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# The Heterogeneity of Experiential Imagination

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Imagination is very often associated with the experienceable. Imagination is said to “re-create” conscious experiences. For instance, philosophers often talk of vision-like or audition-like imagination. How many varieties of experiential imagination are there, and how are they related? In this paper, we offer a detailed taxonomy of imaginative phenomena, based on both conceptual analysis and phenomenology, which contributes to answering these questions. First, we shall spell out the notion of experiential imagination as the imaginative capacity to re-create experiential perspectives. Second, we suggest that the domain of experiential imagination divides into objective and subjective imagination. In our interpretation, objective imagination comprises both sensory and cognitive imagination. In contrast, subjective imagination re-creates non-imaginative internal experiences of one’s own mind, including proprioception, agentive experience, feeling pain, and perhaps internal ways of gaining information about other types of mental states, such as sensory experience and belief. We show how our interpretation of the notion of subjective imagination differs from Zeno Vendler’s, who relies on an orthogonal distinction between two ways in which the self is involved in our imaginings. Finally, we show the relevance of our taxonomy for several important philosophical and scientific applications of the notion of imagination, including modal epistemology, cognitive resonance, mindreading and imaginative identification.

## Keywords

Cognitive imagination | Cognitive resonance | Experiential imagination | External experience | Imagination | Imagination from the inside | Imaginative identification | Internal experience | Introspection | Mindreading | Motor imagery | Objective imagination | Recreative imagination | Self-involvement | Sensory imagination | Subjective imagination

## 1 Introduction

Many theorists have pointed out that imagination, or at least a salient type of imagination, is bound to the “experienceable”.<sup>1</sup> In this sense, we can imagine only what can be experienced. For

<sup>1</sup> This is a widespread claim that dates back to Plato and Aristotle and pervades the history of philosophy. See [White \(1990\)](#) for a good survey and a critical view of the standard picture (suggested by etymology) according to which imagination is akin to perception only. Among contemporary philosophers see also, for instance, [Wollheim \(1984\)](#), [Williams \(1976\)](#), [Casey \(1976\)](#), [O’Shaughnessy \(1980\)](#), [Vendler \(1984\)](#), [Peacocke \(1985\)](#), [Walton \(1990\)](#), [Mulligan \(1999\)](#), [Kind \(2001\)](#), [Currie & Ravenscroft \(2002\)](#), [Martin \(2002\)](#), [Noordhof \(2002\)](#), [Chalmers \(2002\)](#), [Carruthers \(2002\)](#), [McGinn \(2004\)](#), [Goldman \(2006\)](#), [Byrne \(2010\)](#).

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instance, we can visually imagine only what can be seen and auditorily imagine only what can be heard. To capture the latter examples, philosophers often talk of vision-like and audition-like imagination. More generally, the relevant type of imagination is *experience-like* or (as we shall also say) *experiential*, whether or not one believes that experiential imagination exhausts the field of possible imaginings.

However, the precise sense in which imagination is experiential remains a deep and complicated issue. In this essay, we would like

to inquire into the scope of experiential imagination. In particular, we want to relate the notion of experiential imagination to two important distinctions present in the contemporary literature on imagination, namely the distinction between sensory and cognitive imagination (Currie & Ravenscroft 2002; McGinn 2004) and the distinction between subjective and objective imagination (Vendler 1984; Dokic 2008). We aim at proposing, eventually, a systematic and hopefully enlightening taxonomy of the varieties of experiential imagination.

The essay is structured as follows: Section 2 tackles the broad phenomenological sense in which our imaginings are experiential. Sensory imagination will emerge as an important sub-type of experiential imagination.

Section 3 individuates two more fundamental sub-species of experiential imagination, namely objective and subjective imagination. We shall point out that this distinction maps onto an independently motivated distinction in the field of non-imaginative mental states, namely that between external and internal experiences. While external experiences (such as vision) are only accidentally *de se*, internal experiences (such as proprioception or agentive experience) are essentially or at least normally *de se*. The upshot will be that sensory imagination is best seen as a paradigmatic case of objective imagination.

Section 4 discusses the distinction between objective and subjective imagination, as Zeno Vendler introduces it on the basis of intuitive contrast examples. We shall show that Vendler's distinction diverges from ours, since it seems to hinge on a distinction between two ways the self can be involved in our imaginings. We shall suggest that the latter distinction is in fact orthogonal to our distinction between objective and subjective imagination (section 4.1). Moreover, upon closer look, the contrast examples offered by Vendler motivate our construction of the objective versus subjective distinction, which will prove to be more fruitful for the theory of imagination (section 4.2).

Section 5 presents the notion of cognitive or belief-like imagination and gives some reason to resist its interpretation as a form of non-ex-

periential imagination. Cognitive imagination can be construed as experiential, provided that at least some of our occurrent beliefs are conscious. Moreover, if belief is an experience, it is clearly an external experience. Therefore, cognitive imagination will emerge as a sub-species of objective imagination, along with sensory imagination.

Section 6 further investigates the domain of subjective imagination and its heterogeneity. We shall suggest that, along with proprioception, agentive experience, introspection, and feeling pain, subjective imagination may re-create other internal ways of gaining information about one's mental states, including beliefs.

Although much of our discussion in this essay belongs to conceptual clarification informed by phenomenological considerations, section 7 briefly describes several upshots of our account with respect to modal epistemology, cognitive resonance phenomena, mindreading, and imaginative identification. It is our contention that the relevance of the conceptual distinctions proposed by our taxonomy of experiential imagination has been crucially neglected in many important philosophical and scientific applications of the notion of imagination.

## 2 Experiential and sensory imagination

Let us start with Christopher Peacocke's analysis of imagination, which can help us to delineate what we mean by "experiential imagination." Peacocke (1985) puts forward what he calls the "General Hypothesis" about imagination, or GH (General Hypothesis) for short:

GH =<sub>DF</sub> To imagine something is always at least to imagine, from the inside, being in some conscious state (Peacocke 1985, p. 21).

Peacocke does not offer an explicit definition of the phrase "from the inside", but we shall follow Kendall Walton's interpretation and assume that "the question of whether an imagining is from the inside arises only when what is imagined is an experience (broadly construed)" (Walton 1990, p. 31). For instance, I may ima-

gine being a descendant of Napoleon, but, according to Walton, my imagining does not essentially involve the perspective of any experience properly speaking. There is nothing it is like to be a descendant of Napoleon.<sup>2</sup> So there is no question of imagining “from the inside” having this relational property. In contrast, when I visually imagine a white sandy beach, my imagining involves an experiential perspective. I imagine “from the inside” a specific visual experience.

Peacocke’s notion of imagining from the inside is broadly related to other notions in the philosophical literature on imagination. For instance, Gregory Currie and Ian Ravenscroft introduce the notion of *recreative imagination* as the capacity to have “states that are not perceptions or beliefs or decisions or experiences of movements of one’s body, but which are in various ways like those states—like them in ways that enable the states possessed through imagination to mimic and, relative to certain purposes, to substitute for perceptions, beliefs, decisions, and experiences of movements” (Currie & Ravenscroft 2002, p. 12). Similarly, Alvin Goldman puts forward the notion of *enactment imagination* (or *E-imagination*) as “a matter of creating or trying to create in one’s own mind a selected mental state, or at least a rough facsimile of such a state, through the faculty of the imagination” (Goldman 2006, p. 42).<sup>3</sup>

Many other philosophers have held the view that imagination is the capacity to “modify” non-imaginative kinds of mental state (Husserl 1901; Meinong 1902; Mulligan 1999; Weinberg & Meskin 2006a, 2006b), where the relevant modification is to be understood as the “preservation” of some features of the non-imaginative states, such as part of their functional roles, despite phenomenological discrepancies or different overall cognitive underpinnings. This view is independent of a strong kind of simulationism, according to which each of several types of imagination shares with a proper non-imaginative *counterpart* some cognitive mechan-

ism (or set of information-processing systems), which is redeployed off-line.

To recapitulate, according to the terminology used in this essay, imagination is the general capacity to produce *sui generis* occurrent mental states, which we call “imaginings”. Whenever a subject imagines something, she is in a particular mental state of imagining. What type of mental state the subject is in depends on the non-imaginative conscious state that is re-created. Here we want to remain as neutral as possible with respect to the relationship between imaginings and their analogues in the non-imaginative mental realm. It is enough for our purposes to accept the idea that a phenomenologically useful taxonomy of imagination can be guided by a corresponding taxonomy of non-imaginative mental states (and perhaps also the other way around, as we shall suggest toward the end of the essay).

From now on, instead of using Peacocke’s phrase “imagining from the inside”, which is potentially misleading (see footnote 16 below), we are going to use phrases of the form “X-like imagination”, or “re-creating X” in imagination, where X is a type of non-imaginative state (as in “vision-like imagination”, or “re-creating a proprioceptive experience”). However, our use of these phrases should not be interpreted as carrying all the commitments of simulationist or recreative theories of imagination (whence the presence of the hyphen in “re-creating”).

