

# *Representationalism, Double Vision, and Afterimages: A Response to Işık Sarihan*

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*In his paper “Double Vision, Phosphenes and Afterimages: Non-Endorsed Representations rather than Non-Representational Qualia,” Işık Sarihan addresses the debate between strong representationalists and qualia theorists (Sarihan 2020). He argues that qualia theorists like Ned Block and Amy Kind who cite double-vision, afterimages, etc., as evidence for the existence of qualia are mistaken about the actual nature of these states. According to Sarihan, these authors confuse the fact that these states are non-endorsed representational states with the fact that they are at least partly non-representational. I argue that Sarihan’s argument contains gaps that suggest that he misidentifies the mistake that leads these qualia theorists to their conclusion. In my view, these qualia theorists do not confuse the fact that the states in question are non-endorsed states with the fact that they are non-representational, but rather mistake certain representational contents, or certain aspects of these contents, for qualia.*

**Keywords:** Perception, representationalism, qualia, afterimages, double vision.

## 1. *Introduction*

In his paper “Double Vision, Phosphenes and Afterimages: Non-Endorsed Representations rather than Non-Representational Qualia,” Işık Sarihan addresses the debate between strong representationalists and qualia theorists (Sarihan 2020).<sup>1</sup> Strong representationalists hold that the phenomenal character of an experience is identical with a cer-

<sup>1</sup> Strong representationalists include, for example, Tye (1995), Dretske (1995), and Lycan (1996). Qualia theorists include, for example, Boghossian and Velleman (1989), Block (1996), and Kind (2008).

tain type of non-conceptual representational content. As Sarihan puts this: “Representationalism or intentionalism, in its stronger variety, is the theory that all introspectible qualitative aspects of a conscious experience are qualities that the experience non-conceptually represents the world to have” (Sarihan 2020, 7). Qualia theorists hold that the phenomenal character of a perceptual experience outstrips its representational content and, as a consequence, is at least partly constituted by qualia. Qualia, in the relevant sense, are non-representational and intrinsic properties of experiences. One important set of arguments in favor of qualia is based on the phenomenology of specific kinds of visual states, such as double-vision, afterimages, blurriness, and experiences of phosphenes. According to these arguments, introspection reveals that it is not possible to characterize the phenomenal character of these kinds of states exclusively in terms of their representational contents.

Focusing mainly on Block and Kind, Sarihan aims to undermine the cogency of these arguments (Block 1995, Kind 2008).<sup>2</sup> In particular, he argues that those authors who cite double-vision, afterimages, etc., as evidence for the existence of qualia are confused about the actual nature of these states. According to Sarihan, these states are “fully representational,” that is, their phenomenal character is exhausted by their representational contents. Yet, the fact that these states have representational contents that are inconsistent with the typical behavior of physical objects has the consequence that subjects do not endorse them at the cognitive level. Those authors who cite these states as evidence for qualia therefore confuse the fact that they are non-endorsed representational states with the fact that they are at least partly non-representational.<sup>3</sup>

In order to support this conclusion, Sarihan argues for two main claims. The first claim is that those states that are typically cited in support of qualia are fully representational states that automatically fail to be endorsed at the cognitive level. Call this the *non-endorsement claim*. The second claim is that authors who appeal to these kinds of states in order to argue for the existence of qualia confuse the fact that they are automatically non-endorsed representational states with the fact that they are non-representational. Call this the *confusion claim*.

I find the paper very interesting, and I very much enjoyed reading it and thinking about the issues raised in it. I agree with Sarihan that the phenomenological considerations regarding double vision, afterimages, etc. do not provide conclusive support for the existence of qualia. I also share Sarihan’s strong representationalist leanings and believe that these kinds of visual states are fully representational. But I think that the main arguments for the non-endorsement claim and the con-

<sup>2</sup> Sarihan also considers the arguments put forward by Boghossian and Velleman (1989).

<sup>3</sup> As Sarihan puts it: “these authors themselves describe such states as if they were non-endorsed representations, before making the logically illegitimate move that they are non-representational” (Sarihan 2020: 8).

fusion claim contain gaps. These gaps suggest that Sarihan misidentifies the mistake that leads qualia theorists to their conclusion. In my view, qualia theorists like Block and Kind do not confuse the fact that the states in question are non-endorsed states with the fact that they are non-representational, but rather mistake certain representational contents, or certain aspects of these contents, for qualia. As I will try to make clear throughout this paper, our disagreement is grounded in a fundamental difference in how we analyze the contents of the states in question.

