13 Externalism and the Gappy Content of Hallucination

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When we suffer a nonveridical hallucination, our environment seems to be a way that it is not. Because we are not perceptually related to the objects that we seem to be perceiving, we fail to refer to particulars in our environment. How should we understand the effects of this failure of reference? Although our hallucinatory experiences do not yield knowledge, we are arguably justified in believing that our environment is the way that it seems to us to be. How should we understand the nature of hallucinations to explain that hallucinations can be subjectively indistinguishable from perceptions and that hallucinations justify beliefs? This chapter aims to present an answer to these questions.

There are powerful reasons to think of perceptual content as determined at least in part by the environment of the perceiving subject: insofar as the subject is perceptually related to, say, a white cup, she is in a mental state that is of that white cup and determined in part by that very white cup.[1] A view on which the content of a veridical perceptual experience is determined at least in part by the environment of the perceiving subject is committed to externalism about the content of experience. Now, such externalist views are often rejected on grounds that they do not give a good account of hallucinations. I will show that this reason for rejecting content externalism is not well founded if we embrace a moderate externalism about content, that is, an externalist view on which content is only in part dependent on the experiencing subject's environment. In section 1, I motivate content externalism. In section 2, I argue that hallucinations are best understood in terms of a deficiency of veridical perceptual experiences. I discuss the consequences of this thesis by developing a view of hallucinations that is committed to externalism about content.

1. For a defense of this view, see Schellenberg (2010, 2011a).

1 Content Externalism about Perceptual Experience

When a subject perceives a white coffee cup on her desk, she is in a conscious mental state: it seems to her that there is a white coffee cup on her desk. When a subject hallucinates that there is a white coffee cup on her desk, her experience can be subjectively indistinguishable from a perception: it seems to her that there is a white coffee cup on her desk. If perceptions and hallucinations can be subjectively indistinguishable, what is the connection between the sensory character of experience (that is, the way the environment seems to the experiencing subject) and the subject's perceptual or causal relations to objects in the world? There are two traditional approaches to answering this question.

(1) *Conjunctive accounts* posit that subjectively indistinguishable hallucinations and perceptions share a common element. A subject perceives an object if and only if she is in a mental state that is characterized by this common element, and some additional conditions obtain. Typically the additional condition is considered to be a causal relation between the experiencing subject and the perceived objects (see Byrne, 2001; Crane, 2003). This approach is analogous to the view that knowledge can be factorized into true belief and some additional element, such as justification.

(2) *Disjunctive and naive realist accounts* characterize hallucinations in terms of a deficiency of an accurate perceptual experience and argue that perceptions and hallucinations do not share a common element (see Hinton, 1973; Snowdon, 1981; McDowell, 1982; Campbell, 2002; Martin, 2004; Brewer, 2006).[2] This approach is analogous to the view that mere belief is to be analyzed as deficient of knowledge.

We do not need to choose between these two options. With conjunctivists, I will argue that subjectively indistinguishable perceptions and hallucinations share a *common factor* that grounds their sensory character. But with disjunctivists, I will argue that hallucinations can only be understood in terms of a *deficiency* of perceptions. I will argue that subjectively indistinguishable perceptions and hallucinations share an element that grounds their sensory character, while exhibiting fundamental differences in their content.

Why should we think of hallucinations in terms of a deficiency of an accurate perceptual experience? The reasons are the same as the reasons motivating content externalism about experience. We have three main reasons for holding that the content of perceptual experience is at least in part environment-dependent: to give a

2. Naive realism is a newfangled version of disjunctivism. By contrast to most traditional disjunctivists, naive realists not only deny that hallucinatory experiences have content but are moreover skeptical that perceptual experiences have content. Campbell (2002), Travis (2004), and Brewer (2006) argue explicitly that perceptual experiences do not have content. For ease of presentation, I will speak only of disjunctivism, but everything I say about disjunctivism generalizes to naive realism.

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good account of the accuracy conditions of perceptual experience, to give a good account of the sensory character of perceptual experience, and to give a good account of the evidential basis of perceptual knowledge. I will discuss them in turn. Before I do so, it will be helpful to distinguish between two kinds of externalism about content. On one view, the content of experiences is dependent on the environment of the experiencing subject such that she could not have an experience with that content if she were not related to that very environment (see Evans, 1982; McDowell, 1984). According to such a *radical externalism*, a hallucinating subject does not represent; there is only an illusion of content. I will reject such a radical externalist view on grounds that it does not give a satisfactory account of hallucination. But rejecting radical externalism does not require rejecting content externalism altogether. I will argue for what I call a *moderate externalism* about content; that is, I will argue that the content of perceptual experience is only in part dependent on the experiencing subject's environment.

