Hallucination and Its Objects

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When one hallucinates a flying pig, one does not see a flying pig, because there are no flying pigs to be seen. But there is considerable pressure to admit that one nonetheless sees (or, at least, is aware of) some *thing*. That pressure can either be resisted, or else a suitable object of hallucination can be identified. The large philosophical literature on hallucination has recently tended toward to the first option, but the second retains some notable supporters. This is symptomatic of a serious dilemma: an object of hallucination is hard to resist, but finding a plausible candidate has proved well-nigh impossible.

In the first part of this article (sections 1–4), we review and reinforce this dilemma. In the second part, we argue for taking the second horn, and introduce our candidate for the object of hallucination. On our account, the hallucinator is aware of a physical object, albeit sometimes not a familiar one.

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1. A Framework for Hallucination

There is not much consensus in the philosophy of perception. However, underlying the main disputes are some threads of agreement. It is not essential to our argument, but it will greatly help our presentation if we work within a framework for thinking about hallucination that, although not universally accepted, is well motivated by these common threads.

1.1. Successful and Illusory Cases

Imagine you see a yellow pad and a blue pencil on top of a desk. (As is common, we will concentrate on the visual case.) Suppose that you see these objects as they are—the pad looks yellow and is yellow, the pencil looks straight and is straight, and so on. What is it like to see this quotidian scene? As a philosopher might put it: what is the "phenomenal character" of your experience?

Since a central point of perception is to enable the organism to know about its environment, one might expect that attempting to answer by attending to one's "experience" will end in failure, with one's attention simply directed to the environmental *objects* of the experience. But even though one's experience may not be an object of attention in its own right, one can apparently discover its phenomenal character by attending to its environmental objects. Thus Michael Tye:

> Suppose you are standing before a tapestry in an art gallery. As you take in the rich and varied colors of the cloth, you are told to pay close attention to your visual experience and its phenomenology. What do you do? . . . You attend closely to the *tapestry* and details in it. You are aware of something outside you—the tapestry—and of various qualities that you experience as being qualities of parts of the tapestry, and by being aware of these things you are aware of what it is like for you subjectively or phenomenally. (Tye 2009: 117)

This sort of view is very popular among philosophers of perception, who are otherwise divided on a range of central issues.[1]

1. Examples include Harman 1990; McDowell 1994: 191; Dretske 1995; Martin 1998: 174; Byrne 2001; Campbell 2002: 116; Fish 2009: 5–16; Pautz 2013; Logue 2014; Speaks 2015; Schellenberg 2018, chap. 6. Notable dissents include Block 2003 and Peacocke 1983.

Tye's talk of your experience's "phenomenology" (and other similar locutions) could be replaced with the nontechnical 'how things seem to you,' on a contextually natural interpretation of that phrase. Tye, then, is suggesting that "how things seem to you" can be characterized by various qualities of the pencil, the pad, and so on, together with the pencil and the pad themselves. But that is clearly not all, as is indicated by his remark about "qualities *of parts* of the tapestry." If we change the color of the pencil from blue to yellow and the pad from yellow to blue, we have changed how things seem, even though you are still aware of the same qualities and objects. Clearly what is missing in the characterization of how things seem to you is that yellowness is instantiated in the pad, and blueness is instantiated in the pencil. In other words, the pad and yellowness are insufficient—we need to add the *fact* that the pad is yellow.[2]

When you see the pad and the pen, a portion or tract of reality is revealed. A fact concerning the scene before your eyes is, to borrow a phrase from McDowell (1994: 191), "present to consciousness," or (for short) *present*.[3] That this fact is presented, Tye is saying, determines the "phenomenology" of your experience, or the way things seem.[4] That is, along with many other philosophers, Tye endorses:

> TRACT In successful perception, a certain sort of fact is present and thereby determines the way things seem.

(No doubt many philosophers sympathetic to TRACT would quibble with its formulation, but in-spirit endorsements will do.[5])

What about unsuccessful cases of perception? In particular, what about illusions, where one sees an object but it is not as it looks? The straight pencil might be half-immersed in water, and so look bent. Due to abnormal lighting or a color contrast effect, the pencil may look to have a shade of blue that it doesn't in fact have. At least at first glance, in such cases there are no available facts to be presented, and to determine the way things seem.

2. Cf. Fish 2009: 53; Martin 2002: 399.

3. An early occurrence of the 'presentation' terminology is in Searle 1983: 46. The presented fact is no doubt "complex" in some sense, and may not be fully expressible in a natural language (apart from demonstrative constructions such as '*This* is how things are').

4. See Tye 2009: 119–20.

5. See note 8, below.

TRACT suggests an obvious solution. Facts are arguably true propositions.[6] And if they are, then although there is no such thing as the *fact* that the pencil is bent, the (false) *proposition* that it is bent can be pressed into service, yielding the following more general claim:

> SCENE In successful and illusory perception, a certain sort of proposition, a *scene*, is present and thereby determines the way things seem.

Here those on board with TRACT diverge. Many, like Tye, support its extension to SCENE. Others will immediately get off the bus.[7]

However, since SCENE makes our theory of hallucination easier to motivate and present, we will henceforth assume it; that assumption could be dropped without materially affecting the argument.[8]

6. Cf. Williamson 2000: 43. For dissent, see King, Soames, and Speaks 2014: 68. See also Byrne 2019: 13n12, 14n13.

7. Including John Campbell, M. G. F. Martin, and William Fish (see note 1); see also Travis 2004; Kalderon 2011; Brewer 2011; Genone 2014; Beck 2019; French and Phillips 2020.

8. Those who accept TRACT (or something close to it) and reject SCENE treat illusions as successful cases of perception that are nonetheless misleading—a view sometimes called *naive realism*. On a naive realist account of illusion, "a person is simply presented with the actual constituents of the physical world themselves" (Brewer 2006: 169). It is invariably assumed that hallucination cannot succumb to the same treatment. Since (as will become clear later) our view assimilates hallucination to perception (specifically, illusion), it should be congenial to the naive realist dissatisfied with the current menu of theories of hallucination.

Craig French and Ian Phillips (2020) are naive realists who deny that the "actual constituents of the physical world" presented in perception determine the way things seem. What determines the way things seem, on their view, is the "way" those presented elements are perceived (7–9). As naive realists, they reject SCENE; they would also reject TRACT as formulated in the text.

Michael Pendlebury (1990) agrees that in veridical perception and illusion one is presented with a scene (a proposition), but he denies that the presentation of this proposition determines the way things seem, partly by appeal to the (much discussed) example of blurry vision: "The blurred character of some visual experiences may have no 'meaning' or representational significance" (216). Pendlebury would therefore reject both TRACT and SCENE as formulated in the text.

The views mentioned in the previous two paragraphs do not make the problem of hallucination any easier. Their proponents need to respond to an amended version of Argument † (see below), with different premises but the same conclusion. Although demurring at the details of our framing, they have no special reason to reject our solution.

