

## What in the world are hallucinations?

**Abstract:** It is widely assumed that hallucinations are not a type of perception. Coupled with the idea that hallucinations possess phenomenal character, hallucinations raise a problem for naive realism, which maintains that phenomenal character is at least partly constituted by perceived worldly objects. While naive realists have typically responded by adopting a disjunctive view of phenomenal character, I argue that to resolve this conflict we should instead reject the idea that hallucinations are not a type of perception. I defend this view by considering six alleged differences between hallucination and perception that are thought to support the idea that we do not perceive worldly objects when hallucinating. I argue that these differences are all accommodated for in a particular type of perception, picture perception. Drawing on picture perception's resources, I offer an account of hallucinations and their idiosyncrasies, in a way that is plausible in our world, that accounts for the variety of hallucination types, and that is compatible with naive realism.

### 1 Introduction

The argument from hallucination gives us a conclusion that is incompatible with naive realism (or relationalism)<sup>1</sup>, the view that perception is the direct presentation of worldly objects, and that perception's phenomenal character is at least partly constituted by directly presented worldly objects<sup>2</sup>:

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<sup>1</sup> For more on naive realism, see e.g. Beck (2021).

<sup>2</sup> By worldly object I mean the material particulars we typically take to populate the mind-independent world. Most are external to the subject's body, but some are internal e.g. one's eyelids, or phosphenes. For more on how internal these can be, see the discussions in Watzl (2010) Chapter 5, section 6, and Ali (2018) section 6.

- (i) In hallucinatory experiences, we are not directly presented with worldly objects
- (ii) The same account of experience must apply to veridical experiences as applies to hallucinatory experiences.
- (iii) Therefore, we are never directly presented with worldly objects.<sup>3</sup>

In response to the argument, naive realists typically reject (ii).<sup>4</sup> But while this strategy has been popular with naive realists,<sup>5</sup> the disunified account of phenomenal character it results in has been widely criticized.<sup>6</sup> A more recent approach, adopted by some naive realists and representationalists,<sup>7</sup> rejects the view of hallucination endorsed in (i). Views that reject (i) argue that all (genuine)<sup>8</sup> hallucinations can be reconstrued as cases of perceiving worldly objects. As such, all hallucinations are *hallucinatory perceptions*, hallucinations that are a type of perception.

By construing hallucinations in this way, naive realists who adopt this response are able to retain

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<sup>3</sup> See Crane & French 2021.

<sup>4</sup> Besides their possible phenomenal indistinguishability from perception, that hallucinations possess phenomenal character is suggested by empirical cases of hallucination. For instance consider Sacks' (2012) report on a Charles Bonnet Syndrome patient: "[...] Though she had not seen anything at all for several years, she was now "seeing" things, right in front of her. "What sort of things?" I asked. "People in Eastern dress!" she exclaimed. "In drapes, walking up and down stairs ... a man who turns towards me and smiles, but he has huge teeth on one side of his mouth. Animals, too. I see this scene with a white building, and it is snowing—a soft snow, it is swirling. I see this horse (not a pretty horse, a drudgery horse) with a harness, dragging snow away ... but it keeps switching.... I see a lot of children; they're walking up and down stairs. They wear bright colors rose, blue - like Eastern dress." She had been seeing such scenes for several days." p.18

<sup>5</sup> See Crane & French 2021 for an overview.

<sup>6</sup> For instance, see Siegel (2004, 2008).

<sup>7</sup> For naive realist defenses, see Raleigh (2014) and Ali (2018) (though note that Raleigh only rejects (i) for some hallucinations). For representationalist defenses, see Watzl (2010), Maloney (2018), Masrour (2020), Byrne & Manzotti (2022), and Rezaei (2023). It is also worth pointing out adjacent views. For instance, James (2014) and Barkasi (2020) think that at least some hallucinations relate the subject to worldly objects, but do so through memory not perception (Byrne & Manzotti (2022) accept a hybrid view, where hallucinations involve both perception and memory). And Moran (2019, 2022) and Ivanov think there are external causal constraints on undergoing hallucinations, but these do not occur in perception.

<sup>8</sup> I add genuine because one strategy for rejecting (i) maintains that some cases are not genuine hallucinations. See e.g. Ali (2018) and Masrour (2020).

a unified view of phenomenal character while rejecting the argument from hallucination's conclusion.

This chapter offers a new defense of this more recent response. I examine six alleged differences between (visual) hallucination and perception that are thought to support (i), and argue that these differences are all accounted for in perception, and in a way compatible with naive realism.<sup>9</sup> The argument is presented in eight sections. In section 2 I introduce the six differences thought to support (i). At least some hallucinations involve (a) no existing objects that (b) instantiate their properties, and (c) ground no original *de re* knowledge of particulars, unlike perception. In addition, some of the objects we seem to encounter in hallucinations seem (d) psychology-dependent, (e) private, and (f) limited to one sense modality, unlike the objects of perception. In sections 3 and 4 I argue that these alleged differences depend on misconceptions about the nature of perception, and in particular the experiences perception enables. Drawing on the resources available in picture perception I argue that hallucinations seeming to possess the above features can be reconstrued as cases analogous or identical to picture perception.<sup>10</sup> Sections 5 and 6 support the proposal by arguing that it is plausible in our world, and for a wide variety of hallucination types. Section 7 argues for the proposal's compatibility with naive realism, and 8 concludes the discussion.

