] Without the perceptual scene in attentional view, it might naturally happen that one represents themselves as occupying the perspective of an imagined scene – and this could happen whether or not the person sets out, in attitude, to treat the space of the imagined scene as their environment. However, if one does in pretence take an imagined space as their space, while also focusing attention on the imagined space to the point of excluding perceptual space, then we would expect a particularly strong subjective locative presence to emerge.

So, the proposal is that strong forms of immersion require that attention focuses on the imagined scene, at the expense of the perceptual scene and of the attitude through which the subject relates to this scene. Regarding specifically the grades of immersion, the proposal is that the more focused attention is on an imagined scene, the more immersed the imagining subject feels in it.[23] The more a subject has an imagined space in attention at the expense of their perceptual space and their possible imaginative attitude, the more they immerse into it.

Note that our proposal does not squarely align with existing attentional accounts considered in this section, which are often exclusively attention-based. For instance, Liao has is that "immersion is a shift of attention", period (2017, p. 2). Given what we have said about self-projection and pretence, we prefer a middle-way between attitudinal and attentional approaches, that makes room for these

[21] As Liao & Doggett (2014) put it, a shift in attitude is not sufficient to get immersion, *pace* Schellenberg. Attention must also carry out a shift in content, going from a content that includes the attitude of imaginatively pretending to a content restricted to what is imagined. While her account appeals officially to a shift in attitude, even Schellenberg (2013, p. 507, our emphasis) notes: "The most relevant characteristic of imaginative immersion is that the subject *does not consciously think about the fact that she is imagining*. She is immersed in fiction."

[22] At this point, the reader might wonder whether attention and pretence simply add up to get strong immersion or whether they complement each other. They might also wonder whether each of attention and pretence is as efficient a mechanism as the other to get immersion. However interesting and important, we have to leave these questions for another paper.

[23] One might react that internal attention focused on the imagined scene is attention focused on the quasi-perceived *objects* of the scene (e.g., the mountains, the path in the snow), not on the perceiving subject. Accordingly, one could wonder why attentional focus could underpin immersion understood as a *subject*'s feeling of being in the scene. We reply that attention is not always objectifying. For instance, focusing one's attention on a certain part of one's body consists in feeling that part, not in perceiving it as an object we perceive through vision. In this regard, the spotlight metaphor can be misleading, since it suggests that attention is necessarily objectifying.

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three components and that we call 'immersivism'. Also note that the mere fact of focusing one's attention on something (e.g., a math problem), and being absorbed by it, is not sufficient to get one to feel 'immersed' as we have defined this term, since this does not secure the fact that there is a place where one feels being. To get immersion as the experience of feeling at a certain place, we need first a mental scene into which to self-project.

5 Objection: The necessity of sensorimotor coupling?

Many researchers who work on presence do so in the context of artificial VR and AR environments. Developers of VR and AR equipment and software aim to give users an experience that involves presence, more specifically, what we call 'immersion' (Grassini & Laumann, 2020).[24] These developers study the factors that contribute to feeling as if you're really there in a virtual environment. While they don't often distinguish between what we're calling objective and subjective locative presence (Barkasi, 2021, p. 2546), the primary factor they identify is sensorimotor coupling (e.g., Sanchez-Vives & Slater, 2005). Specifically, the idea is that getting a user to feel present in a virtual environment requires that the stimulation from the artificial display correlates with body movement. So, for example, the image displayed in a VR headset should change as expected as the user turns their head. The necessary coupling is fairly precise. For example, it is well-known in the industry that more than 30ms of latency between motion and feedback can ruin the feeling of presence.

The idea that feeling present in an environment requires coupling between body motion and feedback from that environment has a long history, going back to Minsky's early work on "telepresence" (Minsky, 1980) and Evans' discussion of the concept (Evans, 1982, pp. 158–176). While this work focuses on presence in perceptual experiences and in experiences of virtual environments presented through sensory displays (like headsets), one might suggest that it still has implications for presence more broadly. Work in VR shows convincingly that presence in a virtual environment requires coupling between body motion and the sensory input from the display. Plausibly, the natural coupling between sensory input and body motion during normal perception is a key reason one feels present in their perceptual scene. Can we infer further, inferring that sensorimotor coupling is always necessary for presence?