1.1 Accuracy Conditions of Perceptual Experience

One reason for holding that the content of experience is externally individuated is that only such a view of content gives a good account of the accuracy conditions of experience. The content and accuracy conditions of perceptual experience are typically understood to be closely related, such that any changes in accuracy conditions will bring about changes in content. The content (possibly in conjunction with a mode and the context) determines the accuracy conditions of an experience. The accuracy conditions specify the way the world would have to be for the experience to be accurate. More precisely, the content C of experience E is accurate if and only if the world is the way it seems to the experiencing subject and C corresponds to the way the world seems to the experiencing subject. In all other cases, content C of experience E is inaccurate. When I have a perceptual experience of a white coffee cup on my desk, the content of my experience will, for instance, be "that is a white coffee cup." My experience is accurate only if the very white coffee cup that it seems to me is present is in fact the one to which I am perceptually related. So if the cup is replaced with a qualitatively indistinguishable coffee cup, then the accuracy conditions of my experience change—even if I cannot tell the two coffee cups apart. If this is right, then for my experience of a particular coffee cup to be accurate, it is not sufficient that some coffee cup is present. I must be perceptually related to the very coffee cup that I represent.

If the accuracy conditions change depending on what particular object one is related to, and if the content determines accuracy conditions, then the content of experience must change depending on what particular object one is related to. In other words, the content of experience is at least in part dependent on the experiencer's environment. So my experience of the coffee cup on the table will be different from

my phenomenological twin's experience of a numerically distinct but qualitatively indistinguishable coffee cup. Moreover, if I experience cup_1, then my experience is accurate if and only if I am perceptually related to cup_1. If cup_1 is replaced with the numerically distinct but qualitatively indistinguishable cup_2, then the accuracy condition of my experience changes—even if I am not aware that the switch happened.

This approach contrasts with strong representationalist views according to which representational facts about experience are understood to be facts about the sensory character of experience.[3] If content covaries with sensory character, as such views hold, then there naturally will be no difference between my experiences of distinct objects as long as my experiences are subjectively indistinguishable. While such narrow content views hold some plausibility if we are concerned only with sensory character—though I will challenge that they are attractive even in this respect in the next section—they cannot account for accuracy conditions that are sensitive to particular mind-independent objects and property instances.[4]

1.2 The Evidential Basis of Perceptual Knowledge

By virtue of perceiving objects, a subject can gain knowledge of particular objects. Consider a subject who is perceiving a coffee cup. Her perception is of the particular coffee cup in front of her, and she gains perceptual knowledge of that particular cup. Arguably, she would be having a different perceptual experience if she were perceiving a different object than she actually is. An important question is just what counts as the relevant difference in perceptual experience. As I will argue shortly, the relevant difference must be a difference in either the content or the sensory character of the experience. For now, the important point is that if her experience would be the same whether or not she were perceiving the particular coffee cup that she is in fact perceiving, it is not clear how her experience could ground knowledge about that particular coffee cup. If this is right, then only if some relevant aspect of her experience is at least in part externally individuated can perceptual experience ground knowledge of particular objects.

The problem of knowledge of particular objects is best brought out with an example. Consider a subject—let's call her Anna—who sees a coffee cup. Anna sees the particular coffee cup in front of her, and she gains perceptual knowledge about that very cup. Arguably, she would be having a different perceptual experience if she were perceiving a different cup than she actually is. After all, if her experience would be the same whether or not she were perceiving the particular coffee cup that she is in fact perceiv-

3. For a defense of such views, see McGinn (1982), Davies (1992), Lycan (1996), Tye (2000), Byrne (2001), Pautz (2010), and Siegel (2010).

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Switching cases bring out the point particularly clearly. Consider the following case: Anna sees cup_1 at time t_1, but she closes her eyes briefly, and without her noticing, the cup is replaced with the numerically distinct but qualitatively indistinguishable cup_2. So when she reopens her eyes, she is causally related to a different cup. Although she cannot tell, her experience before the cup was exchanged is of a different object than her experience after the cup has been exchanged. If she perceives cup_1 at t_1 and then at t_2 perceives cup_2, her claim that the cup she sees at t_2 is the same as the cup she saw at t_1 does not have the status of knowledge, since the claim is false. If the cup had not been switched out, then her claim would have had the status of knowledge.

Perceptual experience can ground such knowledge only if the particular cup perceived makes a constitutive difference to the experience, for only if experiences are individuated by their objects can perceptual experience be the evidential basis of knowledge of particular objects. What counts as a constitutive difference? Consider again Anna, who perceives coffee cup_1 at time t_1 and the qualitatively indistinguishable cup_2 at t_2. Although Anna cannot tell, she perceives different cups at t_1 and t_2. What is the difference between her experiences at t_1 and t_2? It is uncontroversial that the two experiences differ insofar as Anna is *causally* and *perceptually* related to distinct cups. The question is whether these differences affect the *content* or the sensory character of her experiences.

A second way of bringing out the epistemological role of perceptual experience is with regard to how perceptual experience grounds knowledge of the referent of demonstratives. Perceptual experience grounds our ability to know which particular objects demonstrative terms refer to.[5] If perceptual experiences are not individuated by their objects, it is not clear how they could play this cognitive role. If my experience would be exactly the same whether or not this particular cup is before me, then what is it about my experience that grounds my knowledge that "that" refers to that cup—and not some other cup? Campbell argues that only a view "on which experience of an object is a simple relation holding between perceiver and object, can characterize the kind of acquaintance with objects that provides knowledge of reference" (Campbell, 2002, 115). The idea is that when I say, "That cup of coffee is the one with milk in it," your ability to know which cup I am referring to requires knowing which particular cup "that" refers to. This knowledge is grounded in being perceptually related to the particular cup to which "that" refers in the situation of perception. If my experience would be the very same regardless of what object I am perceptually related to, it is not clear how my experience could ground such knowledge.

