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## APHANTASIA AND THE LANGUAGE OF IMAGINATION: A WITTGENSTEINIAN EXPLORATION

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People might exist who never use the expression “seeing something with the inner eye” or anything like it, and these people might be able to draw and model “out of imagination” or from memory, to mimic others etc. Such a person might also shut his eyes or stare into vacancy as if blind before drawing something from memory. And yet he might deny that he then sees before him what he goes on to draw. But what value need I set on this utterance? Should I judge by it whether he has a visual image?

(Wittgenstein, 1981, § 624)

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In one of his famous imagined thought experiments, Ludwig Wittgenstein invites us to consider the case of people who claim to have no mind's eye, no visual representations in the mind. What credit ought we give to such a claim? Should we take at face value this type of subjective report about what goes on (or fails to go on) in an individual's mind? If there were people who claimed to have no mental imagery, could we, and should we, believe them, especially in cases where they appear able to perform acts which we generally deem to rely on some type of mental imagery, such as imitating the expression of another person or drawing a face? While Wittgenstein set this out as a fictitious thought-experiment, within the broader framework of a philosophical attempt to redefine the role of imagination grammatically and move away from internalist conceptions of mental representation,<sup>1</sup> the problem has taken on new meaning with the discovery that an important number of individuals have a condition that Zeman, Dewar and Della Sala (2016) coined in 2015, "congenital aphantasia"—an absence, from birth, of visual mental imagery (sometimes combined with the absence of other forms of mental sensory representation or quasi-perceptual experience), voluntary and most often spontaneous,<sup>2</sup> in conscious states. Although the condition had been described as early as 1880 by Francis Galton (1880), it received little attention until a 2010 publication in *Discover* magazine about the topic (Zimmer, 2010), which incited individuals with the condition to contact researchers and launched serious exploration of the condition. Understandably, this has led to debates about the condition, with some researchers suggesting that there may be a psychological component involved in certain cases (Vito, Bartolomeo, 2016). Others suggest that rather than a difficulty with metacognition or introspection (where the subject would have mental images but not be aware of them), what characterizes the phenomenon of aphantasia is "low-level sensory visual imagery" (Keogh, Pearson, 2018, p. 58).

Research on aphantasia over the past decade has largely focused on attempting to understand the physiological and neurological mechanisms of the condition. One of the major difficulties associated with the

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<sup>1</sup> For a detailed analysis of Wittgenstein on the problem of imagination, see Gauvry, 2017.

<sup>2</sup> Some subjects report spontaneous mental imagery with no capacity for voluntary mental imagery. Many individuals with aphantasia also report being able to dream in images.

study of aphantasia is the fact that as a mental phenomenon, it is difficult to observe objectively. It is therefore not surprising that the scientific community has proven skeptical about its reality. Just as Wittgenstein responded to his question as to whether we ought to believe the utterances of individuals claiming to have no inner representations that we could not rely on their claims alone (1981, § 624), so too the scientific community has demanded other forms of proof. Until recently, there appears to have been general consensus in medical and scientific literature that aphantasia could only be a rare and pathological condition; Botez et al. indeed expressed surprise in an 1985 publication reporting the case of an individual with a complete deficiency of mental imagery from birth, and especially at the fact that this person was still able to recognize objects and demonstrate cognitive capacities in the same ways as others (Botez, Olivier, Vézina, Botez, Kaufman, 1985). As a subjective phenomenon, however—and one which impacts the individual's experience of the world—a philosophical and linguistic approach to the issue may be required to come to a better understanding of the experience of individuals with aphantasia and the ways in which the condition affects them. It is this type of approach that I wish to develop in this article through a Wittgensteinian-inspired investigation.<sup>3</sup>

### An incommunicability surrounding the concept of mental imagery?

Speaking about mental phenomena has always been problematic, both in philosophical and in scientific literature, and fraught by the methodological problem of having to rely on subjective reports. This occasioned a generalized discredit of the notion of mental imagery, until more recent techniques developed objectively measurable methods of study, and led to a resurgence of the concept (Pearson, Naselaris, Holmes, Kosslyn, 2015). Current debates (Tye, 1991) in cognitive sciences and philosophy revolve around the pertinence of the notion of mental imagery, and the question as to whether mental representations are essentially propositional or imaged in nature. With the increasing attention to conditions such as aphantasia and hyperphantasia (hyper-vivid mental imagery) in research in cognitive sciences, Joel Pearson and Stephen M. Kosslyn have recently argued that it