I proceed as follows. In section 1, I focus on double vision to show that there is a gap in the argument for the non-endorsement claim. Analyzing this gap suggests that those states of double vision that are typically cited in favor of qualia are not accurately characterized as non-endorsed states. In section 2, I focus on afterimage experiences to argue that authors who cite these states in favor of qualia may not be confused in the way Sarihan suggests. My discussion in this section also suggests that these authors accept a problematic premise, namely that we can experience visible properties only as instantiated either in material objects or in experiences. In section 3, I provide a sketch of a representationalist account of afterimage experiences in order to show why this assumption might be false. I propose that afterimage experiences represent a special kind of object, namely what Martin has called a “pure visible” (Martin 2012).<sup>4</sup> If this account is on the right track, it would support the conclusion that those authors who cite afterimage experiences as evidence for qualia mistake certain representational contents, namely certain pure visibilia, for qualia.

Three brief comments. First, in this paper, I focus exclusively on Sarihan’s most important examples, that is, on double vision and afterimages. I will not address other kinds of visual states, such as blurry vision and phosphenes. In my view, these kinds of states require separate representationalist accounts. Second, the goal of section 3 is to sketch a representationalist account of afterimage experiences that, if correct, explains why Block and Kind mistake certain representational contents for qualia. I cannot give a full defense of this account in this paper, however. Third, qualia theorists are often motivated by theoretical rather than phenomenological considerations. However, in this paper I follow Sarihan and focus exclusively on phenomenological considerations.

## 2. *The argument in favor of the non-endorsement claim*

The non-endorsement claim holds that experiences involving double vision, afterimages, blurriness, and the like, are automatically non-endorsed mental states that are fully representational. This claim sub-

<sup>4</sup> Phillips has developed a closely related proposal in great detail (Phillips 2013). He also argues that experiences of afterimages represent pure visibilia. But, as I will make clear later on, my proposal differs in some details from his.

divides into two separate claims, namely (i) the claim that these kinds of states are *fully representational*.<sup>5</sup> A fully representational state is one whose phenomenal character is exhausted by its representational content. And (ii) the claim that these kinds of states are *automatically non-endorsed states*.<sup>6</sup> A non-endorsed state is a state whose representational content is not endorsed at the cognitive level, and the non-endorsement is automatic if it is not a result of a conscious inference on the part of the subject.<sup>7</sup>

In order to support claim (i), the claim that these kinds of states are fully representational, Sarihan considers a number of scenarios involving double vision, afterimages, phosphenes, and floaters. I will focus here on double vision. I will consider afterimages in the next section.<sup>8</sup> Sarihan describes the following scenario. Suppose that you are standing on the roadside at night waiting for your bus after a party at which you had a bit too much to drink. As you look down the road, a motorbike approaches. However, since your eyes are a bit out of focus, due to the influence of alcohol, you see two headlights moving towards you in unison. Since it is entirely dark so that you do not see anything else in your visual field, you do not notice that this is a case of double vision.<sup>9</sup> Consequently, you automatically endorse the content of this experience at the cognitive level and form the belief that a car is approaching.<sup>10</sup> Note, if it had been lighter outside, you would have noticed that the entire scene had doubled, which would have prevented your cognitive endorsement of its content.

If I understand Sarihan correctly, we can state the argument for claim (i) as follows. In those cases in which the subject endorses the

<sup>5</sup> The argument for this claim remains somewhat implicit in the text. But I hope that my representation of it is fair.

<sup>6</sup> Sarihan defines a non-endorsed state as a state that has non-endorsed representational content. He writes: “A mental state has non-endorsed representational content if it has truth-evaluable content but the subject doesn’t take the content as true on a higher, cognitive level” (Sarihan 2020: 11).

<sup>7</sup> As Sarihan puts this: “[A] non-endorsement of an automatic sort does not require conscious deliberation on the side of the subject regarding the illusoriness of the experience in question” (Sarihan 2020: 14).

<sup>8</sup> I believe that my conclusions can be extended to phosphenes and floaters.

<sup>9</sup> I would like to point out that this scenario is somewhat problematic. The scenario’s purpose is to convince us that you have a non-veridical visual experience that represents two headlights moving towards you. But, since you are intoxicated, it is possible that you misinterpret the content of a veridical visual experience at the cognitive level. I describe later on in this paper how experiences of double vision may be veridical. For now, I would like to point out that it is possible to modify the scenario in a way that avoids the problem. Suppose, for example, that, unbeknownst to you, we anesthetize some of your ocular muscles, so that you see double. We also present you with a display containing one single dot that does not give you any indications that you see double. In this case, it is plausible to say that your visual experience represents one dot as two.