## **2 Hallucination and perception**

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<sup>9</sup> I suggest a way of extending the response to other sense modalities in section 7 but otherwise focus on visual cases. Henceforth I omit 'visual' for the most part.

<sup>10</sup> Here I take no stance on whether the proposed hallucinatory perception is a type of picture perception, or just analogous to it. What matters is that the account requires no resources that go beyond those required in picture perception.

The idea that hallucinations are not perceptions of worldly objects is supported by various alleged differences between hallucination and perception. At least some hallucinations are unlike perception in that they (a) involve no experience of existing objects that (b) instantiate the properties they seem to instantiate. This in turn means that hallucinations (c) ground no original *de re* knowledge of particulars. In addition, when a hallucination makes it seem as if an object is present, that object is frequently (d) psychology dependent, (e) private, and (f) limited to a single sense modality. These differences challenge the idea that hallucinations can be reconstrued as perceptions of worldly objects, and collectively paint a picture on which hallucinations are fundamentally different from perception.

Before considering whether these differences are genuine, we should consider each more closely:

(a) Existential difference: A.D.Smith (2002) writes

“hallucination, where a subject seems to perceive a normal physical object, but where none such exists at all. Or rather—since there could be a situation in which a subject hallucinates an object just where there really is such a one—where the subject seems to perceive a physical object, but where there is in reality no physical object which is the one he seems to perceive. [...] This is definitive of hallucination, as philosophers have come to use the term [...] in hallucination, “that” physical object does not exist.192.p”

In both perception and hallucination, we are seemingly presented with objects.<sup>11</sup> In perception, it seems possible to identify seemingly presented objects with worldly objects. But as Smith notes, despite their apparent presence, there is no existing object the subject is perceiving

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<sup>11</sup> This can be compared to what Schellenberg (2018) labels phenomenal (rather than relational) particularity.

in hallucination. One may hallucinate unicorns or Penrose staircases, the former do not exist and the latter are impossible. Not so with perception.

(b) Property difference: If hallucinations lack an existing object, then whatever sensible properties we attribute to the apparent objects of hallucinatory episodes must not be instantiated.<sup>12</sup> A hallucinatory dagger may be metallic and covered in blood. But there is no dagger, so nothing instantiates the properties of being metallic or bloody. This is unlike perception, where worldly objects instantiate the perceived properties.

(c) Epistemic difference: Mark Johnston (2004) writes

“although we can hallucinate real things and real people, no such hallucination could be an original source of *de re* thought about those particular things or people. In this way, hallucination differs from veridical sensing, which characteristically provides new particulars as topics for thought and talk. [...] Hallucination does not *introduce* particular topics for thought and reference.129.p”

Johnston thinks that unlike perceptions, hallucinations offer no original *de re* thought or knowledge of particulars. In a hallucination, there are no particulars, since there is no object one is perceiving. Hallucinations may seem to feature particulars, but such particulars depend on the subject’s existing repertoire of singular reference. Johnston writes “Hallucination of a specific mother or a specific dagger is parasitic upon antecedent singular reference to that mother or that dagger.” (p.129)

(d) Difference in psychology-dependence: Assuming realism about the external world, in perception the objects we perceive have a mind-independent existence. Though one may fail to

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<sup>12</sup> But note that there may also be property hallucinations, as Batty & Macpherson (2016) have argued.

recognize a perceived object because of one's psychological history, the perceived object's existence does not depend on the subject's mind. But in at least some hallucinations, what one hallucinates does seem dependent on the mind.<sup>13</sup> That Macbeth hallucinates a dagger rather than a gun in the absence of one seems dependent on his distinctive psychological history, on having undergone certain events.

(e) Difference in access: Smith (2002) writes

Hallucinatory objects, of the kind we are ultimately trying to avoid, are "private" so that you cannot become aware of the same one as I, nor know which one it is that I am aware of. p.218

Worldly objects are available for anyone to perceive, provided they are appropriately located (i.e. in line of sight, within hearing distance, etc.) and attentive. But in at least some hallucinations,<sup>14</sup> what we seem to perceive is not similarly accessible. What one hallucinates seems private to the hallucinator, such that others, including other hallucinators, cannot access the same (apparent) object even when appropriately located and attentive.

(f) Multimodal difference: The objects we seem to experience in hallucinations are sometimes constrained to a single sense modality. For instance, in Charles Bonnet Syndrome, visually hallucinated items are in principle inaudible. And in some auditory verbal hallucinations, what one seems to hear is not visible.<sup>15</sup> By contrast, in perception worldly objects are at least in principle accessible to different senses. The properties we access through different senses

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<sup>13</sup> See e.g. Larøi, et al (2012).

<sup>14</sup> Some cases are public, for instance because they involve a multi-subject environment apparatus. More in the next section.

<sup>15</sup> See e.g. Sacks (2013).

sometimes differ, and may not overlap, but they do not seem in principle constrained to a single sense modality. Provided worldly objects are material, even e.g. a sound is accessible to a visual system capable of seeing the relevant air vibrations.