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<sup>3</sup> It should be noted that I will not be drawing directly on Wittgenstein's analysis of the imagination or of representation here, but merely on his method.

is time to put an end to the imagery debate and recognize the “heterogeneity of mental representations” (Pearson, Kosslyn, 2015).

The aim of this article is not to take a stand on the imagery debate, but rather to offer a Wittgensteinian critique of the debate itself, suggesting that what has been understood as an empirical problem of understanding the nature and functions of mental representations may really be a grammatical one (i.e., a problem of communicating meaningfully about mental imagery among individuals with varying experiences of mental images and meaningful use of related concepts), or at the very least, may be confused by our grammar, or the apparent conformity of our language, which leads to conceptual confusions. As Bill Faw has argued, one of the difficulties inherent in the literature on mental imagery, and the two competing claims that either mental images play a fundamental role in all cognitive processes, or that no one thinks in mental images, seems to arise from the assumption “that what is in one’s own mind is in everybody’s mind” (Faw, 2009, p. 45). And yet paradoxically, the subjective perspective at the origin of many theories about mental phenomena gives rise to skepticism about subjective claims as such. Debates around mental imagery often call into question the subject’s claims or knowledge about himself and what goes on in his mind. Faw remarks, notably, that one of the challenges he has often encountered is outright “disbelief that I (or anyone) *can be* a wakeful non-mental-imager—that I must be mistaken (or worse!) when I report that when I close my eyes I see nothing” (Faw, 2009, p. 46).

The disbelief or discredit that is thrown upon statements about one’s internal states or mental phenomena opens up to an important question: is it possible to communicate meaningfully about the “inner” or the “mental”? Wittgenstein, in the *Philosophical Investigations*, argues that if “language is to be a means of communication there must be agreement not only in definitions but also (queer as this may sound) in judgments” (2001, § 242). As an external medium, language therefore can never be purely “private” (Wittgenstein, 2001, § 243), it must always rely on external criteria for measurement. Wittgenstein’s point, of course, is not to deny that there are such things as inner representations or sensations, but rather that our ability to identify these relies upon the use of shared public language. He questions whether it would make sense to say that pain is something private, “that it is only from my own case that I know what the word ‘pain’ means” (Wittgenstein, 2001, § 293). The idea that pain is something private or internal, although

fundamentally anchored in our assumptions, must be called into question by the way in which we learn to identify pain, use expressions, and generally communicate through our language games (i.e., “language and the actions into which it is woven” [Wittgenstein, 2001, § 7]).

This, however, does not entail that Wittgenstein is a “behaviorist in disguise” (2001, § 307). What Wittgenstein is pointing to in these examples is, to the contrary, the fact that what we often take to be empirical or epistemological problems—problems about *knowing* what goes on in the mind—ought to be analyzed differently. The question is not whether we all share the same inner experiences or sensations, whether we all identify exactly the same sensation as pain or see the color red in the same manner, but whether we are able to meaningfully express ourselves and communicate with others through our language use. Yet it remains a real question whether concepts relating to inner states can be understood by someone who has never experienced them. Wittgenstein asks: “Could someone understand the word “pain”, who had *never* felt pain?—Is experience to teach me whether this is so or not?—And if we say “A man could not imagine pain without having sometime felt it”—how do we know? How can it be decided whether it is true?” (2001, § 315).

Wittgenstein offers no clear response to these queries, yet he suggests that the problem is not essentially one of empirical proof. To return to the problem of aphantasia, I would suggest much of the skepticism about the absence of mental imagery arises from impossible demands for justification that what individuals report about their own mental states is indeed true. Questions that persons who claim to have no capacity for mental imagery often encounter both from scholars and non-scholars revolve around incredulity that anyone could be able to perform normal daily tasks, such as identifying colors or recognizing shapes and faces, if they have no inner model or representation to compare them to. These individuals’ outward ability to *behave* in certain ways leads to the conclusion that they must also possess the *inner* or mental capacities that most associate with the ability to perform certain acts. When they affirm that they do not, they are then asked to justify how they can perform these activities without the assumed necessary capacity—justification which they are generally not able to provide.