If so, this idea wouldn't be too hard to translate into the case of imagination. The idea would be that feeling present in an imagined scene requires that the imagined scene change in predictable ways with body movement, e.g., that head turns correlate with the appropriate change in imagined scene. According to this sensorimotor coupling proposal, presence is not the result of self-projection or the

[24] In the VR and AR literature, the term 'immersion' is often used to describe the physical immersion of a user in sensory stimuli from visual displays, headphones, haptic vibrators, etc. (e.g., Grassini & Laumann, 2020; Sanchez-Vives & Slater, 2005).

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mechanisms that induce it. It is the result of sensorimotor coupling, or some appropriate analogue like image-motor coupling. A proponent of this objection would push that, at best, we would need to show that something like image-motor coupling is possible in episodic remembering, and, at worst, image-motor coupling is impossible in episodic remembering. Either way, this proposal has it that we have been on the wrong track this entire paper.

In response to this objection, we want to say two things. Firstly, it has been argued by some researchers that mental simulations in episodic memories are sensorimotor in nature (Dijkstra & Post, 2015; Dijkstra & Zwaan, 2014). If at least some episodic memories are rich enough to include reconstructions of the original sensorimotor components, perhaps sensorimotor or image-motor coupling can take place sometimes as well. Secondly, we don't believe sensorimotor coupling is actually required for presence. Due to space constraints, we will set aside the first response, and elaborate on the second.

Recall that we are focused on a specific type of presence: subjective locative presence, or immersion. It is plausible that certain kinds of presence do require sensorimotor coupling. For example, Matthen (2005) has argued that objective locative presence in vision, specifically the feeling of ergonomic significance, results from the vision-for-action system and the way it tracks distal objects. Presumably coupling between visual input and head motion is required for successful tracking. However, subjective locative presence is different. It only requires the experience as of being spatially related to the things in an environment. The question becomes: what are the relata? Clearly the objects in the environment are one side. The other side could be an embodied person, but need not be. For example, when you dream, you feel immersed in the dream scene, and you can feel immersed in it even if, in the dream, you are a mere point in space lacking a body. Perspectives are often things had by embodied agents, but they can be more abstract, thinner.

This is, we think, what often happens in self-projection into quasi-perceptual environments. When you represent yourself as occupying the perspective on an imagined scene, for example, you need not represent your current body as occupying that perspective. Representing your body as occupying that perspective plausibly would involve, or require, image-motor coupling. However, image-motor coupling isn't obviously necessary if you are representing yourself as a bodiless point occupying the perspective, or representing some past or future version of your body as occupying the perspective.

Consequently, we propose that subjective locative presence splits into two forms: *embodied* and *self-projected*. In embodied subjective locative presence, one experiences their current body as being spatially related to the objects in a scene. In self-projected subjective locative presence, though one's body is not experienced as standing in the scene towards which one self-projects, one experiences themselves as being spatially related to the objects in a scene. We think that self-projected subjective locative presence is the more common variety in imagination, and that it is often induced, as we argued above, by pretence and attentional focus.

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VR and AR developers, of course, are interested in inducing embodied subjective locative presence (among other forms of presence) in users. While the embodied version of immersion requires sensorimotor coupling or some analogue, the self-projected version does not and appeals to other mechanisms.

6 Applying immersivism to episodic remembering

Building on our argument for immersivism developed in sections 2–5, the present section argues for the application of immersivism to episodic remembering – 'mnemonic immersivism' – thus, for the potential inclusion of subjective locative presence into episodic remembering. It does so by providing reasons to think that self-projection, along with imaginative pretence and attentional focus, the processes that have been found to underpin imaginative immersion, are also key processes to the experience of episodically remembering.