These differences suggest that at least some hallucinations are not perceptions of worldly objects. Perception's objects exist and instantiate their properties, they are not psychology-dependent, only accessible to the subject perceiving them, or limited to one sense modality, and perception grounds original *de re* knowledge of particulars. By contrast some hallucinations violate each (and all) of these.

In addition, views that support reconstruing hallucinations as hallucinatory perceptions offer no direct response to these differences.<sup>16</sup> Their arguments primarily focus on showing that in (genuine) hallucinations there are candidate worldly objects to perceive. Collectively the arguments offer ordinary, dispersed, proximate, internal, and spatiotemporally gerrymandered worldly objects that are either veridically or illusorily perceived in hallucination. But that we perceive idiosyncratic worldly objects in hallucination, veridically or illusorily, does not immediately explain how perceiving such objects can result in hallucinatory experiences that manifest the above differences.

### **3 Picture perception**

If genuine, the above differences make a compelling case for thinking that hallucinations are not perceptions of worldly objects. But the impression that there are such differences rests on

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<sup>16</sup> The most detailed discussion of these differences is in an appendix in Watzl (2010), focusing on different ways of construing hallucinatory objects. But Watzl's discussion is brief, focusing mainly on reference, and partly motivated by the broader view he defends.

underestimating the variety of experiences perception enables. In the right conditions, perception can accommodate the above features of hallucination, even simultaneously. We can see this clearly in cases of picture perception. In this section I introduce picture perception. In the following section I argue that picture perception accommodates the features of hallucinations, and can be used to offer an account of hallucinatory perception that accommodates the same features.

Picture perception is a type of perception, the perception of pictures. Pictures are worldly object with distinctive surface.<sup>17</sup> What makes a picture's surface distinctive is the way its sensible features - its visible properties and parts - are organized. Pictures have organizations that result in an experience as of some object. The apparent object in a picture, the 'pictorial object', can be distinguished from the picture itself, and what the picture is of. As an example, in a picture of a dagger, the dagger we seem to see in the picture is pictorial, and can be distinguished from the picture, and the dagger the picture is of (which cuts, is made of metal, etc.), assuming the painting is of a particular dagger.

While accounts of picture perception differ in a large number of ways,<sup>18</sup> for now only two basic commitments matter. The first is that what we seem to see in a picture is experienced by seeing the picture surface.<sup>19</sup> This is a minimal commitment.<sup>20</sup> Though we may fail to attend to the seemingly presented object while seeing the surface, and fail to attend to the surface while

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<sup>17</sup> Pictures are sometimes construed as the surfaces alone. This is fine provided we think of surfaces as surfaces of worldly objects.

<sup>18</sup> See e.g. Abell & Bantinaki (2010).

<sup>19</sup> Though I do not commit to this here, this is sometimes described as the two-fold nature of picture perception. See Wollheim (1980), and the further discussion in section 6.

<sup>20</sup> See e.g. Lopes (2005).



seeing the seemingly presented object,<sup>21</sup> we cannot be seemingly presented with a pictorial object if the picture surface is e.g. occluded.<sup>22</sup> Committing to this guarantees that perceiving worldly objects, in this case pictures, and their sensible properties are constitutive of picture perception. The second commitment is to the difference between what we seem to see in a picture, the pictorial object, and what the picture is of. This distinction will help explain some apparent idiosyncrasies of both hallucinations and picture perception.

#### **4 Hallucinations and picture perception**

With this account of picture perception, we can see how picture perception accommodates hallucination's idiosyncratic features, and how these resources can be exploited to offer an account of hallucinatory perception. Consider first existential differences. The objects we seem to see when picture perceiving and hallucinating have a phenomenal presence. In both we can seem to see e.g. a dagger, or Penrose staircase. But in both cases what the experience is of, the dagger or staircase, need not exist. The dagger may have been destroyed, and Penrose staircases are impossible. But just as we can explain the apparently present object in picture perception by appealing to the seen picture surface and its distinctive surface pattern, we can explain the seeming presence of hallucinatory objects by appealing to the seen surrounding worldly objects and their distinctive surface patterns.<sup>23</sup>

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<sup>21</sup> The well known Dalmation image is an example of failing to attend to an object (the Dalmatian) that is seemingly presented in a picture. Successful trompe l'oeil's are an example of failing to attend to the surface.

<sup>22</sup> More on this in section 6.

<sup>23</sup> For an argument that pictures expand the range of visibilia, and so can enable experience of impossible objects like the Penrose staircase, see Aasen (2016).