What is often presented as an epistemological problem ought perhaps instead to be understood as a question of grammar in the Wittgensteinian sense, or a problem of meaningful language use. Wittgenstein directly

evokes the problem of imagination: “One ought to ask, not what images are or what happens when one imagines anything, but how the word ‘imagination’ is used” (2001, § 370). Aphantasia presents us with an interesting path for exploring the issue, since it poses a serious challenge to our language games: the person with aphantasia who attempts to describe his condition to others who do have capacity for mental imaging can only do so by taking up the language games of those with mental images—by making reference to concepts and expressions which he has no experience of, and thus perhaps to which he does not associate any specific meaning. If we admit that imaging is indeed a specific type of activity or process, distinct from other faculties such as thought and perception,<sup>4</sup> or activities such as drawing or narrating, then we must assume that the process cannot be fully understood by someone who does not have the capacity to engage in it. Although such a person may be able to acquire a certain conception of what is being referred to by the term “mental images” by analogy through reference to visual impressions or external images (drawings, etc.), he may very well have no full grasp of the concept of mental images in the same manner as a person for whom these are an integral part of his mental life. Would he then be able to communicate meaningfully about the concept?

One of the astounding facts about the discovery of the prevalence of this condition is that adult individuals who learn about it may come to realize that their whole lives, they have been hearing, reading, and often themselves using expressions such as “imagination,” “seeing in the mind,” “hearing in the head,” or “visualization” while having a completely different conception of these concepts from others. This was indeed my own case, like many other people with the condition who have reported that they only learned there was something different about them when they read or heard about the discovery of aphantasia, or that they had noticed something different in response to the ways in which others *use expressions* like mental image, seeing in the mind, etc., but had not given much thought to the matter. Before stumbling upon the notion, it had not ever occurred to me that “visualizing” was something that other individuals could actually do, that it corresponded

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<sup>4</sup> Indeed, the real aim of Wittgenstein’s remarks about imagination is to offer a grammatical account of how imagination is distinct from both visual impressions (perception) and thought—he articulates ways in which the grammar of imagination is specific, insofar as it is related to the will (one can call up an image at will, whereas one cannot will to ‘see’ an object that is not present), and to creative activities.

to a particular type of mental activity which I myself had never engaged in; in other words, that it was not merely a metaphorical way of expressing a more general command to “think about” something, but corresponded to a distinct type of mental activity.

This example is of course anecdotic, yet it opens up to a serious philosophical consideration as to how individuals such as myself, who have never had any type of visual representations in the mind, play the ordinary language games involving expressions such as “seeing things in the mind’s eye”, or respond to orders such as “visualize the face of your friend.” The language of imagination is prevalent everywhere in daily life, we are constantly solicited to “represent, “imagine” or “visualize.” How is it, then, that some individuals are able to hear and even use these expressions themselves, without realizing that they are not referring to the same experience or activity that others are engaging in? How is it possible that it does not occur to them (as it had not to me) that these words have a meaning for others which is absent for them? How is it possible that neither these individuals themselves, nor their multiple interlocutors, had ever realized that they were not understanding one another? For as Wittgenstein points out, understanding the meaning of an expression or an order is not a merely conceptual endeavor—it requires being able to act in particular ways, being able to respond through particular forms of behavior. As Wittgenstein writes: “Suppose I give someone the order “Imagine a red circle here”—and now I say: understanding the order means knowing what it is like for it to have been carried out” (2001, § 451). A person with no capacity for generating mental images would have no means of knowing “what it is like” to produce such a mental image. He would not be able to respond to the order, or even, I would suggest, understand it.

