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THE CONTENT OF COMPLEX VISUAL HALLUCINATIONS

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ABSTRACT. According to a widespread view about the content of conscious experience (Peacocke, 1992; Siegel, 2007), an experience has content when it is accurate relative to a possible scenario. Suppose you saw a ripe tomato. Your visual experience would have content if what you saw looked exactly like a ripe tomato, be it a genuine tomato or an expertly designed wax copy of a tomato.

I argue that this view cannot account for the content of a hallucination whose content is impossible. A 95-year old patient seems to "see small pumpkins and flowers coming out of her body" (Rocha et al., 2012). Intuitively, the patient's hallucination has content. But the accuracy-conditions view has to classify the experience as devoid of content, because what the patient hallucinated is impossible – accurate to no possible scenario. On the concept of "flower" we possess, it is incoherent for flowers to erupt from under one's skin. This visual hallucination is a counterexample to the view that an experience is endowed with content only relative to its accuracy conditions.

Keywords: *conscious visual experience; hallucination; content; accuracy conditions; Charles Bonnet Syndrome*

Introduction

I start with an overview of the argument. A widespread view about the content of conscious experience holds that an experience is contentful when it is accurate relative to a given phenomenal scenario, whether that scenario happens to be actual or not. For example, if your visual experience were accurate only if a ripe tomato were right in front of you, so that you could see it if you had no visual impairment, then the ripe tomato would count as the content of your visual experience, since this is what would make your experience accurate to the world.

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Accuracy (or veridicality) is for experiences what truth is for beliefs. Correspondingly, accuracy (or veridicality) comes in two flavors: weak and strong veridicality. If your visual experience is accurate with respect to an actual ripe tomato sitting in the actual world right in front of your eyes, then your visual experience is strongly veridical (relative to that content).

But your visual experience would be only weakly, and not strongly veridical, if what were in the actual world were not a ripe tomato, but some other thing looking exactly like it. For instance, suppose an expertly designed wax copy of a ripe tomato (Siegel, 2011) were in front of your eyes, in perfect view but too far to touch. Then you might easily be deceived into thinking you are seeing a ripe tomato. Since the actual visual scene (wax copy of ripe tomato) would be phenomenally indistinguishable from the content of your experience (ripe tomato), your experience would only be weakly veridical.

Call this view "the accuracy-conditions view." If the content of a conscious experience is given by the conditions under which that experience is at least weakly veridical, it follows that no conscious experience can have a content that is logically impossible. In what follows, I will argue that this consequence of the accuracy-conditions view of conscious content is false, by appealing to clinical reports of complex visual hallucinations (Teunisse et al., 1995). Consider a complex visual hallucinatory experience in which a 95-year old patient seems to "see small pumpkins and flowers coming out of her body" (Rocha et al., 2012). What is beyond question, intuitively, is that the patient had a contentful hallucinatory experience – after all, she was hallucinating pumpkins and flowers, not the Empire State Building or a hippopotamus. Therefore, it is false that content is given by accuracy conditions.

Veridical conscious content, weak and strong

To raise an objection to the accuracy-conditions view of how the contents of conscious experiences are identified, we first need to be clear on exactly which conception of accuracy (correctness, truthfulness, or veridicality) is at play.

Suppose Judy, a florist, has just finished gathering a bouquet of red roses, and is looking at them. She is paying keen attention to how many there are, and in what condition, trying to guess how long it will be before they begin to wither. Judy is having a visual experience; she is a sentient adult, perceptually unimpaired, she is aware of seeing the roses, and there is something it is like for her to see the roses exactly when and how she does (Nagel, 2002).

Judy's visual experience has content – roses. When is experience contentful, and of what? The accuracy-conditions view goes as follows. For Peacocke (1992, pp. 105-110), and Siegel (2007, pp. 484-486) following him, the content of an experience is fixed by the accuracy (or correctness) conditions had by the experience. So when is an experience accurate?

One view might be to think that Judy sees roses only if there actually are roses, in the external world, that Judy is looking at. If there actually are no such roses, then Judy's visual experience lacks content. On this view, visual perception is only contentful when (strongly) veridical; seeing is an achievement putting the perceptual subject in direct contact with the external world.

An amendment, leading to a second view (the view I will be concerned with), is possible. Suppose Judy likes her bouquet of roses so much that she sends a picture of them to Mark. Mark will see the picture (a bit of cellulose), not actual roses. But in seeing the picture, he will see the photographed roses. For Mark's *visual* system, if he focuses only on what is in the picture, a photographed rose (a pictorial representation) and the rose photographed (a thorny physical object) will *look* the same, even if they are different.