2. Particularity and the Problem of Hallucination

What are hallucinations? Characterizations from scientists typically involve some variation on the following:

> *An hallucination is a strictly sensational form of consciousness, as good and true a sensation as if there were a real object there.* The object happens to be not there, that is all. (W. James 1898: 115)

> Hallucinations are perceptions without a corresponding stimulus externally. (Bleuler 1934: 59)

> A hallucination can be defined as a conscious sensory experience that occurs in the absence of corresponding external stimulation of the relevant sensory organ and has a sufficient sense of reality to resemble a veridical perception. (Aleman and Larøi 2008: 15)

Since, on our view, (visual) hallucinations do have a "real" or "external" object, albeit not one usually before the eyes, the first two characterizations are (at least) misleading. The third is better, because it puts the emphasis on the lack of "stimulation of the relevant sensory organ," while remaining neutral on whether the hallucinator is aware of any object.

In the spirit of the third characterization, we can informally characterize (visual) hallucinations as follows: *S* (visually) hallucinates when *S* "seems to see" an object, but no such object is currently affecting the eyes. But what is "such an object"? Here is a more careful characterization. *S* hallucinates iff *S* seems to see an object that looks *F* . . . to *S*, but there is no object affecting the eyes that looks *F* . . . to *S*. (Take '*F* . . .' to be an exhaustive specification of the way the ostensible object looks.) The relevant sense of 'seems to see an object that looks *F* . . .' can be illustrated by examples of veridical seeing and examples of illusions. Viewing a pencil on a desk, one seems to see an object that looks straight . . .; viewing a pencil half-immersed in water, one seems to see an object that looks bent. . . . If one sees a pencil on the left of the desk, and simultaneously hallucinates a pencil on the right, then one seems to see an object that looks straight and on the right . . . , but there is no object affecting the eyes that looks straight and on the right. . . .[9] If there *is* an object that looks straight and on the right, then it is a *hallucinatory* object.

9. Further refinements to this characterization of hallucination could be made, but its purpose is simply to convey to the reader the target phenomenon, in a neutral fashion that does not rule out our view from the start. Some visual experiences (e.g.,

In paradigm cases of seeing an object, a pattern of light altered by the object is entering the eyes. There are many actual cases where people report (in effect) that they seem to see an object, but there is no good light-altering candidate in the environment. Here is an example:

> On 28th February, 1799, at the Royal Society of Berlin, a well-known German bookseller called Christoph Friedrich Nicolaï (1733–1811) read an autobiographical paper entitled "Memoir on the Appearance of Spectres or Phantoms occasioned by disease; with Psychological Remarks".... He reported that one morning of the year 1790 (a particularly stressful one for him) he "suddenly observed, at the distance of ten paces, the figure of a deceased person. I pointed at it, and asked my wife [who was sitting by him at the time] whether she saw it. She saw nothing but being much alarmed, endeavoured to compose me, and sent for the physician. The figure remained some seven or eight minutes, and at length I became a little more calm.... In the afternoon the figure which I had seen in the morning again appeared. I was alone when this happened. I went therefore to the apartment of my wife, to whom I related it. But thither also the figure pursued me. Sometimes it was present, sometimes it vanished; but it was always the same standing figure.... The figure of the deceased person never appeared to me after the first dreadful day, but several other figures showed themselves afterwards very distinctly—sometimes some I knew—mostly, however, of persons I did not know." (Berrios and Marková 2015: 7)

There are also many similar cases where the absence of any relevant light-altering object is evident, because there is no light entering the eyes at all. Experiences of phosphenes, known to the ancient Greeks, are a classic example. Accordingly, taking the reports at face value, there are visual hallucinations, as we are using this expression.

Hallucinations as just explained can be called *psychologists' hallucinations*, to distinguish them from—in the terminology of Howard Robinson (2013: 313)—*philosophers' hallucinations*, which would result if "the perceptual system and brain were stimulated in just the way they are stimulated in genuine perception, and not by the usual external objects." In Martin's terminology, these are *causally matching hallucinations*, "those

seeing in thick fog) do not (clearly) involve object perception; their corresponding hallucinations are not under discussion here.

with the same proximate causes as veridical perceptions" (Martin 2004: 71). The proximate (presumably neural) causes, Martin and Robinson suppose, are sufficient for perceptual experience. Philosophers' hallucinations are, in this sense, *internal*: *seeing* a pig requires some porcine contribution from the environment, causally affecting the subject, but *hallucinating* a pig requires no environmental contribution at all. Perhaps some psychologists' hallucinations are also philosophers' hallucinations, but this should not be assumed at the outset. That philosophers' hallucinations are at least *possible* is very widely accepted; nonetheless, at the end of this article we will conclude that it should not be. In any event, when developing a theory of *X*s it is wise to begin with the actual *X*s, rather than merely possible ones. According, our focus until the last section will be on psychologists' hallucinations.[10]

Once SCENE is accepted, a seemingly innocuous next step is to endorse a similar thesis for hallucinations:

> SCENE† In hallucination, a certain sort of proposition, a *scene*, is present and thereby determines the way things seem.

It is here that the problem of hallucination arises. In the successful and illusory cases, you do not merely see *a* pad, you see (and hence are aware of) *this* pad; you do not see a qualitatively identical pad in the stationery cupboard. Vision acquaints you with a *particular object*, this pad; it does not acquaint you with the pad in the cupboard. Accordingly, the presented scenes in the successful and illusory cases, which determine the way things seem, concern *this* pad, not merely some pad or other. It is thus natural to think that the scenes are *object-dependent*, in this sense: necessarily, anyone presented with *these very scenes* would be aware of *this pad*.[11]

A plausible accompaniment to SCENE is therefore:

10. For reasons of space, we are ignoring hallucinations in sense modalities other than vision; these are not unimportant and ideally they should be examined at length. For example, schizophrenic hallucinations often involve "hearing" voices. (For a nonvisuocentric discussion of hallucination, see Farkas 2013.)

11. Note that—at least arguably—one may see (and so be perceptually aware of) an object without attending to it.

The characterization of object-dependence in the text is sufficient for our purposes, but since it is tied to perception there is no pretense to generality. Ephraim Glick (2018) defends a general account of object-dependent (or singular) propositions that fits nicely with the more restricted account given here.

OBJECT If SCENE is true, scenes in successful and illusory cases are object-dependent.

Note that adding OBJECT to SCENE does not imply that merely permuting particular objects can change "phenomenal character," or the way things seem. Imagine looking at one egg and then a qualitatively identical egg. The way things seem doesn't change. However, the presented scene changes: the first presented scene concerns one particular egg; the second presented scene concerns another. There is no route back from the way things seem to the presented scene, which is why SCENE says that the presented scene *determines* the way things seem.[12]

Now consider OBJECT's hallucinatory counterpart:

OBJECT† If SCENE† is true, scenes in hallucinatory cases are object-dependent.

Given the palpable particularity of hallucination, OBJECT† can seem tempting. However, given SCENE† and OBJECT†, it follows that the hallucinator *is* aware of an object—that is, there are hallucinatory objects. We thus have *Argument †*:

SCENE† In hallucination, a certain sort of proposition, a *scene*, is present and thereby determines the way things seem.

OBJECT† If SCENE† is true, scenes in hallucination are object-dependent.

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† There are hallucinatory objects.

Most of the voluminous philosophical literature on hallucination can be viewed as responding to Argument †—either by denying OBJECT†, or by denying SCENE†. Since our overall argument depends on the plausibility of Argument †, we need at least to sketch the main problems with both kinds of response. (Those already convinced that existing theories of hallucination are inadequate can skip ahead to section 4.)