GH turns out to be a general definition of imagination as essentially involving the perspective of a conscious experience—precisely what we call “experiential imagination”. Peacocke then introduces a more specific hypothesis precisely in order to identify sensory imagination as a sub-domain of experiential imagination.<sup>4</sup> He himself calls this hypothesis the “Experiential Hypothesis”,

4 What is the relationship between sensory imagination and mental imagery? The latter phenomenon is at the heart of the well-known debate about the format of representations involved in cognitive tasks such as mental rotation (see Kosslyn 1980, 1994; Tye 1991; Pylyshyn 2002; Kosslyn et al. 2006). This debate concerns the kind of *content* of the relevant representations, and one of the issues is whether such content is propositional or iconic. In contrast, the notion of sensory imagination is defined here by reference to the psychological *mode* of the re-created mental state, namely a conscious perceptual experience. For our purposes we can leave open the nature of the contents of sensory imaginings.

<sup>2</sup> Throughout the paper, we assume that experiences are conscious mental states.

<sup>3</sup> Goldman himself acknowledges that these two treatments of imagination are similar (Goldman 2006, p. 52, fn. 21).

but in order to avoid confusion and make it clear that only sensory imagination is at stake, we are going to call it the “Sensory Hypothesis” (or Sensory Hypothesis (SensH) for short), and rephrase it as follows:

SensH =<sub>Df</sub> To imagine something sensorily is always at least to re-create some sensory experience.

For instance, imagining being in front of the Panthéon or at the helm of a yacht (Peacocke’s examples) may involve re-creating some visual experience as of being in front of the Panthéon or at the helm of the yacht.

Sensory imagination is not confined to vision. In Peacocke’s words, SensH deals with “imaginings describable pre-theoretically as visualizations, hearings in one’s head, or their analogues in other modalities” (Peacocke 1985, p. 22).<sup>5</sup> A similar definition of sensory imagination can be found in the work of other philosophers (Kind 2001; Noordhof 2002; McGinn 2004). The same type of imagination has also been labeled “perception-like” (Currie & Ravenscroft 2002), “perceptual imagination” (Chalmers 2002), and even “experiential imagination” (Carruthers 2002).

To the extent that SensH is concerned only with cases in which the subject re-creates a specific type of experience, namely sensory experience, it deals with a sub-type of experiential imagination as covered by GH, namely sensory imagination. At this point, the question arises as to what other types of experiential imagination there are beyond the sensory type. Walton suggests that the notion of experience at stake in GH should be interpreted in a broad way, and we may wonder about its precise breadth.

### 3 Objective and subjective imagination

Peacocke himself intends GH to cover genuine instances of experiential imagination that are not covered by SensH—what we shall call non-sensory

imagination. For instance, one can imagine “the conscious, subjective components of intentional action” (Peacocke 1985, p. 22). On Peacocke’s view, imagining playing the Waldstein sonata may involve re-creating a non-sensory experience, namely the intimate experience one has of one’s own action while or in acting.

Of course, the precise nature of what we may call “motor imagery” is controversial.<sup>6</sup> Currie and Ravenscroft suggest that “motor images have as their counterparts perceptions of bodily movements. They have as their contents active movements of one’s body” (Currie & Ravenscroft 2002, p. 88). So on Currie and Ravenscroft’s suggestion, imagining playing the Waldstein sonata involves re-creating the perception of bodily movements.

Certainly, in order to imagine performing an action, it is not enough to re-create a *visual* experience of the appropriate bodily movements—otherwise, the relevant type of imagining would belong to sensory imagination after all. Alternatively, one might suggest that motor imagery involves re-creating a *proprioceptive* experience of the appropriate bodily movements. However, such imagining does not entail re-creating an agentive experience, even if it may accompany the latter. In a similar vein, Goldman claims that motor imagery “is the representation or imagination of executing bodily movement” and has as its counterpart “events of motor production, events occurring in the motor cortex that direct behavior” (Goldman 2006, pp. 157–158). Following Goldman, we can say that imagining playing the Waldstein sonata may involve re-creating an execution of the appropriate bodily movements.

In fact, an ordinary case of imagining playing the Waldstein will probably involve (at least) three types of imagining:

- Imagining *seeing* movements of one’s fingers on the keyboard.
- Imagining *having a proprioceptive experience* of these movements.
- Imagining *playing* the sonata.

<sup>5</sup> At this point we can count at least the five senses (vision, audition, touch, taste, and olfaction) as sensory modalities. Later on, we shall suggest that a sensory modality involves an *external* perceptual perspective on the world. This excludes proprioception and the sense of agency as sensory modalities, insofar as they involve *internal* perspectives on oneself.

<sup>6</sup> See section 7.2. As Thomas Metzinger reminded us, the existence of motor imagery has been acknowledged by twentieth century phenomenology. For instance, Karl Jaspers has coined the German term “Vollzugsbewusstsein”, which can be translated as “executive consciousness”.

The three types of imagining are typically entangled within a single imaginative endeavor. That is, someone who imagines playing the sonata will typically imagine having a proprioceptive experience of her fingers running on the keyboard but also various sensory experiences: visual experiences of her moving fingers and auditory experiences of the music. Still, each type is essentially distinct from the others, and might even be dissociable in special circumstances (although we do not want to insist too much on the possibility of such dissociation). Suppose for instance that one imagines one's limbs being remotely controlled. One can imagine from a proprioceptive perspective one's arms and legs going through the motions characteristic of playing the piano without imagining oneself playing the piano. In this case, (ii) is instantiated but (iii) is not. More controversially, suppose that one imagines oneself being selectively anesthetized, or in the situation of a deafferented subject.<sup>7</sup> Perhaps one can then imagine playing the piano without imagining having a proprioceptive experience; (iii) but not (ii) would be instantiated. Given the role of proprioceptive feedback in the ordinary execution of action, it is probably hard if not impossible to imagine playing a whole sonata in the absence of any proprioceptive-like imagining, but the relevant dissociation is in principle possible for simpler actions, such as stretching one's finger. Finally, it seems possible to imagine playing the piano without re-creating any visual or auditory experience. For instance, one can imagine playing the sonata with one's eyes closed or one's ears blocked. Here, (iii) is instantiated but (i) is not. Again, given the role of sensory feedback in the ordinary execution of action, it might be hard to form such a selective imagining, especially if the action gets complicated.

The upshot of the foregoing discussion is that only (iii) is a genuine case of motor imagery. It involves the re-creation of what philosophers of action call the "sense of agency" or the "sense of control" (see e.g., Haggard 2005 and Pacherie 2007). Since the sense of agency or control is a conscious experience, motor imagery clearly falls under the umbrella of experiential imagination.

<sup>7</sup> Deafferented patients have lost the sense of proprioception; see e.g., Cole (1995) and Gallagher (2005).

Moreover, to the extent that motor imagery is (at least in principle) dissociable from sensory imagination, even if it typically depends on the latter, it is a case of non-sensory imagination.<sup>8</sup>

What about (ii)? Proprioception is arguably a mode of perception; it is a way of perceiving the spatial disposition of one's body.<sup>9</sup> In this respect, (ii) is like (i), which is a case of sensory imagination. However, proprioception is also essentially or at least normally a way of gaining information about oneself; what proprioception is about is a bodily state of oneself. In this respect, (ii) is more like (iii), which also involves a way of gaining information about oneself, and more precisely one's actions.<sup>10</sup>

What unifies (ii) and (iii) as cases of non-sensory imagination is the fact that what is re-created is a (non-imaginative) *internal* experience. An internal experience is essentially or at least normally *de se*, in the following sense: it is supposed to be about a mental or bodily state of oneself. Proprioceptive and agentive experiences are both internal in this sense. At least in normal circumstances, one cannot have a proprioceptive experience of another's body or a sense of agency for another's action. In contrast, all cases of sensory imagination are such that what is re-created is a (non-imaginative) *external* experience. An external experience is typically about the external world and is only accidentally *de se*. For instance, vision is an

<sup>8</sup> Even if it turns out that motor imagery is constitutively dependent on sensory imagination, it is clearly not fully sensory, as we will shortly show. Note also that if motor imagery can be conceived as the re-creation of an essentially active phenomenon, namely the sense of agency or control, it need not be itself active. Although we cannot dwell on this issue here, imaginings can be either active, when we deliberately imagine something, or passive, as for instance when we are lost in an episode of mind wandering (see footnote 22).

<sup>9</sup> If proprioception is a case of perception, there must be proprioceptive experiences. This has been contested, especially by Anscombe (1957). However, in our view, Anscombe conflates two different claims. The first claim, which we accept, is that there are no proprioceptive *sensations*. Proprioception is not a case of sensory perception. The second claim, which we reject, is that proprioception does not involve any conscious *experience*. Even if there are no proprioceptive sensations, we are consciously aware of the positions and movements of our body.