5. For a detailed discussion of this role of perceptual experience, see Campbell (2002), esp. chap. 2.

1.3 The Sensory Character of Perceptual Experience

A second reason for holding that the content of experience is externally individuated is to give a representationalist account of the sensory character of perceptual experience according to which sensory character is determined by the very mind-independent objects and property instances to which the experiencing subject is perceptually related. I will argue that hallucinating subjects are best understood as employing perceptual capacities—for instance discriminatory, selective capacities—namely, the same perceptual capacities that in a subjectively indistinguishable perceptual experience are employed as a consequence of the perceiving subject being related to external, mind-independent objects and property instances.[6] Since hallucinating subjects are not perceptually related to any external, mind-independent objects or property instances, the perceptual capacities they employ remain baseless. There are many ways of understanding perceptual capacities. According to the notion in play here, the possession of perceptual capacities grounds the ability to single out or refer to objects and property instances. So perceptual capacities are understood in terms of perceptual relations to the objects and property instances to which they refer. If relations to objects and property instances are implicated in the very nature of perceptual capacities, then hallucinations are derivative of perceptions insofar as the nature of perceptual capacities employed in hallucinations can be explained only in terms of their role in perceptions.

On this view, the sensory character of experience is constituted by employing perceptual capacities in a sensory mode. So any experience in which the same perceptual capacities are employed in the same mode will have the same sensory character. Now, only if it is not revealed in the sensory character whether or not a perceptual capacities is baseless can the suggested view give an explanation of how a perception and a hallucination could be subjectively indistinguishable. Since sensory character is constituted by *employing* perceptual capacities in a sensory mode rather than the perceptual capacities themselves, whether or not a perceptual capacities is baseless will not affect the sensory character of the experience. While this way of thinking about sensory character explains the nature of our conscious states in terms of awareness relations to mind-independent objects and property instances, it can also explain how it is that hallucinations involve conscious mental states, even though hallucinating subjects are not perceptually related to these mind-independent objects and property instances.[7]

Why should we embrace such an externalist view of sensory character? One reason is that such a view makes it possible to accommodate naive realist intuitions that the sensory character of experiences is constituted by relations to the very mind-independent objects and property instances to which we are perceptually related in the case of veridical perceptions while maintaining a common-factor view of experi-

6. Perceptual capacities may amount to concepts, but they can also be understood as nonconceptual capacities, such as discriminatory, selective capacities.

7. I argue for this view in detail in Schellenberg (2011a).

ence. Following the disjunctivist tradition, naive realists treat hallucinations as fundamentally different in kind than perceptions. By contrast, the suggested view has it that perceptions and subjectively hallucinations share a common factor: the content of both experiences is constituted by employing the same perceptual capacities.

A second reason for embracing an externalist view of sensory character is that it allows one to avoid introducing any peculiar entities to account for the sensory character of hallucinations. When a subject is hallucinating, she is by definition not perceptually related to the material, mind-independent object that her experience is seemingly of. Views diverge widely on what the consequences are of this. Some posit that hallucinating subjects must stand in an awareness relation to *something*, and introduce objects distinct from material, mind-independent objects, such as cats and cups, to explain the phenomenological nature of hallucinations. Examples of such objects are sense-data, qualia, Meinongian objects, intentional objects, propositions, and property clusters.[8] There are at least two versions of views on which a hallucinating subject stands in an (awareness) relation to a property cluster. On what we can call a *pure property cluster view*, experience does not have content. It is simply a matter of being related to a property cluster (Johnston, 2004). On what we can call a *content property cluster view*, experience is a matter of being related to a Russellian proposition that is constituted by a property cluster and possibly one or more objects. To account for hallucinations of uninstantiated properties, such as supersaturated red or Hume's missing shade of blue, both versions of the view must understand property clusters as potentially constituted in part by uninstantiated universals. As Dretske formulates the idea: "Hallucinations are experiences in which one is aware of properties. ... Can we really be aware of (uninstantiated) universals? Yes, we can, and, yes, we sometimes are" (2000, 162–163). This view is phenomenologically problematic, since universals are abstract entities. Abstract entities are not spatially extended, and it is not clear what it would be to be sensorily aware of something that is not spatially extended. At least phenomenally, it is more plausible to say that when one experiences a white