We start by noting that from a mere descriptive point of view, a wide range of cases of episodic remembering suggest themselves as being immersive. Some extreme pathological cases of radical mnemonic immersion are offered by PTSD cases. In such cases, subjects report the delusion of actually standing again in the traumatic scene (Brewin & Holmes, 2003). Of course, due to their hallucinatory nature, extreme PTSD cases are apparently perceptual cases, and as such, they differ from immersion into quasi-perceptual scenes. However, they exhibit an interesting parallel with cases of imaginative pretence in which so-called quarantining collapses (Gendler, 2011; Nichols & Stich, 2003). Quarantining refers to the fact that subjects who are pretending succeed nonetheless in keeping the pretended world separate from the actual world. But sometimes the boundary gets fuzzy and confusion occurs. For instance, a child engaged in a game who pretends that a tree is a bear may get really scared by the tree instead of merely pretending to be so. Likewise, in extreme PTSD, what in remembering is normally relived as something past is relived as the actual perceived reality. A possibility is that such cases are radically immersive due to the collapse of the quarantining, a usual feature of imaginative pretence. This fits with our suggestion that imaginative immersion is, in part, a function of the extent to which an imagined space replaces the perceptual scene in consciousness. Milder pathological cases of mnemic immersion are offered by the temporal lobe epilepsy condition, as the case of Franco Magni, the Italian painter who was haunted by very vivid memories of his childhood village (Sacks, 2009, pp. 156–162). As Sacks describes this case, Magni was "transported to a time in the past" in such a strong way – "he is, in a sense, there", he is "living in the past", notes Sacks – that he suffered from doubling of consciousness and "no longer knows where he is". Due to temporal lobe epilepsy, constant and intense immersion results in a competition of feeling back there in the remembered scene with feeling here in one's actual perceptual environment.

Such description is also appealing for more mundane and non-pathological cases, about which Sutton notes:

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> memory often takes us *out* of the current situation: in remembering episodes or experiences in my personal past, for example, I am mentally transported *away* from the social and physical setting in which I am currently embedded. (2009, p. 217)

Flashbulb memories, for instance, are characterised by a particularly intense phenomenology of reliving a striking event experienced in the past with "an almost perceptual clarity" (Brown & Kulik, 1977, p. 73). Some of our cherished memories into which we like to lose ourselves just for pleasure offer a similar case. With them, we can feel transported to a past scene and stand within it again.

In summary, though with various degrees, there are many cases of remembering that suggest describing them as cases of immersion. Of course, one could resist such a description and propose an alternative characterization. But we reason that if, additionally, the processes we have found to underpin imaginative immersion turn out to be also key to the experience of episodic remembering, we will have a good case for preferring the description in terms of immersion and saying that episodic remembering can be and sometimes actually is immersive. As a matter of fact, independently from the question of this paper, researchers from different areas have pointed out the involvement of self-projection under imaginative pretence and attentional focus in the experience of episodically remembering.

Taking *self-projection* on its own, there has been growing evidence over the past two decades that one and the same neurocognitive episodic memory system is used to project oneself towards past (episodic remembering) and future (episodic future thought) personal perspectives and reoccupy them. In particular, Buckner and Carroll (2007, p. 49, our emphasis) characterise this "ability to shift perspective from the immediate present to alternative perspectives as *self-projection*."[25] On a more philosophical side, some have pointed out that the development of the capacity to episodically remember requires the acquisition of the capacity to decentre from one's current perspective to a past personal one, i.e., to self-project towards the past and re-occupy the then perspective. According to McCormack and Hoerl (1999, pp. 173–174), there is a tight developmental link between a "kind of temporal understanding" and a "kind of self-conscious activity", with the representation of time as a unilinear series of particular times that offer different temporal perspectives being dependent on a certain conception of oneself as extended in time (see also Campbell, 1997). This representation of time is thus tightly linked to the capacity of decentring, i.e. projecting oneself, towards alternative past personal perspectives, with the capacity of episodically remembering emerging at relatively the

[25] It has been argued (Hassabis & Maguire, 2007) that the shared neurocognitive system in question also includes the capacity to construct scenes unrelated to the self or the subjective sense of time, with scene construction being the main function of the system in question. Even if one endorses this alternative view, it remains that self-projection is due to the episodic memory system, which is what matters here.

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same age as when this representation of time develops.[26] If this is correct, episodic remembering requires the capacity to mentally simulate oneself as occupying a past personal perspective.[27] Now this is precisely a process that we have identified as inducing immersion, with our best candidate explanation accounting for immersion by appealing to projection towards, and the taking of, a past personal perspective (Kampa, 2018; Kaufman & Libby, 2012).