Mark can have a rose-involving experience without there actually being any roses seen (say they withered meanwhile). For Mark, seeing a snapshot of roses is *perceptually* equivalent to seeing the real thing (*modulo* resolution, etc.), so an improved understanding of an experience's accuracy conditions will say that the visual experience's content is fixed by whatever is perceptually equivalent to the objects seen – accuracy differs from success. On this second view, visual perception is contentful only when *weakly* veridical (Siegel, 2011, pp. 42-58), i.e., when the visual *scenario* (Peacocke, 1992, p.107) is phenomenally indistinguishable from the actual world. If the photo could span all of Mark's visual field, and hue, brightness, resolution, etc. were controlled for, Mark could not distinguish a photo from the real thing no matter how hard he looked at it. The content of Mark's visual experience, on this view, will be the rose as represented by Mark's visual system in all possible situations compatible with what Mark visually experiences. On this view, seeing is weakly veridical, inasmuch as the actual perceptual situation is only one among many perceptually accessible situations, which would prevent *ensuring* that the content of visual experience is the actual object seen.

Is this view right? I will argue that it isn't. Weak veridicality of experiences is more flexible than strong veridicality as a condition to impose on conscious content when a subject is enjoying an experience. Notwithstanding, even weak veridicality is too restrictive. The weak veridicality of Mark's visual experience consists in the fact that the actual perceptual situation (Judy's roses, when she photographed them) is a

member of the set of situations that are perceptually accessible to Mark's eyes fixed on what is in the photo, and perceptually indistinguishable by him while looking. *But* there are cases where the relevant bit of the external world is not among the perceptually accessible situations, so weak veridicality fails to obtain. To those cases I now turn.

The problem-cases: complex visual hallucinations

To build my objection to the accuracy-conditions view of how to identify the contents of conscious experiences, I appeal to empirical cases: complex visual hallucinations. I'll first present these cases, and then argue for why they are credible counterexamples to the accuracy-conditions view.

Visual hallucinations are a paradigm example, especially those present in the Charles Bonnet Syndrome (CBS, hereafter), more frequent in old age, and associated with macular degeneration and peripheral eye loss (Teunisse et al., 1995). CBS patients experience vivid visual hallucinations, and would testify to what they *see* (in a non-factive, perspectival, sense of "see"), even though there is no external object seen by them (in the achievement sense of "see").

Most CBS visual hallucinations (of bugs, or flowers, etc.) are weakly but not strongly veridical: there could actually be seen bugs or flowers, but there happen to be none. However, some CBS visual hallucinations are *strongly* non-veridical, i.e., physically impossible. Rocha et al. (2012, p.553) describe in detail the case of a patient who, in spite of being able to successfully attend to her daily affairs, experienced hallucinations that are not possible given our current understanding of the world. Here is Rocha et al.'s description in full:

> A 95-year-old woman, with four years of schooling, had a seven-year history of DI [delusional infestation comorbidity]. In the beginning, there were itching and prickling sensations on arms and head. Subsequently, she felt small worms, with different shapes and colors, crawling through her skin or swirling around her body. After two years, she began to see small pumpkins and flowers coming out of her body and lettuce crawling on the table. She complained of water trickling out of walls and forming puddles on the ground. Occasionally, she saw small children walking on the walls and also worms on the floor and walls. Sometimes, the parasites set fire to small objects. She became upset with her family and physicians who did not believe her.

This is evidence that some Charles Bonnet complex hallucinations, namely, hallucinations of impossible states of affairs, are counterexamples to the view which assimilates the content of conscious experience to the fulfillment of accuracy

conditions. I take the evidence that complex visual hallucinations provide at face value. We should abandon the accuracy-conditions view of how the contents of conscious experiences are individuated.

The hallucinations which are the relevant counterexamples have impossible contents, like flowers growing under one's skin and then breaking out, tearing one's skin apart. Such hallucinations clearly have contents. But they are counterexamples to the accuracy-conditions view. This is because that view identifies the contents of conscious experiences in terms of accuracy conditions with respect to phenomenal (experienced) scenarios. Since accuracy is assessed relative to *possible* scenarios, no experience can have impossible contents – if the accuracy-conditions view is right. We have just seen some hallucinations do have impossible contents. So the view is mistaken.[1]

The problem should have been expected. If we identify what someone experiences in terms of *truth* (veridicality, accuracy, correctness, etc.), then some hallucinations the contents of which *couldn't* obtain are obvious counterexamples.

Special sciences, everyday concepts, and conceivability

I have argued that the accuracy-conditions view of conscious content is mistaken because impossible contents are sometimes experienced, as in strongly non-veridical hallucinations. The nonagenarian's seeing small pumpkins growing and flowers blooming tearing her skin apart is an experienced content. But it is part of no possible scenario – because the content itself isn't possible.