8. For views according to which hallucinating subjects stand in awareness or acquaintance relations to property clusters, see Johnston (2004); for intentional objects, see Harman (1990), Lycan (1996); for propositions, see Russell (1913); for sense-data, see Price (1950), Moore (1953), Jackson (1977), Robinson (1994); for qualia, see Block (2003); for Meinongian objects, see Parsons (1980). It is important to note that one could argue that hallucinating subjects represent intentional objects without arguing that they stand in awareness or acquaintance relations to such objects. For a defense of such a view, see Crane (1998). Similarly, one can argue that the sensory character of hallucinations is constituted by qualia without arguing that hallucinating subjects stand in awareness relations to these qualia. For a defense of such a view, see Chalmers (1996), McLaughlin (2007), and Shoemaker (2007). Finally, one can argue that the content of a hallucination is a Russellian proposition without arguing that hallucinating subjects stand in awareness or acquaintance relations to these propositions or their constituents. Byrne (2001) and Pautz (2007) defend versions of such a view.

cup, one is aware of an instance of whiteness, not an abstract entity.[9] Views that posit such peculiar entities have it that since hallucinating subjects are aware of something, they must stand in an awareness relation to something that accounts for this sensory character. So such views operate with a particular understanding of what it means to be aware of something. The main problem with such views is that they rely on awareness relations to peculiar objects, such as (uninstantiated) universals.

We can avoid this problem, if the sensory character of hallucinations is understood in terms of employing perceptual capacities rather than an awareness relation to peculiar entities. Moreover, the suggested view makes it possible to vindicate the Aristotelian principle that the existence of a type depends on its tokens: if properties are understood in terms of their instances, we can do without a Platonic realm.

A property cluster theorist who accepts the Aristotelian principle will have to constrain possible hallucinations to hallucinations of properties that are instantiated somewhere in the world. But by doing so, her view faces a range of counterexamples. It is easy to conceive of hallucinations of properties that are not instantiated anywhere, say, hallucinations of Hume's missing shade of blue or hallucinations of supersaturated red. Not only are such hallucinations conceivable, but hallucinations of, say, supersaturated red are easy to induce, although supersaturated red is not instantiated anywhere.[10] To account for hallucinations of uninstantiated properties, a property cluster theorist must argue that hallucinating subjects are cognitively or sensorily acquainted with uninstantiated universals or that the content of hallucination is constituted by such properties. Such a view is not only phenomenologically controversial but moreover metaphysically controversial insofar as it is committed to Platonism about properties.[11]

These problems are avoided if hallucinating subjects are understood not as standing in awareness relations to (uninstantiated) universals or any other abstract entities but rather as employing perceptual capacities, that function to single out objects and property instances and yield contents as outputs.[12] So the content of experience is

9. For a classical defense of this thesis, see Williams (1953).

10. See ffytche and Howard (1999) and ffytche (2008).

11. For a discussion of this set of problems, see Schellenberg (2011a).

12. This way of thinking about perceptual capacities is analogous to a functional understanding of concepts. In formal discussions, functions are understood as necessarily requiring an input to have an output. As I am understanding perceptual capacities, one can employ a capacity and thereby be in a mental state with content, although one is not perceptually related to anything. So one can employ a capacity and yield a content as output even if there is no input. So if the idea that perceptual capacities take objects or property instances as inputs and yield contents as outputs is interpreted functionally, then it is important to note that the notion of function in play is distinct from the one in formal discussion. Alternatively, the view presented here could be reformulated by arguing that in the case of a hallucination, the input is the empty set. This would allow being in tune with the use of "functions" in formal discussions but would require accepting the existence of the empty set.

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constituted by perceptual capacities that single out objects and property instances, rather than the naked objects and properties themselves, as on the property cluster view and most other views that rely on awareness relations to peculiar entities.[13] According to the notion of perceptual capacities in play, perceptual capacities are analyzed in terms of their possession conditions: to possess a perceptual capacity is to have the ability to single out the external, mind-independent objects or property instances that the perceptual capacities functions to single out.[14] So a subject who possesses the perceptual capacity that functions to single out red must be able to use it to single out red things, which involves discriminating red things from things that are not red. The ability to refer to objects and property instances may be analyzed as constituting a kind of know-how, but one that should not be understood as overintellectualizing the requirement for possessing a perceptual capacity. Following Ryle (1949), I am using "know-how" to refer to a practical, nonintellectual conception that nonrational beings could have.[15]

This way of thinking about experience makes it possible to acknowledge that a hallucinating subject does not stand in an awareness relation to anything despite being in sensory state that purports to be of mind-independent objects and property instances. This means that hallucinating subjects are not *extensionally* aware but only *intensionally* aware. In other words, they are in a mental state that purports to be of something without standing in an awareness relation to that thing.

If possessing a perceptual capacity grounds the ability to single out the objects or property instances that the perceptual capacity functions to single out, then the sensory character that ensues from employing perceptual capacities is inherently related to the objects and property instances that the perceptual capacities single out. So this way of understanding sensory character takes on board the naive realist insight that being in a mental state with a certain sensory character can be explicated in terms of relations to external, mind-independent objects and property instances. By doing so, we pave the way for a naturalized view of the sensory character of perceptual experience.[16] Now, naive realists give awareness relations to the environment so much explanatory weight that it is rendered mysterious how one could be having

13. I will discuss in section 2 how the suggested view can account for hallucinations of uninstantiated properties.

14. For a detailed discussion of concepts or mental capacities as analyzed in terms of their possession conditions, which in turn are analyzed in terms of abilities, see Peacocke (1992).

