Chapter 28
What Is Explanatorily Fundamental in an Analysis of Perception?

Susanna Schellenberg

Abstract Perception guides our actions, decisions are routinely made on the basis of perception, and most scientific knowledge derives at least in part from perception. What is it about perception that it justifies our beliefs and provides us with knowledge of the world? This paper further develops the capacities-first view and shows how this way of analyzing perception explains why perception justifies our beliefs and provides us with knowledge.

Perception guides our actions, decisions are routinely made on the basis of perception, and most scientific knowledge derives at least in part from perception. We know that there is a white cup on our desk, since we see it. Seeing it also justifies our belief that there is a white cup on our desk. What is it about perception that it justifies our beliefs and provides us with knowledge of the world?

After discussing several ways in which we can answer this question, I will argue that perception is best understood as fundamentally a matter of employing perceptual capacities. I will present the basic commitments of this view, examine the notion of capacities in play, and show how this way of analyzing perception explains why perception justifies our beliefs and provides us with knowledge.

28.1 Fundamental Levels of Analysis

According to the capacities-first view, consciousness, content, perceptual evidence, and allied notions such as justification, knowledge, and attention are constituted by the mental capacities employed. The notion of a capacity is understood to be explanatorily fundamental. It is because a given subject is employing mental capacities that her mental states have representational content, phenomenal character, and

S. Schellenberg (✉)
Rutgers University, New Brunswick, NJ, USA
e-mail: susanna.schellenberg@rutgers.edu

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_28

epistemic force. Among capacities-first views there is a distinction to be drawn between normative views, on which mental capacities are understood as virtues or in other normative ways (Sosa 1991, 2006, 2007; Zagzebski 1996; Greco 2001, 2010; Bergmann 2006; Kern 2016), and views that forego normative constraints (Burge 2003; Graham 2011; Schellenberg 2013, 2014, 2018). Moreover, there is a distinction to be drawn between views on which the relevant capacities must be reliable (Sosa 1991, 2006, 2007; Greco 2001, 2010; Burge 2003; Bergmann 2006; Graham 2011), and views on which the epistemic force of experience does not depend on the reliability of the relevant capacities (Schellenberg 2013, 2014, 2018).

The capacities-first view can be contrasted with a number of alternative approaches in epistemology. Dogmatists and evidential internalists treat conscious mental states as explanatorily basic and posit a particular rule for justification, namely, that if it perceptually seems that p, then one has prima facie justification for p (Pollock 1974; Feldman and Conee 1985; Pryor 2000; Huemer 2007, among others).[1] The knowledge-first view treats knowledge as explanatorily basic and analyzes justification in terms of a deficiency of knowledge (McDowell 1982; Williamson 2000; Millar 2008; Nagel 2013; Byrne 2014; Littlejohn 2017 among others). Reliabilism treats the reliability of the perceptual or cognitive system as explanatorily basic and analyzes evidence and justification as a product of this reliable system—be it in virtue of a reliable indicator or a reliable process (Goldman 1979, 1986; Lyons 2009 among others).

The capacities-first view can equally be contrasted with a number of alternative approaches in philosophy of mind. Naïve realists or austere relationalists take perceptual relations between subjects and the objects they perceive to be explanatory basic, arguing that perception is constitutively a matter of standing in an awareness or an acquaintance relation to the environment (Martin 2002, 2004; Campbell 2002a, b; Brewer 2011; Fish 2009; Johnston 2011, 2014; Logue 2012; Genone 2014; French and Gomes 2019). Naïve realists explain perceptual consciousness, evidence, and knowledge in terms of this perceptual relation. By contrast, austere representationalists take representational content to be explanatory basic (McGinn 1982; Davies 1992; Tye 1995; Byrne 2009; Pautz 2009; Speaks 2009; Hill 2019) and explain consciousness, evidence, justification, and allied notions in terms of representational content.[2]

By contrast to these views, the capacities-first view treats capacities as explanatorily basic and analyzes perceptual content, consciousness, evidence, and allied notions such as attention, justification, and knowledge as constituted by the capacities employed. So according to the first cluster of views conscious mental states are explanatory basic, on the second knowledge, on the third reliability, on the fourth

[1] One could add Feldman and Conee (1985) to this list, however, on their view, as long as a subject's belief fits her total evidence, the belief is propositionally justified by that evidence, so their view need not be committed to seemings.

[2] As I will show shortly, many representationalist views, including the one entailed by the capacity-first view, are not committed to treating representational content as explanatory basic.

perceptual relations, on the fifth representational content, and on the sixth capacities.[3] These options are neither exclusive nor exhaustive. One might think that more than one of these six elements are explanatorily basic, or one might think that what is explanatorily basic is something else entirely. Nevertheless, these six approaches are the main current options in philosophy of mind and epistemology.

If perceptual relations, representational content, conscious mental states, reliability, knowledge, or capacities are considered to be explanatorily basic, this does not mean that one cannot give an analysis of these concepts. It means rather that they are the fundamental elements in terms of which other aspects of the mind are analyzed. Most views appeal to conscious mental states and reliability; many appeal to some form of mental capacity. The key question is what the basic elements are in terms of which other features of the mind are analyzed. On Williamson's view, for example, this basic element is knowledge. He appeals to conscious mental states and reliability along the way, but on his account they are not explanatory basic.

In a series of papers and a book, I have developed a particular version of the capacities-first view, one that remains steadfastly naturalistic, is externalist without invoking reliability, and in recognizing a metaphysically substantive common between perception, hallucination, and illusion avoids any commitment to disjunctivism.[4] I call this version of capacities-first philosophy *capacitism.* The view has it that perception is constitutively a matter of employing perceptual capacities, that is, capacities to discriminate and single out objects, events, and property-instances in our environment. According to capacitism, perceptual states provide us with evidence since there is an explanatory and metaphysical primacy of perception over hallucinations and illusions. Before delving into the details of this view, it will help to make some general comments about the history and benefits of analyzing mental states in terms of capacities.

28.2 Why Analyze the Mind in Terms of Mental Capacities?

Driven by the idea that a cognitive system has the capacity it does in virtue of its internal components and their organization, it is standard to appeal to capacities in cognitive psychology, neuroscience, and the brain sciences.[5] Critical in the advent of the notion of capacity was Chomsky's influence in these fields. In particular, his distinction between competence and performance—where a competence is a cognitive capacity, and a performance is generated by employing a competence—is

[3] One could make the case that insofar as on some of the views categorized as capacities-first views it is essential that the capacities in play are reliable, those views would better be classified as reliabilist views.

[4] See Schellenberg (2007, 2013, 2014, 2016a, b, 2018, among others).

[5] See Cummins (1985) for a good overview.

deeply entrenched in discussions of computational states and the neural states that subserve them (Chomsky 1995).

In contrast to the centrality of capacities in psychology and neuroscience and despite their prominence in the history of philosophy, questions about mental capacities have been neglected in recent philosophical work.[6] Until the beginning of the twentieth century, capacities and related concepts such as abilities, skills, powers, and categories featured centrally in philosophical and scientific work on perception—particularly in the work of Aristotle and Kant. Indeed, it was standard to analyze the mind in terms of capacities. With the linguistic turn the norms changed and it became standard to analyze the mind in terms of representational content instead. No doubt the linguistic turn brought with it much clarity and precision. However, in sidelining capacities, a great deal was lost.

Contrary to what this history suggests, we need not choose between analyzing the mind in terms of capacities and analyzing it in terms of representational content. On any reasonable understanding of capacities, the capacities-first view entails representationalism—one on which representational content is constituted by employing perceptual capacities. After all, employing perceptual capacities is repeatable and yields mental states that either accurately or inaccurately reflect the environment of the experiencing subject.[7] Thus it yields states that have representational content.

The main benefit of invoking capacities in an account of the mind is that it allows for an elegant counterfactual analysis of mental states: it allows us to analyze mental states on three distinct yet interrelated levels.

(1) The function of mental capacities.
(2) The mental capacities employed, irrespective of the context in which they are employed.
(3) The mental capacities employed, taking into account the context in which they are employed.

The first level of analysis pertains to the function of perceptual capacities, which is to discriminate and single out particulars of a specific type. A perceptual capacity has this function even if it is employed while failing to fulfill its function, as is the case in hallucination and illusion. Even in such a case, the capacity functions to discriminate and single out particulars of a specific type. Moreover, a perceptual capacity has this function even if it is more often than not employed while failing to fulfill its function.

The second level of analysis pertains to what is in common between mental states in which the same perceptual capacities are employed. On this level, it is irrelevant whether or not a perceptual capacity is employed such that it fulfills its function. As I argue, in perceptions, hallucinations, and illusions with the same phenomenal character, the same perceptual capacities are employed. So on this second level of analysis, perceptions, hallucinations, and illusions with the same phenomenal character are on a par.

---

[6] Notable exceptions include Cartwright (1994) and Sosa (2010).

[7] For a defense of this idea, see Schellenberg (2011, 2018, Chap. 3).

The third level of analysis pertains to the fact that perceptual capacities are employed in a specific environment, whereby a particular is either successfully singled out or the experiencing subject fails to single out a particular. In contrast to the second level, it matters, on this level, whether or not a capacity is employed such that its function is fulfilled. So on this level, perceptions differ from hallucinations and illusions. As I argue, this is the level of analysis on which we determine the token content of the relevant experiential state.

28.3 Capacities First

Perception plays multiple roles: it yields conscious mental states, it justifies beliefs, and it provides us with knowledge of our environment. Capacitism accounts for these multiple roles. Employing perceptual capacities constitutes phenomenal character as well as perceptual content. The primacy of employing perceptual capacities in perception over their derivative employment in hallucination and illusion grounds the epistemic force of perceptual experience. Thus, unified account of the phenomenological and epistemological role of perception that is informed by empirical research.

More specifically, perceiving a particular is constitutively a matter of employing perceptual capacities by means of which that particular is discriminated and singled out. So for example, I possess the capacity to discriminate red from blue, a different capacity to discriminate chairs from desks, and yet another capacity to discriminate the note I'm hearing being played on the piano right now from the one I heard a moment ago.

If one possesses a perceptual capacity, one can employ it even if no particular of the kind that the capacity functions to single out is present. Therefore, the very same perceptual capacities that are employed in perception can also be employed in illusion and hallucination. As a consequence, a perception, a hallucination, and an illusion with the same phenomenal character share a metaphysically substantial common element that grounds perceptual consciousness.

However, there are also substantial differences with regard to their representational content. Since perceptual content is constituted by the perceptual capacities employed and since perceptual capacities function to single out particulars, this implies that perceptual content is singular. After all, if the fact that perceptual capacities single out particulars in some situations but not others has any semantic significance, then the token content yielded by employing perceptual capacities in perception will be constituted by the particulars thereby singled out. While the token content of perception is singular content, the form of illusion and hallucination is derivative of the form of perception: perceptual capacities are employed but no relevant particulars are thereby singled out.

Perceptual states provide us with evidence since they are systematically linked to what they are of in perception. More specifically, there is a metaphysical and explanatory primacy of perception over hallucinations and illusions. There is an *explanatory primacy* of the good over the bad case, since one can give an analysis of

the perceptual capacities employed in the bad case only by appealing to their role in the good case. Licensing this explanatory primacy there is a *metaphysical primacy* of the good over the bad case. The employment of a perceptual capacity $C\alpha$ in cases in which $C\alpha$ fulfills its function is metaphysically more basic than the employment of Cα in cases in which $C\alpha$ fails to fulfill its function. After all, perceptual capacities function to single out particulars. They do not function to fail to single out particulars.

Illusions and hallucinations can mislead us: they may prompt us to act in ways that do not mesh with the world around us and they may lead us to form false beliefs about that world. Capacitism provides an account of evidence that shows in virtue of what illusions and hallucinations mislead us and prompt us to act: in hallucination and illusion we have phenomenal evidence, that is, evidence that corresponds to how our environment sensorily seems to us. Moreover, it gives an account of why we are in a better epistemic position when we perceive than when we hallucinate: when we perceive, we have not only phenomenal evidence but also factive evidence, that is, evidence that is determined by the environment to which we are perceptually related such that the evidence is guaranteed to be an accurate guide to the environment. So we have phenomenal evidence in the good and the bad case, but in the good case we have additional factive evidence.

The rational source of both phenomenal and factive evidence lies in employing perceptual capacities that function to discriminate and single out particulars. I thereby show that the epistemic force of perceptual states stems from the explanatory and metaphysical primacy of employing perceptual capacities in perception over their employment in corresponding hallucinations and illusions. Hence the ground of the epistemic force of perceptual states lies in properties of the perceptual capacities that constitute the relevant perceptual states and thus in metaphysical facts about perceptual experience.

Such a unified account of perception opens up a new understanding of the nature of perceptual content, perceptual particularity, the phenomenological basis of evidence, the epistemic force of evidence, the origins of perceptual knowledge, the relationship between content and consciousness, as well as the relationship between consciousness and reference. Moreover, it clears the way for solving a host of unresolved problems, such as the relation between attention and perceptual knowledge, and the perceptual basis for demonstrative reference.

Let me locate this view within the wider philosophical landscape. First, capacitism grounds mental states, events, and properties in the physical, nonmental world. In doing so, these features of the mind are rendered no less amenable to scientific investigation than any other features of the world. This naturalistic and physicalist view shows how perception is our key to the world while situating perception within that world.

Second, capacitism is an externalist account of perceptual content, consciousness, and evidence. It is an externalist account since the perceptual capacities that constitute these features of the mind function to discriminate and single out particulars in our environment. Due to this function they connect us to our environment. While capacitism is an externalist view, it does justice to the internalist elements of perceptual experience. In contrast to, say, orthodox versions of reliabilism, it makes room

for the cognitive and epistemic role that conscious mental states play in our lives. The capacities employed constitute the way in which we perceive particulars in our environment and account for our first-person perspective on the world.

Third, capacitism is a common factor view of perception. The same perceptual capacities can be employed in perception, hallucination, and illusion. The perceptual capacities employed constitute a metaphysically substantial common element. This common element shared by perceptions, hallucinations, and illusions presents itself on three levels: representational content, perceptual consciousness, and phenomenal evidence. Thus, capacitism is at its core non-disjunctivist.

Fourth, despite being non-disjunctivist, capacitism is nevertheless an asymmetric account of perception, hallucination, and illusion. It holds that perception is metaphysically and explanatorily more basic than hallucination and illusion. After all, the function of perceptual capacities is indexed to perception. Perceptual capacities function to discriminate and single out particulars. They have this function, even when employed derivatively in hallucination or illusion.

Thus, capacitism walks a path between naïve realism and austere representationalism. Against naïve realism, I argue that perceptions, hallucinations, and illusions with the same phenomenal character share a metaphysically substantial common factor which grounds that phenomenal character. This much I share with other common factor views. But in the spirit of naïve realism, I argue that hallucinations and illusions can be understood only in terms of a deficiency of perceptions: perceptual capacities fulfill their function when employed in perception but fail to fulfill their function when employed in hallucination or illusion. In this way, there is an asymmetric dependence between the employment of perceptual capacities in hallucination and illusion and their employment in perception.

28.4 What Are Perceptual Capacities?

A perceptual capacity is a kind of discriminatory, selective capacity that we employ in perception, hallucination, or illusion. It is a low-level mental capacity that functions to differentiate, single out, and in some cases classify mind-independent particulars of a specific type. While discriminating particulars can include classification, it does not require it. To say that perceptual capacities are low-level is not to say that they are subpersonal, but rather that they are cognitively less high-level than concepts (at least on most philosophical accounts of concepts).

Moreover, perceptual capacities come in many varieties: there are perceptual capacities to discriminate luminance, motion, quantities, size, pitch, tone, and distances to name just a few. Some capacities are more basic than others. Some stand in complex hierarchical structures. Some are always employed jointly with other capacities.

Perceptual capacities can be more or less high-level and a perceptual capacity can be understood either as a conceptual or a nonconceptual capacity. Which stance one takes will depend largely on how one understands the nature of concepts and

their possession conditions. Depending on how concepts are understood it is more or less plausible to think of perceptual content as conceptually structured. One of the advantages of analyzing perceptual content as constituted by employing perceptual capacities is that it allows us to sidestep this debate.[8]

Perceptual capacities can be analyzed with the following eight conditions:

Function of a Perceptual Capacity: The function of a perceptual capacity $C\alpha$ is to discriminate and single out mind-independent particulars α_1, α_2, α_3, … α_n, that is, particulars of a specific type.

Individuation Condition: A perceptual capacity $C\alpha$ is individuated by the mind-independent particulars α_1, α_2, α_3, … α_n that the perceptual capacity functions to single out.