Next, consider uninstantiated properties. Illusory perception helps account for seemingly uninstantiated properties, but picture perception also affords further resources. Consider the pictorial dagger's properties of being metallic and bloody. Since there is no dagger, the properties of being metallic and bloody are not instantiated. But picture perception helps account for these properties in two ways. First, it allows us to see how these properties can appear instantiated. They appear instantiated by the surface the dagger is drawn on. Second, it allows us to recharacterize the apparently instantiated properties as properties that are in fact instantiated. What appeared to be metallicness and bloodiness is now revealed to be properties of the picture surface, properties like being composed of thin brush strokes, and red and gray oils in some configuration. This change in phenomenology, despite the unchanging object, is plausibly because our perceptual systems can segment and group what we see (or hear, taste, etc.) in different ways.<sup>24</sup> In picture perception a single worldly object or surface property can appear as more than one (seemingly distinct) pictorial object or property, and multiple worldly objects or properties can appear as a single pictorial object or property.<sup>25</sup> A parallel account of hallucinatory perception can maintain that the seemingly uninstantiated properties we attribute to hallucinatory objects are in fact properties instantiated by the perceived surroundings, but misattributed to hallucinatory objects, and in some cases mischaracterized.<sup>26</sup>

Third, consider Johnston's (2004) claim that hallucinations offer no original *de re* knowledge of particulars. Picture perception can seem unlike hallucination because like

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<sup>24</sup> See e.g. Peterson & Kimchi (2013).

<sup>25</sup> More in section 5. For a helpful discussion, see Briscoe (2008).

<sup>26</sup> See Masrour (2020) for a similar strategy, 'displacement'. More on mischaracterization in section 6.

perception, picture perception offers original *de re* knowledge of at least one worldly object, the picture. But this apparent difference is misleading. First, note that while picture perception acquaints us with the picture surface and its visible properties, and may acquaint us with something like a pictorial object on some views, it does not acquaint us with what the picture is of. Pictures offer no original *de re* knowledge of the particular they are of without an anchoring mechanism such as the painter's intentions, or the mechanical process that produces the picture.<sup>27</sup> Next, note that Johnston's account draws a distinction analogous to the distinction between the pictorial object and the object the picture is of. Johnston distinguishes a 'primary' and 'secondary' object of hallucination. The primary object is what we experience, and on Johnston's view this is a 'sensible profile' wholly constituted by uninstantiated sensible properties. Hallucinations provide original *de re* knowledge of this object, but on Johnston's view this object involves no particulars. By contrast the secondary object is what the hallucination is of, and is sometimes a particular e.g. a particular dagger or mother. But this particular is determined by way of the primary object striking the hallucinator as being of that particular. Knowledge of this particular is not original since it depends on the subject's existing capacities for singular reference, or some other anchoring mechanism.<sup>28</sup>

These details reveal the relevant similarity between picture perception and hallucination. First, like picture perception, Johnston's hallucinations offer original *de re* knowledge of an object, the primary object. The apparent difference emerges because Johnston thinks this object

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<sup>27</sup> For instance, see Walton (1984). Also cf. Putnam's (1981) brains in vats argument.

<sup>28</sup> Johnston (2004) gives two examples, the first of a hallucinatory object anchored through brainwashing, the latter anchored through a latent psychoanalytic object.

includes no particulars. But we need not follow Johnston on this point. If we reject the idea that hallucinations are not perceptions of worldly objects, we can maintain that the primary object involves a particular, the worldly objects we perceive. But even when we maintain this, this is not the particular relevant to Johnston's argument. Johnston's focus is on the secondary object of hallucination, or what the hallucination is of.<sup>29</sup> Hallucinations offer no original *de re* knowledge of this object. But picture perception also offers no original *de re* knowledge of what the picture is of. Following Johnston, we can maintain that neither picture perception or hallucination offer original *de re* knowledge of the particular they are of.

Next, consider the apparent psychology-dependence and privacy of hallucinatory objects. Again, picture perception may seem unlike hallucination, particularly if one thinks that pictorial objects are always "fully determined by the marks on the picture surface given the rules of optics"<sup>30</sup>. But Dominic Lopes (2005) has argued that in at least some pictures, like the well-known hidden Dalmatian picture, pictorial objects are not fully determined by the picture surface. In such cases 'subjective contours' help separate objects from their background.<sup>31</sup> If we accept that picture perception partly depends on the perceptual system's capacity to segment and group parts of a scene, this suggestion is plausible because subjective factors enter into scene grouping and segmentation.<sup>32</sup> Though much can be said about subjective contours, for our

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<sup>29</sup> For instance, Johnston (2004) writes "Even if I hallucinated a woman who happened to look just like my mother, there would be nothing that would make that hallucination *of* my mother, as opposed to my aunt, or any other woman who appeared like her." (p.129) [emphasis mine].

<sup>30</sup> Nanay (2018) p.170

<sup>31</sup> Note that the issue is not about finding the Dalmatian. Someone could point out the dog so that it is easier for the subject to notice it. But to see the dog the subject does not only need to be looking at the right place, but also looking at it in the right way i.e. in a way that introduces subjective contours.

<sup>32</sup> See Peterson & Kimchi (2013).

purposes four observations suffice: first, we need not commit to a specific account of subjective contours, nor their unity as a phenomena. There are many empirically plausible explanations for subjective contours, including gestalts, memory, attention, imagination in perception, modal and amodal completion, cognitive and non-cognitive factors, top-down and bottom up processing, object-recognition capacities, and activation in specialized visual regions. Second, whatever subjective contours are, it is important to note that their inclusion does not supplant the role of the perceived surface. One continues to see the picture surface and its visible properties, the contours only help segment and group these features in particular ways. Third, in some cases, more than one set of subjective contours is consistent with what we perceive. For instance, before noticing the Dalmatian, one may have an experience of some other object or animal in the picture by introducing alternative subjective contours. Finally, note that of the many objects we might seem to see in a surface, it is only sometimes the case that the experience has some standard of correctness. One may be said to introduce the wrong subjective contours if they see an elephant instead of a Dalmatian in the Dalmatian picture because the picture is designed to be of a Dalmatian. But in other cases, like cases of seeming to see objects in Rorschach blots, cracked ceilings, fires, and clouds,<sup>33</sup> there is no privileged set of contours. Whatever object we seem to see is on equal footing.