<sup>10</sup> I simplified here. You may first have to endorse a more basic content, such as the content that two headlights move in unison towards you.

content of a state of double vision like in the motorcycle example, we have no reasons to attribute to this state any non-representational aspects. We can explain the subject's cognitive endorsement completely in terms of ordinary representational contents. Specifically, we can say that a state of double vision represents one thing, or one scene, as two. This is a non-veridical visual representation of the scene in front of the subject, but there is no need to appeal to non-representational aspects in order to account for its phenomenal character.<sup>11</sup> If we assume further that this holds for the contents of all states of double vision, it follows that we have no good reasons for saying that they involve qualia.

However, as it stands, the argument does not actually allow us to conclude that *all* states of double vision, including those that are usually cited in support of qualia, are fully representational. Even if states of the kind mentioned in the motorcycle example are fully representational, it is still possible that other states of double vision are not fully representational. In order to arrive at the conclusion that all states of double vision are fully representational, the argument needs an additional premise. Sarihan needs to show that all states of double vision represent one thing, or one scene, as two. As far as I can see, Sarihan does not state this premise explicitly and does not provide an argument for it. This is a gap in the argument because one might argue that those states that are usually cited in support of qualia do not represent one thing, or one scene, as two. Let me explain.

In the case of the motorbike example, it is plausible to say that your visual experience represents two headlights. Since there is only one headlight in front of you, your visual experience is non-veridical. In contrast, when you press against your eyeball, as Boghossian and Velleman suggest, you see the entire scene before your eyes double. Yet, in this case, it is not clear that you see two scenes when you see the scene before your eyes double. In fact, Boghossian and Velleman deny this. Describing a case in which you press against your eyeball while looking at a line of text, they write that "you cannot even force the resulting experience into representing the existence of two lines, even if you try" (Boghossian and Velleman 1989: 87). Boghossian and Velleman do not ask you to convince yourself that you see two lines. Their target is not a cognitive state. Rather, they speak about the phenomenal character of the visual state. It does not look to you visually as if there are two lines on the paper. Since this is a plausible description of the phenomenology of afterimage experiences, we would need an argument for the claim that these states represent one thing, or one scene, as two.

I now turn to the argument for claim (ii), that is, for the claim that states of double vision are automatically non-endorsed states. Let me first say a bit more about the notions of cognitive endorsement and non-endorsement. I will focus on visual states. It seems to me that cog-

<sup>11</sup> Incidentally, so Sarihan, this might also explain why qualia theorists do not cite such scenarios as evidence for qualia.

nitive endorsement is best understood as a dispositional notion, namely as the disposition to form various beliefs regarding the contents of visual states.<sup>12</sup> For example, when your visual state represents a blue cup in front of you, you will be disposed to endorse statements such as “This is a cup,” “This cup is blue,” and “The cup is right in front of me.” Moreover, this disposition is automatic if it does not require a conscious inference on your part. Automatic cognitive endorsement is defeasible. In the case of the Müller-Lyer Illusion, your visual state represents the two lines as being unequal in length. This does not change when you learn that they are equal. But you will no longer endorse the statement that they are unequal. Automatically non-endorsed visual states function in a different way. The representational contents of these states do not create the disposition to endorse statements about them in the first place. The reason for this is that the contents manifestly conflict with the behavior of physical objects.

Sarihan’s argument for the non-endorsement claim now consists of a description of the contents of the relevant experiences of double vision that explains why they do not dispose their subjects to endorse them.<sup>13</sup> He characterizes these contents as follows.<sup>14</sup> Often times, when you see double, the entire scene doubles. Since the physical world does not suddenly double, you know that you are seeing double. Moreover, when you see double, solid, non-transparent physical objects are often superimposed on each other and appear semitransparent. But since solid, non-transparent physical objects cannot occupy the same space and do not suddenly become semitransparent, you know that you are seeing double. In general, the contents of those states of double vision that are usually cited in favor of qualia conflict with our knowledge about the behavior of physical objects and this explains why we do not endorse them at the cognitive level.

In order to bring out my worries about this argument, it will be helpful to consider again how Boghossian and Velleman describe double vision. I already addressed cases in which you see double when you press against your eyeball. If Boghossian and Velleman are right, you see one line double without, however, seeing two lines. It is therefore plausible that the contents of these states are accurate and dispose you to endorse them at the cognitive level. But Boghossian and Velleman also consider more ordinary cases. They write, “Similarly, you can see nearby objects double by focusing on distant objects behind them,

<sup>12</sup> Sarihan speaks of a belief-inducing function of visual states (Sarihan 2020: 8). In my view, this is best understood as the disposition to form beliefs about the content.