In this section I address a reply to my objection. The accuracy-conditions view may keep the party-line by insisting that the experienced content, even in the most outlandish experience, is still *logically* possible. We imagined it, or hallucinated it, or dreamed it – therefore there is a *possible* way of mixing things that way, and that will be the scenario with respect to which our experience gets to count as accurate.[2]

[1] It is important not to hasten to conclusions. For instance, from the claim that accuracy conditions identify the contents of conscious visual experiences, it doesn't follow that *intentionalism* about such conscious experiences is true. Intentionalism is the view that what an experience is like for its subject is fixed by the content of that experience. But the view remains silent about how the content of the experience is fixed. Many works couple intentionalism with an accuracy-based view of identifying contents (e.g., Pautz, 2010). But the two are logically independent of each other. For instance, one might identify the contents of conscious visual experience from introspective reports – what the experience is described by the agent *to be.* Nothing in that view contradicts intentionalism.

[2] It is important to distinguish my view, and this objection to it, from debates surrounding how rich perceptual content is. One might, following Siegel (2011), argue that the content of perceptual

The immediate reply to be made here is that not everything we can imagine is possible. Renaissance geometers tried to square the circle, and this was an active research program for quite a while. Nowadays we admit that this isn't *merely* a failed program. Rather, it's *impossible* to square the circle – regardless of what our forefathers thought.

A variant of the accuracy-conditions view could still claim that the example I have given (following Rocha et al., 2012) doesn't fall in that category. It is *biologically* impossible for flowers to grow under one's skin, but not logically or conceptually impossible. After all, there has to be some hierarchy to the sciences, so that laws of biology are chemically contingent, laws of chemistry are physically contingent, and laws of physics are mathematically contingent. So logical impossibility doesn't follow from biological impossibility.

For the purpose of discussion, let me temporarily agree with this hierarchical picture of the sciences, though I very much doubt that special sciences can be adequately represented in this nifty logical outlook. Even so, when the patient hallucinates flowers growing under her skin, that isn't merely biologically impossible – it's *conceptually* impossible. We use words like "pumpkin" or "flower" with largely fixed and well-established meanings.[3] This prevents creatures of imagination like flowers erupting from one's skin to be conceivable without contradiction. This is not a piece of botanical wisdom. It's larger than that: it's part of our everyday concept of flower.

Appearances

Let me now consider what looks like a way out from this quandary for the accuracy-conditions view. It might be thought that hallucinations like the one just mentioned may still be weakly veridical notwithstanding, because something that *looks* like flowers might have grown under the patient's skin – or might have *looked* like they were growing under the patient's skin.

experience is rich because kind-properties, like that of being a flower or lettuce, are being represented. But the accuracy-conditions view typically construes accuracy as follows. When I see a flower, my experience is weakly accurate if there are possible scenarios in which I perceive what looks like *a flower* – *not* ones in which I perceive what looks like a property, since *nothing* looks like a property.

[3] To say this is not to be committed to any *unchangeability* of meaning. It is only to assert that competent speakers of the same language use words in *largely* overlapping ways, and that it would be incorrect to describe them as deferring to some body of theory (e.g., Linné's classification) which very few of them understand.

In reply, notice, first, that this reply is bound to differ from case to case, and there is no guarantee that all cases can so be explained. If one were to hallucinate a pink elephant while shopping in NYC, what could explain *that* appearance? (Suppose there are no elephants around.)[4]

Moreover, consider the patient's description above. Perhaps the patient's swollen veins might have looked as though some flowers were under her skin. If so, switch the example. How could one account for "lettuce crawling on the table?" Perhaps, you might think, the patient was dizzy and that's what accounts for her impression that the lettuce was moving. But surely that would make everything spin around, not just the lettuce! Once would have *to posit,* in addition, some attentional deficit that made the patient attend to the lettuce alone. But surely she attended to her skin as well, since she seemed to see flowers growing from under it. So it is far from clear how the story would go. And, if the story *could* eventually be filled in, it is hard not to have the sense that it is entirely *ad hoc*.

Finally, to settle for weak veridicality of contents alone seems slightly unsatisfying. At the very least, it fails to do justice to widespread intuitions. We do wish to report that we see the very things around us. I see the computer screen, the coffee mug, the foliage of the forest outside. I don't see *the appearance* of the coffee mug, even though, in seeing, the coffee mug *appears* to me to be some way. The appearance is a way of seeing the mug, not an *extra* mug-styled object. We might say the mug appears to be similar to a small vase; we might conclude this from comparing their appearances. But, surely, it would be ludicrous to say the mug appears to be similar to its own appearance. Theories of appearing (e.g., Chisholm, 1957) for the contents of conscious visual experiences might have to bite the bullet and deny this commonplace.