Let's turn to the *attitude of imaginative pretence*. Several researchers have pointed out that self-projection or decentring towards a past perspective can have strong forms in which the remembered scene is conscious *as if* the remembering subject occupied their past perspective again. Campbell (2002, p. 186) develops a semantic argument on which, to understand memory demonstratives, for instance in a memory report like "This (perceived) man was drenched.", one needs to carry out a 'deep decentring' operation. Deep decentring consists of a two-stage process. At the first stage, one adopts "the hypothesis, or the supposition, or the pretence, that" one occupies a past perspective towards which one has self-projected, and at the second stage one simulates the use of the sentence – e.g., "That (perceived) man is drenched." – whose understanding conditions the understanding of the memory report – e.g., "This (perceived) man was drenched." (Campbell, 2002, p. 186) If this is correct, projecting oneself towards a past perspective under the attitude of imaginative pretence is thus at least sometimes at play in remembering.

Some reservations notwithstanding, De Brigard quotes approvingly Campbell's claim that pretence plays a role in remembering (De Brigard, 2018, pp. 208–209). On his own specific account, one should distinguish between the 'intentional content', that is what is immediately present to the rememberer's mind (e.g., the image of a perceptual scene as a present psychological content), and the 'intentional object', that is what the rememberer is conscious of by means of the intentional content (e.g., a past scene the rememberer has perceptually experienced). According to De Brigard, remembering the intentional object relies on the process of considering the intentional content as if it were the intentional object, a process he calls 'deferred mental ostension' (2018, p. 211). If this is right, this gives support to the claim that imaginative pretence is a key process to remembering, since it provides the link from the current psychological state to the past remembered scene.

Probably due to their respective background ontology of episodic memory, Campbell's account and De Brigard's account differ from each other, obviously. On Campbell's account, imaginative pretence characterises only one way of episodically remembering, which can occur without such an attitude. On De Brigard's account, imaginative pretence is necessary for the link to a past scene to be es-

[26] Interestingly, the same capacity to decentre toward an alternative non-actual perspective has also been noted by philosophers of imagination (Currie & Ravenscroft, 2002, p. 27).

[27] Fleshing out what a subjective vantage point or perspective is in an episodic memory would require additional work, in particular because many memories have not a field but instead an observer perspective (McCarroll, 2018). Further related complications are due to the fact that the self involved in a mental scene comprises several components, see (Lin, 2018, 2020). Elaborating immersivism further will require addressing these complications.

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tablished in remembering. We need not settle the ontological debate, though, and we note minimally that imaginative pretence is recognized as playing a role in the experience of being transported to the past that is characteristic of episodic remembering. This, again, is something that we have identified as required by immersion, with our best candidate explanation accounting for immersion by appealing to the attitude of imaginative pretence (Liao & Gendler, 2011).

What about *attention*? While much has been said about the role of external attention in working memory and memory encoding, there is little philosophical literature on the role of internal attention in episodic retrieval and the experience of episodically remembering. An interesting exception is De Brigard (2012, 2018). Drawing on rich recent empirical evidence – in particular, detrimental effects on conscious episodic retrieval in divided attention tasks (Fernandes & Moscovitch, 2000; Skinner & Fernandes, 2008) and from impairment of parietal regions (Berryhill et al., 2007), a cortical region reputed to underpin attention in a privileged way – he has made the case forcefully for saying that internal attention is a necessary condition for conscious episodic remembering. According to him: "internal attention is also a necessary mechanism by means of which we become conscious of successfully retrieved memories." (De Brigard, 2012, p. 6) Specifically, De Brigard appeals to the Global Neuronal Workspace (GNW) hypothesis developed by Dehaene and others, and proposes that the parietal cortex gates to consciousness locally processed information during retrieval, in particular stored information processed in the neocortex, by broadcasting it onto the global neuronal workspace, an operation necessary for information to become conscious according to the GNW hypothesis. As De Brigard notes: "it is now well accepted that the parietal cortex is involved in memory retrieval", which suggests that "internal attention permits the broadcasting of locally processed memory representations onto consciousness [along the GNW hypothesis]." (2012, p. 6) Specifically, the experience of episodically remembering would strongly depend on internal attention and the parietal cortex, with De Brigard (2012, p. 7) noting that "parietal lesions give further support to the claim that internal attention gates memories into consciousness", with "a diminished sense of 're-experience' or 'autonoetic consciousness' in patients whose parietal lesions hinder such broadcasting." (see also De Brigard, 2018, pp. 204–206)