<sup>13</sup> We can also understand this argument as an inference to the best explanation. Representationalists can give a better explanation than qualia theorists for why we do not endorse these kinds of states.

<sup>14</sup> According to Sarihan, this should be taken as speculative psychology. Sarihan leaves open the possibility that empirical research might lead to a different analysis of the contents of experiences of double vision (Sarihan 2020: 14).

and yet you cannot get yourself to see the number of nearby objects as doubling” (1989: 94). Here, too, it is plausible that the contents of these states are accurate and dispose you to endorse them at the cognitive level. The following example makes this clearer.

Suppose you are walking through a forest. As you look around, you focus on trees at varying distances. Now suppose you first look at one particular tree that is very close to you and then focus on a tree in roughly the same direction that is farther away. When you do this, you see the tree that is closer to you double, but you do not see two trees. The same holds for the trees in its vicinity. Imagine the opposite were true. We would have to accept that your visual state represents different numbers of trees when you refocus your eyes. Since this is highly implausible from a phenomenological point of view, we should characterize the contents of this state in the way suggested by Boghossian and Velleman. Your visual state represents trees at different distances. When you focus on trees that are farther away, you see the ones that are closer to you double without, however, seeing them as doubling in number. Since you have two eyes that are some distance apart from each other, this is as it should be. In other words, you enjoy an accurate experience of the trees in front of you. Based on this visual experience, you will be disposed to endorse a host of statements, such as the statement that there are trees in front of you, that there are so and so many trees in front of you (if the number is relatively small), and so on.

If what I have said in the previous paragraph is correct, we have good reasons for thinking that the states of double vision cited by Boghossian and Velleman function in an entirely ordinary way. They have accurate contents that are usually endorsed at the cognitive level. These visual states are not automatically non-endorsed states. I would therefore conclude that it is not the case that, as Sarihan claims, “the phenomenology described by Boghossian and Velleman above is better analyzed as a case of non-endorsed representation of doubleness” (Sarihan 2020: 16). Boghossian and Velleman do not confuse the fact that these states are non-endorsed with the fact that they are non-representational. In order to convince us otherwise, Sarihan would have to close the gap in the argument for claim (i) and show that all states of double vision represent one thing, or one scene, as two.<sup>15</sup> I will present a similar argument about afterimage experiences in the next section.

In spite of my criticism of the arguments in favor of the non-endorsement claim, I do not think that Boghossian and Velleman have made a conclusive case for qualia in the cited paper. My argument so far suggests that we need to distinguish between two kinds of states of double vision. The first kind is illustrated by the scenario with the motorbike. In cases like this, I agree with Sarihan that you have an

<sup>15</sup> Alternatively, Sarihan could give a different argument for the claim that those states of double vision that are typically cited in favor of qualia are fully representational.

inaccurate visual experience of two objects. The second kind is illustrated by the forest example. In these cases, you enjoy an accurate visual experience. In the first scenario, you are not visually aware that you see double. In the second scenario, in contrast, it is phenomenally manifest to you that your experience involves double vision. Representationalists therefore have to identify those aspects of visual contents that make it manifest to you that you are seeing double without seeing two objects or scenes. Since a number of representationalists have provided plausible accounts of this, Boghossian and Velleman would have to exclude these options in order to make a convincing case for qualia.<sup>16</sup>

### 3. *The argument in favor of the confusion claim*

The confusion claim holds that Block and Kind confuse the fact that those states that are usually cited in support of qualia are automatically non-endorsed states with the fact that they are non-representational. In this section, I will address afterimages in order to argue that Block and Kind may not be confused about this.

Let me first quote the relevant passages from Block and Kind. Block writes: “[Afterimages] don’t look as if they are really objects or as if they are really red. They ... look illusory” (Block 1996: 32; ellipsis in the original). And Kind writes: “But in none of these cases does it seem as if the afterimage represents something that is really there. When you close your eyes after looking at the bright light, for example, you don’t take the lingering glow to be on the inner surface of your eyelids. When you see the red afterimage against a white wall, you don’t take the redness to suggest the existence of a red dot on the page” (Kind 2008: 289). As you can see from these quotes, Block and Kind both describe afterimage experiences as illusory.