[4] The case of hallucinated impossible contents is, to an extent, similar to Crane's (1988) waterfall illusion, where, after intently looking at a moving object for a while and then shifting gaze to a stationary object, it might seem to you *both* that the object is moving when it in fact isn't *and* that the object is immobile relative to its background. I agree there is a similarity with the illusion Crane describes. But hallucinations, unlike illusions, cannot be explained away as malfunctions or side-effects of sensory processing. Further, Crane's own lesson of the illusion is that part of the content of the illusory experience is not conceptual. And that lesson – correct or not – doesn't follow from the facts of the illusion itself. Witness, e.g., Siegel's conception of accuracy conditions, which applies to contents, conceptual or non-conceptual alike. The problem is with identifying conscious contents by accuracy conditions – and it is a problem because sometimes these conditions exclude each other. Whatever (conceptual or non-conceptual) source accuracy may have is not of the essence here. To say, as Crane does, that "one cannot have an experience with contradictory representational content" is simply to beg the question against admitting the existence of hallucinations with impossible contents like the one quoted in the previous section.

Disjunctivism?

In brief, the problem with accuracy conditions is that there are *entirely inaccurate experiences that nonetheless have content*. The problem case described above is that of (some of the) complex visual hallucinations that occur as symptoms of the Charles Bonnet syndrome.

One immediate reaction is disjunctivist. In giving my alleged counterexample, I presupposed that we can talk, in a general fashion, about experienced contents. In contrast, Tye (2009, pp. 547, 561) argues for disjunctivism. On his view, visual experience and hallucinatory experience are two different *kinds* of experience, and conclusions about hallucinations do not carry over to veridical perception.

If one insisted that hallucination and veridical experiences are different in kind – as the disjunctivist claims – then one could preserve an accuracy-based method to identify the contents of veridical experiences. But the problem of identifying the contents of hallucinations would not be touched on. Tye is remarkably clear on this point, and he provides a solution. While he weighs the benefits of competing accuracy-conditions views for the content of sensory experiences, the most promising option (!) he sees for hallucinatory contents is to identify all of them with gappy contents (Tye, 2009, pp. 546-549). This entails that all such hallucinatory experiences have the same content – a gap; or what the null set denotes.

Let's illustrate this. Hallucinating pumpkins growing underneath one's skin and hallucinating an elephant playing the piano have the same content – namely, a gap. Hallucinating pumpkins growing underneath one's skin, flowers blossoming underneath one's skin, and hallucinating both of those happening together also has the same content – namely, a gap. Whatever the patient thought, imagined or daydreamed she was experiencing must have been wrong, on this view. I think it is safe to say that gappy contents are far removed from what patients experience when they undergo hallucinations. It is striking to see thoroughgoing disjunctivists like Tye cornered into such an implausible position.[5]

[5] A similar diagnosis I believe applies to the attempt to rescue accuracy conditions (as part of an account of conscious content) by considering impossible perceptual scenarios in addition to possible ones (Hintikka, 1975). One such impossible scenario would be one on which it is possible that small pumpkins and flowers come out from the patient's body, and her experience of seeing them is accurate. Once we need to appeal to impossible worlds such as the scenario just envisaged, the entire plausibility of using possible-worlds semantics in the first place will have been undermined.

Whether there is a salient enough notion of conscious experience that applies to both, say, visual hallucinations and veridical visual perception, is a large question I can't settle here. So I grant the point: disjunctivism is one way to get around the problem I point to. (Unappealing ways out are ways out nonetheless.) The problem, however, survives unscathed for those who think it *does* make sense to talk about conscious experience in general, and to seek general methods for identifying the contents experienced.

Conclusion

Against the accuracy-conditions view of how to individuate the contents of conscious experiences, I have pointed to counterexamples coming from some complex visual hallucinations experienced by patients suffering from the Charles Bonnet syndrome. The accuracy-conditions view has it that the contents of conscious experiences should be identified by reference to which phenomenal scenarios one's experience is accurate, true, or correct with respect to. The counterexamples I have provided are hallucinations with impossible contents, which cannot be accurate with respect to *any* possible phenomenal scenario. One way out of this problem is disjunctivism; but that faces parallel difficulties in accounting for what, if any, is experienced in hallucinations with impossible contents. Another solution, which this paper points toward, is to stop identifying the contents of conscious experiences by their accuracy conditions.

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