That some cases of picture perception involve subjective contours allows us to see how picture perception accommodates seemingly psychology-dependent and private objects. In both hallucination and picture perception, the objects we seem to see sometimes partly depend on the subject's mental contributions, and so can seem private to the picture perceiver or hallucinator.

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<sup>33</sup> See Sartre (2010).

Though one may trace the contours of a hallucinated or pictorial object with one's finger, or offer insights into one's mental state to help draw the other's attention to certain visible patterns, these strategies will not always succeed. And even if they did, the atypical difficulty of sharing these objects would warrant the impression that the objects we seem to see are private in a way ordinary perception's objects are not.

Construing hallucinatory perception's mind-dependence and privacy in a way analogous to picture perception allows us to shed light on a difference we find in cases of hallucination. While hallucinations that result from an altered mental state manifest mind-dependence and privacy, hallucinations that result from e.g. envattment need not. Many subjects may be envatted in a machine, and envatters can send the same signals that fully determine the envatted subjects experiences. Indeed, in such cases, there is a standard of correctness for what one should hallucinate. The envatters may be alarmed to notice that their subjects are experiencing elephants rather than the intended cats as a result of the envatting machine's signals. This difference in hallucinations can be explained by arguing that hallucinations, like picture perception, only sometimes involve subjective contributions.

Finally, consider the fact that hallucinations sometimes seem constrained to a single sense modality. Picture perception readily accommodates this feature of hallucination. What we seem to see in a picture is specifically visual. One can touch a painting, but one does not expect to feel the pictorial dagger along with seeing it, even if the painting is felt. Drawing on picture perception, we can offer an analogous explanation of hallucinatory perception limited to a single modality. What we seem to encounter in the hallucination may be purely visual but it depends on

perceiving a multimodal worldly object.

So, while it is tempting to think that hallucinations possess features that distinguish them from perception, this impression is mistaken. Picture perception, which is a type of perception, can accommodate all the features that purportedly distinguish hallucination. By construing hallucinatory experience in a way that is either identical or analogous to picture perception, we can offer a plausible account of hallucination as a type of perception. On this view, experiences of hallucinatory objects, like experiences of worldly objects, result from seeing visible patterns in our surroundings. But unlike worldly objects, which exist and instantiate their visible patterns, hallucinatory objects are merely the result of seeing visible patterns that (other) worldly objects instantiate.<sup>34</sup> Hallucinatory perception is the perception of visible patterns in our surroundings, and hallucinatory objects are like the objects we seem to see in pictures.

## **5 Perceptible patterns in the world**

Could cases of hallucination be a type of perception, either analogous or identical to picture perception? One problem is that hallucinations occur in all sorts of external conditions. But if (some) hallucinations are like picture perception, then like picture perception these cases depend on the presence of the requisite perceptible patterns. If in some cases our world lacks the requisite patterns, then it would seem that hallucinations cannot occur in those conditions. A limitation of this sort - that some surroundings disable hallucinations - is implausible.<sup>35</sup> To

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<sup>34</sup> It is worth noting the similarity of this view to Johnston's (2004), which construes hallucinations as sensory profiles. The difference is that Johnston thinks these profiles are constituted by uninstantiated properties while the proposed view takes these profiles to be constituted by instantiated properties.

<sup>35</sup> This seems to be part of the motivation for adding memory alongside perception in Byrne & Manzotti (2022). While I am sympathetic to their general account, I think perceived objects without remembered objects suffice.

address this, we need to show that the requisite perceptible patterns are abundant in our world. I think five features of the (visible) world reveal that such patterns are in fact abundant:

(1) Visual variety and complexity: worldly objects come in different shapes, colors, textures, and sizes, and these can be organized in an indefinitely large number of ways. This results in an abundance of visual variety and complexity in perceived surfaces, and consequently a wide variety of possible experiences. Some common examples include seeming to see objects in clouds, faces in fires, and figures in peeling walls.<sup>36</sup> Some human practices, like 'reading' tea leaves or Turkish coffee depend on how readily some surfaces can seem to present objects.<sup>37</sup>

(2) Visual perspective: worldly objects are perceived from a given spatial perspective. Each viewpoint offers different surfaces and aligns surfaces in different ways. This means that even when surfaces do not seem to present objects from one viewpoint, they may do so from another viewpoint. Felice Varini's art, where painted surfaces align into a pictorial shape only from certain vantage points, illustrates this:

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<sup>36</sup> See Sartre (2010) for a discussion.

<sup>37</sup> It's also worth pointing out how common pareidolia is in humans.