12. For helpful discussion of particularity and phenomenology, as well as references to the literature on the topic, see French and Gomes 2019.

3. Resisting Argument †

To begin, suppose that while SCENE† is true, OBJECT† is false: when hallucinating a flying pig against the clear blue sky, a scene is presented, but that scene is not object-dependent.[13] That is, there is no object *x* such that the hallucinator is aware of *x*. Still, as Susanna Schellenberg (2016: 878) puts it, "it seems . . . as if a particular object is present." What sort of presented scene (proposition) could explain this? There are two options. The most obvious one is that the scene characterizes the hallucinated pig purely descriptively—for instance, using a definite description. To introduce the other, note that on some theories of propositions, an object-dependent scene (proposition) is a structured entity with the relevant object as a constituent. Then perhaps there are "gappy scenes": scenes just like object-dependent ones, but with a "gap" where an object should be (see, e.g., Braun 1993). There are, then, two ways in which OBJECT† might be false: first, hallucinatory scenes are descriptive; second, they are gappy. Let us take these in order.

If hallucinatory scenes are descriptive, there is no reason to treat successful perception and illusion any differently, and indeed proponents of the descriptive response do not (e.g., Pendlebury 1986: 98; Hill 2021). So, in a successful case of seeing a yellow pad, the presented scene picks out the pad by description: it is, say, the yellow rectangular object on the left. A natural descriptivist suggestion is that you are aware of the pad because the scene is the proposition that . . . the *F* . . . , and the pad is the *F*. However, cases of illusion immediately raise a problem. Imagine you see (and so are aware of) Pad, a yellow rectangular pad on the right, but Pad does not appear that way. Perhaps, due to distorting mirrors and lighting conditions, Pad appears to you as a white square pad on the left.[14] The presented scene does not pick out the pad by description, yet you are visually aware of it. Why? John Searle (1983: 48) suggested, in effect, that this shows that the scene has been mischaracterized: it *does* pin down Pad by description, because it specifies that the *F* is "causing this visual experience," and Pad is the *F*.[15] Searle's view has met with a number of well-known objections, for instance that there is no independent reason to think that perceptual experience has this kind

13. The conditional in OBJECT† should be read as material, and so it is not an option to deny *both* SCENE† and OBJECT†.

14. If we add that there is a white square pad on the left, which you do *not* see, we get a variant of a classic example due to H. P. Grice (1961: 142).

15. See also Searle 2015: 63–65.

of self-referential content (Burge 1991: 205). Perhaps more fundamentally, Searle's response, rather than denying OBJECT†, actually reinstates it: scenes *are* object-dependent, with the pertinent objects being "experiences." Moreover, once it is conceded that vision can pick out particular experiences nondescriptively, there is little motivation for insisting that it cannot pick out pads and pigs nondescriptively. And if vision can pick out pads and pigs nondescriptively, the assumption of self-referential content is otiose.[16]

Turn now to the second way of denying OBJECT†: the kind of scene presented in hallucination is not object-dependent, not because it is descriptive, but because it is a structured entity with a "gap" where an object is typically to be found. Perhaps the main problem with this idea is that although the existence of descriptive propositions is not controversial, gappy propositions are dubious entities. For example, a gappy proposition intuitively lacks a truth-value.[17] If someone says 'That is a goat' while demonstrating nothing, they may have expressed a proposition with a "gap" corresponding to the subject term 'That', but they have not succeeded specifying a way for the world to be—or not to be. But the supposition that a proposition is neither true nor false can apparently be reduced to absurdity by simple classical reasoning (Williamson 1994: 187–89).[18]

16. Christopher S. Hill (2021: 1392) offers a variant that appeals to causation as a further condition, not as a component of the presented scene: "A subject S is perceptually aware of an object O just in case (1) S's experience E represents that there is a (single) object with such and such perceptible qualities in such and such a location, (2) O is causally responsible for E, and (3) O comes closer than any of the other causes of E to satisfying its representational content." Concentrating, as Hill does, on vision, one problem is that E's causes can arguably include an *un*seen object O* which due to illusion "comes closer than any of the other causes of E," including the perceived object O, "to satisfying its representational content." (Imagine that O* hits O behind a barrier, causing O to emerge into a hall of distorting mirrors that make O appear exactly like O* and completely unlike itself.) Hill's proposal thus seems to predict that S is aware of the unseen object O* and not aware of the seen object O. Whether this sort of proposal could be fixed by placing restrictions on the causal relation (see Hill 2021: sec. 8) is something we will have to put aside here.

17. See Salmon 1998: 318n54; and also Adams and Stecker 1994: 389. David Braun (1993: 464), however, denies that gappy propositions lack truth values, taking the atomic ones to be false. See also the next note.

18. Schellenberg (2010, 2011, 2013, 2018) develops a Fregean version of the gappy content view. She argues that "a hallucination can have a gappy content and nonetheless be inaccurate" (Schellenberg 2018: 95). (Schellenberg prefers 'inaccurate'/'accurate' over 'false'/'true' [see 93], but for present purposes we can use these pairs interchange-

Suppose, alternatively, that SCENE† is false. When one hallucinates, no scene is "present to consciousness," not even a gappy one. Since the point of denying SCENE† is to evade the conclusion †, one is not (or need not be) aware of *any* particular object, not even a sense datum. Somehow an explanation of hallucinatory experience must be found without appeal to an ostensible tract of reality (a scene), or a hallucinatory object. That is not much to work with.

One option is to reject the explanandum: really, there is no such thing as hallucinatory *experience*. This has been defended at length by William Fish (2009: 94–95): on his view, if someone hallucinates a yellow pad she undergoes no "phenomenal experience," but instead merely has the "cognitive effects" (principally "beliefs or judgments") that would

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ably.) If Schellenberg has made a case that gappy propositions or contents can be false, then the objection in the text does not get off the ground. Schellenberg argues as follows:

> Distinguish two ways in which a content can be inaccurate. One way is for the content to *make a claim about the environment that is not accurate*. A second way is for it to *fail to make an accurate claim about the environment*. To illustrate this second sense of inaccuracy, suppose that I claim that Pegasus lives in my apartment. This claim is inaccurate. Given that "Pegasus" does not refer, the inaccuracy in question is that I have failed to make an accurate claim about who lives in my apartment. *If inaccuracy is understood in this second way, then a hallucination can have a gappy content and nonetheless be inaccurate*. On this understanding of gappy contents, the fact that a content is gappy implies that the content is necessarily inaccurate insofar as a gappy content could never make an accurate claim about the world. (94–95; emphasis added)

Let *p* be the gappy content *that Pegasus is F*, which for vividness we can write as '*that _ is F*'. (For Schellenberg's official Fregean notation, and other complications not relevant to the present issue, see 88–92.) Schellenberg thinks (surely correctly) that *p* fails to make a true (accurate) claim about the environment. Since *p* fails to make a true claim, according to Schellenberg we can regard it as "inaccurate" (or false) in "the second sense of inaccuracy." In Schellenberg's second sense, because *p* fails to make a true claim, it is false. (Notice that in this sense, anything that fails to make a claim at all is false or inaccurate.) But what about the first sense of 'inaccurate', which is the relevant one for the objection in the text? In the first sense, 'inaccuracy' (or 'false') applies only to "claims," or propositions that "make claims." A tomato, which fails to make any claims, is false in the second sense but not in the first. Now the gappy proposition *p does* "make a claim"—put more simply, *p is* a claim, albeit a gappy one. So: is *p*, a "claim about the environment," false or inaccurate? Schellenberg has not shown that it is. Granted, *p* fails to be a true claim, but for all Schellenberg has said, that is because *p* is a truth-valueless claim, not because *p* is a false claim.