Assuming De Brigard is right, his account provides support to mnemonic immersivism, we submit, and some further comments will help establish it. Firstly, and most importantly, De Brigard provides an empirically-grounded argument to say that *the reliving feature of episodic remembering* strongly depends on the fact that internal attention is directed at the remembered scene.[28] This suggests that attention plays a core role in the rememberer's experience of occupying their past perspective again within this past scene, just as claimed by immersivism. But, secondly, De Brigard also claims that while internal attention is necessary for conscious episodic retrieval, it is *not sufficient*, to the effect that for episodic remem-

[28] See also (Servais et al., 2023; Tarder-Stoll et al., 2020) about the attentional switch from the external to the internal mental world that is required by episodic remembering.

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bering to occur, it is also necessary that memorial contents be reinstated. In other words, while internal attention renders the retrieved content conscious, it does not retrieve it. This falls nicely in line with the immersivist claim that for attention to contribute to immersion, it is necessary that a certain representation of oneself as occupying an experiential perspective in a quasi-perceptual scene (self-projection) occurs in the first place. Thirdly, referring to Chun and Johnson (2011), De Brigard insists on *the selective character* of attention in episodic remembering, a key feature of attention according to immersivism. Along similar lines, Campbell says that deep decentring is just one way of remembering, which he contrasts with remembering through 'surface decentring'. In cases of deep decentring vs cases of surface decentring, the fact that the remembered scene is conscious through an act of remembering is screened off, which suggests that attention is then focused on what was perceived as if it were perceived again, instead of being (also) focused on the attitude of remembering and the operation of decentring. This selectiveness can thus explain the shift in content, due to the direction of attentional focus and the subsequent screening-off of some components of remembering and perceptual input.

Drawing on these convergent analyses on the underpinning of episodic remembering by the processes that underpin imaginative immersion, we conclude that the cases mentioned at the beginning of this section illustrate plausibly the potential immersive character of episodic remembering, to the effect that one can reoccupy a past perceptual perspective with a strong degree of subjective locative presence, a feature of perceptual experience that episodic remembering can therefore make us relive.

7 Three consequences of immersivism

If mnemonic immersivism is on the right track, then three important consequences ensue, which we present in this section.

A first significant consequence is that immersivism puts us in the position *to meet the objection against presence in remembering raised by the common view*. To recall, on the no-presence-reliving option endorsed by the common view, the experience of remembering would exclude both temporal and locative presence of what is remembered. For instance, precisely against views that accept that a past scene can be made present in remembering by means of an act of imaginative pretence, Soteriou objects that such views are bound to consider that "the sensory aspects of episodic recollection [...] concern the present" and to "represent the past event as concurrent with the episode of recollection." (2018, pp. 296–298) According to Soteriou, remembered scenes must instead be described as appearing to us as past and absent. This echoes other criticisms of an allegedly too literal use of the mental time travel metaphor.

To this line of thought, we reply firstly that under the attitude of imaginative pretence, a remembered scene is not conscious as an actual perceived scene but *as if*

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it were an actually perceived scene. Moreover, for locative presence to be involved in remembering, it is not necessary that objective locative presence be so; it suffices that only subjective presence be so. Last, while due to its selectiveness attention can focus on the remembered scene to the exclusion of the perceived scene and possibly the attitude of pretence, thereby contributing to the feeling of being there again, it does so in degrees. Accordingly, while in extreme pathological cases there can be confusion, mundane cases degrees are lower and no confusion results. For all these reasons, feeling present again in a scene we experienced in the past does not imply a confusion or a concurrence of the past and the present. Therefore, we have arguments not only to contest the common view, as we said in the previous sections, but also to resist its main objection.

A second significant consequence is about *the relationships between memory and imagination*. Let's set the debate briefly. Borrowing from Van Leeuwen (2013), Langland-Hassan (2021, 2022) distinguishes between different senses of imagining, namely the imagistic, attitudinal and constructive senses. He aims to determine which of these senses is the one at issue in the debate between continuists and discontinuists in the philosophy of memory. This debate asks whether remembering and imagining are of the same kind (continuism) or not (discontinuism). On Langland-Hassan's diagnosis, there are two senses about which continuists and discontinuists agree. About imagistic imagining, they all agree that both imagining and episodic remembering involve mental imagery. About attitudinal imagining, they all agree that remembering and imagining are different. Regarding the latter in particular, he notes:

> both continuists and discontinuists will, without any arm-twisting, allow that episodic rememberings are not attitudinal imaginings, and thus not continuous with other states (such as episodic future thoughts and episodic counterfactual thoughts) in virtue of being attitudinal imaginings. (2021, pp. 6–7)

On his specific argument, while the attitude of remembering implies the aim of representing the actual world, namely as it was, the attitude of imagining has no similar commitments. So, if Langland-Hassan is right (and we think he is), most people reject the proposal that episodic remembering as an attitude is identical to, or even overlaps with attitudinal imagining.