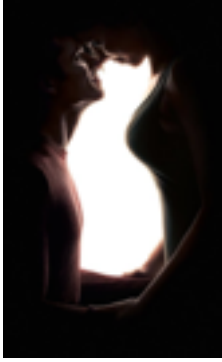
(3) Collections and parts: what we seem to perceive in perceptible patterns does not depend on perceiving a single object's surface, nor a whole object's surface. Instead patterns can emerge across multiple object surfaces and parts of surfaces.<sup>38</sup> Varini's artwork above illustrates both facts since parts of the walls' surfaces contribute to the pictorial shape, and more than one wall's surface does.

(4) Negative space: worldly objects contribute to perceptible patterns, but so does the space between them. On the one hand empty space highlights object contours. On the other hand, because empty space is transparent, it inherits the perceptible properties of background objects.<sup>39</sup> Below a pictorial cat is experienced in the space between the silhouetted couple, and its whiteness is inherited from the background:

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<sup>38</sup> Cf. Byrne and Manzotti (2022)'s view, that hallucinations are perceptions of gerrymandered (worldly) objects.

<sup>39</sup> See Mizrahi (2018).



(5) Varying depths: Perceptible patterns need not lie on a flat plane because we can see objects from varying depths simultaneously. The tears in one's eye, a nearby face, and the sky seen through a window can all be visible simultaneously. Though the distances of these objects vary, their surfaces can align to produce a single picture surface. Oleg Shupliak's paintings illustrate this nicely:<sup>40</sup>



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<sup>40</sup> More generally, Shupliak's art is particularly illustrative for HPTs because it demonstrates how what we see can seem to present objects that are radically different from what we would normally say we see. In the painting I present, nothing about a train in a distance, a woman in the foreground, and a figure under lights suggests that we should seem to see an old man's face.

## 6 The varieties of hallucination

Another worry facing a reconstrual of hallucinations as hallucinatory perceptions is that hallucinations come in many varieties. Hallucinations can occur with and without the subject's awareness, there are veridical hallucinations, and hallucinations that seem to lack an external cause. In this section I address each of these cases.

Consider first hallucinating with or without awareness. By drawing on resources available in picture perception, we can see how hallucinatory perception can occur without awareness in at least two distinct levels. Accounts of picture perception highlight its twofold character. For instance Wollheim (1987) maintains that picture perception involves 'seeing-in', and seeing-in requires the simultaneous awareness of the picture surface and what seems presented in the picture as two inseparable aspects of the experience.<sup>41</sup> Lopes' (2005) account develops Wollheim's by clearly distinguishing different relationships between the two folds in picture perception.<sup>42</sup> Drawing on these helps illustrate different levels of unawareness.

Besides the difference between cases with and without subjective contours, Lopes (2005) distinguishes cases 'doubled with' and 'divided from' design seeing, and illusionistic and non-illusionistic cases. Design seeing is having "a visual experience of a picture as a configuration, on a two-dimensional surface, of marks, colours, and textures in virtue of which the surface

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<sup>41</sup> It's worth pointing out that Wollheim (1980) saw an association between seeing-in and hallucinations. He writes "If we seek the most primitive instances of the perceptual capacity with which seeing-in is connected, a plausible suggestion is that they are to be found in dreams, daydreams, and hallucinations..." p.217

<sup>42</sup> While it is plausible to maintain that subjects always perceive the picture surface, it is less clear that subjects are always aware of the surface's presence, or it's connection to what the picture seems to present. Lopes' (2005) account helps distinguish these cases.

depicts a scene.”<sup>43</sup> Cases divided from design seeing are cases where the subject seems to see an object in a picture without design seeing, while cases doubled with design seeing are cases where the subject seems to see an object while design seeing. Illusionistic cases are experiences phenomenally indistinguishable from face-to-face seeing because the picture surface is not perceptually attended to, while non-illusionistic cases are distinguishable because the surface is attended to.<sup>44</sup>

Drawing on these distinctions we can offer two levels at which hallucinators may be unaware when undergoing hallucinatory perception. First, by analogy to cases divided from and doubled with design seeing, hallucinators can either fail or succeed at noticing the relationship between what they hallucinate and the perceptible patterns they perceive. In cases of failure, the hallucinator seems to experience an object that appears unrelated to the perceived surroundings. Second, by analogy to illusionistic and non-illusionistic cases, subjects can fail or succeed to notice that a hallucination offers no direct encounter with the object they seem presented with. In cases of failure, the hallucinator seems directly presented with the object they hallucinate.<sup>45</sup>

Next consider veridical hallucinations.<sup>46</sup> If hallucinations are hallucinatory perceptions, when Alice hallucinates a white rabbit, she must see at least some part of her surroundings. But even if the scene Alice sees contains a white rabbit, Alice need not see or attend to the rabbit. She may only see perceptible patterns that support a white rabbit hallucination. In such cases Alice

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<sup>43</sup> Lopes (2005) p.28.

<sup>44</sup> My terminology differs from Lopes’ (2005), who uses ‘seeing-in’ and ‘seeing’. By contrast I use ‘attending’ and ‘perceiving’.

<sup>45</sup> When a hallucination is not experienced as a ‘face-to-face’ encounter, the hallucinated item appears flat or imagistic, something reported in various cases of real hallucinations. See e.g. Sacks (2012).