However, this failure to understand may not be in any way evident outwardly, and this is perhaps one of the real challenges with regard to understanding mental processes. Wittgenstein argues that an “‘inner process’ stands in need of outward criteria” (2001, § 580), and yet the case of aphantasia challenges the possibility that such outward criteria may be readily available for determining whether our concepts about the inner or the mental are really understood. This fact seems to be at the heart of the skepticism surrounding aphantasia: individuals with aphantasia do not act in *outwardly* different ways in daily life from individuals with a capacity for producing mental images, the condition may not even constitute a notable difference

for them. This could incite one to hypothesize that mental imagery does not play as significant a role as much research has suggested, or perhaps no role at all. This hypothesis fails, however, to take into account the fact that the loss of mental imagery in individuals who previously had this capacity provokes a strong perturbation of behavioral responses and psychological distress, suggesting that mental imagery, for those who have it, does play an important role. It also fails to consider significant research about the role that mental imagery plays in many aspects of human life, such as the development of motor skills through the use of visualization techniques (Fontani, Migliorini, Benocci, Facchini, Casini, Corradeschi, 2007), skills acquisition, language comprehension and abstract reasoning (Kosslyn, Behrmann, Jeanerod, 1995), or decision-making processes (Gaesser, Schacter, 2014) and interpersonal communication (Storlie, 2015).

Rather than discredit the notion of mental imagery, therefore, it appears imperative to take into consideration the variety of human experience and mental or cognitive processes, and to attempt to understand how outward behavioral patterns may mask significant differences amongst individuals. To do this, we must take into account the ways in which our individual experience leads us to draw general conclusions that we ought to call into question. While more reserved about the role of personal experience in the *Philosophical Investigations*, many of Wittgenstein's notes in his *Remarks on the Philosophy of Psychology* suggest that when speaking about mental phenomena, the conclusions drawn "must be something you know from your own experience; and in that case it is something that may be true for you and not for other people" (1980, § 87). Bill Faw (2009) has suggested that the variety of intuitions about mental imagery, from those who defend that it is a central and integral part of every human experience to those who reject it, depend on varying abilities and capacities for producing mental images. Within the scope of this debate, however, there is a serious challenge as to how individuals with these differing capacities can communicate about these differences at all. How the experience of aphantasia can be explained to those individuals who do have (often vivid) mental images? Can this difference be communicated through language?



## The problem of (negatively) describing aphantasia

It may be difficult (or even impossible) to conceive of a world without mental images to those who have them—just as difficult as it is for subjects with aphantasia to conceive of a world where speaking of seeing something in the “mind’s eye” or hearing music in one’s head corresponds to any real experience. Skepticism about aphantasia, I would suggest, may arise in many cases from a linguistic difficulty: the fact that any attempt to describe the condition can only make use of concepts or expressions that are themselves meaningless for the individual with aphantasia. To illustrate this, we can turn to several telling descriptions of the condition offered by individuals with aphantasia. Nicholas Watkins describes his experience in the following manner:

I think the best way I can describe my aphantasia is to say that I am unaware of anything in my mind except these categories: i) direct sensory input, ii) “unheard” words that carry thoughts, iii) “unheard” music, iv) a kind of “invisible imagery”, which I can best describe as sensation of pictures that are in a sense “too faint to see”, v) emotions, and vi) thoughts which seem too “fast” to exist as words. [...] I see what is around me, unless my eyes are closed when all is always black. I hear, taste, smell and so forth, but I don’t have the experience people describe of hearing a tune or a voice in their heads.

(Watkins, 2018, p. 44)

This description poses some interesting conceptual challenges. What exactly is being referred to by the notions of “unheard words” or “invisible imagery”? If there is something there, must it not also have some perceptual content? The difficulty seems to be that the only way to describe the condition is negatively, by making reference to an *absence* of representational content or to the non-perceptual character of experiences, while paradoxically attempting to describe precisely that content in the language of perception and representation.

Another now famous report of the experience of aphantasia from Blake Ross evokes mental content in terms of thought and semantic memory:

If you tell me to imagine a beach, I ruminate on the “concept” of a beach. I know there’s sand. I know there’s water. I know there’s a sun, maybe a lifeguard. I know *facts* about beaches. I know a beach when I see it,

and I can do verbal gymnastics with the word itself. But I cannot flash to beaches I've visited. I have no visual, audio, emotional or otherwise sensory experience. I have no capacity to create any kind of mental image of a beach, whether I close my eyes or open them, whether I'm reading the word in a book or concentrating on the idea for hours at a time—or whether I'm standing on the beach itself. And I grew up in Miami.