Tye (2009: chap. 4) endorses a Russellian version of the gappy content view for hallucination. Tye (2014) later rejected it, mainly because (he argues) it is hard to make sense of the alleged "gap." For another argument against gappy propositions, see Byrne 2019: 23. See also Hill 2021: sec. 5.

have been produced by a veridical perception of a yellow pad. Naive hallucinators do not just mistakenly think they *see* things, they mistakenly think they (phenomenally) *seem* to see things.[19]

The main complaint against Fish's account is that it places hallucination on the wrong side of the border between perception and cognition. (Visual) hallucination, according to Fish, is a sophisticated kind of blindness-denial or visual anosognosia, a rare condition in which cortically blind subjects claim that they can see. Since hallucination has many of the signatures characteristic of perception (unlike visual anosognosia), an account in terms of "beliefs or judgments" does not seem promising.[20]

What's left? Hallucinators may not be aware of some *thing*, but plausibly they are aware of *something*: if one hallucinates a yellow pad, one may not be aware of any pad (or any particular object), but one arguably *is* aware of various (uninstantiated) properties and relations; in particular, one is aware of what Mark Johnston (2004: 134) calls a *sensible profile*, "a complex, partly qualitative and partly relational property, which exhausts the *way* the particular scene before your eyes is if your present experience is veridical." (A sensible profile is very similar to a gappy scene, although profiles are not supposed to be propositions.) According to Johnston (2004: 156), the hallucinator *mistakes* a property (specifically, a sensible profile) for a particular:

> The act/object account of hallucination is secured by treating hallucination as visual awareness of an uninstantiated sensible profile. If some such presented profile strikes a subject as [a yellow pad], then the subject counts as hallucinating [a yellow pad].

As with Fish, there is a worry that a purely perceptual phenomenon is taken to be partly cognitive. And in any case, it is doubtful that Johnston has adequately explained why a *universal*—a complex property with yellowness as a constituent—could "strike one" as a *particular*—a yellow pad.[21]

Someone who wants to deny SCENE† might seem to have run out of options. A genuinely experiential hallucination of a yellow pad must

19. Fish (2009: 93–94) prefers to describe his view as "eliminativist about phenomenal character," rather than as eliminativist about hallucinations; he would accordingly reject the account of hallucination we gave earlier in section 2.

20. For criticism broadly along these lines, see Siegel 2008; Martin 2013; Pautz 2013.

21. For his explanation, see Johnston 2004: 142. See also Byrne 2019: 19–21. Johnston later amended his account of hallucination: see Johnston 2022.

be secured without appealing to the presentation of an ostensible tract of reality, or any awareness of an object or property. Among the meager resources left is this: someone who hallucinates a yellow pad can't tell that she's not seeing a yellow pad. Is that enough? M. G. F. Martin (2004, 2006) thinks it is.

Martin holds, roughly, that to hallucinate a yellow pad is *simply* to be in a situation that is indiscriminable (not knowably different from) a situation in which one veridically sees a yellow pad.[22] The negative epistemological condition of indiscriminability from a situation in which one veridically sees a yellow pad trivially applies when one *does* veridically see a yellow pad, since falsehoods cannot be known. It also applies when one sees a white pad that looks yellow, at least if we restrict (as Martin [2004: 47] does) the sources of knowledge to "introspection and reflection on [one's] experience." One might know that one is not seeing a yellow pad because one set up the illusion oneself, but here the source of one's knowledge is not reflective introspection. In both these cases there is an additional "mental characterisation" (72): one sees a pad and it looks yellow. Hallucinations, according to Martin, are cases where no such additional characterization is available.

If we focus on simple cases where one hallucinates an object against a plain background, and sees nothing other than the background, the proposal can be put as follows (leaving the qualification about reflective introspection tacit[23]):

> H_M *S* hallucinates an *F* iff *S*'s situation is indiscriminable from a situation in which *S* veridically sees an *F*, and *S* neither veridically sees an *F* nor has an illusion of an *F*.

If the negative epistemic condition on the right-hand side holds, then either (1) *S* veridically sees an *F*, or (2) has an illusion of an *F*, or else (3) neither veridically sees an *F* nor has an illusion of an *F*. In either (1) or (2), *S* has a (visual) experience of an *F*; by H_M, this is also

22. Martin (2004: 15) intends this theory only to apply to "causally matching" hallucinations—see section 2. Many "psychologists' hallucinations" will therefore fall outside the scope of his account.

23. One can "veridically see a tomato" by seeing one far away, or seeing one in very dim light, and so on. These ways of veridically seeing a tomato are not relevant to Martin's account of "hallucinating a tomato"; rather, 'veridically seeing a tomato' is to be interpreted as something like: veridically seeing a tomato in a way such that the tomato is easily recognizable as a tomato. This rough characterization will do for our purposes.

true in (3). H_M thus entails that the negative epistemological condition is *sufficient* for an experience of an *F*. As Martin (2004: 52) puts it:

> A sensory experience of a lavender bush … is no more than … a situation which is indiscriminable through reflection from a veridical perception of a lavender bush.

One might think that this consequence of H_M cannot be right. A dog, we may suppose, has no capacity for reflective introspection at all. A fortiori, it cannot tell its situation apart from a situation in which it is veridically perceiving an *F* (for any filling for '*F*'). Yet it is presumably not enjoying every possible veridical experience simultaneously (Siegel 2004: 383; Martin 2006: 379–80; Siegel 2008: 210–14). Martin (2006: 380–96) has replied to this objection at length; to avoid delaying the introduction of our positive proposal, we will pass over the details and simply note that (as Martin himself would not deny) there is plenty of room for dispute.[24]

That completes our discussion of the standard ways of responding to Argument †. It has hardly been conclusive, but enough has been said to suggest that the conclusion is difficult to avoid. In the second part of this article we will argue that there is no reason to avoid it.

4. Scattered and Gerrymandered Objects

In the philosophy of perception, the existence of "ordinary objects"—lemons, pads, rocks, pencils, pigs, and the like—is taken for granted, and this article is no exception.[25] Familiarly, once the being of lemons and the rest is assumed, it is a short step to the conclusion that ordinary objects are merely the tip of an iceberg. First, as noted by Richard Cartwright (1987), some ordinary objects are (apparently) scattered, occupying disconnected regions of space. For instance: Cartwright's (1987: 174–75) pipe, lying on his desk with its stem removed from the bowl, or his copy of McTaggart's *The Nature of Existence* (volume 1 being at some distance from volume 2). There are also slightly less ordinary examples, like flocks of birds and constellations. At least Cartwright's disassembled pipe and a murder of crows have some intuitive "unity" to them, but constellations have none. Orion, for instance, is an arbitrary group of different sorts of stars at varying (vast) distances apart: the two brightest stars in Orion, the supergiants Riga and Betelgeuse, are more

24. For helpful discussion, see Soteriou 2016: 169–82; Pautz 2021: 209–15.
25. A rare exception is Korman 2014.

than one hundred light-years apart. Indeed, the stars in a constellation may exist at different times—perhaps some stars in some constellations have long since exploded.