Possession Condition: A subject S possesses a perceptual capacity $C\alpha$ if and only if the following counterfactual is true of S: S would be in a position to discriminate and single out a particular α_1, where α_1 is any particular of the type that $C\alpha$ functions to discriminate and single out, if S were perceptually related to α_1, (i) assuming S is perceptually capable (awake, alert etc.), (ii) assuming no finking, masking, or other exotic case obtains, and (iii) where S being perceptually related to α_1 means that (a) the situational features are such that α_1 is perceivable by S (good lighting conditions etc.), (b) S has the relevant sensory apparatus that allows her to gain information about α_1, and (c) S is spatially and temporally related to α_1 such that S is in a position to gain information about α1 via her sensory apparatus.

Fallibility Condition: If a subject S employs a capacity $C\alpha$, $C\alpha$ can either fulfill its function or fail to fulfill its function, such that there is no difference at the level of employing $C\alpha$ but only a difference at the level of fulfilling its function. The function of $C\alpha$ is fulfilled if by employing $C\alpha$ a relevant particular is singled out. The function of $C\alpha$ fails to be fulfilled if by employing $C\alpha$ no relevant particular is singled out.

Asymmetry Condition: The employment of a perceptual capacity $C\alpha$ in cases in which $C\alpha$ fulfills its function is metaphysically more basic than the employment of $C\alpha$ in cases in which $C\alpha$ fails to fulfill its function.

[8] For discussion of nonconceptual content, see Peacocke (1998), Heck (2000), and Speaks (2005). For arguments for the idea that perceptual content is conceptually structured, see McDowell (1994), Glüer-Pagin (2009), and Bengson et al. (2011).

Repeatability Condition: A necessary condition for $C\alpha$ to be a perceptual capacity is that $C\alpha$ is repeatable.

Physical Base Condition: If a subject S is employing a perceptual capacity $C\alpha$, then there is a physical base of employing $C\alpha$ that is constituted by physical processes, events, and structures (such as the neural activity) of S.

Informational Base Condition: If a subject S is employing a perceptual capacity $C\alpha$, then there is an informational base of employing $C\alpha$ that is constituted by the subpersonal psychological mechanism (information processing, computations, and other subpersonal functional states, events, and processes) of S.

Jointly, these eight conditions provide an asymmetric counterfactual analysis of perceptual capacities. I will not discuss each condition in detail here, but will say a bit more about the function and fallibility of perceptual capacities and the sense in which the employment of perceptual capacities in perception and hallucination is asymmetric.[9]

28.4.1 The Function of Perceptual Capacities

Perceptual capacities function to discriminate and single out particulars. I use the notion of "singling out" rather than "referring" so as to remain neutral on whether perceptual capacities are conceptual or nonconceptual. While referring has been argued to require conceptual capacities, singling out particulars requires no such capacities. Singling out a particular can be understood as a proto-conceptual analogue of referring to a particular. Non-rational animals and infants as young as four months old can perceptually single out particulars in their environment, yet on at least some notions of "reference" they do not have the capacity to refer.

The notion of function in play is a notion of natural function. It is natural in that it is independent of interpretation. So what function a capacity has is not relative to an interpreter.[10] There are many different kinds of perceptual capacities. There are perceptual capacities that function to discriminate and single out objects of a specific type. Others function to discriminate and single out property-instances of a specific type. Still others function to discriminate and single out events of a specific type.

Etiological accounts of natural functions argue that something has a certain function because of what it is selected and adapted for (Ayala 1970; Wright 1973; Millikan 1989; Neander 1991).[11] There are good reasons to reject such accounts. Consider

[9] For a detailed discussion of each of these conditions, see Schellenberg (2018, Chap. 2).

[10] For this reason, the account of capacities does not face Dennett's (1991) indeterminacy worries.

[11] For a critical discussion of etiological accounts of function, see Nanay (2010). As Nanay argues, such accounts are circular.

the heart's function to pump blood. The etiologist explains this function by pointing to the fact that hearts were selected for pumping blood. While natural selection or some other natural process is no doubt how it causally came about that hearts have their function, the fact that hearts have this function is neutral on how they came to have it. Even if hearts came to have their function by some other means, they could still have the function to pump blood.

More generally, it is important to distinguish what function something has from how it came to have that function. What is crucial for an analysis of capacities is what function they have, not how they came to have it. Thus, we can work with a notion of natural function while rejecting an etiological analysis.

In contrast to etiological theories, capacitism is neutral on how mental capacities came to have their function. No doubt, we possess the perceptual capacities in our repertoire due to our phylogenetic and ontogenetic background. However, we can analyze the function of those capacities without appealing to how we came to have them. Indeed, the phylogenetic or ontogenetic history of a subject is irrelevant for determining the function of her capacities. A subject who discriminates and singles out particulars in her environment via an implant can have perceptual capacities with the very same function as a subject who has those capacities via engaging with the environment. While most mental capacities happen to have their function due to natural selection, this fact is irrelevant for an analysis of the function of those mental capacities.

Due to its ahistorical account of functions, capacitism does not face well-known problems of etiological theories of mental content. It does not, for example, face the problem of how to account for complex capacities, the possession of which cannot be explained in terms of natural selection, adaptation, or meme selection. Moreover, by contrast to etiological accounts, it does not face Davidson's Swampman objection (Davidson 1987: 443–444). Swampman is a creature that by astounding fortuity came into existence through a collision of particles caused by a lightning bolt. With bewildering coincidence, Donald Davidson is struck by a lightning bolt at the very same time and tragically dies. Swampman is a physical duplicate of Davidson, but his history is radically different. He did not partake in any evolutionary history, and there are no phylogenetic, ontogenetic, or other etiological ways to explain his mental states. For this reason, etiological accounts of function are forced to say that Swampman's component parts do not have any functions. Since according to capacitism, a function is in no way dependent on the history of the subject employing the relevant capacity, it can acknowledge that Swampman possesses all the capacities that Davidson possessed.

This is significant since it shows that neither the content nor the epistemic force of a mental state depends on the history or reliability of employing the capacities that constitutes that mental state. Since capacitism holds that the function of perceptual capacities is independent of the history of the subject employing those capacities, the view posits that Swampman not only has mental states with content, but also mental states with epistemic force.

A perceptual capacity has a certain function irrespective of whether it fulfills its function in any particular context of employment. To explain why, it is helpful to

distinguish capacities from their employment. While a capacity is a kind of mental tool, the employment of a capacity is a mental activity. Consider Sam who possesses the perceptual capacity C_{RED} that functions to discriminate and single out red particulars. Just as Sam's heart has the function to pump blood, but may fail to pump blood, so Sam may employ her capacity C_{RED} while failing to single out any red particular. In such a case, the capacity failed to fulfill its function because the target of employing the capacity is not present: no red particular was discriminated and singled out.

Before discussing the fallibility of perceptual capacities in more detail, it is important to note that when we perceptually discriminate α from β we discriminate an actual, mind-independent particular α to which we are perceptually related from a distinct actual, mind-independent particular β to which we are similarly perceptually related. Let's call this kind of discrimination material discrimination. Discriminating between two particulars in this sense does not require attending to both particulars. It requires only registering their differences. Consider Dylan who is walking through thick foliage. It is unclear how she could be perceptually aware of, say, a leaf without registering how it differs in at least one respect from its surround. The basic level of employing perceptual capacities is to discriminate one particular from another, where this discrimination is understood as registering their differences.[12]

Material discrimination is distinct from any notion of discrimination understood in terms of carving out possibility space. On such notions, to discriminate a property F that an object o instantiates is to discriminate F from relevant alternative ways o could be. In particular, material discrimination is to be distinguished from the notion of discrimination in relevant alternative views of knowledge (Austin 1946; Dretske 1969, 1981; Goldman 1976), as well as contextualism and pragmatic encroachment accounts (Hawthorne 2003; Stanley 2005; DeRose 2009). Subtleties aside, such views have it that to know that an object *o* has property *F* (in some circumstance), one must be able to rule out some relevant alternatives, that is, certain relevant situations in which *o* has, say, property *G* rather than *F*. As Pritchard puts it:

> In the perceptual case at least, to be able to rule out an alternative is to be able to make the relevant discriminations between the target object and the object at issue in the alternative—e.g., to be able to discriminate between goldfinches and woodpeckers. (Pritchard 2010: 246)

On such relevant alternative views of knowledge, discrimination is necessary for knowledge: to know one must discriminate the way things are from relevant other ways they might be. The notion of discrimination is a matter of modal appreciation.

Material discrimination is distinct from discriminating relevant alternatives in two ways. First, material discrimination is a matter of noticing differences between actual, mind-independent particulars to which one is perceptually related rather than appreciating relevant alternatives. Second, material discrimination need not be cognitive (and typically is not), while any kind of modal appreciation and modal theorizing

[12] For discussions of the role of pre-attentive discrimination in perception, see Julesz (1981), Watson and Robson (1981), Sagi and Julesz (1985), Malik and Perona (1990), Krummenacher et al. (2010), and To et al. (2011).

falls squarely in the cognitive realm. It is standard to distinguish perception and cognition. Perception is a kind of mental faculty that we share with non-rational animals. While human perception might be rife with top-down effects, there is no reason to think that modal appreciation is constitutive of perception.

Moreover, material discrimination is distinct from detecting differences between mental states via introspection. It has been argued that two phenomenal states M1 and M2 differ if and only if their subject can introspectively tell them apart (Shoemaker 1994). I am not denying that we can discriminate between phenomenal states in this way. We can call this introspective discrimination. The important point here is that in perceiving our environment, we discriminate between external, mind-independent particulars, rather than mental states or aspects of mental states. According to capacitism, discriminating such particulars constitutes perceptual states and indeed phenomenal character. Perceptual discrimination is more fundamental than introspective discrimination of perceptual states. After all, introspectively discriminating perceptual states requires that there are perceptual states with phenomenal character between which we could be discriminating via introspection.

28.4.2 The Fallibility of Perceptual Capacities

So far, we have analyzed perceptual capacities in light of their function to discriminate and single out particulars in perception. What happens in cases of hallucination and illusion in which we fail to single out what we purport to single out? If capacities are understood as infallible, then one cannot employ a capacity if one does not succeed in fulfilling its function.[13] I will not here argue against such infallibilist views, but will focus rather on why we should understand perceptual capacities as fallible in that the very same perceptual capacity can be employed in perception, hallucination, and illusion.

By way of analogy, consider that if we possess a concept, then we can employ it even if we fail to refer. After all, if we say "That's a horse," pointing to where in fact there is no horse, we are arguably using the very same concept horse that we would use if we were successfully pointing at a horse. The difference between the former and the latter case is simply that we fail to refer in the former, but not the latter. The failure occurs at the level of reference. There is no failure at the level of employing the concept. If that is right, then there is no reason to think that the two cases differ with regard to employing the concept horse.

The same holds for perceptual capacities. If we possess a perceptual capacity, then we can employ it even if we are not accurately perceiving. One could be prompted to employ a perceptual capacity due to non-standard circumstances, such as, unusual brain stimulations or misleading distal inputs. Given that capacities are determined by functional relations between the perceiver and her environment and not by individual

[13] For a view on which capacities are infallible, see Millar (2008: 3f).

token responses, we can employ a capacity even if a relevant particular is not present. If this is right, then like concepts, perceptual capacities are fallible.

If we employ a perceptual capacity, but fail to single out a particular, the capacity is employed baselessly. It is employed baselessly in the sense that the usual target of discrimination and selection—an external, mind-independent particular—is absent. Now, in perception the particulars between which we discriminate are mind-independent particulars in our environment. This invites the question: what do we discriminate between when we employ perceptual capacities baselessly? In response: when we employ a capacity baselessly, we are not discriminating any mind-independent particulars. Indeed, we are not discriminating any particulars. We are employing a mental tool without that mental tool fulfilling its function. The important point for present purposes is that the fact that the mental tool is not fulfilling its function does not imply that we are not employing the mental tool.

Consider Kim who hallucinates a white cup. She employs her capacity to discriminate and single out an object of a certain type. Moreover, she employs her capacity to discriminate and single out white from other colors along with capacities to single out various other property-instances: luminance, shapes, textures, and so on. Since she is hallucinating and so not perceptually related to a white cup, all these capacities are employed baselessly.

Consider a subject who suffers an illusion. She sees an object that instantiates property π, but given misleading circumstances, it seems to her (falsely) to be instantiating property ρ. In such a case, she employs her capacity to discriminate and single out an instance of ρ. But given that there is no ρ-instance present, she employs that capacity while failing to single out any particular. In the typical case, she will be employing several other capacities successfully. But insofar as she is suffering an illusion, she employs at least one capacity baselessly.

28.4.3 The Asymmetry Condition

While perceptual capacities are fallible and employable in perception, illusion, and hallucination alike, there is an asymmetry between employing a capacity in perception and employing that same capacity in hallucination or illusion. The reason for this asymmetry is that the function of a perceptual capacity is to discriminate and single out particulars; its function is not to fail to single out particulars. This is the case even if a perceptual capacity is more often than not employed unsuccessfully.[14]

Another way of expressing the reason for this asymmetry is that the fact that we can employ capacities while failing to single out particulars depends on the fact that we can employ such capacities to successfully single out particulars. This idea is analogous to the idea that misrepresentation depends on representation. Indeed, the

[14] For a more detailed discussion of the asymmetry condition, see Schellenberg (2013, 2018). For a helpful discussion of asymmetry arguments more generally, see Marušić (2016).

two ideas go hand in hand, if employing perceptual capacities yields representational content.

More precisely, there is both an explanatory and a metaphysical primacy of the employment of a perceptual capacity in perception over its employment in hallucination or illusion. There is an explanatory primacy since one can give an analysis of the capacity employed in hallucination or illusion only by appealing to its role in perception. Consider again Kim when she suffers a hallucination as of a white cup on a desk. Even though she fails to single out anything white, in virtue of employing the capacity to discriminate and single out white from other colors, she is in a sensory state that is as of an instance of white. She would single out an instance of white were she perceptually related to a white cup—assuming that no finking, masking, or other exotic case obtains. After all, she is employing a perceptual capacity the very function of which is to differentiate white from other colors and to single out white in her environment. In this sense, we need to refer to what Kim would discriminate between and what she would single out in perception to explain the nature of the capacities she employs in hallucination.

Licensing this explanatory primacy, there is a metaphysical primacy of employing a perceptual capacity in perception over its employment in hallucination or illusion: a perceptual capacity functions to do what it does in perception, namely discriminate and single out particulars. It does not function to do what it does in hallucination or illusion, namely fail to discriminate and single out the particular that one purports to single out. For the reasons discussed under the fallibility condition, the asymmetry condition does not imply that we must have successfully used a perceptual capacity in the past to employ that capacity in hallucination.

The proposed asymmetric counterfactual analysis of perceptual capacities differs in significant ways from Fodor's asymmetrical causal dependence account of mental representation (Fodor 1987, 1990). According to Fodor, a mental state represents properties or objects only if it is reliably tokened by the presence of the relevant properties or objects. A mental symbol represents, say, pigs only if it is reliably tokened by pigs. So reliability is a necessary condition for Fodor's account: symbols of cognitive systems represent because of regularities between those cognitive systems and environments. Such regularities also explain what it is for such symbols to represent in the first place. Like all tracking theories (Dretske 1981; Millikan 1984), Fodor's account face indeterminacy problems. It fails to ground determinate content, which is required not just for avoiding Quinean indeterminacy problems (e.g. undetached pig parts, pig time-slices), but also to allow for the possibility of misrepresentation (and thus for avoiding the "disjunction" problem) and for ruling out proximal contents (e.g. piggy retinal patterns).[15]

[15] Fodor (1990) addresses these indeterminacy problems by adding several conditions to his original account. He stipulates (i) that the mental symbol must be actually caused (not just that it would be caused) by the object or property (i.e. by pigs), and (ii) that the mental symbol has actually been caused by the wrong kinds of objects or properties (i.e. non-pigs), and thus that misrepresentation is not simply possible but that it has actually occurred. Adding these extra conditions, however, undermines the power of the account to explain mental content.

The key problem with accounts of mental content that depend on reliability conditions is the following: if a mental state *M* reliably represents *P* (e.g. pig), then *M* will also reliably represent the disjunction *P v Q* (e.g. pig or a bull terrier; pig or undetached pig part). The reliability relation does not cut finely enough to privilege *P* over the alternatives. In contrast to Fodor's asymmetrical causal dependence account, capacitism does not face these problems since it does not depend on the reliability of perceptual capacities.