Our previous analysis suggests challenging this in-the-majority claim since we have established that a certain type of attitudinal imagining, namely imaginative pretence, can play a key role in the phenomenology of episodic remembering. However, if continuists, discontinuists and Langland-Hassan are right, there is an issue for our analysis. To address this issue, we do not deny that the attitude of remembering is different from the attitude of imagining. Instead, we claim that within the phenomenology of remembering, the attitude of imaginative pretence can play a significant role. Let us explain. We note firstly that there are mental states in which *several* attitudes are at play. The case of belief under pretence that

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we have considered above is a case in point. But we also propose that when several attitudes are involved in one state, they are hierarchically ordered. In the same example of belief under pretence, pretence is the main attitude and belief falls under its scope. We propose to distinguish between the functional notions of *leading* and *non-leading* attitudes. For instance, one can dream that one believes, as in ordinary dreams, but one can also believe that one dreams, as in lucid dreams. In a sense, the attitudes of dreaming and believing are incompatible, insofar as it is unlikely that one can at the same time dream and believe something while giving the same role to each of these attitudes. However, provided there is a hierarchy between them, they can contribute to one and the same mental state without inconsistency, with each attitude occupying different positions within the functional hierarchy. Likewise, and more to the point, imaginatively pretending can be ancillary to episodically remembering and play a role for its phenomenology. One can imaginatively pretend to be in a past remembered scene while remembering it. In such a case, imaginatively pretending is not the leading attitude, remembering is. And provided that they have this hierarchical relationship, they are compatible. So, a state of episodically remembering can have remembering as its leading attitude, while imagining is an ancillary attitude playing a role in the phenomenology of remembering.[29]

A third significant pair of consequences is about *the phenomenology of episodic remembering*. On the one hand, if immersivism is correct, the phenomenology of episodic remembering turns out to be richer than usually admitted. According to some recent views of the phenomenology of episodic remembering (Dokic, 2014; Fernández, 2019; Perrin et al., 2020; Perrin & Sant'Anna, 2022), it is comprised of two levels: the first-order level of the phenomenality of the remembered perceptual scene (e.g., the spatial layout, the experiential perspective, the shapes and colours of the components of the scene) and the second-order level of feelings (e.g., the feeling of pastness or the feeling of ownership with which the scene is remembered). Now if mnemonic immersivism is right, then we must make room for a third level. It consists of *the more or less immersive way* in which the first-order level is undergone. More specifically, on the one hand, it is distinct from the second-order feeling of pastness, since it is an encoding-linked feature, not a retrieval-linked feature. Note however that immersion in remembering is an immersion into *the past* because of the feeling of pastness, which fixes the target of the immersion, as it were. On the other hand, despite both being encoding-linked features, it is distinct from the first-order level phenomenality because it is about the way the remembering subject relates to the remembered scene instead of being about how the components of the scene appear to the remembering subject. Intu-

[29] Note that this involvement of imagination brings no support to simulationism, i.e., it is compatible with the idea of some memory trace, since it is just about phenomenology. Also note that our proposal has some similarity with Arcangeli and Dokic (2018), who give a role to imagination in the phenomenology of remembering and claim that the latter can be immersive. There are also important differences between their and our accounts, but for reasons of space, we have to leave this point aside.

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itively enough, for instance, a remembered scene can appear in a very detailed and vivid way from the imagistic point of view, while the remembering subject does not feel themselves occupying a perspective in the scene. And inversely, a subject can feel there again in a remembered scene while the latter appears in a dim and blurry way. If this is correct, remembering immersively is, therefore, a distinct phenomenological feature, and our paper makes a significant contribution to the related debate.