Once Cartwright's pipe, *The Nature of Existence*, constellations, and the like are admitted, it is hard to resist the incursion of an army of *extra*-ordinary objects: trout-turkeys, consisting of "the front half of a trout plus the back half of a turkey" (Lewis 1991: 7), the Great Roe ("A mythological beast with the head of a lion and the body of a lion, though not the same lion" [W. Allen 1974: 20]), and Harry, composed of a book of matches and one distant match, earlier removed from the book. To deny existence to Harry, as Cartwright (1987: 183) points out, would seem to mistake the "parochial concerns of human beings" for a metaphysical principle. Many metaphysicians embrace extra-ordinary objects, although of course there are dissenters.[26]

We will make the defensible assumption that there are these extra-ordinary scattered objects, some with radically diverse parts, and some with large spatiotemporal gaps. Since it will be useful to emphasize the intuitive lack of unity between the parts of such things, we will call them *gerrymandered objects*. Nothing else will be assumed: in particular, there is no commitment to mereological universalism, a topic-neutral notion of parthood, temporal parts, or any claims about the persistence conditions or essential properties of gerrymandered objects. All we need are spatiotemporal gerrymandered objects like trout-turkeys and constellations, not (for example), trout-pies, objects composed of a trout and π. Leaving these qualifications tacit, we have:

Claim A. *There are numerous gerrymandered objects.*

Suppose a trout and a turkey, and so a trout-turkey, are before you. You see the trout, and the turkey. Do you also see the trout-turkey? Well, you see both its parts: the front half of the trout and the back half of the turkey.[27] And this would appear to be enough: you can see Cartwright's dissembled pipe by seeing its parts, for instance. Of course, you may well not realize that you see the trout-turkey—or Cartwright's pipe, for that

26. Thus Daniel Z. Korman (2015: 160), who defends the "conservative" view that there are ordinary objects like trout and turkeys, but no trout-turkeys, reports that conservatism is thought untenable by "the vast majority of metaphysicians."

27. To sidestep distractions about undetached parts, imagine that you see a severed front-half trout next to a severed back-half turkey.

matter—but one may see an *F* unknowingly (Dretske 1969: 36–37). However, saying that you see the trout-turkey, and leaving it at that, blurs an important distinction. Vision does not recognize the trout-turkey: it may segment the scene into a trout-head, a trout eye, and other objects, but the trout-turkey is not included. The trout-turkey, unlike the trout and its head, does not appear "as one." That is at least *part* of the explanation of why the trout-turkey's existence is not part of "common sense."

However, sometimes gerrymandered objects *do* appear "as one." A pencil sharpener, stapler, Post-it notes, pencils, and other office paraphernalia scattered on a desk form a gerrymandered object. Like the trout-turkey, you see it, although it is not recognized by vision. Imagine that the sharpener, stapler, and so on start moving together, like a flock of birds. Phenomenologically, in addition to the *plurality*—the sharpener, stapler, . . . —there is also a *singularity*—the office-supply-"flock." Or, alternatively, imagine that the spatially separated sharpener, stapler, and so on are aligned and oriented in such a way that from a particular angle they appear as the head of Barack Obama.[28] In these cases the gerrymandered object comes into view in a more interesting sense: vision segments it from the scene, as it segments the sharpener and stapler themselves.[29]

5. Hallucinations and Memory

One striking fact about hallucinations, often not emphasized enough, is how humdrum they are. The philosopher H. H. Price (1964: 15) once took the psychedelic alkaloid mescaline, and reported that he hallucinated "a pile of very large dead leaves." Not terribly impressive (although Price himself was "greatly delighted"). Migraine hallucinations are typically of simple visual patterns, like zigzags. Hallucinations characteristic of Charles Bonnet syndrome are much richer, but are not otherworldly:

> The most common image is that of a person. Disembodied distorted faces; small costumed figures and branching structures; vivid images of animals and figures; subtle geometric forms; well

28. The American artist Michael Murphy has created direction-dependent sculptures of this sort; there are many similar examples.

29. The gestalt psychologists formulated various principles to explain why some perceptual elements are grouped together as one. For example, the "principle of common fate" is supposed to explain why birds moving together appear as a single flock. For a review, see Wagemans et al. 2012.

> defined complex figures; faces; Lilliputian . . . , normal-sized, and 'larger than life' images. (Menon et al. 2003: 60)[30]

Despite much experimentation with mind-altering drugs, Oliver Sacks's (2013) most noteworthy hallucination was of a "pear-shaped blob of the purest indigo." Admittedly (if we take his purple prose at face value), "it was the color of heaven, the color, I thought, that Giotto spent a lifetime trying to get but never achieved"—still, hardly an utterly alien shade.

The neurosurgeon famous for his experiments on direct brain stimulation, Wilder Penfield, never succeeded in inducing hallucinations that were out of the ordinary. "It was like being in a dance hall, like standing in the doorway—in a gymnasium—like at the Kenwood High school. . . . My mother was telling my aunt over the telephone to come up and visit us tonight. . . . I am seeing a picture of a dog and a cat" (Penfield and Perot 1963: 614, 617, 632).

The world of hallucination is not some exotic realm, but very much like the familiar perceptible world, albeit distorted and rearranged.[31]

As these examples indicate, hallucinations at least sometimes depend on memory: Price's leaf hallucination presumably draws on his previous encounters with leaf piles in autumnal Oxford. It may be "unclear whether [Charles Bonnet] images represent playback of previous visual memories" (Menon et al. 2003: 61), but evidently memory is implicated somehow. Eighteenth-century Charles Bonnet sufferers hallucinate coaches and horses, not aircraft or automobiles. "The conclusion is inescapable," Penfield wrote, "that some, if not all, of these evoked responses represent activation of a neural mechanism that keeps the record of current experience" (Penfield and Perot 1963: 679).

As Johnston (2004: 221) notes, one may "hallucinate real things and real people," for instance one's mother; see also the quotations from G. E. Berrios and Ivana S. Markova (section 2), and Wilder Penfield and Phanor Perot (above). There is no obvious reason to deny that such hal-

30. See also ffytche 2013: 51. For a case report of "Lilliputian" hallucinations in a migraine sufferer, see Podoll and Robinson 2001. For mundane descriptions of hallucinations in blindfolded subjects ("flashing lights, mirrors, lamps, trees"; "amorphous shapes"; "a mouse-like face"; "cities, skies, kaleidoscopes, lions, and sunsets"), see Merabet et al. 2004.