In conclusion, on this asymmetric counterfactual analysis of perceptual capacities, the asymmetry stems from the primacy of the employment of perceptual capacities when the capacities fulfill their function over their employment when they fail to fulfill their function. The analysis is counterfactual, since (subtleties aside) one qualifies as possessing a perceptual capacity only if one would be in a position to discriminate and single out a particular of the type that the capacity functions to single out, were one perceptually related to such a particular. Moreover, the analysis is externalist insofar as capacities are individuated by the external, mind-independent particulars that they function to discriminate and single out.

28.5 Factive Evidence and Phenomenal Evidence

With these clarifications in hand, we can take a closer look at why perception provides us with evidence and what evidence we can gain through percpetual experience. Perceptual experience provides us with phenomenal evidence regardless of whether we are perceiving, hallucinating, or suffering an illusion, and an accurate perception provides us with additional factive evidence.[16] Phenomenal and factive evidence both have their rational source in the perceptual capacities employed in experience.

For present purposes, we can understand phenomenal evidence as determined by how our environment sensorily seems to us when we are experiencing. We can understand factive perceptual evidence as necessarily determined by the perceived particulars such that the evidence is guaranteed to be an accurate guide to the environment.

Sensory states provide phenomenal evidence since they are constituted by employing perceptual capacities that function to single out particulars. As a consequence, they are systematically linked to those particulars. Thus, if a subject is in a phenomenal state that is systematically linked to external and mind-independent *F* particulars, then she is in a phenomenal state that provides evidence for the presence of *F* particulars. After all, if a subject is in a phenomenal state that is constituted by employing perceptual capacities that function to single out *F* particulars, then the subject is in a phenomenal state that provides evidence for the presence of *F* particulars.

This is because the perceptual capacities employed in the bad case are explanatorily and metaphysically parasitic on their employment in the good case. There is

[16] For arguments, see Schellenberg (2013, 2014, 2016a, b, 2018).

an explanatory primacy of the good over the bad case since giving an analysis of the perceptual capacities employed in the bad case requires appealing to their role in the good case. There is a metaphysical primacy of the good over the bad case since perceptual capacities function to single out particulars.

In speaking of it being the function of perceptual capacities to single out the relevant particulars, I do not mean to speak of their actual reliability but rather of how they are to be understood metaphysically. It is the function of a perceptual capacity to single out, say, instances of red. This is so regardless of how often the capacity is employed successfully to single out an instance of red. So this way of understanding why it is rational to heed the testimony of our senses has the advantage of not depending on any form of reliabilism. Our senses frequently lead us astray. Nevertheless, they provide us with evidence. Some perceptual capacities may be reliable. However, even if that is the case, it is the systematic linkage to particulars that gives experience its epistemic force. The notion of systematic linkage in play is understood in terms of a metaphysical and explanatory primacy notion, which is not a reliabilist notion. Thus, the epistemic force of perceptual experience does not depend on whatever reliability (if any) perceptual capacities might have.

Phenomenal evidence in the bad case is brought about by employing the very same perceptual capacities that in the good case allow us to perceptually navigate our environment. While these capacities are determined by functional relations to the particulars they single out in perception, we can employ the same capacities while failing to single out a relevant particular. So having phenomenal evidence is compatible with our perceptual capacities being employed baselessly. As a consequence, hallucinations provide us with tangible, though misleading, phenomenal evidence.

An accurate perception provides us moreover with factive evidence. The analysis of the rational source of phenomenal evidence in virtue of a notion of systematic linkage carries over to an analysis of the rational source of factive evidence. After all, in the case of a perception, there is an ideal link between our perceptual state and the environment due to our perceiving it. Therefore, we have additional factive evidence in virtue of accurately representing our environment. Due to the link being ideal, factive evidence provides a rationality boost beyond the rationality boost provided by phenomenal evidence. This explains why a perceiver is in a better evidential position than someone suffering an illusion or a hallucination.

Now, from the first-person perspective, one may not be able to tell the difference between a hallucination, in which one has only phenomenal evidence, and a perception, in which one has both phenomenal and factive evidence. However, we need not think that what is accessible from the first-person perspective dictates what is rational to heed. This principle holds even for phenomenal evidence: a phenomenal state is rational to heed in virtue of being constituted by employing perceptual capacities that function to single out mind-independent particulars. There is no need to have access to all aspects of that phenomenal state.

Now, insofar as perceptual capacities are systematically linked to particulars, the phenomenal character constituted by employing perceptual capacities is systematically linked to particulars. This is to say that phenomenal character is systematically linked to what the relevant perceptual capacities single out in perception. If

the fact that perceptual capacities single out particulars in some situations but not others has any semantic significance, then the token content ensuing from employing perceptual capacities in perception will be constituted by the perceptual capacities employed and the particulars thereby singled out. Employing perceptual capacities yields a content type that perceptions, illusions, and hallucinations with the same phenomenal character have in common. So individuating perceptual states by their content type amounts to individuating them with regard to the experiencing subject's phenomenal character.

The token content of a perceptual state ensues from employing perceptual capacities in a particular environment, thereby either singling out particulars or failing to do so. In the case of a perception, the token relational content will be a singular content. Insofar as at least some of the perceptual capacities that constitute the content of an illusion or a hallucination are employed baselessly, the token content of such mental states is gappy. The ensuing content of an illusion or a hallucination has the form of a singular content, but fails to be a token singular content.

In light of this way of thinking about perceptual content, we can say that phenomenal evidence is determined by the content type of an experience, which is in turn constituted by the perceptual capacities employed. Factive evidence is determined by the singular token content of perception, which is in turn constituted by the perceptual capacities employed and the particulars thereby singled out. Insofar as both kinds of evidence have the same rational source, capacitism provides a unified account of the internal and external aspects of perceptual evidence.

Capacitism has several attractive features. First, it is an externalist view of evidence that nonetheless makes room for phenomenal evidence. Hallucinations provide us with evidence that is neither introspective evidence nor constituted by general content. The view is externalist insofar as the content of factive evidence is a singular token content and insofar as our phenomenal evidence is determined by our phenomenal states, which in turn are individuated externally. Phenomenal states are individuated externally since they are constituted by employing perceptual capacities that are by their very nature linked to the particulars that they are of in the good case. While the content of factive evidence is a singular token content, the content of phenomenal evidence is a content type. No doubt we can articulate a general content or an existentially quantified content to express the content of our phenomenal states. But the fact that we can articulate such content does not imply that the content of phenomenal evidence is such a general content or an existentially quantified content. It is a potentially particularized content type.

This externalist notion of phenomenal evidence makes room for the idea that having evidence is a matter of being in an epistemic position that is a guide to how the world is, while allowing that we can have evidence even if we happen to have been led astray and so are in a state that is not accurate with regard to our environment. As a consequence, capacitism shows how experience provides us with phenomenal evidence even in the bad case without retreating to introspective evidence.

Second, capacitism provides a unified account of the internal and external elements of perceptual evidence. The rational source of both kinds of evidence stems from the perceptual capacities employed in experience.

Third, capacitism explains the distinction between the internal and external elements of perceptual evidence in terms of the representational content of perceptual experience. The distinction between phenomenal and factive evidence emerges from two levels of perceptual content. I argued that any perceptual experience can be individuated by a content type or a token content. Phenomenal evidence is determined by the content type, which is in turn constituted by the perceptual capacities employed. Factive evidence is determined by the token content, which is in turn constituted by the perceptual capacities employed and the particulars thereby singled out.

Fourth, while capacitism makes room for phenomenal evidence, it does not amount to an internalist attempt at isolating a non-factive mental component of factive evidence. After all, phenomenal evidence is constituted by employing perceptual capacities—the very same capacities that also constitute factive evidence. Insofar as both kinds of evidence stem from properties of the perceptual capacities employed, capacitism provides a unified account of the rational source of perceptual evidence.

How does capacitism differ from competing views of evidence and knowledge, such knowledge-first epistemology, reliabilism, and virtue epistemology? In contrast to externalist views such as Williamson's, capacitism shows that we have at least some evidence provided directly through experience in the bad case: we have phenomenal evidence. In contrast to evidential internalist views (cf. Pollock 1974; Feldman and Conee 1985; Pryor 2000), capacitism shows that we have more evidence in the good than the bad case: we have additional factive evidence. In contrast to disjunctivist views, capacitism shows that there is at least some evidence in common between good and bad cases: in both cases, we have phenomenal evidence. In contrast to epistemological disjunctivism, capacitism shows that we do not know whether we are perceiving rather than hallucinating: we do not know that we know in virtue of having factive evidence. So capacitism provides us with something that neither factive evidentialists nor evidential internalists can supply.

Capacitism is a naturalistic and externalist alternative to reliabilism. According to capacitism, the epistemic power of perceptual experience is explained in terms of metaphysical facts about perceptual experience. By grounding the epistemic force of experience in facts about the metaphysical structure of experience, capacitism is not only an externalist view, but moreover a naturalistic view of the epistemology of perceptual experience.[17]

[17] For a detailed discussion of how capacitism compares to these alternatives, see Schellenberg (2018, Chap. 10).

28.6 Generalism, Attributionalism, and Particularism

We can distinguish three kinds of views that are compatible with a capacities-first approach. The generalist holds that the fact that perception functions to single out particulars has no repercussions for perceptual content.[18]

Generalism: The content of a perceptual state brought about by being perceptually related to the particular α is constituted only by general elements, and not by α

Generalists have it that if two perceptual states have the same phenomenal character, then they will be the same in all respects other than that the subject may be causally related to distinct environments. The problem with generalism is that perception grounds demonstrative reference, yields de re mental states such as singular thoughts, it fixes the reference of singular terms, it provides us with knowledge of particulars, and it justifies singular thoughts about particulars. There are powerful reasons to believe that perception could not play these cognitive and epistemological roles if perceptual states were not constituted by the particulars perceived.[19]

Now the generalist can respond that in perception it seems to us that there is a particular present. This is true. But it seeming to us that there is a particular present does not provide us with knowledge of environmental particulars, and seemings are not sufficient to ground demonstrative reference. When a subject perceives her environment, she is aware of a particular. Indeed, her experience can be as of a particular, even if she is hallucinating or suffering an illusion. In this sense, perceptual experiences are (as) of particulars. We can call this aspect of phenomenal character phenomenological particularity.

Phenomenological Particularity: A mental state manifests phenomenological particularity if and only if it phenomenally seems to the relevant subject that there is a particular present.

A mental state manifests phenomenological particularity if and only if the particularity is in the scope of how things seem to the subject. So a mental state can manifest phenomenological particularity without the particular that seems to the subject to be present in fact being present. Every perceptual experience (as) of a particular manifests phenomenological particularity. If a subject has an experience that is intentionally directed at a particular and subjectively indistinguishable from perceiving a particular, it will seem to her as if a particular is present—regardless of whether she is in fact perceiving, hallucinating, or suffering an illusion. In short,

---

[18] For generalist views, albeit not ones that are versions of a capacities-first approach, see Jackson (1977), Lewis (1980), Harman (1990), Millar (1991), Davies (1992), Siewert (1998), Byrne (2001), and Hill (2009).

[19] For an argument for the thesis that perceptual states are constituted by particulars that does not itself depend on perception playing these epistemological and cognitive roles, see Schellenberg (2016a, b).

phenomenological particularity is a feature of any perceptual experience—be it a perception, a hallucination, or an illusion. It is unclear what it would be to have a perceptual experience that seems to be of a material, mind-independent particular without it sensorily seeming to the subject that such a particular is present. I see no reason why phenomenological particularity could not be explained within a generalist framework.[20]

The interesting question is whether perception tracks actual particulars in the environment and if so, how these particulars are tracked. Now, we can all agree that when a subject perceives a particular, she is causally related to the particular she perceives. It is uncontroversial and compatible with almost any view of perception that there is such a causal relation between a subject and a perceived particular. Consider the case of two experiences, one of which is a perception of an object, the other of which is a hallucination with the same phenomenal character. It is uncontroversial and compatible with almost any view of perception that there is a difference in causal relation between the two experiences.

In order to cut any ice, we need something more substantial than a mere causal relation. A mental state is characterized by relational particularity if and only if that mental state is constituted by the particular perceived. More precisely:

Relational Particularity: A subject's perceptual state M brought about by being perceptually related to the particular α is characterized by relational particularity if and only if M is constituted by α.

A view on which perception is characterized by relational particularity can—in contrast to generalism—explain how perception can ground demonstrative reference, yield de re mental states such as singular thoughts, fix the reference of singular terms, provide us with knowledge of particulars, and justify beliefs about particulars.

If a perceptual state is characterized by relational particularity, then it follows that if M is a perceptual state brought about by being perceptually related to the particular α, and M^* is a state brought about by being perceptually related to a numerically distinct particular β (and not perceiving α), then M and M^* are distinct perceptual states—even if α and β are qualitatively identical.

The relevant particulars perceived can be objects, events, or property-instances in our environment. It is uncontroversial that objects and events are particulars. Arguably, however, we are not just perceptually related to objects and events, but also to property-instances—for example, instances of shape, size, pitch, texture, and color properties, to name just a few. To support this idea, note that a perceptual relation is a kind of causal relation. So when we perceive, say, the shape of the cup in front of us, that shape must be causally efficacious—otherwise we could not perceive it. Thus, given plausible assumptions about causation, the shape of the cup must be a concrete spatio-temporal particular rather than a universal. After

[20] For skepticism that generalism can explain phenomenological particularity, see Reiland manuscript. Some generalists argue that perception does not manifest phenomenological particularity. See for example, Hill (2019: 13–15).

all, universals are neither spatio-temporally located nor causally efficacious. I will assume an Aristotelian view on which properties are understood in terms of their instances. Hence, I will assume that we perceive property-instances. These property-instances could be, but need not be, understood as tropes. Regardless of whether or not property-instances are understood to be tropes, they are particulars and not universals.

If one accepts that we perceive property-instances, then any perception involves being perceptually related to at least one particular. After all, in any case of perception, a subject perceives at least one particular: an object, an event, or a property-instance. It follows from this that every perception is constituted by a particular and thus is characterized by relational particularity.

There are at least three types of views on which perceptual states are characterized by relational particularity. In denying that perception involves any general elements, naïve realism presents the most radical departure of generalism. The naïve realist argues that perception is particularized with regard to any perceived particulars, be they objects, events, and property-instances. In denying that any of these particulars are represented, the naïve realist breaks with generalism entirely.

So as to give a substantive answer to the hallucination question, explain how perception can justify beliefs, and how we can remember what we perceived, we should arguably not go that far.[21] One option would be to fall back on generalism, but there are many better alternatives. One is to argue that perceptual content is constituted by the object(s) perceived and that properties are attributed to this object (Evans 1982; Mcdowell 1986; Peacocke 1983; Searle 1983; Burge 1991, 2010a, b; Recanati 1993, 2010; Speaks 2009; Garcia-Carpintero 2010; Crane 2011; Block 2014; Rescorla 2020).

Attributionalism: Perceptual content is singular in the object-place, but not the property-place.

Attributionalists argue that perception necessarily has an attributional or predicative structure.[22] On this view, perceptual states are characterized by relational particularity if the subject perceives an object. However, in cases in which the subject sees only property-instances (without seeing any objects that instantiate those property-instances), perceptual content will be general. We can contrast this view with particularism.

Particularism: The content of a perceptual state brought about by a subject *S* being perceptually related to the particular α is constituted at least in part by α, where α could be an event, an object, or a property-instance in *S*'s environment (Schellenberg 2011, 2016a, b, 2018; Nanay 2012).

According to particularism, perception is particular and general all the way down. It is particular all the way down because every case of perception involves perceiving and

[21] For arguments that perception has representational content, see Siegel (2010a, b), Pautz (2010), Schellenberg (2010, 2011, 2018).

[22] For a critical discussion of attributionalism and an argument that discriminating environmental particulars is more fundamental than attributing properties to objects, see Schellenberg (2018, pp. 67–69).

representing at least one particular, where that particular could be an object, event, or a property-instance in the environment. Perception is general all the way down because we perceive particulars by employing perceptual capacities, that is, capacities to discriminate and single out particulars. So the particular element of perception is provided by the particulars perceived, while the general element is provided by the perceptual capacities employed by means of which one discriminates and singles out those particulars.

A perceptual capacity is general in that it can be employed to single out any particular of the type that the capacity functions to discriminate and single out. In the typical case, no specific particular needs to be singled out in any specific employment of a perceptual capacity.[23] Any particular will do, as long as it falls under the type of particulars that the capacity functions to discriminate and single out. For example, the perceptual capacity C_{square} can be employed to discriminate and single out any perceivable square object. In this sense, it is general in much the way as the concept *square* is general.