<sup>10</sup> The idea that there are "self-informative methods," i.e., ways of finding out about oneself, is pervasive in John Perry's theory of self-knowledge; for a recent statement, see Perry (2011). As Perry makes clear, these methods can be either metaphysically or merely architecturally guaranteed. François Recanati makes use of a similar idea in his account of perspectival thought (Recanati 2007) and mental files (Recanati 2012); for instance, he writes: "In virtue of being a certain individual, I am in a position to gain information concerning that individual in all sorts of ways in which I can gain information about no one else, e.g. through proprioception and kinaesthesia" (Recanati 2007, p. 262).

Objective imagination	Subjective imagination	
Sensory imagination	Proprioception-like imagination	Action-like imagination
<p>I re-create in imagination a visual experience of <i>my fingers running on the keyboard</i></p> <p>I re-create in imagination an auditory experience of <i>music</i></p> <p>I re-create in imagination a multimodal experience of <i>the music as caused by the motions of my fingers</i></p>	<p>I re-create in imagination a proprioceptive experience of <i>my fingers running on the keyboard</i></p>	<p>I re-create in imagination the action of <i>running my fingers on the keyboard</i></p> <p>I re-create in imagination the action of <i>playing the sonata</i></p>

**Figure 1:** Types of imagining involved in playing a sonata

external experience; it is a way of gaining information about one's immediate surroundings, whether or not one also sees oneself.<sup>11</sup>

These considerations allow us to give a more fine-grained analysis of the realm of experiential imagination based on the external versus internal contrast, rather than the sensory versus non-sensory contrast. In a nutshell, we

<sup>11</sup> This is an oversimplification, since many ordinary experiences have presumably both internal and external aspects. On the one hand, vision might involve both exteroception and interoception (Gibson 1966). On the other hand, proprioception and other forms of bodily experience often rely on visual information (Botvinick & Cohen 1998; de Vignemont 2013). Still, the external aspect of many ordinary visual experiences is clearly dominant, while visually aided proprioception remains essentially a way of gaining information about oneself, and thus is an internal experience in our sense.

can say that experiential imagination comes in two varieties. Experiential imagination can re-create: (a) some external experience—e.g., a way of gaining information about the world (e.g., I imagine *seeing* Superman flying in the air), and (b) some internal experience—e.g., a way of gaining information about oneself (e.g., I imagine *having a proprioceptive experience of flying in the air*). Following Jérôme Dokic (2008), we shall call (a) “objective imagination” and (b) “subjective imagination”; see figure 1.<sup>12</sup>

<sup>12</sup> To make our terminology as clear as possible, the distinction between internal and external experiences concerns the realm of non-imaginative states, while the analogous distinction between subjective and objective imagination concerns the realm of imaginative

We may thus introduce two other hypotheses subordinate to GH, which we call the Objective Hypothesis (ObjH) and the Subjective Hypothesis (SubjH):

ObjH =<sub>Df</sub> To imagine something objectively is always at least to re-create some external experience.

SubjH =<sub>Df</sub> To imagine something subjectively is always at least to re-create some internal experience.

Sensory imagination forms an important subclass of experiential imagination, but it can also be seen as a paradigmatic case of objective imagination, since it involves re-creating an *external* experience. Experiential imagination is not merely objective imagination, since another sub-class of experiential imagination, namely subjective imagination, is constituted by cases in which an *internal* experience is re-created. For instance, imagining having one's legs crossed or driving a Ferrari may involve re-creating some internal non-sensory experience, namely a proprioceptive and/or agentive experience as of having one's legs crossed or driving a Ferrari.

To sum up, we have identified two important varieties of imagination that seem to exhaust the domain of experiential imagination: objective and subjective imagination.<sup>13</sup> We have argued that this distinction, which gives rise to phenomenologically different imaginings, traces back to an independent distinction within the domain of non-imaginative experiences, between external and internal experiences. We have also claimed that sensory imagination, which is the variety of experiential imagination most commonly recognized, should be seen as a paradigmatic example of objective imagination. More should be said about the distinction between objective and subjective imagination. For instance, questions arise as to whether sensory imagination exhausts the field of objective imagination and as to whether

states. The question of whether imaginings themselves can be said to be internal or external is not raised in this essay.

<sup>13</sup> Note that our definition leaves open the possibility that a particular imagining is both objective and subjective, to the extent that the re-created experience has both external and internal aspects (see footnote 11).

subjective imagination encompasses more than proprioceptive or agentive experiences.

The remainder of the paper is devoted to further clarification of the notions of objective and subjective imagination. We shall begin with a comparison between our own proposal and Zeno Vendler's observations about imagination.

## 4 Vendler's varieties of imagination

A well-informed reader might think that our distinction between objective and subjective imagination is the same as a homonymous distinction introduced by Vendler (1984). Certainly Vendler intends to capture two phenomenologically different ways of imagining, which potentially correspond to our distinction between external and internal experiential perspectives (perspectives on the world and perspectives on oneself). However, he also gives a *prima facie* interpretation of the distinction between objective and subjective imagination, which has more to do with the way the self is involved in our imaginings than with the distinction between external and internal experiences. On this interpretation, Vendler's notions of objective and subjective imagination arguably diverge from ours. Let us start with Vendler's interpretation of these notions (section 4.1) and then move to a deeper analysis of the contrast examples offered by Vendler in order to motivate his distinction (section 4.2). In so doing, we shall show that our construction of the objective versus subjective distinction is more helpful in order to map the realm of experiential imagination.

### 4.1 Two kinds of self-involvement

Vendler (1984) suggests that the phrase "S imagines doing A" invites what he calls "subjective" imagination, while the phrase "S imagines herself/himself doing A" can be used to describe "objective" imagination. *Prima facie*, Vendler seems to interpret the distinction between subjective and objective imagination in terms of two ways in which the self can be involved in our imaginings—implicitly or explicitly.

Subjective imagination concerns cases in which the self is implicitly involved in the imagining, whereas objective imagination concerns

cases in which the self is explicitly involved in the imagining. This is why the phrase “imagining doing A”, which does not explicitly mention the agent of the action A, is best used to describe subjective imagination, whereas the phrase “imagining *myself* doing A”, which explicitly mentions myself as the agent of the action A, is more suitable to the description of objective imagination.

The self is implicitly involved in an imagining when it fixes the point of view internal to the imagined scene without being a constituent of that scene. One can imagine seeing the Panthéon from the other end of rue Soufflot without imagining oneself as another object in the scene. Still, the scene is imagined from a specific point of view, as defined by a virtual self. One can also imagine seeing oneself in front of the Panthéon. In such a case, the self is a constituent of the imagined scene—it is explicitly represented as a part of the imagining’s content.

Of course, when one imagines seeing oneself in front of the Panthéon, one’s imagining also involves the self implicitly. One imagines a scene from the perspective of a virtual self, which is distinct from oneself as a constituent of the scene. As a consequence, Vendler makes clear that subjective and objective imagination are not mutually exclusive. Commenting on Vendler’s distinction, François Recanati concurs, writing that “the objective imagination is a particular case of the subjective” (Recanati 2007, p. 196).

It should be sufficiently apparent that the distinction between implicit and explicit self-involvement is a matter of the imagining’s *content* and more precisely deals with the issue of how the self is involved in imagination. In contrast, the distinction between internal and external experiential perspectives has to do with the *mode* re-created in imagination, respectively an external and an internal experience. Therefore, the two distinctions answer different questions and turn out to be orthogonal.

First, objective imagination can involve the self either implicitly or explicitly (but not both at the same time). This is easily seen by considering the Panthéon example. Peacocke

himself suggests another relevant case. He observes that the phrase “imagining being seated on a horse” is ambiguous between adopting the point of view of the rider (namely oneself) and adopting the point of view of someone else who could see the rider (see Peacocke 1985, p. 23). If the relevant perspective is that of the rider (namely oneself), the self need not be a constituent of the imagined scene—in this case (where the rider does not see any part of her body), it is implicitly involved in the imagining. In contrast, if the relevant perspective embraces oneself as the rider, the self is explicitly involved; it figures in the content of the imagining. However, both interpretations involve *visual* (i.e., external) perspectives, so what is at stake is a distinction within *objective* imagination rather than a contrast between subjective and objective imagination.<sup>14</sup>

Second, it is at least arguable that subjective imagination can involve the self either implicitly or explicitly. Suppose that one subjectively imagines swimming in the ocean. One may re-create the internal experience of what Marc Jeannerod & Elisabeth Pacherie (2004) call a “naked” intention (in action), which precisely does not involve an explicit representation of the agent. In this case, no self is part of the representational content of one’s imagining. One subjectively imagines swimming without imagining the agent as such, whether oneself or anyone else. However, one might also re-create a more complex internal experience, whose content embraces oneself as the agent of the action of swimming. Accordingly, in this case, the self (oneself) is explicitly represented in the content of one’s subjective imagining. One subjectively imagines a particular agent swimming; in Vendler’s example, that particular agent is oneself.

One might object to the last point and claim that the self is never an object of internal experience. One can have at best internal experiences of particular mental states, such as inten-

<sup>14</sup> One might object that both cases involve subjective imagination, since the visual perspective of the rider, even if she does not see her own body, is tied to her proprioceptive experience; see the *caveat* voiced in footnote 11 above. Again, it might be that the distinction between subjective and objective imagination has really to do with the distinction between re-creating predominantly internal and re-creating predominantly external experiences.