If I understand Sarihan correctly, he analyzes the mistake in Block and Kind’s reasoning as follows. Block and Kind describe afterimage experiences, using representational language. At the same time, they notice that the objects and properties referred to by these terms do not actually exist in the physical world. Consequently, they do not endorse the claim that these experiences represent material objects. But Block and Kind do not realize that the non-endorsement is a cognitive judgment and mistake it for a specific phenomenal feature of afterimage experiences, namely a feature that belongs exclusively to qualia. According to Sarihan, Block and Kind thus confuse the fact that experiences of afterimages are non-endorsed states with the fact that they are non-representational. As I stated above, I agree with Sarihan that Block and Kind make a mistake. But I do not think that they are confused in exactly the way described here. I will make two points in support of this.

<sup>16</sup> One such account can be found in Tye (2000). I also think that the account of perceptual content in Lycan (1995) can be extended to double vision.



My first point concerns the conclusion that Block and Kind confuse the fact that experiences of afterimages are non-endorsed states with the fact that they are non-representational. I have already argued in the previous section that states of double vision may not be accurately described as non-endorsed visual states. I think the same may be true for experiences of afterimages. A plausible way to interpret Block and Kind is as saying that afterimage experiences do not purport to represent material objects and their properties.<sup>17</sup> As Boghossian and Velleman put it, “afterimages are not seen as material objects, any more than, say ringing in one’s ears is heard as real noise” (Boghossian and Velleman 1989: 87). Under certain circumstances, we may mistake afterimages for real objects. Schroer, for example, reports an afterimage caused by a lightbulb, which “he immediately took . . . to be a red beanbag” (2004: 543). Schroer may have had a temporary non-veridical experience of a red beanbag. However, it is plausible that genuine experiences of afterimages are not like that, that is, that they do not purport to represent material objects. If genuine afterimage experiences manifestly do not represent material objects, their contents can be accurate and dispose their subjects to endorse them at the cognitive level. This will happen if afterimage experiences represent their objects as what they are, namely as visual disturbances. I will elaborate on this in the next section. If this is correct, Block and Kind are not confused about the fact that afterimage experiences are non-endorsed visual states.

My second point concerns the representational language. In the passage quoted above, Block describes afterimages as looking as if they are not really red. According to Sarihan, the most plausible way to interpret this is to take it to mean that something, some represented object, does not really look red. Similarly, Block describes afterimages as looking illusory. The most straightforward interpretation of this is to take it as saying that there is some brute feature of “unrealness” or “illusoriness” attached to the visually represented objects or properties, and this, so Sarihan, is best understood as saying that the experience represents some object or some property as being unreal or illusory. Third, according to Sarihan, it is also possible that Block means that something looks illusory in the sense that it is represented in a way that makes it unlikely that it exists. Similarly, Kind talks about a “lingering glow” and a “red dot,” terms that are most plausibly interpreted as referring to representational contents. On all these interpretations, Block and Kind describe experiences of afterimages as representational states. But, so Sarihan, this is inconsistent with their overall aim to argue in favor of qualia.

According to Sarihan, one might interpret Block and Kind also in a different, more charitable, way. One might argue that they use representational language in order to refer to qualia, that is, to intrinsic,

<sup>17</sup> Phillips agrees with this. He writes, for example, “[A]fterimages simply do not appear to be material objects” (Phillips 2013: 425).

non-representational features of experiences. One could then say that Block and Kind hold that an afterimage is simply a complex of qualia. However, according to Sarihan, this interpretation “has no appeal for people who, introspecting an afterimage experience, find no qualities other than those like colors that objects appear to have also in uncontroversially representational experiences, which makes it natural to think of afterimages as a special type of misrepresentation” (Sarihan 2020: 25).

I find these observations about the use of representational language important. But I do not think that these observations clearly show that Block and Kind are confused about the intended referents of their terms. It seems plausible to me that they use representational language intentionally with the aim of describing intrinsic, non-representational aspects of experiences. Sarihan correctly concludes that the phenomenological descriptions provided by Block and Kind may not convince those who do not find qualia when they introspect their own afterimage experiences. But the question at this point is whether Block and Kind are confused about the intended referents of these terms, and, as far as I can see, this may not be the case.

Sarihan comes back to the more charitable interpretation of Block and Kind’s use of representational language again towards the end of his paper. He considers the possibility of translating their descriptions into qualia theoretic terminology. He suggests, for example, that qualia theorists might use the term “red-quala” not in order to say that some object, a quale, is red, or that the quale represents redness, but rather to talk about the quale that we normally find in experiences that represent redness. Similarly, he suggests that qualia theorists might use the phrase “experiencing an afterimage” in a non-representational sense that would be similar to saying that we experience joy (Sarihan 2020: 18). A successful translation of the entire representational language into qualia theoretic terminology would lend significant strength to Block and Kind’s argument.