28.7 Ways of Perceiving, Perceptual Capacities, and Modes of Presentations

By employing a perceptual capacity in perception, we single out a particular in a certain way. Let's say we are perceptually related to a triangle. We can single it out via its three-sidedness, or via its three-corneredness. When we single it out via its three-sidedness we employ a different capacity than when we single it out via its three-corneredness. Similarly, when we hear a cello in the midst of the cacophony of an orchestra, we can single it out in virtue of its rich timbre or its reverberating sound. When we see a scarlet gemstone, we can single it out in virtue of it being red or in virtue of it being scarlet.

Contrary to what naïve realists would have us believe, we are always constrained by our perceptual tools: there is always a way in which we perceive the world. As I argue, what perceptual capacities we employ to discriminate and single out particulars in our environment constitutes the way in which we perceive our environment. Suppose you see a field of flowers that are shades of red and yellow. You can employ your capacity to discriminate between red and yellow and thus be aware of a field of red and yellow flowers. Alternatively, you can employ your capacity to discriminate between crimson, scarlet, and vermilion, and between lemon, mustard, and ochre and thus be aware of the colors in front of you in a more fine-grained way. In both cases, the same environmental particulars are perceived, but by employing different perceptual capacities, they are perceived in different ways. Denying that we are always in some respect constrained by our perceptual tools is epistemically arrogant.

[23] Exceptions are perceptual capacities that function to single out one unique particular, such as -someone's perceptual capacity to single out their mother.

The idea that content is constituted by employing perceptual capacities by means of which we (purport to) single out particulars is analogous to the Fregean idea that modes of presentation are a way of grasping or referring to particulars. Indeed, perceptual capacities can be understood as the mental counterpart of Fregean modes of presentation. Now, while Frege introduces the distinction between sense and reference with a perceptual case, he does not develop the notion for perceptual content. His focus was never on lowly mental faculties like perception. Nonetheless, we can apply his view of modes of presentation to the case of perception. Applied to that case, the idea is that a mode of presentation is the specific way in which a subject singles out a perceived particular. We can think of perceptual capacities as the mental counterpart of modes of presentation.

Employing perceptual capacities parallels modes of presentation in at least four respects. Just as a mode of presentation is a way of referring to an object, employing a perceptual capacity is a way of singling out a particular. And as there is a many-one relation between senses and references, there is a many-one relation between perceptual capacities and particulars: the same particular can be singled out with a range of different perceptual capacities.[24] Moreover, as modes of presentation both have a cognitive significance and are a means of referring to particulars, employing perceptual capacities has the dual role of constituting the perceptual content and consciousness, on the one hand, and discriminating and singling out particulars, on the other. Finally, as a mode of presentation is the specific way in which a subject refers to a particular, employing perceptual capacities is the specific way in which a subject perceives a particular.

28.8 Coda

I argued for a view of epistemic externalism that does not entail any version of epistemic disjunctivism. The basic idea is that in perception we employ perceptual capacities that function to discriminate and single out particulars in our environment. Due to the explanatory and metaphysical primacy of the good case over the bad case, employing such perceptual capacities yields a mental state that provides us with phenomenal evidence and in the good case additional factive evidence.

The notion of a capacity is understood to be explanatorily basic. It is because a given subject is employing a mental capacity with a certain nature that her mental states have epistemic force. I show how this view allows us to acknowledge internalist insights by arguing that mental state are constituted by the perceptual capacities employed which in turn provide the mental state with its epistemic force.

[24] See Schellenberg (2018, Chap. 4, Sect. 3.1).

References

Austin, J. L. 1946. Other minds. *Supplement to the Proceedings of the Aristotelian Society* 20: 148–187.

Ayala, F. 1970. Teleological explanations in evolutionary biology. *Philosophy of Science* 37 (1): 1–15.

Bengson, J., E. Grube, and D. Korman. 2011. A new framework for conceptualism. *Noûs* 45 (1): 167–189.

Bergmann, M. 2006. *Justification without awareness.* Oxford University Press.

Block, N. 2014. Seeing-as in the light of vision science. *Philosophy and Phenomenological Research* 89 (3): 560–572.

Brewer, B. 2011. *Perception and its objects.* Oxford University Press.

Burge, T. 2003. Perceptual entitlement. *Philosophy and Phenomenological Research* 67 (3): 503–548.

Burge, T. 2010a. *Origins of objectivity.* Oxford University Press.

Burge, T. 2010b. Steps toward origins of propositional thought. *Disputatio* 4 (29): 39–67.

Burge, T. 1991. Vision and intentional content. In *John Searle and his critics*, ed. E. LePore & R. van Gulick. Blackwell.

Byrne, A. 2001. Intentionalism defended. *The Philosophical Review* 110 (2): 199–240.

Byrne, A. 2009. Experience and content. *Philosophical Quarterly* 59 (236): 429–451.

Byrne, A. 2014. Perception and evidence. *Philosophical Studies* 170 (1): 101–113.

Campbell, J. 2002a. Berkeley's puzzle. In *Conceivability and possibility*, ed. T. Gendler and J. Hawthorne. Oxford University Press.

Campbell, J. 2002b. *Reference and consciousness.* Oxford University Press.

Cartwright, N. 1994. *Nature's capacities and their measurement*. Oxford University Press.

Chomsky, N. 1995. Language and Nature. *Mind* 104 (413): 1–61.

Crane, T. 2011. The singularity of singular thought. *Aristotelian Society Supplementary* 85 (1): 21–43.

Cummins, R. 1985. *The nature of psychological explanation.* MIT Press.

Davidson, D. 1987. Knowing one's own mind. *Proceedings and Addresses of the American Philosophical Association* 60 (3): 441–458.

Davies, M. 1992. Perceptual content and local supervenience. *Proceedings of the Aristotelian Society* 92: 21–45.

Dennett, D. 1991. *Consciousness explained*. Little, Brown & Co.

DeRose, K. 2009. *The Case for contextualism.* Oxford: Oxford University Press.

Dretske, F. 1969. *Seeing and knowing.* University of Chicago Press.

Dretske, F. 1981. *Knowledge and the flow of information.* MIT Press.

Evans, G., and J. McDowell (Eds.). 1982. *The varieties of reference.* Oxford University Press.

Feldman, R., and E. Conee. 1985. Evidentialism. *Philosophical Studies* 48 (1): 15–34.

Fish, W. 2009. *Perception, hallucination, and illusion.* Oxford University Press.

Fodor, J. 1987. *Psychosemantics: The problem of meaning in the philosophy of mind*. MIT Press.

Fodor, J. 1990. A theory of content, I & II. In *A theory of content and other essays*, ed. J. Fodor. MIT Press.

French, C., and A. Gomes. 2019. How naïve realism can explain both the particularity and generality of experience. *Philosophical Quarterly* 69 (274): 41–63.

García-Carpintero, M. 2010. Fictional singular imaginings. In *New essays on singular thought*, ed. R. Jeshion. Oxford University Press.

Genone, J. 2014. Appearance and illusion. *Mind* 123 (490): 339–376.

Glüer-Pagin, K. 2009. In defense of a doxastic account of experience. *Mind & Language* 24 (3): 297–327.

Goldman, A. 1986. *Epistemology and cognition.* Harvard University Press.

Goldman, A. 1976. Discrimination and perceptual knowledge. *The Journal of Philosophy* 73: 771–91.

Goldman, A. 1979. What is justified belief? In *Knowledge and justification*, ed. G. Pappas. Reidel.
Graham, P. 2011. Epistemic entitlement. *Noûs* 46 (3): 449–482.
Greco, J. 2001. Virtues and rules in epistemology. In *Virtue epistemology: Essays on epistemic virtue and responsibility*, ed. A. Fairweather and L. Zagzebski. Oxford University Press.
Greco, J. 2010. *Achieving knowledge: A virtue-theoretic account of epistemic normativity*. Cambridge University Press.
Harman, G. 1990. The intrinsic quality of experience. In *Philosophical Perspectives 4: Action theory and philosophy of mind*, ed. J. Tomberlin. Ridgeview Publishing Company.
Hawthorne, J. 2003. *Knowledge and lotteries*. Oxford: Oxford University Press.
Heck, R. 2000. Nonconceptual content and the space of reasons. *The Philosophical Review* 109 (4): 483–523.
Hill, C. 2009. *Consciousness*. Cambridge University Press.
Hill, C. 2019. Perceptual existentialism sustained. *Erkenntnis* 86: 1391–1410.
Huemer, M. 2007. Compassionate phenomenal conservatism. *Philosophy and Phenomenological Research* 74 (1): 30–55.
Jackson, F. 1977. *Perception: A representative theory*. Cambridge University Press.
Johnston, M. 2011. On a neglected epistemic virtue. *Philosophical Issues* 21: 165–218.
Johnston, M. 2014. The problem with the content view. In *Does perception have content?*, ed. B. Brogaard. Oxford University Press.
Julesz, B. 1981. A theory of preattentive texture discrimination based on first-order statistics of textons. *Biological Cybernetic* 41 (2): 131–138.
Kern, A. 2016. *Sources of knowledge: On the concept of a rational capacity for knowledge*. Harvard University Press.
Krummenacher, J., A. Grubert, and H.J. Müller. 2010. Inter-trial and redundant-signals effects in visual search and discrimination tasks: Separable pre-attentive and post-selective effects. *Vision Research* 50 (14): 1382–1395.
Lewis, D. 1980. Veridical hallucination and prosthetic vision. *Australasian Journal of Philosophy* 58 (3): 239–249.
Littlejohn, C. 2017. How and why knowledge is first. *Knowledge-First Epistemology*, ed. A. Carter, E. Gordon, and B. Jarvis. Oxford: Oxford University Press.
Logue, H. 2012. Why naive realism? *Proceedings of the Aristotelian Society* 112 (2): 211–237.
Lyons, J. 2009. *Perception and basic beliefs: Zombies, modules, and the problem of the external world*. Oxford University Press.
Malik, J., and P. Perona. 1990. Preattentive texture discrimination with early vision mechanisms effects. *Journal of the Optical Society of America* 795: 923–932.
Martin, M.G.F. 2002. Particular thoughts and singular thoughts. In *Logic, thought and language*, ed. A. O'Hear. Cambridge University Press.
Martin, M.G.F. 2004. The limits of self-awareness. *Philosophical Studies* 120 (1): 37–89.
Marušić, B. 2016. Asymmetry arguments. *Philosophical Studies* 173: 1081–102.
McDowell, J. 1982. Criteria, defeasibility, and knowledge. *Proceedings of the British Academy* 68: 455–479.
McDowell, J. 1994. The content of perceptual experience. *Philosophical Quarterly* 44 (175): 190–205.
McDowell, J. 1986. Singular thought and the extent of inner space. In *Subject, thought and context*, ed. P. Pettit and J. McDowell. Clarendon Press.
McGinn, C. 1982. *The character of mind*. Oxford University Press.
Millar, A. 1991. *Reasons and experiences*. Clarendon Press.
Millar, A. 2008. Perceptual-recognitional abilities and perceptual knowledge. In *Disjunctivism: Perception, action, knowledge*, ed. A. Haddock and F. Macpherson. Oxford University Press.
Millikan, R.G. 1984. *Language, thought and other biological categories*. MIT Press.
Millikan, R.G. 1989. In defense of proper functions. *Philosophy of Science* 56 (2): 288–302.
Nagel, J. 2013. Knowledge as a mental state. *Oxford Studies in Epistemology* 4: 273–308.
Nanay, B. 2010. A modal theory of function. *Journal of Philosophy* 107 (8): 412–431.

Nanay, B. 2012. Perceiving tropes. *Erkenntnis* 77: 1–14.
Neander, K. 1991. Functions as selected effects. *Philosophy of Science* 58 (2): 168–184.
Pautz, A. 2009. What are the contents of experiences? *Philosophical Quarterly* 59 (236): 483–507.
Pautz, A. 2010. Why explain visual experience in terms of content? In *Perceiving the world*, ed. B. Nanay. Oxford University Press.
Peacocke, C. 1983. *Sense and content: Experience, thought, and their relations.* Oxford University Press.
Peacocke, C. 1998. Nonconceptual content defended. *Philosophy and Phenomenological Research* 58 (2): 381–388.
Pollock, J. 1974. *Experience and justification.* Princeton University Press.
Pritchard, D. 2010. Relevant alternatives, perceptual knowledge, and discrimination. *Noûs* 44: 245–68.
Pryor, J. 2000. The skeptic and the dogmatist. *Noûs* 34 (4): 517–549.
Recanati, F. 1993. *Direct reference: From language to thought.* Blackwell.
Recanati, F. 2010. Singular thought: In defence of acquaintance. In *New essays on singular thought*, ed. R. Jeshion. Oxford University Press.
Rescorla, M. 2020. How particular is perception? *Philosophy and Phenomenological Research* 100 (3): 721–727.
Sagi, D., and B. Julesz. 1985. Detection versus discrimination of visual orientation. *Perception* 13 (5): 619–628.
Schellenberg, S. 2007. Action and self-location in perception. *Mind* 116 (463): 603–632.
Schellenberg, S. 2013. Experience and evidence. *Mind* 122 (487): 699–747.
Schellenberg, S. 2014. The epistemic force of perceptual experience. With a response by Alex Byrne. *Philosophical Studies* 170: 87–100.
Schellenberg, S. 2016a. Perceptual particularity. *Philosophy and Phenomenological Research* 93 (1): 25–54.
Schellenberg, S. 2016b. Phenomenal evidence and factive evidence. *Philosophical Studies* 173 (4): 875–896.
Schellenberg, S. 2018. *The unity of perception: Content, consciousness, evidence.* Oxford University Press.
Schellenberg, S. 2010. The particularity and phenomenology of perceptual experience. *Philosophical Studies* 149 (1): 19–48.
Schellenberg, S. 2011. Perceptual content defended. *Noûs* 45 (4): 714–750.
Searle, J. 1983. *Intentionality: An essay in the philosophy of mind*. Cambridge University Press.
Shoemaker, S. 1994. Phenomenal character. *Noûs* 28 (1): 21–38.
Siegel, S. 2010a. Do visual experiences have content? In *Perceiving the world*, ed. B. Nanay. Oxford University Press.
Siegel, S. 2010b. *The contents of perception.* Oxford University Press.
Siewert, C. 1998. *The significance of consciousness.* Princeton University Press.
Sosa, E. 1991. *Knowledge in perspective.* Cambridge University Press.
Sosa, E. 2006. Internal foundations or external virtues? *Philosophical Studies* 131 (3): 769–833.
Sosa, E. 2010. How competence matters in epistemology. *Philosophical Perspectives* 24: 465–475.
Sosa, E. 2007. *A virtue epistemology: Apt belief and reflective knowledge.* Oxford University Press.
Speaks, J. 2005. Is there a problem about nonconceptual content? *Philosophical Review* 114 (3): 359–398.
Speaks, J. 2009. Transparency, intentionalism, and the nature of perceptual content. *Philosophy and Phenomenological Research* 79 (3): 539–573.
Stanley, J. 2005. *Knowledge and practical interests.* Oxford: Oxford University Press.
To, M.P., I.D. Gilchrist, T. Troscianko, and D.J. Tolhurst. 2011. Discrimination of natural scenes in central and peripheral vision. *Vision Research* 51 (14): 1686–1698.
Tye, M. 1995. *Ten problems of consciousness: A representational theory of the phenomenal mind*. MIT Press.

Watson, A., and J. Robson. 1981. Discrimination at threshold: Labelled detectors in human vision. *Vision Research* 21 (7): 1115–1122.
Williamson, T. 2000. *Knowledge and its limits*. Oxford University Press.
Wright, L. 1973. Functions. *The Philosophical Review* 82: 139–68.
Zagzebski, L. 1996. *Virtues of the mind*. Cambridge: Cambridge University Press.

Chapter 29
Schellenberg and the Capacity to Perceive

Tony Cheng

In "What is explanatorily fundamental in an analysis of perception?" (this volume) as well as many recent writings, notably *The Unity of Perception* (2018), Susanna Schellenberg has put forward a version of "capacity-first epistemology" concerning perception, according to which "in perception we employ perceptual capacities that function to discriminate and single out particulars in our environment" (Schellenberg, this volume, Chap. 28, p. 245). There are many formulations of this view in Schellenberg's works, but due to the space limit, and for our purposes anyway, we will stick to this current one for now. The view has become a major competitor in recent epistemology and philosophy of perception, conceived as incompatible with (say) dogmatism (e.g., Huemer 2007), knowledge-first epistemology (e.g., McDowell 1982; Williamson 2000), reliabilism (e.g., Goldman 1979, 1986; Lyons 2009), austere relationalism (e.g., Martin 2002, 2004; Campbell 2002a, b; Brewer 2011; Fish 2009; Johnston 2011), and austere representationalism (e.g., McGinn 1982; Davies 1992; Tye 1995; Byrne 2009), amongst others. It is not realistic to even attempt to adjudicate various issues in these ballparks in this brief comment. In what follows I will raise three related clarificatory questions, with the hope that they can further sharpen our understanding of the view, and preferably, make the view more plausible. To anticipate, the first is about the relation between being explanatorily basic (or fundamental) and being primitive, the second is about the characterisations of perceptual capacities, and the third about the relation between perceptual capacities and perceptions themselves.