Experiential Imagination		
	Explicit self-involvement	Implicit self-involvement
Subjective	I re-create in imagination a proprioceptive and/or agentive experience of <i>myself flying in the air</i>	I re-create in imagination a proprioceptive and/or agentive experience of <i>flying in the air</i>
Objective	I re-create in imagination a visual experience of <i>myself being seated on a horse</i>	I re-create in imagination a visual experience of <i>being seated on a horse</i>

**Figure 2:** Explicit and implicit self-involvement in subjective and objective imagination

tions in action, but never of oneself having those mental states. However, this is a substantial claim that certainly needs to be backed up by careful arguments. Note that the assumption that the self can figure in the content of an internal experience is in principle compatible with the Humean point that the self cannot be introspected. Introspection, conceived as a form of inner perception, is only one type of internal experience. Perhaps there are non-introspective cases of internal experience whose explicit contents cannot be fully specified except by using the first-person pronoun. For instance, one might argue that at least some cases of proprioception as well as internal experiences of controlling one's body as a whole give us access to one's self, or at least to the boundaries between oneself and the rest of the environment.<sup>15</sup>

Consider other examples offered by Vendler. When you imagine yourself eating a lemon by imagining your pinched face, your imagining is

<sup>15</sup> For relevant discussion, see e.g., Cassam (1999), Bermúdez et al. (1995), Bermúdez (1998), Metzinger (2003), and Peacocke (2014).

explicitly self-involving and might be fulfilled via objective imagination, such as visual imagination, but also via subjective imagination, such as proprioceptive imagination, at least to the extent that it recreates an internal experience of your bodily self. What about imagining implicitly involving the self? If while imagining eating a lemon, the subject imagines the action of eating a lemon and nothing else, she is exploiting her subjective imagination, insofar as she is re-creating an agentive perspective. It seems possible to imagine eating a lemon via objective imagination too, for instance by re-creating a visual experience as of an action independently of any identification of the agent.

To sum up, while the distinction between subjective and objective imagination seems to capture two forms or modalities of imagination, the distinction between two kinds of self-involvement, although important in itself, is less relevant to a taxonomy of experiential imagination. The orthogonality of these distinctions is shown again in figure 2. In the following sub-

section we shall further motivate our hypothesis that Vendler's own contrast examples are best understood in terms of the independently motivated distinction between internal and external experiences.

## 4.2 Vendler's examples revisited

Aside from his interpretation of subjective imagination as implicitly self-involving and objective imagination as explicitly self-involving, Vendler clearly draws our attention to two ways of imagining a given action, which have quite different phenomenological profiles. In his own words:

We are looking down upon the ocean from a cliff. The water is rough and cold, yet there are some swimmers riding the waves. 'Just imagine swimming in that water' says my friend, and I know what to do. 'Brr!', I say as I imagine the cold, the salty taste, the tug of the current, and so forth. Had he said 'Just imagine yourself swimming in that water', I could comply in another way, too: by picturing myself being tossed about, a scrawny body bobbing up and down in the foamy waste. (Vendler 1984, p. 43)

As some of Vendler's other examples show, the relevant distinction is not restricted to imagining actions:

In order to familiarize yourselves with this distinction, imagine eating a lemon (sour taste), and then imagine yourself eating a lemon (pinched face); imagine being on the rack (agony), and then yourself being on the rack (distorted limbs); imagine whistling in the dark (sensation of puckered lips), and then yourself whistling in the dark (distance uncertain, but coming closer); and so forth. (Vendler 1984, p. 43)

It is not immediately clear what is common to all cases of subjective or objective imagination in Vendler's examples. Consider the suggestion

that the relevant distinction can be explained at the level of the *states* represented by the imaginings. Subjective imagination would involve imagining states that *cannot* be imagined objectively. For instance, in imagining swimming in the water, I also imagine proprioceptive experiences, which (one might argue) cannot be imagined objectively. How could we *visually* imagine such experiences, which are essentially *felt*?

However, it is not obvious that the essence of the distinction between subjective and objective imagination can be fully captured by reference to the imagined states. One can imagine having one's legs crossed via subjective imagination, but also via objective imagination. The first type of imagining is akin to proprioception (one imagines feeling one's legs crossed), while the second type of imagining is akin to vision (one visualizes oneself with one's legs crossed). Yet these imaginings are about the same bodily condition—having one's legs crossed.

Similarly, the very same action of swimming in the ocean can be imagined subjectively or objectively. The case of pain is more controversial, but if one can be visually aware that someone is in pain (by observing pain-related behavior), then one can imagine the very same pain state either subjectively or objectively. The difference between the relevant imaginings must lie elsewhere.

We are now in the position to see that we were on the right track and that Vendler's contrast examples are plausibly construed as involving different experiential perspectives on a given scene, either internal (perspectives on oneself) or external (perspectives on the world). Subjective imagination has to do with the former, and objective imagination with the latter. This is easily seen by considering the example of imagining whistling in the dark. Vendler contrasts the subjective case, in which the subject imagines the sensation of puckered lips, with the objective case, in which the subject imagines the distance uncertain, but coming closer. In other words, what Vendler seems to contrast is proprioception-like imagination with auditory imagination or, in our terminology, an internal experiential perspective with an external one.

More generally, Vendler seems to be concerned with the difference between, on the one hand, imagining doing an action (e.g., swimming, eating, whistling, etc.) or having pain (e.g., agony), where what the imaginer re-creates is the relevant experience and, on the other hand, imagining pieces of behaviour that reveal the very same experience (e.g., visualizing an eating mouth or a body in agony), where what the imaginer re-creates is an external perspective on the relevant experience.<sup>16</sup>

Let us note that, in order to make his contrast more realistic, Vendler gives us complex examples, where more than one experience is involved. So for instance, his example of imagining swimming in the ocean clearly belongs to subjective imagination, since the re-creation of a proprioceptive and/or agentive experience is involved. As Vendler suggests, though, when you fulfill this imagining you can also re-create various external experiences, such as “the cold, the salty taste, the tug of the current, and so forth”. The same is true in the case of imagining eating a lemon. When you imagine eating a lemon, you re-create in imagination an internal experience (e.g., the proprioceptive and/or agentive experience of eating), but your imagining can be accompanied by others that re-create external experiences (e.g., the sour taste, the yellow lemon).

The discussion of Vendler’s distinction has led us to strengthen our taxonomy of experiential imagination. So far we have seen that, first, all cases covered by *SenH* seem to be cases of objective imagination (and thus covered by *ObjH*), which involves re-creating some external experience. Second, all cases covered by *SubjH* arguably involve re-creating some internal experience.

However, another important type of imagination emerges from the literature on imagin-

ation, namely cognitive imagination, which has been defined as belief-like and typically contrasted with sensory or even experiential imagination.

## 5 Cognitive imagination

Many authors contrast sensory imagination with cognitive imagination (“imagining that,” or “propositional imagination”), which has been defined as belief-like (Mulligan 1999; Currie & Ravenscroft 2002; McGinn 2004; Goldman 2006; Weinberg & Meskin 2006b; Arcangeli 2011a).<sup>17</sup> Cognitive imagination seems to be relatively autonomous from sensory imagination. For instance, one can imagine that poverty has been reduced in the world independently of re-creating any visual, auditory, tactile, etc., experience. Of course the autonomy of cognitive imagination relative to sensory imagination echoes the autonomy of belief relative to sensory perception (one can believe that poverty must be reduced in the world without perceiving anything).

Cognitive imagination is by essence non-sensory, but given our previous discussion, it does not exhaust the field of non-sensory imaginings. Re-creating in imagination some internal experience is presumably non-cognitive (in the relevant sense of being belief-like), but it is non-sensory as well. Thus we have, at least *prima facie*, three types of potentially dissociable imagination: sensory non-cognitive imagination (e.g., I imagine hearing a piece of music, such as Ravel’s *Concerto pour la main gauche*), non-sensory non-cognitive imagination (e.g., I imagine having the proprioceptive experience of being one-armed), and non-sensory cognitive imagination (e.g., I imagine that Maurice Ravel has created a piano piece especially for me).

One might argue that cognitive imagination is not only non-sensory but non-experiential as

<sup>16</sup> A similar point is made by Mike Martin when he draws a distinction between “cases in which there is just an itch in the left thigh” in imagination and cases “in which one imagines some person whose behaviour reveals that they have an itch” (Martin 2002, p. 406, fn. 35; see also Dorsch 2012). However, according to his terminology, only the former cases count as being “from the inside”. Very often in the literature, the phrase “imagining from the inside” is used in this narrow sense (to refer to subjective imagination in our terminology) more than the broad sense meant by Peacocke (which refers to experiential imagination as a whole).