(Ross, 2016)

While this description is perhaps less conceptually problematic, it does pose a serious linguistic challenge: what does it *mean* to claim, “I have no capacity to create any kind of mental image,” for a person for whom “mental image” does not correspond to any lived experience or coherent concept? What does it mean to be able to speak only through negations about one's abilities (or their absence)? It is apparent here that the individual with aphantasia who is asked to describe his condition finds himself in the difficult position of attempting to explain to others what his mental states and cognitive abilities are *lacking*; he cannot communicate his experience otherwise than through concepts referring to experiences that are not his own.

Wittgenstein does not speak directly of aphantasia, but he does evoke the problem of meaningfulness with regard to related conditions which challenge the possibility for meaningful communication about mental representations. One of these is the case of synesthesia; evoking the case of being able to see that “vowels have colors,” he notes that while one individual may very well grasp this directly, another person “neither perceives these colors nor understands what is meant by that change of aspect” (Wittgenstein, 1980, § 40). For a person who has never had the experience of perceiving colors associated with vowels or words, the language game of synesthesia is essentially meaningless, at best an intellectual curiosity. Another case is that of the person blind from birth, who has never had the experience of seeing; how could this person speak about sight? He may very well be able to grasp the fact that there is a difference between himself and those who can see, and even be able to speak about this difference: “A blind man can say that he is blind and the people around him sighted. ‘Yes, but doesn't he after all mean something different from the sighted man when he uses the words “blind” and “sighted”?’” (Wittgenstein, 1981, § 618). The question Wittgenstein asks here is, “can one part of language not be explained to him? Or rather not be described?” (1981, § 617). Wittgenstein offers no

definitive answer to this question, but I would suggest that, indeed, some parts of language cannot be explained, that some persons<sup>5</sup> with aphantasia *cannot understand* what it would mean to perform certain types of activities such as forming images in the mind. My intent here is of course not to suggest that aphantasia constitutes a lack of some fundamental capacity, a pathology or a handicap. It is rather to point out that the language that we use to speak about mental processes constitutes a fundamental difficulty for our ability to observe and study these.

### Language games and behavior

I have suggested that one of the major challenges with regard to explaining aphantasia is that persons with the condition are generally asked to justify or explain their absence of mental imagery, thus making reference to what can for them only be a meaningless concept. A more fruitful approach to the study of the condition and may be to examine the ways in which individuals respond or react through practice to the language games of imagination in ordinary life situations. What do they actually *do* when they are told to imagine the face of a friend or a rising sun (two standard examples from the Vividness of Visual Imagery Questionnaire)? How do they respond when they are told to “visualize”? What activities do they perform? In his remarks on language and language games, Wittgenstein consistently establishes a link between understanding and practice. Understanding a rule or an order is equivalent to knowing “how to go on” (Wittgenstein, 2001, § 179) once one has grasped the rule, understanding the meaning of a proposition or expression is equivalent to being able to use it or respond in appropriate ways. This link between language and practice can help clarify what it is like to have aphantasia, and move us away from theoretical or empirical debates about mental images, to an acknowledgement of the richness and variety of human experience.

We are only just beginning to understand the implications of research into imagination and the plurality of ways in which individuals navigate their mental experiences. Visual mental imagery has long been thought

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<sup>5</sup> Given that aphantasia is a spectrum disorder affecting individuals differently, my intent here is obviously not to generalize about the condition. As Adam Zeman has pointed out, moreover, many individuals participating in his studies “had some understanding of what imagery was like, as they *dreamed* visually” (Zeman, 2020, p. 700).

to be an essential component of human existence; as Adam Zeman notes: “Our capacity to detach ourselves from the here and now, to enter the virtual worlds of memory and prospection, the fictional world of a novel, the creative worlds of science—or just to daydream—defines our human existence. And for most of us visualization is a key facet of imagination: The discovery that some people get along fine in the absence of visualization, and indeed, apparently, without *any* sensory imagery, is striking” (2020, p. 706). That this is viewed as “striking” by many may well account for the fact that aphantasia is generally described in negative terms in scientific research, associated with “inabilities”, “lack” of certain capacities, or even pathological states. Recent research suggests, for instance, that persons with aphantasia demonstrate “a significantly lower ability to remember specific life events in general”, and “a near total inability to imagine future hypothetical events in any sensory detail” (Dawes, Keogh, Andriillon, Pearson, 2020).