15. Ryle's conception of know-how has famously been criticized by Stanley and Williamson (2001). In short, the criticism is that "know-how" expresses the same relation as "know-that." Addressing this criticism would only affect the wording of my argument. For a critical discussion of Stanley and Williamson's argument and a defense of the concept of know-how, see Hornsby (2004).

16. See in particular Fish (2008) for an account that brings out the naturalistic advantages of naive realism.

an experience with a certain sensory character if one is not related to the relevant mind-independent objects or property instances.[17]

By introducing perceptual capacities that ground our ability to single out external, mind-independent objects and property instances, the suggested view gives an account of hallucinations on which subjectively indistinguishable hallucinations and perceptions share a common factor that grounds the sensory character of these experiences. Insofar as the perceptual capacities employed in hallucinations can only be specified with reference to their possible roles in perceptual experiences, hallucinations are derivative of perceptual experiences. In this sense, hallucinations are understood to exhibit a deficiency that can only be explained with reference to successful perceptual experiences.

2 The Content of Hallucination

So far I have motivated content externalism for perceptual experience. In the rest of this paper, I will specify the details of the view and discuss its consequences for the nature of hallucination. More specifically, I will develop a view on which hallucinations and perceptions share a common element, but hallucinations are derivative of perceptions. The thesis that content is constituted by perceptual capacities that single out objects and property instances implies that the content of experience is inherently relational. Relations to objects and property instances are implicated in the very nature of experiential content, if such content ensues from employing perceptual capacities and possessing such a capacity is a matter of being able to single out its referent. If the fact that perceptual capacities single out objects or property instances in some situations but not in others has any semantic significance, then the content ensuing from employing these capacities will depend at least in part on the environment in which they are employed. We can call a content that is inherently relational in the sense articulated a *relational content*, and any content that is not inherently relational a *nonrelational content*.

There are many different ways of understanding nonrelational contents. They can be thought of as descriptive Russellian propositions, phenomenal contents, or as constituted by Fregean *de dicto* modes of presentation. What these contents have in common is that the content in play is the same regardless of what (if anything) the experiencing subject is related to. On such views, the relation between content and object is simply the semantic relation of satisfaction: a nonrelational content lays down a condition that something must satisfy to be the object determined by the content. The condition to be satisfied does not depend on the object or property instance that satisfies it.

17. For a defense of this radical naive realist thesis, see Campbell (2002), Brewer (2006), and Fish (2008). Martin (2004) argues for a more moderate version of naive realism.

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In contrast to so-called strong representationalist views, according to which the sensory character of experience covaries with its content, I will argue that sensory character merely supervenes on content. More specifically, I will argue that the sensory character is constituted by the perceptual capacities employed in a sensory mode, but the content ensuing from employing perceptual capacities differs depending on the environment of the experiencing subject. This way of thinking about content makes it possible to acknowledge the externalist insight that content is at least in part determined by the relevant subject's environment, while recognizing the representationalist insight that sensory character is grounded in the content of experience. My twin on twin earth who perceives XYZ will have an experience with different content from I who perceive H_2O, but if we employ the same perceptual capacities, then our experiences will be phenomenologically the same—assuming that experiences of different subjects can be phenomenologically the same. To take an example closer to home: my experience of the white coffee cup on my desk is subjectively indistinguishable from my experience a minute ago before you replaced the coffee cup with a numerically distinct but qualitatively identical coffee cup, if I employ the same perceptual capacities to single out the cup and the properties it instantiates. Nonetheless, insofar as I am perceptually related to distinct cups, the content ensuing from employing these perceptual capacities will be different.

On the suggested view, for something to be the object of the relational content, the content must constitutively depend at least in part on that very object. Another way of expressing the same idea is to say that relational contents are mental indexicals. A content determines the contextual relation that something must bear to a mental state to be the referent of that mental state. Relational contents differ depending on what object or property instance (if any) the subject is related to. So the token content covaries with the environment in which the subject experiences. In the case of a successful perceptual experience, the token content determines a referent. Insofar as the token relational content is individuated in part by the object that it determines, it is at least in part object-dependent. Similarly, insofar as the token relational content is individuated in part by the property instance that it determines, it is at least in part dependent on that property instance.

If perceptual content is at least in part object-dependent, how should we understand the content of hallucination? On a radical view of object-dependent contents, a subject cannot represent if there is no object present to be represented. So a hallucinating subject does not represent; there is merely an illusion of content. The problem with such a view is that it downplays the cognitive significance of content that is independent of the particular object present. If the content of experience is, among other things, supposed to ground the sensory character of the experience, and hallucinations involve conscious mental states, then such a radical view of object-dependent content will not serve our purposes.