31. Admittedly psychedelic-induced hallucinations are sometimes taken to reveal the *mysterium tremendum*, the interconnectedness of all things, the nonexistence of the ego, and the like (see Huxley 1990; Pollan 2018). But if they do that, it is not by seeming to present completely novel objects and properties.

lucinations are ways of becoming aware of these things (see James 2014). Thus one may become aware of a particular pig (say, one's favorite pig, the Empress of Blandings), and particular wings (say, the wings of one's pet parrot) by hallucinating them. Drawing on the observation made at the end of the previous section, one may also hallucinate the Empress and the wings together, so they appear as one—in particular, as a flying pig. Probably this happens occasionally, which gives us:

Claim B. *Sometimes hallucinators are aware of diverse spatiotemporally scattered objects that appear as one.*

Claim B is a claim about *some* hallucinations, perhaps only a tiny minority.[32] Further, it is not especially original. Similar claims can be found in the empirical literature—for instance:

> Everything that one perceives can also become a hallucination, in such a way, that the various elements can be combined freely; a hallucinated lion can have wings, a human figure can be composed out of the properties of various persons. (Bleuler 1934: 59)[33]

6. The Gerrymandered Object of Hallucination

We are now in a position to set out and defend our theory of hallucination. On quite minimal assumptions, over the last two sections we have argued for claims A and B. Together, they give us a modest version of our theory of hallucination. By claim B, the hallucinating subject is sometimes aware of diverse spatiotemporally scattered objects that appear as one. By claim A, there is such a gerrymandered object. In some cases, then, there is an object of hallucination: a physical object, no more mysterious than a lemon or a lump of clay, that we parochially minded humans tend to overlook.

The case for the modest view does not depend on any of our criticisms of philosophical accounts of hallucination. It just appeals to

32. For our purposes, this weaker version of claim B would do: it could easily have happened that a hallucinator is aware of diverse spatiotemporally scattered objects that appear as one. For simplicity we will stick to the stronger thesis in the text.

33. See also a claim made by Dominic H. ffytche (2013: 59): "CBS [Charles Bonnet Syndrome] hallucination content is based on juxtaposed or unusually intense fragments of normal visual perception." Here ffytche does not appear to be thinking of the "juxtaposition" of *objects* of normal perception, but rather the juxtaposition of *mental* items, perceptions, or experiences.

a metaphysical view that is of considerable appeal, together with some relatively mundane observations about hallucinations. The proponents of views mentioned in section 3 have no compelling reason to deny it: their theory, they may say, fits the (perhaps many) cases that the modest view does not cover.

We now appeal to our earlier discussion of Argument †. Considerable ingenuity has been devoted to avoiding the conclusion—that there are hallucinatory objects—because it is almost always assumed to require (in Schellenberg's phrase) "strange particulars" like sense data. We have now amassed reasons to question this assumption. Sometimes there is an ordinary object of hallucination—say, one's mother. But sometimes the object is gerrymandered. Given that this is *sometimes* the case, and given the difficulty of denying the premises, the natural hypothesis is that Argument † is, after all, sound: there is *always* an object of hallucination, and that object is *always* a physical object—sometimes an ordinary object, but sometimes a gerrymandered one. This is our theory of hallucination: the *Gerrymandered Object Theory of Hallucination*, or GOTH.[34]

Before turning, in the final section, to the implications of GOTH for philosophers' hallucinations and more general issues in the philosophy of mind, we will elaborate the theory and discuss an empirical issue that bears directly on it.

GOTH is the conjunction of claim A and this universalized version of claim B:

Claim B+. *Hallucinators are always aware either of ordinary objects or of diverse spatiotemporally scattered objects that appear as one.*

34. A similar account (developed independently) is in Barkasi 2020. It is worth pointing out that there is a closely related theory of hallucination that dispenses with gerrymandered objects, the *Morphed Object Theory of Hallucination*, or MOTH. On this theory, the object of hallucination is *always* an *ordinary* object: when one hallucinates a flying pig, the object is simply (say) the Empress of Blandings, perceptually distorted so as to appear to have wings. One problem with MOTH is that it is unmotivated, given that scattered objects can perceptually appear "as one"—as birds can appear as a flock, for example. According to us, the appearance of the flock should be taken at face value: there really is such a scattered object, and it can be detected by vision. But even if this is disputed, the observation that the birds *appear* as one remains. Whatever accounts for the phenomenology can presumably be pressed into service to explain how the Empress and a parrot's wings can appear in hallucination as one.

The counterpart of claim B+ for the objects of dreams (which are often taken to be a species of hallucination[35]) is in the *First Meditation*:

> It must surely be admitted that the visions which come in sleep are like paintings, which must have been fashioned in the likeness of things that are real, and hence that at least these general kinds of things—eyes, head, hands, and the body as a whole—are things which are not imaginary but are real and exist. For even when painters try to create sirens and satyrs with the most extraordinary bodies, they cannot give them natures which are new in all respects; they simply jumble up the limbs of different animals.[36] (Descartes [1642] 1984: 13)

To a first approximation, a siren is half-woman, half-bird. A painting of a siren, although no doubt "fashioned in the likeness" of women and birds encountered by the painter, need not be of a particular woman or a particular bird. Similarly, a painting of a flying pig need not be of a particular pig—the Empress of Blandings, say—or of a particular pair of wings. Is GOTH committed to the view that when one hallucinates a flying pig, one is aware of a gerrymandered object that is composed of parts that would form (something like) a flying pig, were they glued together appropriately?

No, it is not. Consider hallucinating a perfectly ordinary pig. If one keeps a single pig, the Empress of Blandings, she may well be the object of the hallucination. If one keeps two pigs, the Empress and Piglet, one may perhaps be aware of the gerrymandered object consisting of Piglet's head and the Empress's body. However, there is another candidate that is a more plausible fit for most cases, where there is no reason to think that a particular pig, or pig-part, is salient. A useful model is a contrived sort of binocular fusion, where the object presented to the left eye is distinct from the similar object presented to the right. Even though the pig (the Empress, say) seen with the left eye is distinct from the pig (Piglet) seen with the right, they appear as one. That gerryman-

35. For example, Aristotle (1941: 625) took dreams to be "presentation[s] based on the movement of sense impressions, when such presentation occurs during sleep."

36. Immediately following the quoted passage, Descartes qualifies this somewhat. The observation that memory influences the content of dreams goes back at least to classical antiquity. In *The Interpretation of Dreams*, Freud (2010: 44) remarks that "all the material making up the content of a dream is in some way derived from experience, that is to say, has been reproduced or remembered in the dream—so much at least we may regard as an undisputed fact."

dered object looks very much like a pig, but it isn't. It has two pigs as parts, but one does not see the parts *as* parts. Despite looking like a pig, the gerrymandered object is not composed of parts that, were they all appropriately glued together, would form a pig, or indeed anything like a pig. If we say that an *amalgam* of Ks is an object composed of some Ks, then the proposal is that the typical object of a pig-hallucination is an amalgam of pigs that, to the hallucinator, looks like a single pig.[37]

The object of a hallucination is not currently affecting the subject's retinas, and cannot be scrutinized by holding up a magnifying glass. In that respect hallucinations are unlike illusions. However, according to GOTH, there are significant commonalities. Like illusions, hallucinations involve visual awareness of an object, and the object (typically) appears a way it isn't: an amalgam of pigs appears as a single pig, for instance.[38]

GOTH thus has considerable degrees of freedom in accounting for hallucinations, since there are few limits on how an object can appear (see Ali 2018: 607–13). However, this does not insulate the theory from empirical refutation, because its plausibility depends on substantive claims about memory. Despite the degrees of freedom, potential evidence against GOTH is easy to find.