While these findings may be empirically true (and, personally, I admit that I identify with them), what is problematic here is that our scientific understanding of aphantasia appears influenced by some prior preconception of what is necessary to lead a “normal” fulfilling life, have a rich sense of self or to be able to “get along” in existence, which depends on mental imagery (cf. Fox-Muratton, 2021). These preconceptions have a long philosophical history; in his phenomenology of the imagination, for example, Jean-Paul Sartre suggested that a consciousness unable to imagine could only be a consciousness “stuck in the world” (2005, p. 353), “totally bogged down in the existing and without possibility to take hold of anything other than the existing” (2005, p. 359). The intuition that a capacity for mental imagery plays a vital role in many psychological and existential constructions of self, memory and relation to the world leads to the conclusion that its absence must necessarily constitute an inability or a lack. Yet the very fact that aphantasia has gone so long unnoticed, that it does not appear to impact individuals’ lives in significant ways, and that persons with aphantasia do not consider themselves “sufferers” (Kendle, 2017, p. 3) should invite us to reconsider our theories about self, memory and the role of mental imagery, and the ways in which we interpret research findings on aphantasia and related conditions.

One way to go about this would be to interpret the differences between individuals with aphantasia and others with mental imagery in grammatical rather than cognitive or psychological terms—in other words, to recognize

that what persons with aphantasia lack is essentially the possibility to play certain types of language games related to imagination, visualization or representation. There may indeed be ways in which aphantasia entails that certain types of activities cannot be performed in response to linguistic cues—for example, such a person may not be able to respond to a command such as “visualize a ball of fire” or “call to mind your best friend’s face.” This does not mean of course that he would not be able to respond at all to this type of order, but rather that his response behavior might be distinctly different from that of individuals with mental imagery. For example, when asked to visualize a sun rising, a person capable of developing a mental image may actually see the sun in movement, while the person with aphantasia would not find this to be a meaningful order at all. If he does, he may respond in different ways, such as narratively recounting an event, or thinking about the sensations that such an experience would procure. If we suppose that the order to visualize is not merely a specific “task,” but rather intended as part of a larger goal, such as arriving at a meditative state, it may very well be that the actual visualization could have a physiological and neurological effect that the absence of visualization does not, enabling the first individual to enter a meditative state while the latter may find the cue distracting. Ought we, however, to conclude therefrom that the person with aphantasia is incapable of meditating simply because he is not able to summon up a mental image? He may very well be able to arrive at a similar state through alternative techniques. The “inability” of the person in question only concerns his responsiveness and reaction to certain linguistic cues. He may be unable to perform the specific task that is asked of him—visualizing the rising sun, here—but we ought not to conclude from this alone that he is incapable of mobilizing the type of attentiveness or attention required for meditating.

The example may appear trivial, but it takes on great importance with regard to the methodology used in cognitive sciences to study phenomena such as aphantasia and its relatedness to issues such as episodic memory. In the study published by Dawes et al. (Dawes, Keogh, Andriillon, Pearson, 2020) concluding the link between aphantasia and episodic memory, one of the tools used was an Episodic Memory Imagery Questionnaire, asking participants to recall events or scenes from their life experiences and to rate their ability to “see” these ranging from no image at all to clear as normal vision. Unsurprisingly, participants with aphantasia scored very low

on these tests—when one is incapable of forming mental images, how can one be expected to do so on command? Yet again, ought we to conclude from this that persons with aphantasia have impaired cognitive skills or memory? While they may be incapable of performing certain types of tasks, such as “reliving” an important event, “seeing” themselves at a particular point in their lives, they might rely on other alternative strategies such as semantic memory. They may be able to recite an entire conversation they had with a friend at a particular point in time, without being able to conjure up any representation of where that conversation took place. The detail and accuracy of their memories may be just as good or even superior to those of individuals with visual memory, despite the focus on different aspects of a situation. Again, the “inability” here resides in their incapacity to respond to a particular type of linguistic command and the terms in which it is formulated. Linguistic cues which request that persons with aphantasia imagine, represent or visualize are not ones to which they can respond, but there are no grounds for us to make any further conclusions from this fact.