Sarihan raises two problems for this interpretation, however. First, he argues that it is not plausible that we will be able to give a satisfactory translation of the complete description of these experiences. He points out, for example, that it is not very plausible to translate Kind’s references to spatial relations, such as her claim that the afterimage is in front of the photographer’s face, into qualia theoretic terminology. Second, he argues that there is no apparent reason for why we should translate the representational language into a qualia-theoretical vocabulary, since “we have a simpler analysis which treats these states as illusions of an automatically non-endorsed sort” (Sarihan 2020, 30). I agree that it is implausible that qualia theorists will be able to give a satisfactory translation. I also agree that it is more plausible to take the descriptions at face value, that is, as a characterization of representational contents. But, if what I have said above is correct, these descriptions do not imply that afterimage experiences are non-endorsed states.

In my view, the most important problem with Block and Kind's argument is that they make use of an implicit assumption that is plausibly false. As I said above, we can interpret Block and Kind as saying that afterimage experiences do not represent colors and shapes as instantiated in material objects. Yet, the conclusion that these colors and shapes are therefore properties of experiences follows only if we also assume that viewers can experience visual properties only as instantiated either in material objects or in experiences.<sup>18</sup> In the next section, I will present a representationalist account of afterimage experiences that shows that there is an alternative. The representationalist can argue that afterimage experiences represent the colors and shapes as instantiated in pure visibilia.

Before moving on to the next section, I would like to summarize my argument so far. In section 1, I argued that there is a gap in the argument for the non-endorsement claim. What we would need is an argument for the claim that all states of double vision represent one thing, or one scene, as two. Absent such an argument, Block and Kind might still insist that the phenomenal character of genuine states of double vision outstrips their representational contents. In section 2, I made a parallel point about experiences of afterimages. Absent further argument, it is possible that the phenomenal character of genuine experiences of afterimages outstrips their representational content. In both sections, I also argued that these kinds of states might be accurate. If this is correct, Block and Kind do not confuse non-endorsed states with non-representational states. In order to fortify his arguments for the non-endorsement claim and the confusion claim, Sarihan would therefore have to show that those states that are usually cited in support of qualia have inaccurate contents that conflict with the typical behavior of physical objects. If we assume, however, that these kinds of states are usually accurate, it follows that the representationalist is faced with a different task. The representationalist needs to give an account of the contents of these kinds of states that explains how they can be accurate. I will give such an account for experiences of afterimages in the next section.

#### 4. *A representationalist account of afterimage experiences*

In this section, I will briefly sketch a representationalist account of afterimage experiences. My goal is to show that the implicit assumption underlying Block's and Kind's arguments in favor of qualia, that is, the assumption that viewers can experience visual properties only as instantiated either in material objects or in experiences, may not be correct. I will assume that Boghossian and Velleman are right in saying that genuine experiences of afterimages do not purport to rep-

<sup>18</sup> I believe that Sarihan is aware of the fact that the arguments put forward by Block and Kind may presuppose this assumption.

resent material objects or properties instantiated in material objects. The main task for the representationalist then is to explain how it is possible for a viewer to be aware of colors and shapes that are instantiated neither in material objects nor in experiences. In the following, I propose that afterimage experiences represent a special kind of perceptual object, namely what Martin has called a “pure visible” (Martin 2012).<sup>19</sup> More specifically, I suggest that afterimage experiences represent these pure visibilia as visual disturbances.

My argument proceeds somewhat indirectly. I begin with an analysis of shadow experiences and then consider experiences of afterimages. I argue that both shadow experiences and experiences of afterimages represent pure visibilia.<sup>20</sup> But whereas experiences of shadows represent their objects as illumination phenomena, experiences of afterimages represent their objects as visual disturbances. I would like to emphasize that I do not understand the *as-locution* here in a conceptual sense. In order to see a pure visible as an illumination phenomenon or as a visual disturbance, you do not need to possess the relevant concepts. Rather, my claim is that your experience represents its content as an illumination phenomenon or a visual disturbance non-conceptually.

Let me begin with shadow experiences. We experience shadows in many different situations. For example, we see shadows when we watch a movie that is recorded on celluloid film and projected onto a screen. But when we watch movies, we enjoy visual experiences of ordinary three-dimensional objects – cars, trees, people, etc. These experiences are not genuine shadow experiences, that is, they are not experiences of shadows as shadows. In contrast, suppose that you are walking through a snow-covered forest on a sunny day. You see the blue shadows of the trees on the smooth white surface of the snow. This is a genuine shadow experience. In the following, I will talk only about these kinds of shadow experiences.