If we recognize content to be only *partly* dependent on the environment of the experiencing subject, then we can acknowledge that the content of experience is externally individuated, while avoiding the commitments of a radical content externalism. Indeed, a view according to which the content of experience ensues from employing perceptual capacities that single out objects and property instances implies that the content of experience is inherently relational and thus at least in part dependent on the experiencer's environment. Moreover, insofar as content is constituted by employing perceptual capacities rather than the naked objects and properties themselves, the suggested view implies that content is Fregean. Analogous to the distinction between relational and nonrelational contents, there are two standard ways of thinking about the Fregean modes of presentation that correspond to Frege's use of modes of presentation as accounting both for the cognitive significance of an expression and for a way of singling out an object. On one understanding, a mode of presentation can be the same regardless of what (if anything) the experiencing subject is related to. Following standard use, we can call these senses *de dicto modes of presentation*.[18] This way of thinking about modes of presentation focuses on Frege's insight that modes of presentation constitute a specific cognitive significance. This way of thinking about modes of presentation has several problems. For the present purposes, the main problem is that this view of Fregean senses implies a two-stage view of determining reference: we first represent an object-independent content by virtue of which we, in a second step, refer to external objects and properties.[19] The mental act of representing a *de dicto* mode of presentation is independent of the second step, in which an external particular is determined that is the referent of these senses.

To avoid this problem, it is helpful to contrast *de dicto* modes of presentation with *de re* modes of presentation. The introduction of *de re* modes of presentation is motivated by recognizing that having a specific cognitive significance is not the only role that modes of presentation play. A second role is to single out objects and property instances. If one acknowledges this second role, then thinking of modes of presentation as descriptive will not do. A subject could be in a mental state that is constituted by a *de dicto* mode of presentation regardless of whether she is related to the objects or properties to which she is intentionally directed. If the role of modes of presentation as singling out objects and property instances is taken seriously, then the mental state of

18. Among others, Chalmers (2006, 99) understands Fregean senses in this way: "Fregean content is supposed to be a sort of phenomenal content, such that, necessarily, an experience with the same phenomenology has the same Fregean content."

19. For an argument against such a two-stage view of determining the reference, see Johnston (2004, 150). Johnston does not distinguish between *de dicto* and *de re* modes of presentation and as a consequence sees the problem articulated in the main text as a problem for a Fregean view *tout court*. As I will show, it is only a problem for a view in which Fregean senses are *de dicto* rather than *de re*.

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a subject who successfully singles out the object or property instance at which she is intentionally directed will arguably not be the same as the mental state of a subject who fails to refer to the object or property instance at which she is intentionally directed. But a descriptive, *de dicto* mode of presentation is not affected if there is no referent. So while *de dicto* modes of presentation are represented in a first step, which an external item may or may not satisfy in a second step, *de re* modes of presentation determine a referent in a certain way or fail to determine a referent. *De re* modes of presentation are inherently relational in that what object or property instance the subject is related to makes a constitutive difference to the nature of the ensuing content.

De re modes of presentation are typically understood to be radically object-dependent. But given that a hallucinating subject employs the same perceptual capacities that she would be employing were she successfully perceptually related to objects and property instances, there is no reason to think that she is not in a mental state with content.[20] I will argue that *de re* modes of presentation are best understood to be partly dependent on the experiencer's environment. I will call them *potentially gappy modes of presentation* or *potentially gappy Fregean contents* for short.[21] This way of understanding *de re* modes of presentation can be characterized with the following two conditions:

1. The content of any two subjectively indistinguishable experiences e_1 and e_2 in which a subject s is perceptually related to the same object o in the same way will include $MOP_r(o)$, where $MOP_r(o)$ is the output of employing a perceptual capacity that takes objects as inputs.
2. A hallucination that is subjectively indistinguishable from e_1 is a matter of employing the same perceptual capacity, but since there is no object present, the perceptual capacity remains baseless. The ensuing content is $MOP_r(\_\_)$.

Modes of presentation of properties can be specified in an analogous way. If I perceive a white cup o, the content of my perceptual experience will be

$<MOP_r(o), MOP_r(P)>$

where $MOP_r(o)$ is a *de re* mode of presentation of the cup o, and $MOP_r(P)$ is a *de re* mode of presentation of the property that this object instantiates. If I hallucinate a white cup and thus am not related to any white cup, the content of my hallucination will be

20. Sosa (1970), Perry (1977), Peacocke (1981), Bach (1987/1994), Recanati (1993), and Jeshion (2002) develop different ways of understanding *de re* modes of presentation that are not fully object-dependent.

21. I develop this way of thinking about the content of perceptual experience in detail in Schellenberg (2006, 2011b). For a discussion of gappy Russellian contents, see Braun (1993), Bach (2007), and Tye (2007).

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where $MOP^1_r(\_\_)$ in the object place is the token content ensuing from employing a perceptual capacity that remains baseless in virtue of failing to single out an object, and $MOP^2_r(\_\_)$ in the property place is the token content ensuing from employing a perceptual capacity that remains baseless in virtue of failing to single out a property. The content in the object place specifies the kind of object that has to be present for the experience to be accurate. It accounts for the intentional directedness of the experience to a (seeming) particular object. The content in the property place specifies the properties that this object would instantiate if the experience were accurate. Since the hallucinating subject is not related to the object or property instances that the perceptual capacities employed purport to single out, the modes of presentation are gappy. The gap marks that there is a reference failure.