<sup>46</sup> See Lewis (1980).

hallucinates a white rabbit, and coincidentally the scene before her includes a white rabbit, but Alice is not seeing the white rabbit. Similarly, if Alice is envatted in a lab she may see the vat's stimulations,<sup>47</sup> and these may include perceptible patterns that result in a hallucination of a qualitatively identical lab. Still, Alice is not seeing the lab, since she is seeing the occluding envatting apparatus.

Finally consider hallucinations that lack an apparent external cause. In Ali (2018), I consider different varieties of these cases, and argue that when these cases genuinely involve hallucinations they also involve perception. More specifically, they involve the perception of particular types of absence. Some examples include seeing unlit surfaces, or hearing silent rooms. Such cases are perceptions of ganzfelds, albeit ones devoid of positive stimuli. But even these cases are not devoid of perceptible patterns. In impoverished surroundings, one's experience makes salient the perceptible patterns resulting from entoptic phenomena like phosphenes or floaters.<sup>48</sup> As an example, in a sensory deprivation chamber hallucinators see the unlit surfaces of the chamber along with visual entoptic phenomena generated by the visual system. While it may be difficult to see how entoptic phenomena in unlit surroundings can result in a e.g. rabbit hallucination, it is easier to see how such surroundings can contain perceptible patterns that can be segmented and grouped, with the help of subjective contours, in ways that result in an experience as of a rabbit. Cases with unstructured surroundings, like those involving ganzfelds, TV static, clouds, fires, and Rorschach blots, all typically enable a wide variety of experiences. And this is not surprising from an evolutionary standpoint. It is better for the

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<sup>47</sup> See Raleigh (2014).

<sup>48</sup> Similarly, in e.g. auditory cases, these involve white noise.

perceptual system to err on the side of experiencing objects when there are none rather than fail to see potentially threatening objects. Moreover many hallucinations occur in exceptional mental conditions - like being sleep deprived, under the influence of hallucinogenic substances, in hypnagogic and hypnopompic states, or when suffering perceptual system damage, mental illness, or fever - which make it unsurprising that the perceptual system introduces idiosyncratic subjective contours.<sup>49</sup>

## **7 Hallucinatory perception and naive realism**

I have argued that hallucinations can be construed as hallucinatory perceptions, and that hallucinatory perception can accommodate the idiosyncrasies of hallucinations by drawing on the resources available in cases of picture perception. But is this view compatible with naive realism? Here I respond to five potential worries briefly.

One may worry that in drawing on picture perception, the account is limited to visual hallucinations. But hallucinations occur in all sense-modalities, and there are multi-modal hallucinations. We can give three responses to this worry. First, assume the view is constrained to visual cases. Still, an account of visual hallucinations would be a significant outcome. Humans have a visual bias, and the philosophical literature has largely focused on visual hallucinations. Second, it is worth noting that some accounts of picture perception maintain that there are pictures (or something analogous to them) in other modalities. For instance, John Kulvicki

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<sup>49</sup> Current Charles Bonnet Syndrome (CBS) research lends itself to the possibility that noisy stimuli are at least partly organized by the hallucinator's visual system. Our visual systems partly parse incoming visual information using specialized visual regions in both perception and picture perception (Kanwisher 2004). Activation in these regions is associated with perceiving objects of a given category e.g. colors, landscapes, and body parts. CBS hallucinations also show activation in these regions. And the category of objects a CBS patient hallucinates are reliably correlated with activation in the corresponding region (Ffytche 2013).

(2013) thinks there are auditory images, and potentially images in other senses. Third, notice that while the proposed account draws on picture perception to explain how hallucinations with idiosyncratic features may nevertheless be cases of perception, what is fundamental to the account is the idea that worldly objects offer perceptible patterns that can be exploited in some hallucinations. Since every sense modality offers perceptible patterns, the account can in principle be extended to every modality. This is not to say that no more work is needed, just that nothing prevents extensions.

A second worry focuses on what we seem to see in pictures. Accounts of picture perception vary considerably, and there are many different accounts of the pictorial entities we seem to encounter in pictures.<sup>50</sup> On some accounts these entities have ontological weight, they are objects of a particular type e.g. abstract objects, and ones wholly distinct from the picture one perceives.<sup>51</sup> If one accepts an account of this sort, and accepts the proposed view of hallucinations, then one will maintain that hallucinatory objects, like pictorial objects, are distinct from perceived worldly objects. Accepting this would jeopardize the account's capacity to support naive realism, since naive realism maintains that worldly objects rather than some surrogate object are the constituents of phenomenal character. I think this worry is legitimate. To use this account in a way that is friendly to naive realism, the proposed account limits the views of picture perception we can accept. Pictorial entities cannot be construed as ontologically heavyweight entities. But many accounts of pictorial entities meet this criterion.<sup>52</sup>

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<sup>50</sup> See Nanay (2022).

<sup>51</sup> Thanks to Craig French, Farid Masrou, and Ori Beck for pressing me to clarify this issue.

<sup>52</sup> A recent example is the view defended by Nanay (2022).