The problem, I would suggest, is that all research on mental imagery and its consequences relies precisely on the language of mental imagery, of imagining, visualizing or representing in the mind’s eye, and that these “language games” are ones that persons with aphantasia cannot play. They impose a non-symmetrical dialogue where the person with aphantasia is asked to account for or explain his condition and his experiences in terms which may be meaningless to him, or to perform tasks of which he is incapable. It is just as meaningless to ask a person with aphantasia to imagine a beach as it is to ask a blind person to see the beach that is before him. And yet we do not conclude that the blind person, simply because he is unable to perform this task, has less knowledge of the beach than others, merely that his experience and the sensory pathways he uses to acquire this knowledge may be different.

### The need for an account of the variability of human experience

I am not suggesting that there may not be significant ways in which aphantasia might affect an individual’s experience, but rather that the common focus on negative description or understanding aphantasia through the “lack” of mental imagery or “inabilities” limits our possibilities for grasping these differences. As Wittgenstein writes: “It is conceivable, [...] and also important for us, that some people might have a completely different

relation to pictures than we do” (1980, § 481). What we can learn from cases such as aphantasia is that there is an extreme variability and diversity in human (mental) life and experience. Beyond aphantasia, this also includes of course the great variability in capacity for forming vivid mental representations among individuals. The belief that mental images play certain roles or have certain functions leads us to assume that their absence must be a deficiency or defect, and yet as Wittgenstein points out there is no way of demonstrating that there is any causal link between what might be going on in the mind and our abilities to perform certain actions, and no way of guaranteeing that our inner states and representations are consistent and effectively correspond to our outward judgments. Why do we assume, for example, that being able to identify a color or a shape is a capacity that relies on some mental representation—having a “sample” of that color or shape somewhere in the mind? Even if we do have one, how could we be certain that this sample remained consistent and really could inform us about the outside world? As Wittgenstein remarks, even if this were the case, my already carrying the pattern around with me would be only a causal explanation” (1981, § 210) but could not instruct us about how such activities could be meaningful for us. Why do we assume that “knowing” and “recognizing” rely on internal representations—that to be able to recognize a person we must have some type of mental image of that individual stocked in the mind to consult? Yet, Wittgenstein asks:

Couldn't there be people who could describe a person's features in minute detail from memory, who would even say that they now suddenly know what he looks like—but who would empathically deny, when they were asked, that at that moment they in any way “saw” the person “before them” (or anything like that)? People who would find the expression “I see him before me” *totally inappropriate*? This seems to me to be a very important question. Or even: the important question is whether this question makes sense. – What reason do I have, after all, to believe that this is not the case for all of us? Or, how can I decide the question whether someone else (I'm excluding myself for the time being) is really “forming a visual image” of somebody, or is merely able to describe him in visual terms (to draw him, etc.).

(Wittgenstein, 1980, § 144)

Wittgenstein's point here is not that mental imagery does not exist, but rather that there is no proof or reason to suppose that it is necessary. A person who claims to have no mental representations, to never see anything in the mind's eye, may very well be able to recognize his friend on the street, offer a description of him or even produce a recognizable drawing. And likewise, someone with a capacity to form mental images may not be able to accomplish all of these tasks. Why do we assume that these capacities depend on the ability to retain a mental image? A person lacking the capacity to form a mental image may very well not be able to "see the schematic cube as a cube" in his mind, but Wittgenstein notes that it "would not follow from this that he could not recognize it as a representation (a working drawing for instance) of a cube" (2001, § 183).

