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Whither Naïve Realism? – II[*]

Alex Byrne and EJ Green

Abstract

In a companion paper (Byrne and Green 2023) we disentangled the main characterizations of naïve realism and argued that illusions provide the best proving ground for naïve realism and its main rival, representationalism. According to naïve realism, illusions never involve perceptual error. We assessed two leading attempts to explain apparent perceptual error away, from William Fish and Bill Brewer, and concluded that they fail. This paper considers another prominent attempt, from Craig French and Ian Phillips, and also sketches the case for representationalism.

1: What is naïve realism?

Naïve realism, as it appears in the contemporary literature, is some combination of the following three theses, or variations of them: (a) the "phenomenal character" of veridical perceptual experience ("how things perceptually seem", on one natural understanding of that phrase) is determined by the environmental objects of perception; (b) perceptual experiences have environmental objects as "constituents", and (c) perceptual experience is relational—relating the perceiver to environmental objects—but not representational.[1]

To elaborate on (a), imagine seeing a blue sphere the size of a soccer ball in good light, a few feet away: if perception is ever veridical, this is presumably an example. The "phenomenal character" of your experience will change if you move away from the sphere, or take LSD, or swap out the blue sphere for a yellow one. On the (a)-component of naïve realism, the phenomenal character of your experience is—as Adam Pautz puts it—"fully *grounded in* your experiential acquaintance with states involving objects" (2021: 192).

By "fully grounded" Pautz means that any difference in phenomenal character is due to a difference in elements of the environment that the perceiver is acquainted with:

[1] Naïve realism is a theory about perception in general, not just vision. However, as is customary in the literature, this paper is visuocentric. The naïve realist relation the perceiver bears to environmental objects may be the same across perceptual modalities, or it may differ between modalities; either way, naïve realists usually take the relation to be primitive. For present purposes we can ignore these distinctions.

> Differences in veridical experiences are grounded in differences in what states you experience. (Pautz 2021: 192)

William Fish (a naïve realist himself, unlike Pautz) endorses a version of this position:

> [T]he naïve realist claims that when we see the world, the subject enjoys an experience in which he or she is acquainted with elements of the mind-independent environment. The phenomenal character of such an experience—that property of the experience that types the experience by what it is like to have it—is therefore its property of acquainting the subject with those particular elements of the mind-independent environment. (Fish 2009: 47)

On Fish's view, differences in the phenomenal character of experience owe exclusively to differences in the mind-independent elements with which one is acquainted. Accordingly, when internal factors such as attention, visual acuity, or adaptation modify the phenomenal character of a subject's experience, they must do so by way of altering the mind-independent elements the subject is acquainted with (Fish 2009: ch. 3).

Pautz includes (c) in his characterization of naïve realism. The veridical perceiver bears a relation Pautz calls "experiential acquaintance" to various elements of her environment. This relation, Pautz says, "is a kind of irreducible mental arrow pointed at the states of objects" (193), where "a *state*… is an actual occurrence of a property. For instance, the state of the blueness of the sphere is something that cannot exist unless the sphere is actually blue" (192). That irreducible mental arrow is analogous to knowledge in being factive: one can only be experientially acquainted with the "actual occurrence of a property", as one can only know truths. On the side of cognition, knowledge has a non-factive counterpart, belief. Thus there is cognitive misrepresentation, namely false belief.[2] But there is no non-factive counterpart to experiential acquaintance, and so no misrepresentation in perceptual experience.

French and Phillips give an account that superficially seems identical:

> Naïve realists hold that perceptual experience involves a subject standing in a primitive relation of perceptual acquaintance to aspects of mind-independent reality which

[2] But see Goodman 2023, which argues that knowledge has no non-factive counterpart.

> constitutively shape the contours of the subject's consciousness. (French and Phillips 2023: 363-364)

This passage, read in isolation, conceals important differences. One is that French and Phillips stress (b), the claim about "constituents":

> Naïve realists hold that perceptual experiences have the conscious characters they do partly by having such aspects of the mind-independent world as *constituents*. The conscious visual experience you have of the oak has that very tree as a literal part. (363)

How can an oak tree be a literal part of a visual experience? French and Phillips explain:

> Here the naïve realist thinks of experiences not as objects with spatial parts, but as events or states with constituent elements: such as a car crashing into a wall which involves car and wall as constituents, or a marriage, where each spouse is a constituent. (363)

This component is endorsed by prominent naïve realists other than French and Phillips (e.g., Logue 2012: 232; Sethi This volume: xxx; Soteriou This volume: xxx); nonetheless, we think it is not central to the position. In the foregoing passage, French and Phillips suggest that experiences are *events or states* with constituent elements. However, the claim that experiences are *events* is controversial (setting aside the issue of constituency). In contrast, if experiences are *states*, then the claim that they have environmental objects as constituents is, on a natural reading, a trivial consequence of the claim (c) that perceptual experience is relational. Let us briefly elaborate on these two options.