The motivation for thinking of experiential content in terms of potentially gappy modes of presentation is that the content of experience should be understood as sufficiently fine-grained to reflect differences in cognitive significance, as well as differences in reference. *De dicto* modes of presentation only reflect differences in cognitive significance, while radically object-dependent *de re* modes of presentation take the effects of differences in reference too far.

Although *token* modes of presentation covary with the environment in which the subject experiences, the mode of presentation *types* remain the same across subjectively indistinguishable experiences. The content of a hallucination is a token of the same type of *de re* mode of presentation as the token content of a subjectively indistinguishable perception. These mode of presentation types are constituted by the perceptual capacities employed. Since an experiencing subject can employ a perceptual capacity even if she is not in an environment that contains the object or property instance that the capacity functions to single out, employing perceptual capacities is independent of these object and property instances. As a consequence, subjectively indistinguishable experiences share a content element—namely, the perceptual capacities employed or the mode of presentation types.

Thus on the suggested view, hallucinations are all alike in that the perceptual capacities employed are baseless. But phenomenologically distinct hallucinations differ insofar as different perceptual capacities are employed. The differences between the perceptual capacities employed explain the differences in sensory character. Since the capacities in play are individuated by what they single out in accurate perceptions, the fact that the perceptual capacities employed in hallucinations remain baseless does not threaten the distinctness of the capacities in play. Indeed, distinct baseless perceptual capacities can be employed in a single mental act. After all, the identity of a perceptual capacity is secured even if the perceptual capacity does not have a referent. The identity of a perceptual capacity is secured by what it would refer to in the case of a successful perceptual experience. So although baseless percep-

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tual capacities are all alike in lacking a referent, perceptual capacities differ even if they do not have a referent.

As I have shown, environment dependence is not an essential feature of potentially gappy modes of presentation. Although a part of the token content covaries with the environment in the case of a perception, the same type of *de re* mode of presentation can be tokened if no object is present. The token content of the hallucinatory experience is naturally not object-dependent. The suggested view explains the possibility that when one hallucinates an object, it can seem to one as if one is perceiving a particular object. The intentional directedness to an object is accounted for by the mode of presentation in the object place. So on the suggested view, hallucinations and perceptions share a common element, namely, potentially gappy modes of presentation, which ground the sensory character of the experience.[22]

I have argued that possessing a perceptual capacity is a matter of being able to single out or refer to the objects or property instances that the capacity functions to single out. Now, when we employ perceptual capacities in hallucination, is our awareness of a seeming object by acquaintance or by description? As Russell argued, we can gain knowledge about an object by being directly related to the object. Alternatively, we can gain knowledge about an object through inferences from propositions. The Fregean gappy content view that I am propagating forges a third way between these two Russellian options. Since no object is present, the awareness in play cannot be by acquaintance. Hallucinating subjects are not extensionally aware of an object but rather intensionally aware. But although hallucinating subjects are not related to the objects of which they aware, this does not imply that the way in which they are aware of a seeming object is by description. If possessing perceptual capacities is understood in terms of the ability to refer to the objects and property instances that the perceptual capacity functions to single out, then the content constituted by employing these perceptual capacities cannot be purely descriptive. The perceptual capacities employed in hallucinations are individuated by the objects or property instances that would be singled out were the subject perceiving.

Now, how can the suggested view account for the possibility of hallucinations of properties that are not instantiated anywhere? The content of hallucination is derivative of the content of perception either in that it *recombines* perceptual capacities based on past perceptions or in that the capacities employed in hallucinations are *extrapolations* of capacities based on past perceptions. A hallucination of supersaturated red could, for instance, be a result of combining the perceptual capacities to single out red and saturatedness respectively, thereby inducing an experience as of a particularly saturated red. Alternatively, one could argue that a hallucination of supersaturated red

22. For a discussion of how the suggested view accounts for the intuition that hallucinating subjects misrepresent their environment, see Schellenberg (2010).

is a result of extrapolating from experiences of red with regular levels of saturatedness.[23] We can develop this thesis in two ways. On what we can call a *grounded* version, the perceptual capacities employed in hallucinations must be acquired through perceptions of similar objects or property instances. So on this version, past perceptions of instances of the relevant property are necessary to have hallucinations of that type of property instances. On a second, *ungrounded* version, hallucinations of properties or objects are possible even if one has not had past perceptions of instances of the same property or the same type of object. So on this version, one can possess perceptual capacities without having been perceptually related to the objects or property instances that the perceptual capacities function to single out. This version would allow that a subject could have a hallucination of, say, an object unlike anything she has seen before, by acquiring the relevant perceptual capacities through testimony or imagination. Indeed, a brain in a vat could have hallucinations. In its most radical form, this ungrounded version could posit that having a hallucination is sufficient to acquire the ability to single out external, mind-independent objects and property instances. This radical thesis is only plausible on the assumption that hallucinations of objects and property instances (to which one has never been perceptually related) do not involve at least *imagining* such objects or property instances, where imagination involves more high-level mental capacities than mere hallucination. We can remain neutral here on whether or not the ungrounded view is best understood in this radical way. The important point is that on the ungrounded version, no past perceptions of objects and property instances are necessary to have hallucinations as of similar objects and property instances.