To begin with, on p. 225, Schellenberg states that "[i]f perceptual relations, representational content, conscious mental states, reliability, knowledge or capacities are considered to be explanatorily basic, this does not mean that one cannot give an analysis of these concepts." This remark seems puzzling. Schellenberg further explains

T. Cheng (✉)
Waseda University, Tokyo, Japan
e-mail: h.cheng.12@alumni.ucl.ac.uk

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_29

that explanatorily basic elements "are the fundamental elements in terms of which other aspects of the mind are analyzed." So now the question is: does this mean that these elements can be explanatorily basic or fundamental yet not primitive? If yes, this seems to be quite different from how others understand these notions. For example, Schellenberg mentions Williamson's view as a prime example, but I believe his view is a paradigm case of something being fundamental, basic, primitive, and therefore unanalysable. This does not show that he and others are right about this, or they are authoritative about these matters, but I am just wondering whether Schellenberg's way of using these terms are different from some others, in a way that they might fail to engage one another's views.

Furthermore, in characterising perceptual capacities, Schellenberg explains that they "come in many varieties: there are perceptual capacities to discriminate luminance, motion, quantities, size, pitch, tone, and distances to name just a few" (p. 229; also see her 2018, p. 31, 2019a, p. 137). These all look fine, but they can all be captured in physical and physiological terms, and relevant accounts can be found in standard perceptual psychology textbooks (e.g., Cacciamani and Goldstein 2021). It is unclear, one might think, how this distinguishes Schellenberg's accounts from others. For example, an austere relationalist or an austere representationalist can readily accept that there are such capacities, without subscribing Schellenberg's overall picture, given that the above description refers to standard facts of human or animal psychology that all parties in philosophy of perception should agree. There is a natural response to this, namely that others do not put capacities first in this context. I shall rejoin this in my final point below. For now, note that in other contexts Schellenberg also holds that perceptual capacities function to discriminate and single out particulars in the environment (2019b, 2020, *passim*). This is fine too, but again it might seem unclear how this is supposed to distinguish her view from others. This is not to say that there are no obvious disagreements can be found: in the two book symposiums and on many other occasions, we already see how other philosophers disagree with this capacity-first approach. However, it would be more fruitful, I submit, if what is distinctive about the view can be already seen in how perceptual capacities are characterised. Again one natural response on Schellenberg's behalf might be that what is distinctive about the view is that it holds that perceptual capacities are explanatorily basic or fundamental, but then the question is how it is possible for something to be explanatorily basic or fundamental yet non-primitive, which leads us back to the start.

My last point is related to the second point, so it might lead back to the first point as well. In *Kant and the Capacity to Judge* (1998), Béatrice Longuenesse discusses how sensibility and discursivity work together in Kant's Transcendental Analytic to account for our power of judgement. No one would deny that we have capacities to judge or make judgements, but it is a further and controversial claim that judgements are themselves capacities, or judgements should be first and foremost analysed by judging capacities. By analogy, no one would deny that we have capacities to perceive, but it is a further claim that perceptions or perceptual experiences are themselves capacities, or perceptions should be first and foremost analysed by perceptual capacities. All sides can agree that we have perceptual capacities to

discriminate luminance, motion, quantities, size, pitch, tone, and distances, and we have perceptual capacities to discriminate and single out particulars in the environment. Schellenberg's picture treats the relevant capacities as explanatorily basic or fundamental, and this is what sets this view apart from other outlooks. The question is, back to the first point, how they can be explanatorily basic or fundamental but non-primitive. Moreover, not only the first question above would come back again, but also a different worry concerning circularity might loom large; consider this analogy: if, for example, one analyses nature by natural phenomena, then it might be a valid but almost vacuous analysis. Now if we analyse perceptions by perceptual capacities, this worry is something we need to address.

This completes my brief commentary on Schellenberg's paper in this volume. It does not do justice to this rich paper, let alone her substantive picture developed in the past few years. That said, I do hope this short note has raised some non-trivial clarificatory questions that are helpful for us to understand Schellenberg's view better. On further occasions, it would be interesting to compare similar views such as McDowell's idea that perception as a capacity for knowledge (2011).

References

Brewer, B. 2011. *Perception and its objects*. Oxford University Press.
Byrne, A. 2009. Experience and content. *Philosophical Quarterly* 59 (236): 429–451.
Cacciamani, L., and B. Goldstein. 2021. *Sensation and perception*, 11th edn. Cengage.
Campbell, J. 2002. Berkeley's puzzle. In *Conceivability and possibility*, ed. T. Gendler and J. Hawthorne. Oxford University Press.
Campbell, J. 2002. *Reference and consciousness.* Oxford University Press.
Davies, M. 1992. Perceptual content and local supervenience. *Proceedings of the Aristotelian Society* 92: 21–45.
Fish, W. 2009. *Perception, hallucination, and illusion.* Oxford University Press.
Goldman, A. 1979. What is justified belief? In *Knowledge and justification*, ed. G. Pappas. Reidel.
Goldman, A. 1986. *Epistemology and cognition.* Harvard University Press.
Huemer, M. 2007. Compassionate phenomenal conservatism. *Philosophy and Phenomenological Research* 74 (1): 30–55.
Johnston, M. 2011. On a neglected epistemic virtue. *Philosophical Issues* 21: 165–218.
Longuenesse, B. 1998. *Kant and the capacity to judge.* Princeton.
Lyons, J. 2009. *Perception and basic beliefs: Zombies, modules, and the problem of the external world*. Oxford University Press.
Martin, M.G.F. 2004. The limits of self-awareness. *Philosophical Studies* 120 (1): 37–89.
Martin, M.G.F. 2002. Particular thoughts and singular thoughts. In *Logic, thought and language*, ed. A. O'Hear. Cambridge University Press.
McDowell, J. 1982. Criteria, defeasibility, and knowledge. *Proceedings of the British Academy* 68: 455–479.
McGinn, C. 1982. *The character of mind*. Oxford University Press.
Schellenberg, S. 2011. Perceptual content defended. *Noûs* 45 (4): 714–750.
Schellenberg, S. 2018. *The unity of perception: Content, consciousness, evidence.* Oxford University Press.
Schellenberg, S. 2019a. Perceptual capacities. In *Perception, cognition, and aesthetics*, ed. S. Gouveia and D. Shottenkirk. Routledge.

Schellenberg, S. 2019b. Summary of *The unity of perception: Content, consciousness, evidence*. *Analysis* 79 (4): 709–713.
Schellenberg, S. 2020. Précis of the unity of perception. *Philosophy and Phenomenological Research* 100 (3): 715–720.
Tye, M. 1995. *Ten problems of consciousness: A representational theory of the phenomenal mind*. MIT Press.
Williamson, T. 2000. *Knowledge and its limits*. Oxford University Press.

Chapter 30
Capacities Second (or Never)

Jack Lyons

Schellenberg defends a "capacities-first" view, on which capacities (specifically, capacities that function to discriminate and single out particulars in the environment) are metaphysically and explanatorily prior to representation, content, evidence, justification, knowledge, and the like. Her view is sophisticated and complex and has a number of interesting and compelling features. But I think the view works just as well, or better, without any mention of capacities.

Here's an independently plausible thought, very much in the spirit of Schellenberg's but purged of capacities:
Perceptual representations function to refer to (and predicate veridically of) particulars in the environment.

From this, using Schellenberg-style arguments, we could get the following results:

- all perceptual content is externally aimed
- all perceptual content has a singular element
- the very same representation type can be tokened in veridical and hallucination cases—hence we can be in the same mental state in both cases
- there is normative failure in hallucination, since perceptual representations function to refer and predicate veridically—thus our epistemic status is better in the veridical case.

Thus, we could defend the major theses of her project, without mentioning or presupposing anything like capacities.

I think capacities are therefore theoretically unnecessary. Furthermore, against Schellenberg's claims of explanatory priority, I think that capacities as she invokes them are too obscure to explain anything.

J. Lyons (✉)
University of Glasgow, Glasgow, UK
e-mail: Jack.Lyons@glagow.ac.uk

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_30

We have a good idea what representations are and how to individuate them. They're physical states or events that have semantic (and some of us think syntactic) properties. They can be individuated either coarsely, by their contents, or finely, by their syntax.

We also have a good idea what cognitive processes are and how to individuate them (*pace* Feldman's (1985) famous "generality problem" for reliabilist epistemologies). They're transformations of representations. We can individuate them coarsely, considering only the input–output functions they instantiate; or finely, requiring "algorithmic" equivalence as well. (See Lyons 2019 for a much fuller account.)

Certainly there's more we'd like to know about processes and representations, like how various representations are physically encoded, which processes are used on which occasions, etc. But these aren't questions that capacitism will help with. Understanding representations or processes as exercises of capacities doesn't illuminate any of what was dark.

Schellenberg says this about capacities (slightly paraphrased):

> S possesses a perceptual capacity C_a iff: S would be in a position to discriminate and single out some particular instance a_i of the type that C_a functions to represent, if S were appropriately perceptually related to a_i (including: S is awake, is appropriately spatiotemporally placed vis-a-vis a_i, has the relevant sensory apparatus, etc.)

When Schellenberg talks about "discriminating and singling out" she means the perceptual segregation of some particular (object, event, property instance, etc.) from its background ("discrimination"), and referring to that particular ("singling out")—with the proviso that this referring needn't involve conceptually or propositionally structured vehicles.

So a capacity is, roughly, an ability to refer, where having an ability doesn't mean that you're able to do it reliably, or even (I think) reliably in ideal conditions, but merely that you would have some more-than-merely-logical possibility of referring to that particular if conditions were good.

Contrast this with two other, different conceptions of capacities:

- **RELIABILITY** (e.g., Sosa 2015; Millar 2019): to have a capacity to F is to be able to F reliably; to exercise a capacity to F is to F successfully because you're good at F-ing. (This is the conception she explicitly rejects.)
- **PROCESS** (standard, I think, in cognitive science): to have a capacity to F is to possess a mechanism that embodies an F-ing algorithm (possession might be cashed out in terms of procedural knowledge, dispositions, etc.); to exercise a capacity is to execute that algorithm.

Schellenberg rejects RELIABILITY because it's reliabilist and also precludes unsuccessful exercises. PROCESS allows unsuccessful exercises, but she can't embrace it, because it makes representation metaphysically and explanatorily prior to capacities, i.e., making capacities second, not first.

Oddly, because having the relevant sensory apparatus appears in the antecedent of the counterfactual, her analysis implies that you and I have capacities for heat vision, electroreception, and presumably even clairvoyance—for *if we were to have the*

relevant sensory apparatus, we'd have the ability to single out the relevant properties or events. I find this counterintuitive. This isn't *necessarily* an objection, but it is a stark reminder that Schellenberg is using 'capacity' as a technical term, and we can't import commonsense or cognitive scientific understandings of capacities to make sense of her.

It's unclear to me how Schellenberg individuates capacities. I can perceptually refer to cups and to saucers. Is this one capacity or two? In a process framework, this question is easy—or at least empirical. Visually segregating by color is a distinct process from segregating by contrast, both of which are further distinct from segregating by motion, etc. But we don't have separate *processes* for **cup-segregation-by-color** and **saucer-segregation-by-color**; so it's a single capacity.

Schellenberg addresses the individuation of capacities: "a perceptual capacity C_a is individuated by the mind-independent particulars α_1, α_2, α_3, … α_n that the perceptual capacity functions to single out." But this doesn't help with the current question. We need a way of knowing—and a principled way of deciding—whether a given capacity has the function of referring to *this* cup, to cups generally, to this-cup-or-saucers-generally, etc. All this quotation tells us is that individuation is extensional; we still need a way to decide whether this cup-referring capacity is *the same* capacity as that saucer-referring capacity.

She needs the answer to be 'no'; she needs the cup-referring capacity to be distinct from the saucer-referring capacity, because phenomenal character is supposed to be a function of which capacities are employed and there's a phenomenal difference here. But how to get this result in a principled way? The tempting solution is to turn to predicative contents: representations have the function of predicating veridically, so the representation *CUP* functions to single out cups (generally, and only cups). If the individuation of capacities thus aligns with the individuation of contents, then the problem vanishes.

But it only vanishes because our understanding of representational content has shed light on the individuation of capacities. This gets the explanatory priority exactly backward from what Schellenberg wants. It remains unclear whether there's an intelligible conception of capacities that might illuminate, rather than presuppose, representational function.

References

Feldman, R. 1985. Reliability and justification. *The Monist* 68 (2): 159–174.

Lyons, J. 2019. Algorithm and parameters: Solving the generality problem for reliabilism. *Philosophical Review* 128 (4): 463–509.

Millar, A. 2019. *Knowing by perceiving*. Oxford University Press.

Sosa, E. 2015. *Judgment and agency*. Oxford University Press.

Chapter 31
Capacitism and Phenomenal Variance

Arnon Cahen

Space limitations prevent me from addressing all that I would have wished to in Schellenberg's rich text, I therefore focus on but one difficulty I find with Schellenberg's capacitism, which can be straightforwardly captured by the following trilemma:

1. Capacities First: "Employing perceptual capacities [to discriminate and single out particulars] constitutes phenomenal character as well as perceptual content." (Schellenberg, this volume, Chap. 28, p. 227)
2. "Individuation Condition: A perceptual capacity Cα is individuated by the mind independent particulars α_1, α_2, α_3, … α_n that the perceptual capacity functions to single out." (Schellenberg, this volume, Chap. 28, p. 230)
3. Phenomenal Variability: The same particular successfully discriminated and singled out (or different particulars of the same type) can be experienced in a wide variety of ways.

(1) and (2) are central commitments of Schellenberg's capacitism. (1) is especially significant, as it accounts for the *generality* of experience: What is common among different veridical, illusory, and hallucinatory, experiences with the same phenomenal character, and accounts for its sameness, is their all involving the employment of the *same perceptual capacity*. (2) comprises the core of Schellenberg's externalist commitment, which accounts for the relational particularity of perception, and grounds demonstrative reference and perceptual knowledge. Finally, (3) has wide support, even without appealing to controversial inverted spectrum scenarios. Examples abound, but for simplicity let us just reflect upon the fact that a particular

A. Cahen (✉)
Hebrew University of Jerusalem, Jerusalem, Israel
e-mail: cahena@gmail.com

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_31

white patch—the same token whiteness—can *appear* white during daylight but reddish under red illumination (say, during sunset).[1]

The challenge here is that there is an obvious phenomenal difference between experiencing the white patch during daylight and during sunset. So, given (1), i.e., that phenomenal character is constituted by the perceptual capacities employed, a difference in phenomenal character entails a difference in perceptual capacities employed. The thought would be that in daylight we employ the capacity to discriminate and single out (DSO) instances of whiteness *appropriately* and in sunset we employ the capacity to DSO instances of redness *inappropriately* (as there is nothing red to DSO). Indeed, this seems to fit nicely with what Schellenberg says about illusions: "Consider a subject who suffers an illusion. She sees an object that instantiates property π, but given misleading circumstances, it seems to her (falsely) to be instantiating property ρ. In such a case, she employs her capacity to discriminate and single out an instance of ρ. But given that there is no ρ-instance present, she employs that capacity while failing to single out any particular." (Schellenberg, this volume, Chap. 28, p. 235).

The trouble with this suggestion is that there is nothing particularly illusory or misleading about the sunset case—*this* is how white appears in daylight and *that* is how it appears in sunset. Not only is there no obvious reason to insist that the one experience is veridical whereas the other illusory but, given that we live in a world of ever-changing illumination, to do so would squeeze out cases of veridical perception to a vanishing few. Rather, in both cases we *successfully* DSO the same token whiteness, and on the basis of our experience can attend to it, form demonstrative thoughts about it, etc.[2] Yet, given (2), the fact that in both cases we successfully DSO the same particular suggests that in both cases we employ the same perceptual capacity to DSO that particular, namely, the capacity to DSO instances of whiteness. However, in that case, (1) would wrongly imply that both experiences have the same phenomenal character.