How do we describe such an experience phenomenologically? I think that the following features are uncontroversial. First, you are aware of shapes. These shapes have a determinate location – they are *on* the snow. These shapes lack a third dimension – they are genuinely two-dimensional.<sup>21</sup> Moreover, you do not experience these shapes as properties of the snow. Second, you are aware of the blue color of the shadows. But, again, you do not experience the blueness as the color of the snow – the snow looks white all over. You also do not experience the color as blue light that illuminates the snow. Experientially, the color belongs

<sup>19</sup> See also Phillips (2013).

<sup>20</sup> Phillips also argues that shadows are pure visibilia (Phillips 2018).

<sup>21</sup> One might object here that shadows are sometimes experienced as three-dimensional. This is true. For example, we sometimes experience silhouettes as three-dimensional. Moreover, moving shadows may imply three-dimensionality. On my account, these kinds of experiences are not genuine shadow experiences, but rather illusions, much like movies.

to the shadows. Genuine shadow experiences, we can say, represent colored two-dimensional shapes. Note that I use the term “color” here to include both chromatic and achromatic colors.

However, this does not exhaust the phenomenology of genuine shadow experiences. Even though you do not experience the blue color as blue light that illuminates the snow, you nevertheless experience it as an illumination phenomenon. The shadowed regions look to you like regions that receive less light than the unshadowed regions. This becomes clearer if we take the following two phenomenological facts into account. First, you see the snow as having the same color in the shadowed and the unshadowed regions. Second, you do not see the shadows as occluding the surface of the snow. The first fact makes clear that genuine shadow experiences involve color constancy. The second fact makes clear that this kind of color constancy is not a result of the visual system filling in the color behind a perceived material occluder, but rather an illumination phenomenon. As experienced illumination phenomena, shadows may improve or impede the perception of the visual properties of the shadowed regions.<sup>22</sup>

Martin has argued that we perceive shadows, and many other phenomena, as pure *visibilia* (Martin 2012).<sup>23</sup> He writes:

[T]he visible world seems to contain both purely visual objects together with the concrete entities that we suppose are the medium-sized dry goods of the material world. We see lights, we see shadows, we see highlights, we see rainbows, we see the sky, and we can see mirror images or holograms; all of these things seem to be creatures solely of the visual world, nothing about them reveals how they would extend into physical space in aspects beyond those that we can detect visually. Alongside these purely visual phenomena, we see tables and chairs, rocks and sparrows, fires and hurricanes: entities which we can single out among visible objects, but which also have an existence and an impact well beyond the visible realm. (Martin 2012: 334)

If we assume that visual experiences are states with representational content, we can put this as follows. When you see a pure visible, your visual experience represents it as having only visible properties. Seeing a pure visible differs markedly from seeing a material object. When you see a material object, say a tree, your experience also represents it as having properties that are not visible. You see a tree as a three-dimensional solid object.

Now, according to the phenomenological description above, shadow experiences represent colored two-dimensional shapes that are located on surfaces. Since their visible nature is exhausted by their visible properties, they are pure *visibilia* in Martin’s sense.<sup>24</sup> I further suggest-

<sup>22</sup> It is obvious that shadows often make it more difficult to clearly recognize the visible properties of objects. But sometimes, when the surrounding light is very bright, shadows can have the opposite effect.

<sup>23</sup> See also Phillips (2013, 2018).

<sup>24</sup> I would like to emphasize that I am not talking about the actual physical properties of shadows. Shadowed regions receive less light than the surrounding

ed that we perceive shadows also as areas that receive less light than the surrounding regions. I therefore think that it is correct to say that shadow experiences represent these pure visibilia as illumination phenomena. This claim needs to be understood in the right way. A shadow is the result of an object blocking the light from reaching the surface. But I do not claim that a shadow experience represents the causal origin of the shadow. I only claim that such an experience represents the shadow as a light phenomenon. I also want to emphasize again that this is a non-conceptual representational content.

I will now argue that afterimages also represent pure visibilia. But whereas experiences of shadows represent their objects as illumination phenomena, experiences of afterimages represent their objects as visual disturbances. To have a concrete case in mind, consider again Kind's scenario in which you experience an afterimage caused by a camera flash. After the flash goes off, you are aware of a patch (Kind says "dot") that has a complex shape and a color that is somewhere between blue and gray.<sup>25</sup>

How do we describe the experience of the patch phenomenologically? The patch has a rather complex phenomenology. I take it that the following phenomenal features are widely accepted:

1. The patch has a fuzzy border. This is similar to the borders of shadows. It is possible to create very sharp afterimages, but this requires very special circumstances. Typical afterimages have fuzzy borders.
2. The patch changes in appearance. When seen against a light background, the patch looks dark, and when seen against a dark background, the patch looks light. Similarly, the patch changes its appearance when you close your eyes.
3. The patch does not have a third dimension and it is not possible to look at the patch from different points of view.
4. The patch is not on the wall or at some determinate distance away from you. Phenomenologically, the patch seems to be floating in front of your eyes and this persists even if you close your eyes.
5. The patch moves with your eyes in much the same way in which floaters move. It is very difficult, or even impossible, to focus your eyes on the patch and follow its movement.