On both the grounded and the ungrounded versions, hallucinations are externally directed without involving awareness relations to abstract entities, sense-data, or any other peculiar entities. Now, taken independently, both the grounded and the ungrounded versions face problems. Taken independently, the grounded version faces the problem that one can only have hallucinations of objects and property instances if one has had perceptions of objects and property instances that are sufficiently similar for one to extrapolate from these experiences. This puts a constraint on what hallucinations it is possible for an experiencing subject to have. Taken independently, the ungrounded version faces the problem that an analysis of hallucinations of uninstantiated properties requires rejecting the Aristotelian principle that the existence of a type depends on its tokens. We avoid both problems if we recognize that the grounded version holds globally, but the ungrounded version holds locally. So an analysis of what grounds our abilities to refer to objects and property instances requires combining the two versions.

23. It would lead too far afield to discuss the details of what it takes to extrapolate a perceptual capacity here. For an excellent discussion, see Browne (2002).

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Let's assume for the sake of argument the empiricist thesis that any given perceptual capacity is grounded in perception insofar as its existence depends on perceptions of the objects or property instances that the capacity functions to single out.[24] If this is right, then it follows that the grounded version holds globally: there cannot exist a perceptual capacity that is not grounded in perception. It does not, however, follow from this that an individual subject must have had perceptions of the objects or property instances that a capacity functions to single out to possess the relevant perceptual capacity. So it does not follow that the grounded view holds locally. It follows only that there cannot exist perceptual capacities that function single out objects or property instances that have not been perceived by someone or other. A subject can acquire a perceptual capacity through testimony. If this is right, then any given individual perceiver can have hallucinations of objects and property instances that she has not perceived. Therefore the ungrounded version can hold locally, even if the grounded version holds globally. If this is right, then there cannot be a world in which there are only brains in a vat that could have hallucinations of a white cup. It is, however, possible that an individual brain in a vat in our world could have hallucinations of a white cup.

By accepting that the grounded version holds globally, the suggested externalist view satisfies the Aristotelian principle. By accepting that the ungrounded version holds locally, the suggested view allows that one can have hallucinations as of objects and property instances unlike anyone has seen. Finally, by accepting that the content of hallucination is derivative of the content of perception, either in that it *recombines* perceptual capacities acquired in past perceptions or in that the perceptual capacities employed in hallucinations are *extrapolations* of capacities acquired in past perceptions, the suggested view can allow for hallucinations as of uninstantiated properties while satisfying the Aristotelian principle.

Can Jackson's Mary have hallucinations of red? Mary is a color scientist who knows everything about colors but lives in a black-and-white world and so has never seen any colors. She could not have acquired the perceptual capacity to single out red through perceptions of instances of red. Since the ungrounded version holds locally, Mary could have hallucinations of red. If one rejects the radical ungrounded view, one might argue, however, that perceptions of colors are necessary for a person to imagine what it would be like to experience red. So one might argue that some perceptions of colors other than red are necessary to have hallucinations of red. If this is right, then Mary could not have hallucinations of red, but her sister Anna could. Anna is a color scientist who knows everything about colors but lives in a world with all the colors except red. So while she has seen all colors, she has never seen red.[25]

24. For a defense of this empiricist thesis, see Peacocke (1992) and Prinz (2002). This thesis is famously challenged by Fodor (1998).

25. For an excellent discussion of experiences of novel colors, see Macpherson (2003).

3 Conclusion

I have argued that the content of perceptual experiences is best understood as externally individuated, and have presented a way of thinking about hallucination that is committed to the insights of content externalism. I have argued that hallucinating subjects employ perceptual capacities, namely, the very same capacities that are employed in subjectively indistinguishable perceptions. Insofar as the perceptual capacities employed in hallucinations can only be specified with reference to their possible roles in perceptual experiences, hallucinations are derivative of perceptual experiences. In this sense, hallucinations exhibit a deficiency that can only be explained with reference to an analysis of successful perceptual experiences. More specifically, a subject only possesses the perceptual capacities employed in hallucinations because she has the ability to single out the objects and property instances that the capacity functions to single out. So the capacities employed in hallucinations can only be specified with reference to their possible roles in perceptions. A subject can employ a perceptual capacity while failing to single out the object or property instance that the capacity purports to single out. The capacities employed account for the intentional directedness to a seeming particular object and the properties that this object instantiates. On the suggested view of hallucinations, a hallucinating subject does not stand in an awareness relation to anything despite being in a sensory state that purports to be of material, mind-independent objects or property instances. Since a hallucinating subject is not perceptually related to the relevant objects or property instances, the perceptual capacities she employs remain baseless. I developed the consequences of this idea for the content of hallucination by arguing that it is constituted by potentially gappy modes of presentation.

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