<sup>17</sup> In fact, Mulligan speaks of a judgement-like, rather than a belief-like, type of imagination, which he calls “supposition”. It is not entirely clear whether his notion of supposition can be equated with what we call “cognitive imagination.” Very often in the literature, supposition is taken to be belief-like and, as such, nothing but cognitive imagination (Nichols & Stich 2003; McGinn 2004; Goldman 2006). An alternative view is that supposition is a *sui generis* type of imagination akin to *acceptance* rather than belief (Arcangeli 2011b). However, for present purposes we will skip this issue and consider only belief-like imagination.

well and as such lies outside the scope of GH. According to a standard view, beliefs, even if they can be occurrent, are not conscious experiences strictly speaking. On this view, an occurrent belief may be accompanied by various experiences (mental images, feelings, emotions, etc.), but there is nothing it is like to have a belief.<sup>18</sup> Now this view has recently come under attack by philosophers who acknowledge the existence of a doxastic phenomenology, i.e., a kind of phenomenology characteristic of belief (see the debates on cognitive phenomenology in Bayne & Montague 2011). On this alternative view, there is something it is like to have an occurrent belief, which is reducible to neither sensory nor affective phenomenology. At least some occurrent beliefs would be *sui generis* conscious experiences.<sup>19</sup>

If the alternative view is broadly correct, some beliefs lie within the scope of GH.<sup>20</sup> In order to capture cognitive imagination as a putative form of experiential imagination, let us introduce another specific hypothesis subordinate to GH, which we call the Cognitive Hypothesis (C):

CogH =<sub>df</sub> To imagine something cognitively is always at least to re-create a conscious occurrent belief.

For instance, cognitively imagining that quantum physics is false or that this pen is an alien involves re-creating the conscious occurrent belief that quantum physics is false or that this pen is an alien. In general, one may surmise that anything that can be consciously believed can be cognitively imagined.

We have suggested that experiential imagination divides into two sub-domains only, namely subjective and objective imagination (covered by SubjH and ObjH, respectively). In addition, sensory imagination (covered by SensH)

<sup>18</sup> See Metzinger (2003), Tye (2009), and Carruthers & Veillet (2011). Note that the standard view can lead to different attitudes toward the notion of cognitive imagination. On one attitude, cognitive imagination exists but is non-experiential. On another attitude, cognitive imagination does not exist or wholly reduces to sensory imagination (if, for instance, it is construed as auditory verbal imagination).

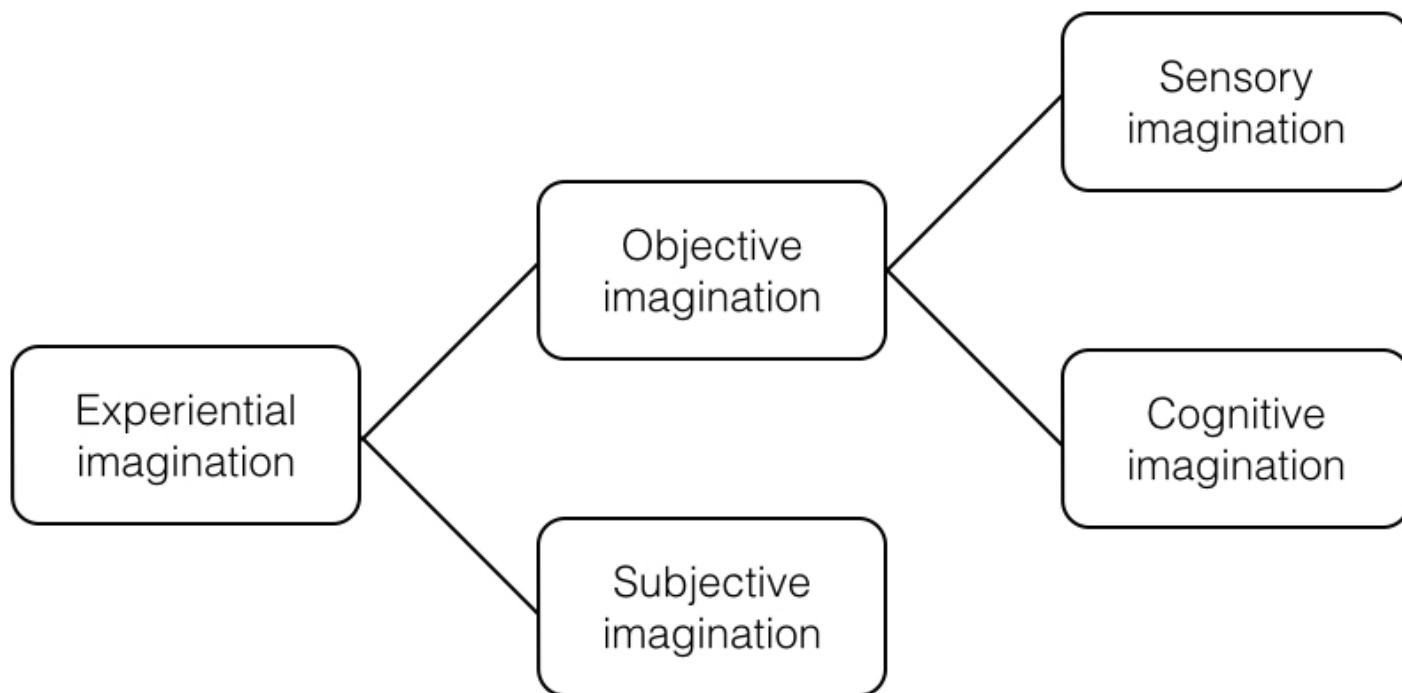
<sup>19</sup> Crane (2013) defends a closely related view, according to which episodes of thinking, although not beliefs themselves, are phenomenally conscious. CogH can easily be adapted to accommodate Crane's view.

<sup>20</sup> In conversation, Peacocke confirmed that he intends GH to cover at least some cases of belief-like imagination.

emerged as a species of objective imagination and non-sensory non-cognitive types of imagination (e.g., proprioception-like and agentive-like imagination) have been described as paradigmatic cases of subjective imagination. What about cognitive imagination (covered by CogH)? Is it a type of objective or of subjective imagination? Or should we acknowledge a third class of experiential imaginings that are neither objective nor subjective?<sup>21</sup>

We have introduced the distinction between objective and subjective imagination as the imaginative analogue of the distinction between external and internal experience. As we have seen, many external experiences are ways of gaining information about the world, and many internal experiences are ways of gaining information about oneself. Now one might claim that belief, unlike perceptual or introspective experience, is not individuated in terms of ways of gaining information. Of course some of our beliefs result from various ways of gaining information about the world and ourselves, but it is logically possible to have a belief that is not the result of any source of information. Does it follow that belief as an experience is neither external nor internal? Not really, for an external experience has been more fundamentally defined as being accidentally *de se*, whereas an internal experience is essentially or at least normally *de se*. In this more fundamental sense, if belief is an experience, it is clearly an external experience: one can believe all sorts of states of affairs that do not involve or concern oneself. It follows that cognitive imagination, as the re-creation of an external doxastic experience, is better seen as a sub-species of objective imagination, along with sensory imagination. Objective imagination then emerges as a heterogeneous domain, but where at least two clearly different types of imagining can be distinguished (see figure 3).

<sup>21</sup> Moreover, the question of whether these varieties of imagination exhaust the field of experiential imagination remains open. In order to answer it we would have to inquire as to whether there are other types of imagination, such as desiderative or desire-like imagination (see Currie & Ravenscroft 2002 and Doggett & Egan 2007 for a positive view, and Weinberg & Meskin 2006a and Kind 2011 for a critical view), affective or emotion-like imagination (see Goldman 2006 for a positive view, and Currie & Ravenscroft 2002 for a critical view) and judgement-like or acceptance-like imagination (see footnote 17). For lack of space, we have to defer this inquiry to another occasion.



**Figure 3:** The varieties of experiential imagination

## 6 The scope of subjective imagination

As we have seen, subjective imagination involves re-creating various ways of gaining information about ourselves, such as proprioceptive or agentive experience. Now we also have ways of gaining information about our own sensory experiences, as well as about our own beliefs. We seem to be able to form self-ascriptions of the form “I see  $x$ ” or “I believe that  $p$ ” without relying on independent background beliefs. The nature of this ability is controversial. Some philosophers claim that both sensory experiences and beliefs can be introspected (e.g., Goldman 2006). Thus, we should be open to the possibility of re-creating in imagination an introspective experience of a visual experience or an occurrent belief. Other philosophers reject the notion of introspection altogether and consider that self-ascription of sensory experience or belief can follow a purely theoretical procedure known as an “ascent routine” (see Evans 1982 and Gordon 1995 for the case of belief, and Byrne 2010 for suggestions about how to extend the ascent routine to sensory experience).

The question arises as to what types of internal experience can be re-created in imagination, i.e., what the scope of subjective imagination is. In a sense, this question is hostage to an

independent theory of internal experience, appropriate to sensory experience or belief. Obviously, we cannot settle the matter in this exploratory essay. Still, before moving to the penultimate section, we would like to suggest that phenomenologically accessible distinctions within the realm of imagination might be conceived as (usually neglected) constraints on a correct theory of internal experience. We shall focus on belief, but similar observations can be made for the case of sensory experience.