On the other hand, immersivism suggests a reassessment of the status given to phenomenology amongst the success conditions of episodic memory. Let us explain. To be successful, a mental state must possess certain features. These are the state's normative features, also called success conditions. So far, the literature has explored only two types of normative features or success conditions for episodic memory. The first are *genuineness* conditions. These take the form of criteria that a mental state has to satisfy to qualify as a genuine episodic memory. For instance, the ongoing debate in the philosophy of memory about the necessity (or not) of an appropriate causal connection between a state of remembering and the remembered event is a case in point as it comes to a genuineness condition. Another example of a genuineness condition is the idea that for a mental state to qualify as an episodic memory, it has to be experienced as representing the personal past (Debus, 2010). The second type of success conditions are *accuracy* conditions. These take the form of criteria that a mental state has to satisfy to accurately represent the past. For instance, the ongoing debate as to whether an episodic memory has to be accurate not only about the remembered past event but also about the experience of this event is a case in point as it comes to an accuracy condition. Another example of an accuracy condition is the idea that for an episodic memory to be wholly accurate, not only its imagistic content (first-order phenomenality), but also the feeling of pastness relative to its source (second-order phenomenological feature) have to be accurate (Michaelian, 2021).

However, immersivism suggests that, in addition to genuineness and accuracy conditions, there are phenomenological features which must be had in order for an episodic memory to be successful. What we would like to suggest here is that the *phenomenology of reliving* provided by the immersive way of remembering the personal past is yet another distinct potential success condition, which is irreducible to genuineness or accuracy conditions. Let us first motivate the *normative* character of the phenomenology of reliving. As one is episodically remembering, one often *expects* that one will succeed not only in (1) being conscious of a causally-linked remembered scene as belonging in one's personal past (genuineness conditions)[30] and (2) accurately representing in consciousness what happened in that scene and its past temporal location (accuracy conditions), but also (3) reliving the past experienced scene. Undergoing the state of remembering in the way of reliving the remembered event is then a requirement set to this state. It is a norm the state is expected to satisfy for it to be successful. This normative status can be motivated,

[30] Assuming causalism on genuineness conditions.

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for instance, by the subject's aim to understand why they have felt the emotions they have felt in the past and behaved accordingly – epistemic motivation – or by the affective link they entertain with certain parts of their personal past – affective motivation.

Is this third success condition really distinct from the first two? As we have just suggested, an episodic memory can be accompanied by the feeling of pastness, for instance, and be accurate with respect to the event it represents, while the remembering subject feels at a distance from what is remembered. For instance, memories of remote episodes of our life can be so. In such cases, while the genuineness and the accuracy success conditions are satisfied, the memory is not wholly successful, and this is due to the fact that one fails to relive, or: feel present in, the remembered scene. The possibility of such cases suggests that the reliving feature is a distinct normative feature or success condition of episodic memory. If this is correct, then we should make room for a distinct reliving phenomenological success condition and say that our episodic memories can be *phenomenologically (un)successful* depending on the degree of immersion that characterises them. We offer this as a final suggestion.

8 Conclusion

In this paper, against a common view in the philosophy of memory, we have argued for a closer resemblance between experiences of perceptual scenes and their episodic memory. Specifically, we have argued that the subjective locative presence that is characteristic of perceptual experiences can be relived in episodic memories. According to our proposed view, mnemonic immersivism, remembering subjects can immerse themselves into the past perceptual scenes they remember, and as far as the mental time travel metaphor intends to capture this phenomenological feature, it must be deemed as descriptively more adequate than usually admitted by philosophers of memory. Our specific argument has been that the processes that underpin imaginative immersion – self-projection, imaginative pretence, and attentional focus – also underpin episodic remembering.

If our view is on the right track, some significant consequences ensue. The common view objection from incompatibility between presence and the feature of absence characteristic of the remembered scene does not go through, since due to the selective focus of attention, presence and absence can co-exist with inverse importance. Moreover, and of prominent importance is the fact that, contrary to what most people hold in the (dis)continuism debate, attitudinal imagining can be involved in remembering, namely as a constitutive mechanism of its phenomenology. Lastly, another pair of consequences ensue about the phenomenology of episodic remembering. In our view, the potential immersive character of remembering suggests making room for a further level of phenomenological features, subjective locative presence, which must sometimes be had in order for remembering to be successful.

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