37. There are other more complicated proposals along similar lines; for ease of illustration we will focus on amalgams.

Johnston (2004: 130) makes the plausible observation that "I can secure my *first* singular reference to the quality cherry red or to the structural property C major by way of hallucinating a scene or a tune." (Recall Sacks's hallucination of the "purest indigo" in section 5.) In contrast, Johnston says, "hallucination could not be an original source of *de re* thought about particulars" (129). If GOTH is right, the contrast here is not as Johnston has it: hallucination could allow one to secure one's first singular reference to what appears to be a pig but is in fact a pig-amalgam.

Another Johnstonian contrast that GOTH overturns concerns "intensional identity": "Absent special cases such as those in which their respective hallucinations are anchored in thought about some actual dagger or daggers, no sense is to be made of Macbeth and Macduff hallucinating either the same or different daggers" (143). On the GOTH model, it *always* makes sense to ask if the objects of Macbeth's and Macduff's hallucinations are identical. A surprising result, but no more than that: the answer is grounded in Macbeth's and Macduff's complex history of causal interactions with objects. Actually *finding* the answer may be practically impossible, but that is no objection.

38. The converse is also possible: a single pig (say Pinky) can appear as an amalgam of pigs, as in double vision, for instance, when one sees a finger twice over. Moreover, Pinky can appear as a "drift" of pigs, moving in concert and segmented from the scene in the manner of a flock of birds. Here one is not aware of a gerrymandered object composed of Pinky many times over, but simply Pinky himself. (Thanks to an anonymous referee.)

As a simple example, consider phosphenes. What are phosphenes, according to GOTH? A reasonable hypothesis is that they are amalgams of flashes or patches of light, where the component flashes may be distorted by memory to appear, say, smaller or brighter than they actually are. Apart from the conjecture about amalgams, this hypothesis involves little more than familiar psychological mechanisms, since we certainly can remember (somewhat imperfectly) flashes of light. A congenitally blind person has no memories of any flashes, so if she experiences phosphenes, they must be nonoptical entities of some sort. Perhaps sounds, which (despite the lack of any visual input) somehow appear as emitting light? However, there is no independent evidence that the distortions of memory can be so extreme, and the amalgam model (at least as illustrated above) is of no help. GOTH, then, predicts that the congenitally blind cannot experience phosphenes. That prediction appears to be supported by the evidence (e.g., Kupers et al. 2011; cf. Fish 2009: 128–29). Be that as it may, potential threats to GOTH are everywhere.[39]

7. Perception, Memory, and Imagination

Many philosophers of perception have stressed the phenomenological point that perceived objects are "present to consciousness" in some intuitively direct or immediate way that does not apply to objects of belief or thought. Sometimes a contrast is also made with sensory imagination, as in Jean-Paul Sartre's claim that its objects "are given to intuition as absent" (quoted in K. Allen 2015: 289). If one assumes, as Keith Allen (2015: 292) does, that "like sensory imagination, hallucination is essentially a mode of consciousness of that which is absent or merely possible: dead relatives, angels, pink rats, and so on," then classifying hallucination as a kind of degenerate perception is implausible. Rather—as Allen himself argues—it is more attractive to assimilate hallucination to sensory imagination.

39. Here is another example. GOTH fits naturally with this simple inhibitory model of hallucination: a subject who has previously seen pigs is poised to hallucinate pigs, but is typically prevented from doing so because of current sensory stimulation or some other inhibitory factor. A hallucination of a pig will thus be induced if the inhibitor is itself removed or inhibited. Evidence against the inhibitory model is a strike against GOTH. We think that the evidence generally favors the inhibitory model—e.g., hallucinations are induced by sensory deprivation, and the psychedelic drug psilocybin, the ingredient in "magic mushrooms," appears to depress neural activity (Carhart-Harris et al. 2012)—but the present point is merely that GOTH is testable. See also ffytche 2013: 54–55; Manzotti 2017: 138–43.

However, assuming GOTH, the hallucinator is aware of a physical object, and given the felt perceptual nature of hallucination, there is no reason to deny that such objects are present to the mind as they are in ordinary perception.

On the view defended in this article, then, hallucination is assimilated to perception. Perception, according to some neuroscientists, is "controlled hallucination." GOTH reverses this slogan: hallucination is uncontrolled perception.[40]

When one hallucinates a flying pig, parts of the hallucinatory object are causally responsible for one's hallucination via the earlier stimulation of one's sensory surfaces, as in ordinary perception. Unlike ordinary perception, stimulation from different parts of the hallucinatory object may occurred at different times, laying down a succession of visual memories. The contrast between ordinary perception and hallucination is significant—there is no hallucinatory analogue of moving around an object to get a better look at it, for example. But this does not spoil the assimilation. Memory is operative in ordinary perception too (see, e.g., Olkkonen and Allred 2014).

Perception takes time. In the visual case, light has to get from the object to the eye. Of course, that interval is negligible for terrestrial objects. For the moon, the delay is more than a second, and for the North Star it is centuries. The visual pathways inside the head also induce a delay, on the order of a tenth of a second. What if the signals from the retina had to traverse miles of tightly wound neural cabling, producing a massive postponement of perception? One would then see a pencil, say, years after it had affected one's eyes. Likewise if the delay were further downstream, after the pencil's visual features like color and shape had been extracted from the retinal signal. We could even imagine that one sees the pencil in the usual way, with a copy of the processed visual signal remaining in a buffer, only to produce a reseeing of the pencil much later.

That last case is close to GOTH, on which hallucination is a kind of delayed perception, slowed down by memory. Hallucination is not necessarily *re*-perception, though: when one hallucinates a flying pig, one has perceived its parts before, yet one may be perceiving *it* for the first time.

40. For the neuroscientists, see Clark 2016: 308n3; Barrett 2020: 71. The reversed slogan is borrowed from Andy Clark (2016: 196)—it fits our view better than it fits his.

The type of memory relevant to GOTH is episodic memory, as when one visually recollects being in a faculty meeting, or visually recollects the yellow pad and blue pencil laying on the desk. Endel Tulving (2002: 6), who was the first to distinguish episodic from factual (or "semantic") memory, describes the former as "allow[ing] people to consciously re-experience past experiences." The quotation suggests that episodic memory can fruitfully be thought of as delayed (re-)perception, albeit a highly degraded and transformed kind readily told apart from perception of the here and now. As Tulving notes, "We seldom confuse the feeling that we are remembering a past event with the feeling that we are looking at the world" (2). According to GOTH, awareness of a hallucinatory object is typically enabled by a jumble of different episodic memories of different objects.

Episodic memory, although notoriously unreliable in some circumstances, can give us knowledge of the past. But episodic memory would be entirely useless if it freely reshuffled experienced objects in the manner of many hallucinations. For that reason, GOTH is *not* the view that all hallucinations involve abnormally vivid "playback of previous visual memories" (see the quotation from Menon et al. 2003 in section 5 above, and especially ffytche 2013: 58). Rather, GOTH holds that episodic memory provides a basic inventory of familiar objects which under certain conditions allows the visual system to present gerrymandered objects composed from the inventory.

What about sensory imagination? Compatibly with GOTH, it may be given a radically different treatment, for instance as a way of representing perceptual experiences (see Peacocke 1985; Martin 2002). But it is more natural, from a GOTHic perspective, to take sensory imagination to be a degenerate kind of hallucination, sometimes subject to voluntary control.[41]

8. Some Rival Strategies

The view that hallucinations are (quasi-)perceptions of physical objects has recently gained some steam.[42] Thomas Raleigh (2014: 95) argues that philosophers' hallucinations (in his terminology, "perfect" hallucinations) are perceptions of "whatever external factor (evil neuroscien-

41. Defending that view would require a separate article. We are also sympathetic with a similar GOTHic treatment of dreaming (see note 36). Note that both sensory imagination and dreaming share the humdrum nature of hallucination (section 5).