There are of course documented cases of individuals for whom the loss of mental imagery has entailed severe cognitive and psychological difficulties. One example is the case of Monsieur X., a patient of Jean-Martin Charcot, who suddenly lost all memory of forms and colors and ability to call up visual mental images (Bernard, 1883). Monsieur X. was then unable to recognize his family and even himself, and the city in which he lived. His loss of mental representation led to great emotional turmoil, and daily astonishment at what he saw around him, with his impressions seeming always novel. The case of Monsieur X. seems to reflect much of the research and speculation about aphantasia today—questions about how it is that an individual can identify objects or recognize others or his surroundings, and the relation between mental imagery and memory and projection. One might well question the pertinence of this analogy, however, on the grounds that Monsieur X.'s case is a quite particular one: it is that of an individual who had previously relied his on photographic memory, and the loss of this imagery requires that he relearn to navigate his environment. Persons with congenital aphantasia, who have never experienced visual imagery, will have developed these alternative cognitive strategies from birth.

What we can learn from this case, however, is that there does appear to be a significant *experiential* difference for which we have yet to offer an account between modes of consciousness involving inner vision or mental images and a world without a mind's eye. The loss of mental imagery, as Monsieur X. himself reports, is a loss of "meaning," more than of skill or capability; when asked to imagine three different objects, he responds that "although knowing perfectly well how to distinguish the three very different



things and knowing well what is being referred to, they have no meaning for me from the perspective of inner vision” (Bernard, 1883, p. 11). This may represent a serious challenge to Wittgenstein’s famous “beetle in the box” argument,<sup>6</sup> which suggests that what is inner or mental “has no place in the language-game at all, not even as a *something*”, since what is in the box may be constantly changing, or “the box might even be empty” (Wittgenstein, 2001, § 293). Aphantasia could be described as a state in which the box is always empty; and although this may not affect individual’s capacities or outward behavior, it is clear that it does entail a significant difference in meaning that has yet to be fully explored.

What we ought to learn from cases of aphantasia is that we, as human beings, experience meaning in a multiplicity of ways. As Wittgenstein remarked: “We remain unconscious of the prodigious diversity of all the everyday language-games because the clothing of our language makes everything alike” (2001, § 191). Recent scientific research on aphantasia and related conditions have made important contributions to our enhanced understanding of the “remarkable, often unsuspected, variety of [...] imaginative experience” (Zeman et al., 2020, p. 438) and opened up to greater possibilities for taking into account the diversity and variability of human life. However, it is important that the research methodologies used also take into account their own limits and the ways in which they may influence, through their language games, the types of responses they solicit and conclusions they formulate.

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<sup>6</sup> Wittgenstein invites us to consider what the consequences would be if we assumed that “private” sensations such as pain were identifiable in the way objects might be if we assumed everyone possessed a particular sample in the mind (or in a box) to which they referred—in this case, a beetle. The question he asks is whether it makes sense to think that this could play some role in our language games, since if we all had a box which no one else could look into, how could we guarantee that what was in the box was not something different for everyone, or even whether the object in any given individual’s box was not constantly changing?

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### Abstract

Congenital aphantasia, or the complete absence of mental imagery, is a topic that has recently aroused the interest of researchers in many fields including philosophy, psychology, and cognitive sciences. While it is generally supposed that we all have

rich mental lives full of imaged representations, estimates suggest 2–3% of the population may have never formed an image or seen “in the mind’s eye.” This paper aims to address the skepticism surrounding aphantasia, the challenges in communicating about mental imagery, and the research methods used in cognitive sciences today through the lens of Wittgenstein’s philosophy. The paper argues that 1) communicating about mental imagery involves language games that persons with aphantasia may not be able to play (i.e., makes reference to expressions and concepts that are meaningless for them, such as “visualize,” “form an image,” etc.); 2) that as a consequence aphantasia, in present research, is only describable negatively (as lack or incapacity); 3) that rather than a cognitive or a psychological issue, aphantasia can be understood as a grammatical one; and 4) that we need to find new ways to explore the impact of conditions such as aphantasia, and to be able to appreciate the rich diversity and variability of human experience.