There is some phenomenological evidence that subjective imagination can capture an internal perspective on at least some beliefs. Consider an atheist who tries to imagine what it is like to believe in God. One might argue that this involves re-creating some internal experience of an occurrent belief in God. At least the atheist’s imagining seems different from two other types of imagining, namely imagining believing in God and imagining believing that one believes in God.

First, it is different from re-creating in imagination an occurrent belief in God, which would be an example of cognitive imagination. The latter imagining does not have belief as a constituent of its content; one cognitively imagines God himself, rather than some belief in

his existence. In general, an imagining that re-creates the non-imaginative state *M* need not have *M* as part of its content; the imagining itself is an imaginative re-creation of *M*, but it is not about *M* (Currie & Ravenscroft 2002, p. 27; see also Burge 2005, p. 63, for the corresponding point about sensory imagination). In contrast, the atheist's imagining essentially has belief as one of the constituents of its content; one imagines a particular belief in God. A related difference is that re-creating an occurrent belief in God is re-creating an external experience of a God-involving world. However, the atheist might want to imagine what it is like to believe in God without taking a stance on the presence of God in the imaginary world. Her imagining is focused on the belief in God, independently of whether it is true or false (even though as an atheist she believes it to be false).

Second, the atheist's imagining is different from re-creating an occurrent higher-order belief that one believes in God, i.e., imagining that one believes in God. Intuitively, the former imagining is more specific than the latter (which is another example of cognitive imagination). Imagining having the higher-order belief that one believes in God involves re-creating an external experience of one's belief in God. However, the atheist is not merely imagining that she or someone else has a belief in God. She wants to get into the believer's mind and re-create in imagination an *internal* perspective on some occurrent belief in God.

In the context of GH, the apparent existence of cases of subjective imagination where the re-created experience is an internal experience of belief can be seen as a constraint on a correct account of the way we gain information about our own beliefs. The introspective account can offer a straightforward explanation of the atheist's imagining as involving the re-creation of an introspective experience, as opposed to a mere higher-order belief, about the belief in God. *Prima facie*, the ascent-routine account has fewer resources to give justice to the relevant phenomenology. It might not be impossible to do so, though, if experiential imagination can also re-create complex cognitive processes such as going through an ascent routine. Again, we

have to leave the discussion for another occasion. It is enough for our purposes to gesture toward the possibility of extending the scope of subjective imagination to encompass more or less specific internal perspectives on beliefs, even if further argument is certainly needed.

## 7 Some applications

In this penultimate section, we would like to briefly illustrate how the fate of important claims about imagination made by philosophers and scientists depends on something like our taxonomy of experiential imagination. Although we believe that this taxonomy has philosophical value in its own right, we also would like to show that it is connected to central issues in philosophy and cognitive science. These issues concern, respectively, modal epistemology (section 7.1), cognitive resonance (section 7.2), mindreading (section 7.2), and imaginative identification (section 7.4). Our discussion in what follows, though, can only be rather programmatic in contrast to the rest of the essay.<sup>22</sup>

### 7.1 Modal epistemology

Imagination has been traditionally construed as providing evidence for modal claims. For instance, many philosophers since Descartes have suggested that what can be imagined is metaphysically possible. On the other hand, imagination has been shown to produce various sorts of modal illusions (Kripke 1980; Gendler & Hawthorne 2002). The main challenge faced by proponents of an internal relation between imagination and possibility (perhaps via conceivability) is thus to distinguish proper and improper

<sup>22</sup> This is only a selection of issues where we think our phenomenological and conceptual distinctions are relevant. We wish we had space to discuss other topics of relevance to the theory of imagination, such as mental time travel (Schacter & Addis 2007), dreams (Windt 2014), and mind wandering (Metzinger 2013). For instance, there are interesting issues having to do with the apparent lack of reflexivity of mind wandering episodes, and the tendency for the mind wanderer to identify herself with imagined protagonists (Metzinger 2013). A speculative hypothesis is that the passivity of mind wandering episodes causes various metacognitive errors, such as the error of confusing a case of subjective imagination with a genuine case of internal experience, which leads the imaginer to self-identify with the subject of the imagined mental state. Again, we have to leave this fascinating issue to another occasion.

uses of imagination, i.e., those uses that provide, and those that do not provide, evidence for modal claims. One might suggest, for instance, that proper uses of imagination require a certain format that other uses lack (Nichols 2006; Weinberg & Meskin 2006b).

In our view, there is an additional criterion that must be taken into account in these debates, which concerns the type of non-imaginative state that is re-created by the relevant imaginings. It might be that only some types of imagination are internally related to modal properties. For instance, it is not clear that cognitive imagination is essentially related to possibility. Assuming the correctness of our claim that cognitive imagination re-creates belief, the fact that one can cognitively imagine that  $p$  is no more evidence that  $p$  is possible than the mere fact that one believes that  $p$ . After all, one can believe all sorts of metaphysically impossible states of affairs (such as that Hesperus and Phosphorus are distinct celestial bodies).

The challenge is then to identify the types of imagination, if any, that are essentially or at least reliably related to what is metaphysically possible. One hypothesis, voiced by Dokic (2008), is to focus on types of imagination that re-create states of (actual or potential) knowledge. On this hypothesis, some uses of imagination are guides to possible contents because they are guides to the possibility of *knowing*. To the extent that sensory perception is commonly thought to be a source of knowledge, sensory imagination could be reliably linked to the possibility of what is imagined in this way (see also Williamson 2008).

This is not to say that cognitive imagination has no role to play in providing evidence for modal claims. Just as belief can be grounded on sensory perception and thereby be counted as knowledge, a single imagining might re-create not only belief and perception separately, but the complex mental state of believing that  $p$  on the basis of suitable sensory evidence (see Dokic 2008). The resulting imagining would be neither purely sensory nor purely cognitive, but to the extent that it re-creates a non-imaginative state of knowledge, its content might be bound to what is metaphysically possible.

## 7.2 Cognitive resonance

If we are right, there is a phenomenologically accessible distinction between objective and subjective imagination. What it is like to visually imagine an action or a painful experience is typically different from what it is like to subjectively imagine acting or having pain. However, this distinction is rarely made explicit in the scientific literature on the neural underpinnings of imagination. Let us consider the case of action. It has been a remarkable discovery that observing and executing an action involve (at least sometimes) the same resonance system in the brain, and more precisely the same “mirror neurons,” corresponding to types of action such as grasping, reaching, or eating (Rizzolatti et al. 1996; Rizzolatti et al. 2001). What about imagining an action? Marc Jeannerod claims that “imagining a movement relies on the same mechanisms as actually performing it, except for the fact that execution is blocked” (Jeannerod 2006, p. 28). Does this claim concern objective imagination, subjective imagination, or both? On the one hand, his notion of “motor imagery”, defined as “the ability to generate a conscious image of the acting self” (p. 23), strongly suggests that he is talking about subjective imagination. Motor imagery seems to underlie the imaginative recreation of an internal experience of action, such as the intimate experience we have while executing an action or controlling our bodily movements. On the other hand, Jeannerod makes clear that the “action representations” involved in motor imagery can also operate during action observation (p. 39). To the extent that visually imagining an action is analogous to observing an action, one may surmise that objective imagination too involves the relevant action representations.<sup>23</sup>

What we would like to know, of course, is which action representations are common to both objective and subjective imagination of an action, and which action representations are specific to

<sup>23</sup> There is also the interesting case of observing one’s own action in a mirror. The question here is whether the observer is aware that she is observing her own action. If the answer is negative, then the re-creation of the relevant experience belongs to objective imagination. If the answer is positive, as for instances when one uses visual information to control one’s action (think of a man shaving in front of the mirror), then the re-creation of the relevant experience may also belong to subjective imagination (see footnote 11).

subjective imagination. Here as elsewhere, we think that phenomenological considerations can at least guide scientific investigations into the neural underpinnings of our ability to imagine actions, whether imaginatively observed or imaginatively executed.

### 7.3 Mindreading

We also think that much of the once-hot debate between the “theory theory” and the “simulation theory” of mindreading has missed the distinction between objective and subjective imagination, or at least its significance. Mindreading is often described as involving ways of “putting oneself in another person’s shoes” (Goldman 2006). However, as many have observed, that colloquial phrase can be used to refer to two different projects. One might try to understand either what one would do if one were in the other’s situation or what the other will do. The difference between these meanings has been conceived as depending on whether one performs the right “egocentric shift” and succeeds in mimicking the other’s mind (Gordon 1995). If we are right, there is another distinction that is crucial to simulation-based mindreading, namely the objective versus subjective imagination distinction. We might perform the right egocentric shift but imaginatively re-create only the other’s external experiences. For instance, we might imaginatively adopt the other’s visual point of view and try to understand what he or she is actually seeing. In doing so, though, we imaginatively adopt a perspective that is not necessarily the other’s perspective. Visual perspectives can be shared. It is only if we re-create at least some of the other’s internal experiences that we imaginatively adopt a perspective that can only be that of the agent. Unlike external experiences, internal experiences cannot be shared.