One potential way out of this difficulty would be to appeal to different modes of presentation (MOPs)—to acknowledge that in both cases we DSO instances of whiteness (indeed, the same instance) but that in each case we do so by employing *different capacities*, hence accounting for the different phenomenal characters of the experiences. In the first case we employ the capacity to DSO whiteness-in-daylight and in the second a capacity to DSO whiteness-in-sunset. The central problem with

[1] There are, of course, many other examples that aren't merely a matter of illumination, but of the colored object's orientation, texture, the color's surrounding context, etc. One especially beautiful example is Beau Lotto's famous Rubik's Cube, where one instance of brown looks brownish but another instance of the same brown, presented in a different context, appears orange. This is commonly considered to involve a visual illusion, but for the same considerations discussed below should not.

[2] Of course, which thoughts we'd likely form about the patch will differ—'that *looks* red' and 'that *looks* white.' The point though is that even when it comes to the mistake of judging 'that *is* red,' the mistake is in the attributive component of the judgment not in the demonstrative component, which depends on our *successfully* employing the capacity to discriminate and single out the white patch. That is, there is no failure to discriminate and single out the particular in question.

this suggestion is that it isn't clear, given the individuation conditions of perceptual capacities (i.e., (2)), what would make these capacities *distinct*. It is, after all, the particulars discriminated and singled out that individuate perceptual capacities, and in both cases we are concerned with all and only the exact same particulars–all those instances of whiteness (including the same *token* whiteness in our example).[3] It turns out that there aren't two such MOPs, and as a result, no explanation of the phenomenal difference (in violation of (1)).

Let me end by noting a general point about Schellenberg's appeal to MOPs. Consider Schellenberg's example (this volume, Chap. 28, p. 244): we might DSO a triangle, she says, via its triangularity or via its trilaterality; that is, by employing a capacity to DSO triangles or by employing a capacity to DSO trilaterals. The problem is that triangles *are* trilaterals—these are necessarily co-extensive properties. Given (2) it turns out that the perceptual capacity to DSO triangularity *just is* the perceptual capacity to DSO trilaterality, as they are individuated by all and only the same particulars (all those triangles/trilaterals). So, there are no different capacities—different MOPs—when it comes to one and the same property (so long as we hold on to (2), of course). Similarly, with respect to the color property—whiteness—characterizing the patch under consideration.[4]

Space limitations prevent me from exploring alternative options, so let me just end with the central question: Supposing (1) that capacities to DSO particulars are constitutive of phenomenal character and that (2) such capacities are individuated by the particulars they have the function to DSO, how do we accommodate (3) the vast variability in the phenomenal character of experiences of the very same particulars successfully discriminated and singled out?

[3] Changing the illumination does not, after all, change the color of the patch itself–the nature of the particular discriminated and singled out.

[4] There is much more to say about this general point. But let me just note that it does not follow that there cannot be different perceptual capacities by which one and the same property instance could be discriminated and singled out. This is most clear when considering perceptual capacities with respect to determinable and determinate perceptible properties. For example, an instance of crimson can be DSO by means of a capacity to DSO instances of red and by means of a capacity to DSO instances of crimson. Yet these are not different modes of presentation of the property crimson.

Chapter 32
Do Mere Natural Functions Make an Epistemic Difference?

Ori Beck

Susanna Schellenberg's capacitism (2013, 2016, 2018; this volume) opens up a novel way of theorizing about perceptual experience. While representationalists explain experience's phenomenal and epistemic features by drawing on the notion of representation, and while relationalists explain the same by drawing on the notion of an acquaintance relation, Schellenberg's capacitism steps in a new direction: It suggests that perceptual experiences are fundamentally constituted by employments of perceptual capacities; and it is this constitution that explains why experiences have representational content, phenomenal character and epistemic force. Here I wish to focus on capacitism's account of experience's epistemic force. While I wholeheartedly applaud capacitism's invocation of capacities in its account of experience's epistemic force, I also worry that if the invocation is to succeed, the account needs to be further developed. Let me say why.

Capacitism characterizes perceptual capacities as capacities whose function is to discriminate and single out mind-independent particulars of specific types. These capacities are employed successfully exactly when particulars of the appropriate types are indeed discriminated and singled out. In such cases, the employment of the capacities constitutes a perception. On the other hand, when the capacities are employed unsuccessfully, the employment constitutes an illusion or a hallucination. Note that capacities that function to discriminate and single out mind-independent particulars of distinct types are themselves distinct. Furthermore, the functions that perceptual capacities possess are natural functions, i.e., ones that are independent of interpretation. Despite their naturalness, however, Schellenberg insists that the (phylogenetic or ontogenetic) history of a subject in no way determines the functions of her perceptual capacities. The functions of perceptual capacities are also left unaffected by how reliable the capacities are.

O. Beck (✉)
Ben-Gurion University of the Negev, Beersheba, Israel
e-mail: becko@bgu.ac.il

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_32

The part of capacitism's account of experience's epistemic force I wish to focus on can now be put on the table. It says roughly the following: Since perceptual capacities function to do what they do in perceptions (i.e., to discriminate and single out mind-independent particulars of specific types), there is metaphysical primacy to their employments in perceptions over their employments in illusions or hallucinations. Furthermore, this metaphysical primacy entails that one can give an analysis of the perceptual capacities employed in illusions or hallucinations only by appealing to their role in perceptions. So there is also an explanatory primacy to their employments in perceptions over their employments in illusions or hallucinations. These two primacies—the metaphysical and the explanatory—constitute a sense in which any employment of a perceptual capacity (whether it is successful or not) is systematically linked to the particulars of the type *t* that the capacity functions to discriminate and single out. But if an employment of a perceptual capacity is systematically linked (in the present sense) to particulars of type *t*, the employment makes it rational (barring defeaters) to accept that a particular of type *t* is present. (See Schellenberg's 2018, Chap. 7, and this volume.)

I will present my worry about this account by means of a hypothetical case:

Unreliable Machine. Alice stumbles upon a completely foreign and unfamiliar machine carrying a big "cannabis testing lab" sign. She sees a sample deposit box on the machine and places a sample into it. The box gets collected into the machine, which after a few seconds prints out a piece of paper saying, "your sample contains cannabis". Alice has no defeaters to what the machine's printout says. But unbeknownst to Alice, the machine is unreliable. Also unbeknownst to Alice, the machine's natural function is to discriminate and single out samples containing cannabis.

It is very intuitive that the unreliable machine's activation does not make it rational for Alice to accept that her sample contains cannabis. To begin with, the machine is unreliable. And besides, since the machine is completely foreign and unfamiliar to Alice, Alice has no information about the machine's trustworthiness. Under such circumstances, Alice should not accept what the machine's printout says. After all, one shouldn't simply accept any old thing that one happens to find written down. That's how fake news spreads!

Consider, however, how capacitism would look upon the Unreliable Machine case: By stipulation, the machine's natural function is to discriminate and single out samples containing cannabis. According to capacitism, this entails that there is metaphysical and explanatory primacy to the machine's activations in cases where the machine reports on the presence of cannabis correctly, over the machine's activations in cases where the machine reports on the presence of cannabis incorrectly. This constitutes a sense in which any activation of the machine (whether it is successful or not) is systematically linked to the particulars of the type that the machine functions to discriminate and single out, i.e., to samples containing cannabis. Now, according to capacitism's line of reasoning, the existence of this kind of systematic linkage entails that any activation of the machine makes it rational (barring defeaters) to accept that a sample containing cannabis is present. So according to capacitism's

line of reasoning, it is rational for Alice to accept that her sample contains cannabis. This seems to be the wrong result.

At this point we would do well to remember that capacitism is a view about perceptual capacities, not about capacities embodied by foreign machines. For this reason, the Unreliable Machine case poses no immediate objections to the material claims that capacitism makes. But the case is not uninteresting either. If it succeeds, I think it suggests that the broad *inferential principle* capacitism attempts to outline and draw on requires augmentation. This inferential principle is (roughly) this: "*x*'s natural function is to discriminate and single out *t*s; therefore, any employment of *x* makes it rational (barring defeaters) to accept that a particular of type *t* is present." The Unreliable Machine case seems to cast doubt over this principle. Therefore, until we get clearer on how the principle specifically applies to capacitism's perceptual capacities, we should be cautious about using it.

References

Schellenberg, S. 2013. Experience and evidence. *Mind* 122 (487): 699–747.

Schellenberg, S. 2016. Phenomenal evidence and factive evidence. *Philosophical Studies* 173 (4): 875–896.

Schellenberg, S. 2018. *The unity of perception: Content, consciousness, evidence.* Oxford University Press.

Chapter 33
What Can Perceptual Capacitism Explain?

Lisa Miracchi Titus

In this volume and other work (c.f. Schellenberg (2018)), Schellenberg develops and defends a view of perception that she calls capacitism. According to capacitism, perception is constitutively a matter of employing perceptual capacities to discriminate and single out particulars (p. 225). Discriminating and singling out particulars is the constitutive function of perceptual capacities, and so there is primacy of the good case of employment—when one successfully singles out the particular—over the bad case, when one fails to do so. This account of the nature of perception, Schellenberg argues, helps explain its characteristic features, such as its epistemic import, and it also does justice to the contributions of the perceiver while having the power to explain what is common across different cases. I am in broad agreement about the explanatory power of understanding perception as inherently an exercise of a perceptual capacity (or, as I prefer, competence). Doing so helps us to explain core features of perception and corresponding failures, such as hallucination.[1] It also prioritizes the relationality of perception in a way that can do justice to the stable features of the agent that are constant across cases.

However, here I will focus on two points of disagreement. First, I disagree on whether capacitism entails representationalism as Schellenberg thinks it does. We can explain why perception has accuracy conditions with appeal to capacities alone. Secondly, I doubt that capacitism on its own can explain the rationality or justification of perceptual beliefs. We should embed capacitism within another epistemic theory, and there are many options for how to do so. Capacitism, then, is both more and less explanatorily powerful than Schellenberg claims it is.

[1] I ignore here any differences between my account of perceptual competences and Schellenberg's account of perceptual capacities that are not germane to the issues under discussion.

L. M. Titus (✉)
University of Denver, Denver, CO, USA
e-mail: lisa.titus@du.edu

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_33

33.1 Capacitism and Representationalism

Schellenberg claims that capacitism entails representationalism. It is important to distinguish two things one might mean by this claim. First, one can hold that perception has (or can have) accuracy conditions—this is a "lightweight" notion of representational content (see also Siegel (2010a, b)). You might think that merely by saying that in perception we perceive things to be certain ways commits us to this lightweight notion of representationism. If this is all Schellenberg meant, there would be no disagreement. However, representationalism about perception is typically meant to be a stronger claim, one which Schellenberg endorses, namely that characterizing perception in terms of its representational content both illuminates the nature of perception and helps us explain some of its key properties, such as its epistemic force and phenomenal character. No such view follows from capacitism, which aims to illuminate the nature of perception in terms of perceptual capacities.

I have developed a non-representationalist capacitist account of perception in detail elsewhere (Miracchi 2017), and review the key idea and here for illustration. On my view, the regularities that provide an agent with a perceptual competence—e.g. to see Fs—suffice to determine the *way* the agent perceives the object when she manifests that competence—namely, as an F. The only object of perception is the thing perceived, which is understood as the *target* of a relational perceptual activity, rather than something represented. The way in which the object is perceived—namely, as an F—is a feature of the activity itself, and is determined by the nature of the competence exercised. In this way, we can explain how one perceives objects to have certain properties without invoking the attribution of content to objects or appealing to representational states or contents more generally. Moreover, we can extend the view to explain cases of hallucination. These are failed exercises of competence. One is having an experience that is *as if* one were perceiving an object to be F, but this is not explained by grasp of a certain content. It is explained by the fact that the subject is exercising her competence. Lightweight representational content is explained, but representation does not figure as an *explanans*; it plays no explanatory role.

Whether or not this view is correct, it is a conceptual possibility, showing that capacitism does not entail a commitment to representationalism in the more robust sense.

33.2 Capacitism and Evidence

Schellenberg argues that the systematic linkage between the exercise of a capacity and its success due to its exercise makes it the case that perceptual experience provides the perceiver with evidence about what to believe (p. 238). Schellenberg wants an account of perceptual evidence that provides *directives*, not just partial evidence that needs to be supplemented by other evidence in order for a belief to be justified (p. 238). For example, she wants an experience as of a white cup on one's desk to

justify the belief that there is a white cup on one's desk. I worry that the systematic linkage Schellenberg focuses on between the exercise of a perceptual capacity and its success is not enough for perceptual experiences to provide such evidence.

The fact of a systematic linkage between some state S and a state of affairs in the world W is not enough for that S to provide evidence of W. S might be systematically linked with W, but that systematic linkage could be an *anti-correlation.* So it can't be any systematic linkage that does the job. There must be something special about the *kind* of systematic linkage that is provided by the fact that perceptual capacities constitutively function to single out particulars. But Schellenberg does not (anywhere to my knowledge) provide an in-depth discussion about what it is about constitutive functioning that gives the right kind of linkage between the exercise and the success condition to give the exercise *epistemic* force.

To illustrate this, consider ovulation. When a person ovulates, an egg that is ready for fertilization goes into the fallopian tubes and subsequently the uterus for fertilization and implantation. This is plausibly the constitutive function of ovulation. However, the fact that a person ovulates is not sufficient evidence that fertilization and implantation will occur. The probabilities are just too small. We need more information about the other factors in order for the systematic linkage between ovulation and fertilization to provide someone with justified beliefs. Understanding our capacity for ovulation seems to involve the same kind of explanatory primacy of the good over the bad case that Schellenberg argues suffices for perception to provide phenomenal evidence. But this seems insufficient here. So what makes perceptual capacities different, such that the systematic linkage between exercise and success provides a directive for belief?

Capacitism therefore cannot explain the epistemic force of perception on its own, It is more plausible to situate a capacitist account of perception within another epistemological framework.

References

Miracchi, L. 2017. Perception first. *Journal of Philosophy* 114 (12): 629–677.

Schellenberg, S. 2018. *The unity of perception: Content, consciousness, evidence.* Oxford University Press.

Siegel, S. 2010a. Do visual experiences have content? In *Perceiving the World*, ed. B. Nanay. Oxford University Press.

Siegel, S. 2010b. *The contents of perception.* Oxford University Press.

Chapter 34
Capacitism About Perceptual Evidence

Adam Marushak

Schellenberg's capacitism promises a distinctive account of why perception provides evidence about our environment. In contrast to theories that give explanatory priority to knowledge, reliability, or conscious mental states, capacitism takes the epistemic force of perception to lie in the nature of perceptual capacities and their exercise. Her general idea is that perception provides evidence since perceptual capacities function to discriminate or single out particulars in cases of veridical perception.

How can we flesh out this general idea in a way that is both plausible and compatible with Schellenberg's capacities-first epistemology? Her initial suggestion is that perception provides evidence due to the metaphysical link between perceptual states and the particulars singled out therein: "[I]f a subject is in a phenomenal state that is systematically linked to external and mind-independent *F* particulars, then she is in a phenomenal state that provides evidence for the presence of *F* particulars" (Schellenberg, this volume, 237). But the following is a counterexample: my headache is a phenomenal state constituted by, and so systematically linked to, the firing of particular C-fibers (say), but my headache does not provide evidence for the presence of these C-fibers—where 'evidence' here and throughout should be understood in the normative sense of affecting what it is rational to believe.

Her second proposal is more promising: "[I]f a subject is in a phenomenal state that is constituted by employing perceptual capacities that function to single out *F* particulars, then the subject is in a phenomenal state that provides evidence for the presence of *F* particulars" (Schellenberg this volume, 237). Headaches do not function to single out C-fibers, so this proposal avoids the above counterexample. But this proposal raises a different worry: even if the proposal is true, how can a capacities-first epistemology explain *why* it is true?

A. Marushak (✉)
South China Normal University, Guangzhou, China
e-mail: adshak@gmail.com

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_34

Schellenberg elsewhere claims that there are perceptual capacities that function to discriminate particulars but are sub-personal and do not affect the subject's phenomenology (Schellenberg 2013: 713–714, 2016: 878). I take it she would agree that the exercise of these capacities does not provide evidence for the presence of the discriminated particulars. Hence, a capacity's functioning to discriminate particulars only provides evidence if the exercise of this capacity grounds a phenomenal state. But how is this point consistent with a capacities-first epistemology? It would seem that it is not the *function* of a capacity but instead its phenomenological significance that makes a difference to whether the exercise of that capacity is epistemologically relevant.