42. In addition to the authors cited in this paragraph, see Ali 2018: 607.

tist, vat-machine, demon, etc.) is causing the 'perfect' hallucination." Rami Ali (2018) argues that this view can be extended to cover hypothetical cases where there are no such "external factors." Farid Masrour (2020) goes further, suggesting a relationalist treatment for psychologists' hallucinations.

Since our focus is still on psychologists' hallucinations, we will compare and contrast Masrour's proposal with GOTH. One type of case Masrour considers is an "embedded" hallucination, where the hallucinator "correctly perceives" a portion of his environment, as when John hallucinates a pink elephant in "the bare corner of his room" (Masrour 2020: 749). Masrour gives a relationalist strategy for accommodating embedded hallucinations, which he calls "Displacing." In the case of John:

> The object of John's experience is the room. The aspect of John's experience that corresponds to the pink elephant is re-described as corresponding to a property that he experiences the room as having. As a working characterization, in Displacing, an aspect of experience that is taken to be presenting a non-existent object is re-described as misrepresenting a property of a perceived external concrete particular. (746)

Importantly, Displacing is *not* the idea that the scene presented to John is (structurally akin to):

> J2 a is room-like and b is pink and elephantine, and b is in the corner of a.

Where, in fact, a is room-like, $a = b$, and so b is neither pink nor elephantine, nor in the corner of a (see Masrour 2020: 748–49n18.) On J2, there is a hallucinatory object—the room. Rather, Displacing gets rid of the hallucinatory object entirely, with the corresponding scene being:

> J1 a is room-like and pink-and-elephantine-in-the-corner.

John's experience does not present an object as being pink or elephantine, or as being in the corner. Rather, it presents an object (the room) as having a property ("being pink-and-elephantine-in-the-corner"), leading John to think that he is confronted with a pink elephant. When John describes his experience as one of an object, a pink elephant, this is not "faithful to the phenomenology of his experience" (748).

As Masrour emphasizes, this is an empirical conjecture, and one that is amenable to experimental testing. With the common assumption the perceptual system uses "object files" (representations used to store information about particular objects, and to keep track of objects over time), Masrour's conjecture predicts that no new object file is created when John hallucinates a pink elephant.[43] However, Masrour does not provide any evidence for the conjecture, and there are reasons to be skeptical. For instance, someone with Charles Bonnet syndrome who is hallucinating a dancing pig on a (real) table should, by being suitably attentive, be able to rid herself of the impression that there is a particular pig, and come to see the "pig" somewhat like a varying highlight or pink "discoloration" (746), a component of the variegated pattern of light, color, and texture that qualifies the desk. We know of no reports of this syndrome that suggest that this is possible.

The simpler idea (which Masrour rejects)[44] is that some perceived physical object—for instance, the table in the above example—appears twice over, once (veridically) as a table and the other (illusorily) as a dancing pig. This suggestion has a clear empirical upshot—namely, that the removal of the physical object from the scene before the eyes would extinguish the hallucination. One would expect this to feature in the psychological literature, if it actually occurred. And on the general strategy of trying to squeeze as many hallucinations as possible under the umbrella of ordinary perceptual illusions, it is worth noting that hallucinations occur in normal subjects after visual deprivation (see Merabet et al. 2004; for some quotations see note 30 above), and Charles Bonnet hallucinations can occur in subjects who are completely blind (McNamara, Heros, and Boller 1982).

9. Philosophers' Hallucinations and Externalism

Recall from section 2 that philosophers' hallucinations are supposed to have sufficient internal conditions (presumably neural). If GOTH is true, no actual hallucinations are philosophers' hallucinations. Still, as noted earlier, it is widely assumed that philosophers' hallucinations could occur. Martin (2006: 358), for instance, characterizes the following as a "common observation":

43. On object files see, e.g., Green and Quilty-Dunn 2020; Hill 2021: sec. 2.

44. For his discussion of a related suggestion from William Alston, see Masrour 2020: 748–49n18.

> Someone who succeeds in producing an hallucination in a subject does not have to induce an appropriate correlation between the subject and any other entities beyond the subject's brain or the mind; or, if there are such necessary conditions of the occurrence of an hallucinatory experience (that other such entities should exist and be suitably related to the experience), then the causes of experience must also be sufficient to guarantee that these additional conditions obtain.[45]

GOTH is motivated, in part, by the study of actual hallucinations. But that doesn't mean it should be taken to merely be a theory of hallucinations that occur in familiar kinds of embodied creatures. Pending some argument for restricting the theory's scope, GOTH should be taken as an account of the *nature* of hallucinations. Granted Martin's common observation, GOTH is incorrect.

Why accept the common observation? One reason is that philosophers' hallucinations are, in some intuitive sense, "conceivable." According to some, that is evidence that they are possible. Fortunately, we need not investigate this here, because conceivability casts a very wide net indeed: in the sense in which philosophers' hallucinations are conceivable, so are "zombies," whose healthy brains are unaccompanied by conscious experience; and "ghosts," or disembodied minds (see, e.g., Yablo 1993; Chalmers 2002; Cutter 2019). The conceivability objection to GOTH brings dualism in its wake; like many of the philosophers we have discussed, we are simply setting dualism to one side to keep the dialectic manageable.

Another potentially more threatening reason to accept the possibility of philosophers' hallucinations is empirical. The scientific study of perception, it might be thought, has not just implicated the brain, but has made it plausible that neural activity alone—absent any "appropriate correlation" with entities like pigs, pencils, or stars—can be sufficient for hallucination. But this, we think, is just an artifact of a philosophical picture on which perceptual objects, the neural states they produce, and the corresponding perceptual experiences are related as objects before a video camera, the electromagnetic states they produce on a video monitor, and the corresponding monitor colors. In the latter case, the object is dispensable, and internal states of the video monitor are sufficient for the

45. The "other such entities" mentioned in the second disjunct are "mind-dependent" (sense-data, on one conception); see Martin 2006: 358.

monitor colors. The comparison with perception can seem inevitable, but it would be a mistake to think that the philosophical picture is supported by perceptual psychology or neuroscience (see, e.g., Fish 2009: chap. 5).

If Martin's common observation is entirely up for grabs, the evidence for GOTH suggests that it should be rejected. And without the common observation, the "reverse causal argument," which Martin uses to motivate his version of disjunctivism, is unsound (see Martin 2004: 53–54; 2006: 368–69).

Contemporary philosophers of mind have generally embraced externalism, with its consequence that internal duplicates can differ mentally. They have also moved away from the once-popular idea that the basic insight of internalism can be preserved by recognizing the "narrow content" of mental states, a kind of content that is internally determined (Yli-Vakkuri and Hawthorne 2018). But when it comes to experience, the analogous idea has been hard to shake: granted, *seeing a pig* is not an internal state, but *hallucinating a pig* must be. Hallucination is the last redoubt of the internalist. And that last redoubt is, we have argued, overrun by GOTH.

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