We can make additional observations, such as the fact that afterimages often seem self-luminous, that they often seem semitransparent,

regions and have complex physical properties. I suggest only that we perceive shadows as pure visibilia.

<sup>25</sup> I would also like to emphasize that experiences of afterimages are very varied, depending on the specific circumstances – the duration of exposure, wavelength and intensity of the light, conditions of observation (in darkness or light, with or without eye movements, etc.). In the following, I assume that the conclusions from Kind's example generalize to all genuine afterimage experiences.

that they can be refreshed through blinking, and that they disappear over time while changing color. But, for now, it suffices to focus on the features listed above.

These phenomenal features clearly support the claim that afterimage experiences represent pure visibilia. The patch has colors and shapes that are bound together. But these colors and shapes do not seem to be instantiated in a material object that has depth, can be seen from different points of view, moves independently of the eye, or has other properties that are characteristic of material objects, such as solidity. The representationalist can therefore plausibly claim that afterimage experiences represent pure visibilia.

Unfortunately, these phenomenal features alone do not suffice to support the second part of the claim, namely that afterimage experiences represent their objects as visual disturbances. One might plausibly argue that you can tell that the afterimage is a visual disturbance because of the way in which it moves and changes its appearance. But your ability to do so may be the result of a cognitive judgment and may thus not require special experiential contents. However, the features described above do not exhaust the phenomenology of typical afterimage experiences. Let me illustrate this again with Kind's example.

Suppose again that the camera flash goes off and that you see the patch floating before your eyes. If the afterimage is very intense, you will not be able to recognize any visible properties of objects that are located in the same direction in your visual field. If the afterimage is less intense, you may be able to recognize some, or even all, visible properties of these objects, but this will be more difficult. In both cases, you experience the patch as something that impairs your vision. However, like in the case of shadows, you do not experience the patch as a material object that occludes other objects located behind it, and, in contrast to shadows, you do not experience the patch as an illumination phenomenon. I therefore submit that you experience the patch as a visual disturbance.<sup>26</sup> Here too, I do not claim that the afterimage experience represents the causal origin of the afterimage. The experience does not represent that the afterimage is a result of certain photochemical processes taking place in your retinal cells, for example. Rather, the experience represents the afterimage just as a visual disturbance.

This concludes my brief sketch of a representationalist account of afterimage experiences. In my view, genuine afterimage experiences represent pure visibilia (e.g., the patches caused by camera flashes) as visual disturbances. If this is correct, it is plausible that the phenomenology of an afterimage experience is exhausted by its representational content. Moreover, since afterimages are in fact visual disturbances, genuine afterimage experiences can be accurate. They are not illusory

<sup>26</sup> This is also indicated by the fact that you do not try to improve your vision by moving the patch out of the way. Rather, you are tempted to make the afterimage go away by blinking or rubbing your eye.

as Sarihan suggested. This account of afterimage experiences has two consequences that are important for the argument in this paper. First, the fact that afterimage experiences represent afterimages as visual disturbances accommodates Boghossian and Velleman's phenomenological observation that they do not purport to represent material objects. Second, the account implies that Block and Kind mistake a certain kind of representational content, namely pure visibilia, for qualia.

## 5. Conclusion

In sections 1 and 2, I argued that the arguments in favor of the non-endorsement claim and the confusion claim contain a gap. In order to fill the gap, Sarihan would have to show that states of double vision and experiences of afterimages have non-veridical contents. However, if it is not possible to give such an argument, the representationalist needs to give an account of the contents of these kinds of states that explains how they can be accurate. In section 3, I sketched such an account for afterimage experiences, suggesting that they represent pure visibilia. If this account is on the right track, it follows that the implicit assumption in Block's and Kind's arguments, that is, the assumption that visual states can represent colors and shapes only as instantiated either in material objects or in experiences, is false. It then also follows that Block and Kind do not confuse the fact that afterimage experiences are non-endorsed mental states with the fact that they are non-representational. Rather, they fail to see that we can experience colors and shapes as instantiated in pure visibilia.<sup>27</sup>

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