A related worry is that picture perception is fundamentally representational, so drawing on picture perception introduces representational states that are incompatible with (at least some varieties of)<sup>53</sup> naive realism. Three things can be said in response. First, I take it that naive realism is compatible with at least some accounts of picture perception. If not, then the view is seriously jeopardized, since it would be unable to account for some cases of perception, and not just hallucination. Second, not all accounts of picture perception construe it representationally e.g. Briscoe (2016). Finally, I think there is reason to think that even if picture perception involves representational states, these states are not ones that concern the naive realist. Naive realism rejects representational states that supplant the role of perceived worldly objects in phenomenal character. But picture perception is not representational in this objectionable way. In picture perception worldly objects are perceived and play their role in phenomenal character. When representation enters picture perception, it does so further upstream, and in a way that depends on perceiving the picture's surface. Unless there is reason to think that the perception relation we bear to pictures is itself representational, this worry is misplaced.

A fourth worry is that arguing that pictures manifest the features of hallucination does not make hallucination less mysterious, it instead extends the mystery to picture perception. In response I admit that picture perception is mysterious. I think the philosophical puzzles around pictures and picture perception reveal as much. But the view here is not meant to show that picture perception is not mysterious. It is only meant to show that whatever problematic features hallucinations are supposed to possess, these features are not substantively different from those

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<sup>53</sup> This is because some varieties accept that representational states can feature in the naive realist picture e.g. see Kennedy (2013).



we find in picture perception. Both hallucinations and picture perception can result in experiences phenomenologically indistinguishable from perception,<sup>54</sup> but where the object we seem to see does not genuinely exist. Even if both cases are mysterious, there is still a big difference between thinking that there are two puzzles -one raised by picture perception, another raised by hallucination - rather than one puzzle raised by both cases. Assimilating the problematic features of hallucination to those of picture perception still leaves us with less mysteries to solve.

A final worry is that the proposed view is incompatible with naive realism because it offers a positive account of hallucinatory phenomenology. M.G.F. Martin (2004, 2006) has argued that positive accounts of hallucination fall prey to the screening-off problem. But this worry is also misplaced. Martin's argument focuses on the standard conception of hallucinations, where the subject's state alone is sufficient for the positive phenomenal character. I share Martin's worry, and hallucinatory perception is meant as a remedy. In hallucinatory perception the subject's state is not sufficient for hallucinatory phenomenology, one must also be directly presented with worldly objects. Moreover whatever else occurs in hallucinatory perception does not supplant the role of worldly objects, but depends on worldly objects (and more specifically, their perceptible surface patterns) playing their role in phenomenal character.

## **8 Conclusion**

As Dany hallucinates the two sisters in Kubrick's *The Shining* (1980), Tony, his imaginary friend, says "Remember what Mr. Hallorann said, it's just like pictures in a book Dany, it isn't

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<sup>54</sup> In picture perception, this is the case of Trompe-l'oeils.

real". This is sound advice on the view I have been defending. Hallucinations are like perceived pictures. Though various features seem to distinguish hallucination from perception, these features support no genuine difference. This is because picture perception, a type of perception, manifests all the features that characterize some hallucinatory cases. By drawing on the resources available in picture perception, we can reconstrue hallucinations as hallucinatory perceptions while accommodating the idiosyncrasies of hallucinatory experience. The resultant view maintains that we experience hallucinatory objects as we do worldly objects, by seeing visible patterns in our surroundings. But hallucinatory objects, unlike worldly objects which exist and instantiate their perceptible patterns, are merely the result of perceiving patterns (other) worldly objects instantiate, like the objects we seem to see in pictures. This reconstrual gives us a view of hallucinatory perception that is plausible in our world, can be extended to different hallucinatory varieties, and is compatible with naive realism.

It is worth ending with a concrete illustration of hallucinatory perception. Imagine Macbeth visually hallucinating a dagger as he sits at the dinner table. There is no dagger Macbeth sees and whatever properties he attributes to the dagger remain uninstantiated. Moreover Macbeth can only hallucinate the dagger because of his prior acquaintance with daggers, and the dagger is fabricated by his troubled mind, only accessible to him, and not a dagger he could take hold of, since it is purely visual. On the proposed view, though it may not be apparent to Macbeth, his dagger hallucination is just the perception of e.g. a plate on the table he is sitting at. The scene before him may contain nothing sharp and bloody. But the plate, a spoon, and the table before him possess various perceptible properties, particular contours, textures, and reflections. While looking at the scene, Macbeth selectively attends to visible perceptible patterns around him.

What seems to be a dagger's metallic blade is e.g. the part of the plate's surface reflecting light. What seems its hilt is e.g. partly the non-reflective side of the plate, partly the spoon on it. And what looks to be blood is e.g. the perception of a shadowed part of the table. This is one example illustration of hallucinatory perception. While there is no general account we can give for token hallucinations, what we can do is give individual accounts by paying attention to what the hallucinator's surroundings look like from their point of view. Specific cases will vary. Some cases will involve illusory perception, entoptic phenomena, and subjective contours, while others will involve none of these. And while in some cases it will seem plausible to the hallucinator that her hallucination is just the idiosyncratic experience of what she sees, in others this will strike her as false, because her experience is analogous to illusionistic picture perception divided from design seeing.

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