Set aside this worry and return to the case of the headache. This case would seem to show that the epistemic force of a phenomenal state lies not in whether the state is systematically linked to mind-independent particulars but whether the state functions to discriminate or single out those particulars. Why, then, do hallucinations also provide evidence? After all, no mind-independent particulars are singled out in cases of hallucination. Schellenberg's answer is that hallucinations provide what she calls phenomenal evidence, since the exercises of perceptual capacities involved therein are metaphysically and explanitorily parasitic on veridical exercises of perceptual capacities, which do function to single out mind-independent particulars (Schellenberg 2013: Sect. 2, 2016: Sect. 2; this volume). But why should these metaphysical and explanatory connections have any epistemic significance? Why do these connections allow a failed exercise of a capacity to inherit any part of the epistemic force of a successful exercise?

Here is a very rough analogy that illustrates the point. Suppose I have the capacity to make a three-point shot in basketball, but on this particular occasion, my shot is blocked. My shot thus constitutes a failed exercise of my capacity to make a three-pointer. Now, it may well be true that we can only understand what this capacity is a capacity to do by referring to successful exercises where I make the shot. Moreover, it may well be true that I only count as having this capacity if, under circumstances where there is no intervening factor such as someone's blocking my shot, the ball would have gone through the net. But none of these metaphysical or explanatory connections make any difference to the fact that if my shot is blocked, I get zero points—not one or two. All that matters is whether the ball goes through the net. Similarly, if the epistemic force of perception derives from singling out a particular, then it is irrelevant that a hallucination has metaphysical and explanatory connections to states that *do* single out a particular, for the hallucination itself does *not* single out a particular. All that matters is whether a particular is indeed singled out. In other words, Schellenberg's views about the epistemic significance of singling out a particular would seem to yield the result that hallucinations provide no evidence, not some lesser type of phenomenal evidence.

Of course, perception is not basketball. But the point is that there is nothing metaphysically incoherent about a structure wherein some state A has metaphysical and explanatory connections to state B, but state B has some normatively significant feature that is not inherited by state A via the aforementioned connections. The question for Schellenberg is why these connections allow a hallucination to inherit

even part of the epistemic significance of a veridical perception. And again, there is a concern that it is phenomenology, not the exercise of a perceptual capacity, that is making the difference. After all, in a hallucination, things still seem to be a certain way. But how things seem cannot be the ultimate, explanatory basis of perceptual evidence in a capacities-first epistemology.

References

Schellenberg, S. 2013. Experience and evidence. *Mind* 122 (487): 699–747.
Schellenberg, S. 2016. Phenomenal evidence and factive evidence. *Philosophical Studies* 173 (4): 875–896.

Chapter 35
Capacitism and Phenomenal Character

Miloš Vuletić

Abstract According to Susanna Schellenberg's Capacitism, the employing of perceptual capacities *constitutes* the phenomenal character of experience. This chapter argues that such an understanding of the phenomenal character of experience leaves Capacitism without a plausible account of certain cases of shifted spectra.

Susanna Schellenberg's capacitism promises to account for a wide range of fundamental features of experience in terms of perceptual capacities. Employing capacities that function to single out mind-independent particulars is supposed to explain why mental states have epistemic force, representational content, and phenomenal character (p. 223–224). I will focus on Schellenberg's capacitist claim regarding the phenomenal character of experience.

Schellenberg claims that employing perceptual capacities *constitutes* phenomenal character (p. 227). More specifically, discriminating and singling out external, mind-independent particulars constitutes phenomenal character (p. 234; I will call this claim *Constitution*). Capacities are individuated entirely in terms of particulars that they function to discriminate and single out (p. 230; see also Schellenberg 2018, 38–39), and the capacities in question are *not* subpersonal (p. 229). Among these particulars are property-instances. These ideas result in the possibility of raising a seemingly problematic case for Schellenberg's *Constitution* claim.

Consider mind-independent instances of unique green. A subject capable of discriminating and singling out individual instances of unique green would count as possessing a particular perceptual capacity, call it C_{UG}, the capacity to single out and discriminate instances of unique green. It is easy to imagine that such a subject would fulfil all the conditions required by Schellenberg's *Possession Condition* (p. 230). Suppose there are two such subjects. It holds for both that they are in a position to discriminate particulars of the type that C_{UG} functions to discriminate.

M. Vuletić (✉)
University of Belgrade, Belgrade, Serbia
e-mail: milos.vuletic@f.bg.ac.rs

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_35

However, let us imagine that the subjects' spectra are slightly shifted and under identical viewing conditions one of them has an experience, while perceiving an instance of unique green, exactly like an experience the other would have while perceiving an instance of a slightly yellowish green. Such variations among individual subjects are well documented and both subjects in our case could well fall within the range of normal perceivers. The problem for Schellenberg's capacitism is this: assuming *Constitution*, and given that perceptual capacities are individuated entirely in terms of external, mind-independent particulars that they function to discriminate and single out, the two subjects in our case, as possessors of the capacity C_{UG}, should have, color-wise, experiences with identical phenomenal characters. But this is not the case, for their experiences are different. In absence of further explanatory resources, it seems that Schellenberg's capacitism cannot uphold *Constitution.*

Schellenberg could resist the claim that the two subjects possess the same perceptual capacity. Such response should invoke some difference in mind-independent, external particulars that the respective capacities of the two subjects function to discriminate. None are forthcoming in the case under consideration: the two subjects perceive the same instances of unique green and their experiences do not differ with respect to situation-dependent properties.[1] So perhaps Schellenberg could resort to saying that the two subjects differ not insofar as they employ different highly determinate capacities to perceive unique green, but rather insofar as they employ different determinable capacities, such as two different capacities to perceive instances of green (call them C_{G1} and C_{G2}). Given that the two subjects have shifted spectra, it can be expected that their respective capacities to discriminate and pick out instances of, say, green and blue will somewhat differ. Perhaps then the difference in capacities employed in their respective experiences is to be located in some more coarse-grained capacity.

This response brings up problems of its own. Which capacities are supposed to be employed when we perceive specific shades of green? If highly determined, shade-specific capacities, then the case of shifted spectra is difficult to explain. If determinable, color-specific capacities, then other cases prove to be problematic. Consider a situation in which the subjects from our shifted spectra case perceive (as they well may) instances of a different shade of green—say, some dark shade of green—by having experiences with *identical* phenomenal characters. Instances of dark green are instances of green, and *Constitution*, together with the claim that the capacity to discriminate and single out instances of green is employed when perceiving instances of dark green, requires that the two subjects have experiences with different phenomenal characters because their capacities C_{G1} and C_{G2} are distinct. Yet their experiences are phenomenally identical. It would be ad hoc to say that in this case they do employ the same highly determined capacity (call it C_{DG}) rather than distinct capacities C_{G1} and C_{G2}, when in the case of phenomenally non-identical experiences of the instance of unique green they supposedly employed precisely C_{G1} and C_{G2}.

[1] See Schellenberg (2008, 2018, p. 39).

I suspect that there are deeper reasons that prevent capacitism from upholding *Constitution.* Here my case must be tentative and brief. I offer it in an effort to uncover some issues that underlie my opposition to *Constitution.*

In her earlier work, Schellenberg had proposed to explain the phenomenal character of experience in terms of *employment of concepts in a sensory mode*,[2] whereby "any experience in which the same concepts are employed in the same sensory mode will have the same phenomenology."[3] Schellenberg is now neutral on whether perceptual capacities that constitute phenomenal character are conceptual or non-conceptual (p. 231). I have argued elsewhere that Schellenberg's earlier proposal has a circularity problem, and that it gets things the wrong way around when explaining phenomenal character in terms of employment of concepts.[4] The switch to the employment of perceptual capacities—potentially non-conceptual—does not appear as an improvement in this respect. The worry, in a nutshell, is that the fact that an experience has a particular phenomenology cannot be explained in terms of possession and employment of either conceptual or proto-conceptual capacities. If anything, it is the phenomenology of experience that serves as the ground according to which capacities to discriminate and single out are exercised.[5] The phenomenal character of experience serves up appearances of objects that we use in order to exercise our capacities to sort out objects, so it cannot be what is constituted by the employment of such capacities.

References

Fodor, J. 2004. Having concepts: A brief refutation of the twentieth century. *Mind & Language* 19 (1): 29–47.

Schellenberg, S. 2008. The situation-dependency of perception. *The Journal of Philosophy* 105 (2): 55–84.

Schellenberg, S. 2011. Perceptual content defended. *Noûs* 45 (4): 714–750.

Schellenberg, S. 2018. *The unity of perception: Content, consciousness, evidence.* Oxford University Press.

Vuletić, M. 2015. *Ways of appearing: Experience and its phenomenology* [unpublished doctoral dissertation]. University of Pittsburgh.

[2] Schellenberg (2011, 744).

[3] Schellenberg (2011, 733).

[4] Vuletić (2015, pp. 34–38).

[5] This worry can be seen as having a counterpart in Fodor's circularity objection against concept pragmatism, i.e., theories that explain concept possession in terms of epistemic capacities (Fodor 2004, pp. 39–40).

Chapter 36
Fundamentality in Perception: Response to Commentators

Susanna Schellenberg

36.1 Introduction

I am grateful to Beck, Cahen, Cheng, Lyons, Marushak, Miracchi, and Vuletić for their insightful comments. It is an honor to receive such a wealth of rich and thoughtful comments and I welcome the opportunity to develop capacitism further.

Fundamentality

Cheng and Lyons both take issue with my argument that capacities are explanatory more fundamental than content, representations, consciousness, evidence, knowledge, and justification. Specifically, Cheng asks in what sense perceptual capacities are explanatory fundamental given that I argue that being explanatory fundamental is compatible with giving an analysis of perceptual capacities (Schellenberg 2018, Chap. 2).

In response, for *x* to be fundamental is for *x* to be explanatory more fundamental than other phenomena to be explained. On this understanding, *x* being fundamental does not entail that *x* is materially or physically primitive, nor does it entail that one cannot give an analysis of *x*. This is, pace Cheng, a standard understanding—arguably the standard understanding—of the term "fundamental". Being explanatory more fundamental than content, representations, consciousness, knowledge, evidence, and justification, means that those phenomena are explained in terms of perceptual capacities and not vice versa. Being explanatory more fundamental than these terms does not imply that perceptual capacities cannot be analyzed in terms of features other than content, representations, consciousness, knowledge, evidence, and justification.

S. Schellenberg (✉)
Rutgers University, New Brunswick, NJ, USA
e-mail: susanna.schellenberg@rutgers.edu

M. Vuletić and O. Beck (eds.), *Empirical Reason and Sensory Experience*, Logic, Epistemology, and the Unity of Science 60,
https://doi.org/10.1007/978-3-031-52231-4_36

Of course, they can. Indeed, I provide such an analysis in my recent book (see in particular, Chap. 2).

Lyons suggests that we could achieve all my explanatory goals by replacing capacities with representations and so by treating representations, rather than capacities, as fundamental. In response, "representation" is a technical term. It is not suitable to be primitive in any account. After all, any account needs to explain in virtue of what we represent the environment and what it takes to represent. My answer to these questions is that we represent our environment in virtue of employing perceptual capacities that function to discriminate and single out particularly in our environment.

Now, Lyons paraphrases my view as being about capacities that function to represent. In response, appealing to capacities to represent would not help to explain what representations are. So, if I were indeed talking about capacities to represent, Lyon's criticism would be apt. However, contrary to what Lyons states, on my view, the capacities fundamental to perceiving are not capacities to represent, but rather capacities to discriminate and single out. I argue that perception is fundamentally a matter of employing capacities that function to discriminate and single out features, objects, and events.

It is not clear what the explanatory benefit is of analyzing perception in terms of capacities to represent (Burge 2010a, b) or the capacity to know (Kern 2016; McDowell 2011). If the aim is to give an analysis of knowledge or representation, then explaining either in terms of capacities to do those very things would not yield any explanatory gain. By contrast, the capacity to discriminate and single out is more primitive than either knowledge or representation and thus appeal to such capacities can help in providing a satisfactory explanation of those more complex mental phenomena.

I argue that perceptual content is constituted by the capacities employed and the particulars thereby discriminated and singled out. So the capacity to discriminate and single out is more basic than the capacity to represent. The idea that perception is at its core a discriminatory activity is at the center of any account of perception in neuroscience. Appealing to capacities to represent rather than capacities to discriminate would go against what we know from vision science.

Lyons suggests moreover make space for processes in my account, and her argues that if I would, representations would turn out to be fundamental. Capacitism can easily accommodate processes, after all the employment of capacities is an activity that can include the execution of an algorithm. But pace Lyons, appealing to processes does not make representations primary relative to capacities. Indeed, Lyon's notion of process does not mention representations.

What would be lost by eliminating capacities entirely in favor of processes? One central advantage of analyzing the mind in terms of capacities is that it allows for a counterfactual analysis of mental states on three interrelated levels. On one level, we focus on the function of mental capacities. On a second level, we focus on the mental capacities employed irrespective of the context in which they are employed. Here the focus is on what perception and corresponding cases of hallucination and illusion have in common. On a third level, we focus on the mental capacities employed,

taking into account the context in which they are employed. Here the focus is on the difference between cases in which a capacity fulfills its function (perception) and cases in which it fails to fulfill its function (hallucination and illusion). Appeal to processes alone cannot replicate such a counterfactual analysis on three distinct yet interrelated levels. Moreover, the relation between a capacity and its employment would be lost. While a capacity is a kind of mental tool, its employment is a mental activity that can feature in a process. There is no similar distinction if we eliminate capacities in favor of processes.

The analysis of perceptual states in terms of employing perceptual capacities allows us to clearly show what mental states with the same phenomenal character have in common and how they differ given differences in the environment. That in turn allows us to give an analysis of the epistemic force that does justice to the role perception plays in our conscious lives.

36.2 Perceptual Variance, Situation-Dependent Properties, and Perceptual Capacities

There is a wide range of perceptual conditions (such as illumination conditions, acoustic conditions, locations, olfactory contexts, and the like) under which we can perceive the features, objects, and events in our environment. Changes in perceptual conditions generate changes in perceptual consciousness. Cahen asks how such perceptual variance can be accounted for within the framework of capacitism. More specifically, he asks how perceptual variance can be reconciled with my argument that capacities are externally individuated, on the one hand, and my argument that perceptual consciousness is constituted by employing perceptual capacities, on the other.

In response, I am grateful to Cahen for providing me with the opportunity to address the important phenomenon of perceptual variance. I reject all three options that Cahen offers. Instead, I analyze perceptual variance as follows. First, it is important to note that we always perceive from a perspective under specific perceptual conditions. Due to this, every case of perception is characterized by perceptual variance. Elsewhere, I argue that in perception, we are perceptually related not only to external mind-independent properties, such as the intrinsic shape and size of objects or their illumination-independent color. We are perceptually related also to situation-dependent properties (Schellenberg 2008). Situation-dependent properties are external, mind-independent properties in our environment that are constituted by intrinsic properties and relevant perceptual conditions, where perceptual conditions are properties in the environment such as the lighting conditions, acoustic conditions, or the location that the perceiver happens to occupy.

Consider a perceiver who is looking at a cup while pacing in her room. The rim of the cup is intrinsically round and she is perceptually related to that intrinsic round shape. She employs her perceptual capacity to discriminate and single out that

round shape. As her perceptual location relative to that round shape changes, she is perceptually related to distinct situation-dependent properties. After all, the relevant situation-dependent property is constituted by her location and the intrinsic round shape of the cup's rim. In addition to employing a perceptual capacity to discriminate and single out the intrinsic round shape, she employs a distinct perceptual capacity to discriminate and single out this situation-dependent property.

Similarly, when we perceive a uniformly white wall that is illuminated unevenly, there is a respect in which we perceive the color to be uniformly white, but also a respect in which that color appears differently depending on the illumination conditions. To take a non-visual example: when we hear a cello first played in a concert hall and then played on the street, there is a respect in which we perceive the sound to be the same, but also a respect in which it appears differently. More generally, we can say that in each case of perception we can be perceptually related to a variant and an invariant property, that is, a situation-dependent and an intrinsic property. We employ different perceptual capacities to discriminate and single out the situation-dependent properties and the intrinsic properties.

Let's consider Cahen's example of perceiving a white wall first during daytime and then when illuminated by red light: in the two situations, the wall has the same intrinsic color property, but different situation-dependent properties. We employ the same perceptual capacity to discriminate and single out the intrinsic, white color of the wall. In addition, we employ a separate capacity to single out the situation-dependent property, that is, to discriminate and single out the way the white wall is presented given the lighting conditions. In other situations, we might use that very same perceptual capacity to single out the intrinsic red color of a tomato.