Why is it important for the success of mindreading that the mindreader re-creates also internal experiences of the other person? Let us consider the case of pain. To the extent that both objectively and subjectively imagining another person in pain may trigger the same resonance (affective) mechanisms, we can argue

that they are on par with respect to the imaginer’s *understanding* of the other’s experience (Gallese 2003). We surmise that the relevant difference between objectively and subjectively imagining the same painful experience concerns the *dynamics* of mindreading. Recreating an internal perspective on pain will spontaneously give rise to other subjective imaginings involving the recreation of the mental consequences of pain in the other. Objective imagination of another person in pain will likely develop in different directions. For instance, if we re-create a visual experience as of someone in pain, we will be inclined to re-create other visual experiences of the consequences of pain. More generally, someone who would be able to re-create only external experiences of pain would be blind to the internal consequences of pain. In contrast, subjective imagination promises to yield a better view of the other’s inner life as it unfolds in time.

### 7.4 Imaginative identification

In this essay, we did not explicitly mention an intriguing phenomenon in the field of imagination, namely our ability to *imagine being someone else*, or imaginative identification. For instance, we can imagine being Napoleon seeing the desolation at Austerlitz and being vaguely aware of one’s short stature (Williams 1976, p. 43). Recanati calls such cases “quasi-de se imaginings”:

I will, therefore, coin the term ‘quasi-de se’ to refer to the first person point of view type of thought one entertains when one imagines, say, being Napoleon. The type of imagining at stake is clearly first personal, yet the imaginer’s self is not involved [...]. The properties that are imaginatively represented are not ascribed to the subject who imagines them, but to the person whose point of view she espouses. (Recanati 2007, pp. 206–207)

How can an imagining be both first-personal and not genuinely (but only “quasi”) *de se*? If we can imagine being Napoleon just by recreat-



ing his visual experience of the desolation at Austerlitz, it is not obvious that quasi-*de se* imagination is necessarily first-personal. Since visual perspectives can be shared, our visual imagining can re-create anyone's perspective. In other words, objective imagination (i.e., the recreation of external perspectives) would not be sufficient to generate quasi-*de se* imaginings. Perhaps Recanati implicitly ties quasi-*de se* imagination to subjective imagination so that imagining being someone else involves the recreation of at least some internal experience. Again, in contrast to external perspectives, internal perspectives cannot be shared. For instance, a subject imagining to be Napoleon might, on the one hand, see in imagination the desolation at Austerlitz (i.e., an external perspective is re-created) and, on the other hand, be vaguely aware of his short stature and his hand in his tunic (i.e., an internal, proprioceptive perspective is re-created).

In what sense would subjective imagination be first-personal, then? One view is that the quasi-*de se* case somehow derives from the genuine *de se* case, in which we imagine ourselves having various external and internal experiences. On this view, there is an asymmetrical dependence between quasi-*de se* and genuine *de se* imagination: even if the former is not merely a type of the latter, imagining being someone else having such-and-such experiences depends on the ability to imagine oneself having these experiences.

However, our account of subjective imagination suggests an alternative view, according to which the identity of the subject need not be built into a subjective imagining. Consider the case of action again. The constraint imposed on subjective imagination, that the imagined perspective on the action can only be that of the agent, leaves open whose self is involved. That the action is my action, or someone else's, is an additional fact in the imaginary world. In other words, subjective imagination can be neutral as to the identity of the self that occupies the relevant internal perspective. As a consequence, the same neutral imagining can give rise to either quasi-*de se* or genuine *de se* imagination, depending on

the imaginary project at stake.<sup>24</sup> Subjectively imagining oneself swimming and subjectively imagining another person swimming both rest on the same type of imagining, i.e., the recreation of an internal experience of the action of swimming. We take this neutrality to be a potential advantage for our analysis of subjective imagination. Subjective imagination can be seen as a basis for the introduction of a notion of self that is conceptually on a par with other selves. In this respect, imagination acts as an antidote to solipsism.

## 8 Conclusion

In this essay, we have tried to clarify what it means to claim that imagination is experiential. As we have seen, the notion of experiential imagination is not unitary and refers to a variety of phenomena. We have focused our attention on four aspects of this notion.

- First, experiential imagination broadly means that different kinds of experiential states are re-created in the imagination (although we have remained silent about the precise way in which the experiential states are re-created).
- Second, the distinction between external and internal experiences, which is independently motivated in the literature on non-imaginative mental states, has given rise to a helpful sub-division of experiential imagination into two different ways of imagining: objectively and subjectively. *Pace* Vendler, we have argued that this contrast cannot be straightforwardly aligned with two ways in which the self is involved in our imaginings (respectively, explicitly, or implicitly).
- Third, the literature commonly acknowledges two other varieties of imagination, namely sensory and cognitive imagination.

<sup>24</sup> The notion of imaginative project comes from Williams (1976). Imaginings are particular mental states, whereas imaginative projects can bind several imaginings in a coherent endeavour of imaginative world-making. The distinction is relevant even when a single imagining is at stake. Typically, an imaginative project will impose constraints, e.g., of an intentional or stipulative sort, on what is the case in the imagined world in addition to what is explicitly represented in an imagining.

We have pointed out that they should be considered as two sub-varieties of objective imagination, insofar as they both re-create external experiences (respectively, the five senses and at least some occurrent beliefs).

- Fourth, we suggested, more tentatively, that subjective imagination too may be further divided. There would be, on the one hand, the imaginative re-creation of *non-cognitive* non-sensory internal experiences (e.g., proprioception, agentive experiences, introspection, feeling pain) and, on the other hand, the imaginative re-creation of *cognitive* non-sensory internal experiences (e.g., ascent routines).

Of course, more has to be said about the precise domain of experiential states that can be re-created in the imagination, beyond those that we have introduced in this essay. Another question is whether there is something like non-experiential imagination. It might well be that, at the end of the journey, every type of imagining can be shown to belong to experiential imagination. This would have to include the state of imagining being a descendant of Napoleon, which, as we have seen, Walton rates as non-experiential. For instance, one might suggest that it is the state of imagining believing that one is a descendant of Napoleon (understood as representing in imagination a world in which one is a descendant of Napoleon).

Eventually, an analysis of experiential imagination on the lines suggested above should throw light not only on imagination *per se*, but on connected phenomena. As we have tried to illustrate, we believe that traditional and contemporary discussions about the relationship between imagination and possibility, the nature of mindreading, and the ability to imagine being someone else, often rely on oversimplified conceptions of imagination, and that a more fine-grained taxonomy of experiential imagination is needed. We suspect that our taxonomy is beneficial to still other applications of the notion of imagination, but we have to leave the task of justifying our suspicion to another occasion.