As I argue, employing perceptual capacities constitutes perceptual content. So in virtue of employing capacities to discriminate and single out both intrinsic and situation-dependent properties, she represents both properties in her environment. Due to representing the intrinsic white color of the wall, her perceptual consciousness tracks perceptual constancy. But she is also perceptually related to a situation-dependent property. Due to representing the situation-dependent property, her perceptual constancy tracks perceptual variance.

I agree with Cahen that there is nothing illusory about the case he describes. One of the advantages of the situation-dependent properties approach is that it can account for the fact that there is a wide range of viewing conditions under which we successfully perceive the intrinsic properties in our environment while also being aware of perspectival variance. It can do so without resorting to illusions.

But now what about a case in which we stand in front of a uniformly white wall that unbeknownst to us is illuminated by red light and it seems to us to be uniformly, intrinsically red. In response, the situation-dependent property approach can easily account for such cases: we mistake a situation-dependent property for an intrinsic property. More precisely, this is a case in which we represent a situation-dependent property but misrepresent it to be an intrinsic property—though of course typically not under that label.

Such cases have been analyzed as illusions in the philosophical tradition—though it is worth noting that they are not analyzed as illusions by vision scientists. The

situation-dependent property approach explains why there is nothing illusory about such cases and shows precisely what the mistake is that the perceiver has made. Moreover, the approach can account for why it is that we have some reason to believe that the wall is red. After all, the wall is situation-dependently red. We get something right: there is an external, mind-independent red property. However, contrary to how things seem to us, it is not an intrinsic property, but rather a situation-dependent property.

36.3 Evidence

Beck, Marushak, and Miracchi raise questions about the epistemic force of perceptual experience. Beck presents a hypothetical case of an unreliable machine with the aim of showing that we ought not trust the testimony of a discriminatory system that we have no good reason to trust. Miracchi notes that reproductive organs rarely fulfill their function and asks how perceptual systems differ. Why should we head the testimony of our perceptual system but not of these unreliable systems?

Beck's unreliable machine and Miracchi's example of reproductive organs that rarely fulfill their function are problems for reliabilist views. They are not a problem for capacitism. Here is why. As Miracchi notes, in contrast to other externalist accounts (Sosa 2007, 2010; Burge 2003, 2010a, b), I do not appeal to reliability. According to capacitism, the epistemic force of perceptual experience does not depend on neither on perception nor on the employment of perceptual capacities being reliable. This is a good thing, since perception is not a particularly reliable faculty. Our senses frequently lead us astray and perception is riddled with biases. Instead of appealing to reliability, I explain the epistemic force of perception by appeal to the function of perceptual capacities. They function to discriminate and single out particulars. In having this function, they connect us to the world. By contrast to our perceptual system, Beck's unreliable machine does not function to produce accurate representations or true claims, pace Beck's claim that, "By stipulation, the machine's natural function is to discriminate and single out samples containing cannabis" (Beck, this volume, p. 264).

We should trust the testimony of our senses, since perceptual capacities function to do what they do in perception and thus function to produce mental states with content that accurately represents the world. In speaking of it being the function of perceptual capacities to single out the relevant particulars, I mean how they are to be understood metaphysically. It is the function of a perceptual capacity to single out, say, instances of red. This is so regardless of how often the capacity is employed successfully to do just that.

Now, if a perceptual capacity is mostly employed to generate accurate perceptions, then it will be reliable. However, it is rational to heed the testimony of the senses, not because our perceptual system is reliable (often it is not), but because of the function of perceptual capacities. If this is right, then the employment of perceptual capacities imbues perceptual states with epistemic force due to their function to do what they

do in the good case, thereby providing a systematic link between perceptual states and the particulars they are about.

Marushak questions whether it is not the phenomenal character that provides the epistemic force. As he argues "my headache is a phenomenal state constituted by, and so systematically linked to the firing of particular C-fibers (say), but my headache does not provide evidence for the presence of these C-fibers" (Marushak, this volume, p. 271). In response, I agree with Marushak that headaches do not provide evidence for the neural events that underpin the headache. But the example does not provide a counterexample to capacitism. After all, as headaches do not provide us with evidence of the neural events that underpin our headache, the evidence we gain in perception is not of the neural events that underpin our perception. Similarly, the evidence we gain in perception is not of the molecular structure of the particulars we perceive in our environment.

We can articulate Marushak's concern in a more pointed way: I argue that due to the systematic link between our perceptual states and the particulars perceived our perceptual states provide us with evidence. Lots of things are systematically linked without generating epistemic evidence, for example, our perceptual states are systematically linked with the neural events that enable them. Yet our perceptual states do not provide evidence for those neural states. Why is it that this systematic link does not provide us with evidence of those neural events? What is the disanalogy between the systematic link to the neural events and the systematic link to the particulars perceived such that the former does not generate evidence, but the latter does?

In response, perceptual states are systematically linked to external, mind-independent particulars since we discriminate and single out those particulars. As a consequence, our perceptual states are about those particulars: we both represent and are aware of the relevant particulars. Perceptual states are systematically linked to what they are of in the good case since they are constituted by perceptual capacities employed and the particulars thereby discriminated and singled out. So the successful employment of perceptual capacities relates perceivers to these particulars and thus the perceiver gains factive evidence of the relevant particulars. This aspect of my account is akin to a knowledge-first view, but it is an account on which the basic level of analysis is the capacities employed (not knowledge or any other such epistemic property). Moreover, in contrast to knowledge-first views, I argue that even when employed in the bad case perceptual capacities have the function of discriminating and singling out particulars.

Phenomenal states are systematically linked to particulars of the type that they are of in the good case in the sense that the perceptual capacities employed in the bad case are explanatorily and metaphysically parasitic on their employment in the good case. There is an explanatory primacy of the good over the bad case since one can give an analysis of the perceptual capacities employed in the bad case only by appealing to their role in the good case. Licensing this explanatory primacy there is a metaphysical primacy of the good over the bad case. The metaphysical primacy is captured by the asymmetry condition on perceptual capacities that I develop in Chap. 2: the employment of a perceptual capacity C_α in cases in which C_α fulfills its function is metaphysically more basic than the employment of C_α in cases in which

C_α fails to fulfill its function. Perceptual capacities function to single out particulars. They do not function to fail to single out particulars. Due to this function, I argue, we have phenomenal evidence (regardless of whether we are perceiving, hallucinating, or suffering an illusion) in virtue of employing capacities with a certain function (for details, see Schellenberg 2013).

So the systematic linkage between perceptual states and the particulars are of differs from the systematic linkage between perceptual states and the neural states that enable them: perceptual capacities function to discriminate and single out the particulars to which we are perceptually related and as a consequence perceptual states are about the particulars discriminated and singled out. By contrast, the systematic linkage between perceptual and neural states does not track what the perceptual states are of.

I argue that perception provides us with factive and phenomenal evidence, while hallucination provides us only with phenomenal evidence. Marushak questions whether hallucinations provide us with any evidence, even weak phenomenal evidence. He does so by considering an analogy. As he argues when we are playing basketball and exercise our capacity to make a three-pointer, we get no points when our shot is blocked. Why would perception be different? Why would we get some evidence in hallucinations albeit not as much as we get in perception? In response, consider a bike. A bike has the function to transport someone down the road. Let's say my bike needs to be repaired. I bring it to a bike shop and come back a few days later to pick it up. The bike is suspended in air. I spin its wheels and see that its mechanics are in good order. When its wheels are spun while being suspended in air, the bike does not fulfill its function of transporting someone down the road. But the mechanics of the bike are working as they should.

While bikes and perceptual capacities differ in most respects, we can think of the case of hallucination in analogy to the bike suspended in air. The environment is not playing along, but all else is working as it should. If the wheels of the bike are spined while the bike is suspended in air, the mechanics of the bike is activated without the bike fulfilling its function. Similarly, in hallucination one employs perceptual capacities without those capacities fulfilling their function.

A bike suspended in air does not transport us down the road and we get no points when our three-point is blocked in a game of basketball. But the mechanism of the bike working as it should provides something. Once it is no longer suspended in air (and so once the environment is playing along), it would transport us down the road.

Similarly, hallucination does not provide us with knowledge, but that does not mean it does not provide us with anything. Due to hallucinating say a red apple on the desk in front of us, we are in a sensory state according to which there is a red apple on the desk in front of us. It just so happens that the environment is not playing along. So we do not have factive evidence.

In short, on my view, the key idea for why perception has epistemic force is that perceptual states are systematically linked to external, mind-independent particulars of the type that the perceptual state is about in the good case. The notion of systematic linkage in play is understood in terms of a metaphysical and explanatory primacy

notion, which is not a reliabilist notion. So the epistemic force of perceptual experience is grounded in metaphysical properties of perception, thus providing naturalistic account of perceptual evidence.

36.4 The Repeatability of Perceptual Capacities and Perceptual Content

Miracchi argues that we can have a capacity view while rejecting any commitment to perceptual states having representational content, and indeed Miracchi develops such a view (Miracchi 2017). In response: in my book, I argue in detail that on any reasonable understanding of perceptual capacities, employing such capacities yields perceptual states with content.

I argue that on any reasonable view of capacities, they are repeatable and general and thus employing them yields perceptual states with representational content. Perceptual capacities are repeatable in that the very same perceptual capacity can be employed to single out particular α or to single out particular β, where α and β are both particulars of the type that the perceptual capacity functions to single out. For example, the perceptual capacity RED functions to single out any perceivable instance of red. So the same perceptual capacity can be employed in distinct environments. Moreover, the same perceptual capacity can be employed to single out α at time t_1 and at time t_2 and thus yield the same perceptual state at t_1 and t_2. If this is right, then there is a repeatable element that is constitutive of perceptual states, namely, the perceptual capacities employed. And, with repeatability comes generality—for what it is for a capacity to be general simply is for it to be applicable across a variety of temporal and situational contexts. As a consequence, perceptual states have a general element. This general element is due to the nature of the perceptual capacities the employment of which constitute the perceptual state.

Being a repeatable capacity is, of course, not a sufficient condition for yielding a mental state characterized by representational content. After all, many things in the world have repeatable capacities without those capacities yielding mental states characterized by content. When one is perceptually related to a scene, one employs perceptual capacities which may or may not function to single out the particulars present. If I employ my capacity to discriminate and single out red from other colors in an environment in which there is no instance of red, I will fail to do what I purport to do.

Insofar as a perceptual capacity is repeatable and insofar as one either singles out the particular one purports to single out or one fails to do so, employing perceptual capacities generates a perceptual state that is repeatable and has accuracy conditions. Now, being repeatable and having accuracy conditions are jointly key features of representational content. So employing perceptual capacities yields perceptual states that exhibit key features of representational content: it yields a perceptual state that is repeatable and that can be accurate or inaccurate with regard to the particulars

in the environment of the perceiver. If this is right, then the perceiver's perceptual state represents particulars in her environment in virtue of employing perceptual capacities. If that is right, then that perceptual state is constituted by content in virtue of employing those perceptual capacities. (For details of my argument in defense of perceptual content and for how the notion of perceptual content established differs from the mere association thesis, see Schellenberg 2011, 2017.)

Miracchi does not address any aspect of this argument, but instead writes, as if disagreeing with my view, "the only object of perception is the thing perceived, which is understood as the target of a relational perceptual activity, rather than something represented." But this is precisely my view: as I argue, perception is a relational activity and in perception we perceive particulars in one's environment, be they objects, features, or events. The idea that the objects of perception are external, mind-independent particulars is not unique to my relational version of representationalism. Indeed, with few exceptions, it is standard for represenationalists to argue that the only object of perception is the thing perceived, even those that eschew relationalist commitments.

Now, Miracchi continues, "the way in which the object is perceived—namely, as an *F*—is a feature of the activity itself. … In this way, we can explain how one perceives objects to have certain properties without the attribution of content to objects." Contrary to what Miracchi seems to suggest, it is not part of capacitism that properties are attributed or predicated of objects. Indeed, I reject attributional views of perception, arguing that perception is fundamentally a matter of discriminating particulars, not attributing features to objects (see Schellenberg 2016, pp. 48–49, 2018, pp. 67–69). Moreover, it is important to differentiate the following two aspects of perception. One aspect is the perceived features (or property-instances) in one's environment. I argue that features in our environment are just like objects and events insofar as they are external and mind-independent and insofar as in perception we can discriminate them by employing perceptual capacities. The other aspect is the *way* in which particulars in one's environment are perceived. I argue that the way in which features, objects, and events are perceived is a matter of which perceptual capacities are employed. The important point is that features are out in the world as much as objects, and that we should distinguish what is external to us (objects, features, and events) from the *way* in which we perceive those external, objective particulars in our environment. I analyze the way in which we perceive those particulars in terms of employing perceptual capacities, and thus in terms of a mental activity.

36.5 Consciousness and Individuating Perceptual Capacities

Vuletić focuses his comments on my argument that employing perceptual capacities constitutes perceptual consciousness. He notes that on my view perceptual capacities are individuated by the particulars they function to discriminate and single out.

He questions how my view deals with common phenomena in which two subjects perceive the same shade of green in slightly different ways: one perceives it as unique green, while the other as a slightly yellowish green. Vuletić stipulates that the two perceivers employ the same perceptual capacities.

There are several ways one could respond to this challenge. One is standardly externalist. It is to say that at least one of the two perceiver's experience is at least in part illusory. It is well documented that perception can include systematic and reliable illusions.

A second possible response is to say that the second subject is at least in part misperceiving her environment. Our perceptual states are riddled with misperceptions. For example, we systematically misperceive distances etc. So the verdict that the second subject is misperceiving is not all that problematic.

A third possible response is to reject Vuletić's stipulation that the two subjects are employing the same capacities. Having rejected the stipulation, one can then argue that one subject employs a capacity that is individuated by only unique green instances and the other employs a capacity that is individuated not just by unique green instances but also instances of yellowish green. Due to employing distinct capacities the way in which the two subjects perceive the color discriminated and singled out is different.

The approach is the one I would favor. It hinges on capacities being individuated externally, namely by the mind-independent particulars (features, objects, and events) that the capacity functions to single out. Now, regarding this externalist commitment of my view, Lyons asks whether his capacity to discriminate and single out cups is the same as his capacity to discriminate and single out saucers. The answer is easy. The two capacities are distinct: one is individuated by cups; the other by saucers.

Vuletić raises the concern that "the phenomenal character of experience serves up appearances of objects that we use in order to exercise our capacities to sort out objects, so it cannot be what is constituted by the employment of such capacities". In response, luckily, we need not accept the assumption implicit in Vuletić's comments that phenomenal character is the only basis on which any sorting of objects can happen. We have many resources by means of which we sort objects that do not rely on how they appear to us. Moreover, we need to not accept the idea, seemingly implicit in Vuletic's claim, that phenomenal character is the ultimate ground for any account of perception. Vision science, neuroscience, psychology, among other fields provide us with evidence about the nature of perception that does not rely on phenomenal character.

References

Burge, T. 2003. Perceptual entitlement. *Philosophy and Phenomenological Research* 67 (3): 503–548.

Burge, T. 2010a. *Origins of objectivity*. Oxford University Press.

Burge, T. 2010b. Steps toward origins of propositional thought. *Disputatio* 4 (29): 39–67.

Kern, A. 2016. *Sources of knowledge: On the concept of a rational capacity for knowledge.* Harvard University Press.
McDowell, J. 2011. *Perception as a capacity for knowledge.* Marquette University Press.
Miracchi, L. 2017. Perception first. *Journal of Philosophy* 114 (12): 629–677.
Schellenberg, S. 2008. The situation-dependency of perception. *The Journal of Philosophy* 105 (2): 55–84.
Schellenberg, S. 2011. Perceptual content defended. *Noûs* 45 (4): 714–750.
Schellenberg, S. 2013. Experience and evidence. *Mind* 122 (487): 699–747.
Schellenberg, S. 2016. Perceptual particularity. *Philosophy and Phenomenological Research* 93 (1): 25–54.
Schellenberg, S. 2017. Perceptual capacities, knowledge, and Gettier cases. In *Explaining knowledge: New essays on the Gettier problem*, ed. R. Borges, C. de Almeida, and P. Klein Oxford University Press.
Schellenberg, S. 2018. *The unity of perception: Content, consciousness, evidence.* Oxford University Press.
Sosa, E. 2007. *A virtue epistemology: Apt belief and reflective knowledge.* Oxford University Press.
Sosa, E. 2010. How competence matters in epistemology. *Philosophical Perspectives* 24: 465–475.