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## References

- Anscombe, G. E. M. (1957). *Intention*. Oxford, UK: Blackwell.
- Arcangeli, M. (2011a). L'immaginazione ricreativa. *Sistemi intelligenti*, 23 (1), 59-74. [10.1422/34612](https://doi.org/10.1422/34612)
- (2011b). *The imaginative realm and supposition*. Paris, FR: University Paris 6-UPMC PhD Dissertation.
- Bayne, T. & Montague, M. (Eds.) (2011). *Cognitive phenomenology*. Oxford, UK: Oxford University Press.
- Bermúdez, J. L. (1998). *The paradox of self-consciousness*. Cambridge, MA: MIT Press.
- Bermúdez, J. L., Marcel, A. & Eilan, N. (1995). *The body and the self*. Cambridge, MA: MIT Press.
- Botvinick, M. & Cohen, J. (1998). Rubber hands “feel” touch that eyes see. *Nature*, 391 (6669), 756-756. [10.1038/35784](https://doi.org/10.1038/35784)
- Burge, T. (2005). Disjunctivism and perceptual psychology. *Philosophical Topics*, 33 (1), 1-78. [10.5840/philtopics20053311](https://doi.org/10.5840/philtopics20053311)
- Byrne, A. (2010). Recollection, perception, imagination. *Philosophical Studies*, 148 (1), 15-26. [10.1007/s11098-010-9508-1](https://doi.org/10.1007/s11098-010-9508-1)
- Carruthers, P. (2002). The roots of scientific reasoning: infancy, modularity, and the art of tracking. In P. Carruthers, S. Stich & M. Siegal (Eds.) *The cognitive basis of science* (pp. 73-95). Cambridge, UK: Cambridge University Press.
- Carruthers, P. & Veillet, B. (2011). The case against cognitive phenomenology. In T. Bayne & M. Montague (Eds.) *Cognitive phenomenology* (pp. 35-56). Oxford, UK: Oxford University Press.
- Casey, E. S. (1976). *Imagining: A phenomenological study*. Bloomington: Indiana University Press.
- Cassam, Q. (1999). *Self and world*. Oxford, UK: Oxford University Press.
- Chalmers, D. (2002). Does conceivability entail possibility? In T. S. Gendler & J. Hawthorne (Eds.) *Conceivability and possibility* (pp. 145-200). Oxford, UK: Oxford University Press.
- Cole, J. (1995). *Pride and a daily marathon*. Cambridge, MA: MIT Press.
- Crane, T. (2013). Unconscious belief and conscious thought. In U. Kriegel (Ed.) *Phenomenal intentionality* (pp. 156-173). Oxford, UK: Oxford University Press.
- Currie, G. & Ravenscroft, I. (2002). *Recreative minds: Imagination in philosophy and psychology*. Oxford, UK: Oxford University Press.
- De Vignemont, F. (2013). The mark of bodily ownership. *Analysis*, 73 (4), 643-651. [10.1093/analysis/ant080](https://doi.org/10.1093/analysis/ant080)
- Doggett, T. & Egan, A. (2007). Wanting things you don't want: The case for an imaginative analogue of desire. *Philosophers' Imprint*, 7 (9), 1-17.
- Dokic, J. (2008). Epistemic perspectives on imagination. *Revue Internationale de Philosophie*, 243 (1), 99-118.
- Dorsch, F. (2012). *The unity of imagining*. Berlin, GER: De Gruyter.
- Evans, G. (1982). *The varieties of reference*. Oxford, UK: Oxford University Press.
- Gallagher, S. (2005). *How the body shapes the mind*. Oxford, UK: Oxford University Press.
- Gallese, V. (2003). The manifold nature of interpersonal relations: The quest for a common mechanism. *Philosophical Transactions of the Royal Society of London*, 358 (1431), 517-528. [10.1098/rstb.2002.1234](https://doi.org/10.1098/rstb.2002.1234)
- Gendler, T. S. & Hawthorne, J. (Eds.) (2002). *Conceivability and possibility*. Oxford, UK: Clarendon Press.
- Gibson, J. J. (1966). *The senses considered as perceptual systems*. Boston, MA: Houghton Mifflin.
- Goldman, A. (2006). *Simulating minds: The philosophy, psychology, and neuroscience of mindreading*. Oxford, UK: Oxford University Press.
- Gordon, R. (1995). Simulation without introspection or Inference from me to you. In M. Davies & T. Stone (Eds.) *Mental simulation* (pp. 53-67). Oxford, UK: Blackwell.
- Haggard, P. (2005). Conscious intention and motor cognition. *Trends in Cognitive Science*, 9 (6), 290-295. [10.1016/j.tics.2005.04.012](https://doi.org/10.1016/j.tics.2005.04.012)
- Husserl, E. (1901). *Logische Untersuchungen. Zweiter Teil: Untersuchungen zur Phänomenologie und Theorie der Erkenntnis*. Halle, GER: Max Niemeyer.
- Jeannerod, M. (2006). *Motor cognition. What actions tell the self*. Oxford, UK: Oxford University Press.
- Jeannerod, M. & Pacherie, E. (2004). Agency, simulation and self-identification. *Mind & Language*, 19 (2), 113-146. [10.1111/j.1468-0017.2004.00251.x](https://doi.org/10.1111/j.1468-0017.2004.00251.x)
- Kind, A. (2001). Putting the image back in imagination. *Philosophy and Phenomenological Research*, 62 (1), 85-109. [10.1111/j.1933-1592.2001.tb00042.x](https://doi.org/10.1111/j.1933-1592.2001.tb00042.x)
- (2011). The puzzle of imaginative desire. *Australasian Journal of Philosophy*, 89 (3), 1-19. [10.1080/00048402.2010.503763](https://doi.org/10.1080/00048402.2010.503763)
- Kosslyn, S. M. (1980). *Image and mind*. Cambridge, MA: Harvard University Press.
- (1994). *Image and brain: The resolution of the imagery debate*. Cambridge, MA: MIT Press.

- Kosslyn, S. M., Thompson, W. L. & Ganis, G. (2006). *The case for mental imagery*. Oxford, UK: Oxford University Press.
- Kripke, S. (1980). *Naming and necessity*. Cambridge, MA: Harvard University Press.
- Martin, M. (2002). The Transparency of Experience. *Mind and Language*, 17 (4), 376-425. [10.1111/1468-0017.00205](https://doi.org/10.1111/1468-0017.00205)
- McGinn, C. (2004). *Mindsight: image, dream, meaning*. Cambridge, MA: Harvard University Press.
- Meinong, A. (1902). *Über Annahmen*. Leipzig, GER: Verlag Johann Ambrosius Barth.
- Metzinger, T. (2003). *Being no one., The self-model theory of subjectivity*. Cambridge, MA: MIT Press.
- (2013). The myth of cognitive agency: subpersonal thinking as a cyclically recurring loss of mental autonomy. *Frontiers in Psychology*, 4 (931), 1-19. [10.3389/fpsyg.2013.00931](https://doi.org/10.3389/fpsyg.2013.00931)
- Mulligan, K. (1999). La varietà e l'unità dell'immaginazione. *Rivista di Estetica*, 11 (2), 53-67.
- Nichols, S. (2006). Imaginative blocks and impossibility: An essay in modal psychology. *The architecture of the imagination. New essays on pretence, possibility, and fiction* (pp. 237-256). Oxford, UK: Clarendon Press.
- Nichols, S. & Stich, S. (2003). *Mindreading: An integrated account of pretence, self-awareness, and understanding other minds*. Oxford, UK: Oxford University Press.
- Noordhof, P. (2002). Imagining objects and imagining experiences. *Mind and Language*, 17 (4), 426-455. [10.1111/1468-0017.00206](https://doi.org/10.1111/1468-0017.00206)
- O'Shaughnessy, B. (1980). *The will: a dual aspect theory*. Cambridge University Press: Cambridge, UK.
- Pacherie, E. (2007). The sense of control and the sense of agency. *Psyche*, 13 (1), 1-30.
- Peacocke, C. (1985). Imagination, possibility and experience: A berkeleyan view defended. In J. Foster & H. Robinson (Eds.) *Essays on berkeley* (pp. 19-35). Oxford, UK: Oxford University Press.
- (2014). *The mirror of the world. Subjects, consciousness, and self-consciousness*. Oxford, UK: Oxford University Press.
- Perry, J. (2011). On knowing one's self. In S. Gallagher (Ed.) *The oxford handbook of the self* (pp. 370-391). Oxford, UK: Oxford University Press.
- Pylyshyn, Z. W. (2002). Mental imagery: In search of a theory. *Behavioral and Brain Sciences*, 25 (2), 157-182. [10.1017/S0140525X02000043](https://doi.org/10.1017/S0140525X02000043)
- Recanati, F. (2007). *Perspectival thought: a plea for (moderate) relativism*. Oxford, UK: Oxford University Press.
- (2012). *Mental files*. Oxford, UK: Oxford University Press.
- Rizzolatti, G., Fadiga, L., Matelli, M., Bettinardi, V., Paulesu, E., Perani, D. & Fazio, F. (1996). Localization of grasp representations in humans by PET. 1. *Experimental Brain Research*, 111 (2), 246-252. [10.1007/bf00227301](https://doi.org/10.1007/bf00227301)
- Rizzolatti, G., Fogassi, L. & Gallese, V. (2001). Neurophysiological mechanisms underlying the understanding and imitation of action. *Nature Reviews Neuroscience*, 2 (9), 661-670. [10.1038/35090060](https://doi.org/10.1038/35090060)
- Schacter, D. L. & Addis, D. R. (2007). The cognitive neuroscience of constructive memory: remembering the past and imagining the future. *Philosophical Transactions of the Royal Society of London*, 362 (1481), 773-786. [10.1098/rstb.2007.2087](https://doi.org/10.1098/rstb.2007.2087)
- Tye, M. (1991). *The imagery debate*. Cambridge, MA: MIT Press.
- (2009). *Consciousness revisited: Materialism without phenomenal concepts*. Cambridge, MA: MIT Press.
- Vendler, Z. (1984). *The matter of minds*. Oxford, UK: Clarendon Press.
- Walton, K. L. (1990). *Mimesis as make-believe: on the foundations of the representational arts*. Cambridge, MA: Harvard University Press.
- Weinberg, J. & Meskin, A. (2006a). Imagine that! In M. Kieran (Ed.) *Contemporary debates in aesthetics and the philosophy of art* (pp. 222-235). Oxford, UK: Wiley-Blackwell.
- (2006b). Puzzling over the imagination: Philosophical problems, architectural solutions. In S. Nichols (Ed.) *The architecture of the imagination: New essays on pretence, possibility, and fiction* (pp. 175-202). Oxford, UK: Oxford University Press.
- White, A. (1990). *The language of imagination*. Oxford, UK: Blackwell.
- Williams, B. (1976). *Problems of the self: philosophical papers 1956-1972*. Cambridge, UK: Cambridge University Press.
- Williamson, T. (2008). *The philosophy of philosophy*. Oxford, UK: Blackwell.
- Windt, J. M. (2014). *Dreaming: A conceptual framework for philosophy of mind and empirical research*. Cambridge, MA: MIT Press.
- Wollheim, R. (1984). *The thread of life*. Cambridge, UK: Cambridge University Press.