First, the idea that experiences are events. A crash is a paradigmatic event, something that happens, with a beginning, middle and an end. Similarly for marriages: a marriage may last for 50 years, or (in the case of Britney Spears and Jason Alexander) a mere 55 hours. Further, there is a deflationary sense in which a particular Mercedez-Benz W140 was a constituent of the crash that killed Princess Diana, and in which Ms. Spears was a constituent of her short-lived marriage, although naïve realists seem to have a more substantial sense of constituency in mind.[3] But in the

[3] That is, the Mercedez-Benz is a "constituent" of the crash into the wall at least in the sense that *it* was the car that crashed into the wall; Ms. Spears is a constituent of the marriage with Alexander because *she* married Alexander. It is not obvious that this justifies talk of "literal parthood", but we need not pursue this here. (French and Phillips clearly do not have this minimal understanding of parthood in mind (2023: 364, fn. 4).)

case of seeing the mighty oak, standing motionless against the sky, it is not apparent that any event is occurring—either psychological or environmental—let alone with the oak itself as a constituent.[4] Grammar does not suggest that there is, since "see" is a stative verb. And introspection does not suggest this either. Granted, the objects of perception sometimes appear *as* events: one may see the car crumple as it collides with the wall. But is there some *other* event, "the experience of seeing the crash", which accompanies the crash? If there is such an event, then a similar happening occurs when one sees the oak, "the experience of seeing the oak". That is hardly obvious, and a rather weak peg on which to hang a theory of perception.[5]

On the second alternative, "visually experiencing the oak" is not an event or occurrence, but the state of *being perceptually (or perhaps visually) acquainted with the oak*. (That is, the *property* of being perceptually acquainted with the oak, which may or may not be instantiated—hence not a "state" in Pautz's sense.) If so, the claim about constituency is innocuous, or at least has an innocuous interpretation: the oak is a "constituent" of *being acquainted with the oak* in the sense that this relational property relates its bearer to *the oak*.

Summing up, it is unclear why we should accept that experiences are events, and it is a further debatable step to (b), the constituency claim. But if instead experiences are states of acquaintance with environmental objects, (b) trivially follows from (c), the acquaintance claim. Let's now turn to the other—more significant—respect in which naïve realism à la French and Phillips differs from the version described by Pautz.

According to what Pautz calls "basic naïve realism," being perceptually acquainted with the blue sphere (more exactly, "the state of the blueness of the sphere") fully determines the phenomenal character of experience. [6] Nothing more is needed to have an experience with that distinctive phenomenal character than acquaintance with the blueness of the sphere or (more

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[4] On Jaegwon Kim's (1976) theory of events as "property exemplifications", events are Pautz's "states", and in seeing a motionless blue sphere one is aware of an event, Pautz's "the blueness of the sphere". Here we are assuming a more intuitive conception of events (on Kim, see Bennett 1988: 76-8).

[5] For more on this point, see Byrne and Logue 2008: 82-3 and also Byrne 2009.

[6] Pautz (2021) later considers versions of naïve realism that depart from this commitment of basic naïve realism in various respects (222-231).

cautiously) *some* states or other of the sphere.[7] In that sense, acquaintance with states of the sphere "constitutively shapes the contours of the subject's consciousness".

William Fish agrees with Pautz on this commitment of naïve realism:

> According to the naive realist, in the good cases of perception, external objects and their properties 'shape the contours of the subject's conscious experience'. (Fish 2010: 96, quoting Martin 2004: 64)[8]

On Fish's view, mind-independent elements *fully* shape the contours of the subject's conscious experience. Differences among experiences are explained wholly in terms of differences in the facts with which the subject is acquainted. However, although French and Phillips also use the language of "shaping the contours" of experience, on their version of naïve realism external objects and their properties only *partially* shape the contours of the subject's conscious experience:

> To hold that external objects constitute the character of experience is not to hold that they *exhaustively* constitute experiential character. Instead, the *way* in which we are acquainted with things also makes a difference to the character of experience. (French and Phillips 2023: 367)[9]

Imagine seeing a yellow sphere illuminated with purple light so that it looks red. One is not experientially acquainted with the state of the redness of the sphere, because the sphere is not red. But the sphere is yellow, so there is such an item as the state of the yellowness of the sphere.

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[7] "The blueness of the sphere" is naturally interpreted as referring to the color blue, or perhaps the particular shade of blue exhibit by the sphere, but we will follow Pautz and take it to refer to the state of the sphere's being blue. Pautz does not consider naïve realist theories of illusion in detail, though he suggests that naïve realists might generalize Martin's (2006) negative epistemic account of hallucination to cases of illusion (Pautz 2021), generating a version of disjunctivism that classifies illusions together with hallucinations under the "bad case" disjunct (Byrne and Logue 2008). However, other naïve realists have been reluctant to adopt this generalization, and for good reason (Fish 2009: 44; Phillips 2016: 355). Here (and in Byrne and Green 2023) we concentrate primarily on those naïve realists who offer positive accounts of illusion.

[8] Cp. "external things such as trees, tables and rainbows ... and the properties which they can manifest to one when perceived ... *determine* the phenomenal character of one's experience" (Martin 1997: 93, emphasis added).

[9] Cp. "why cannot the *ways* in which things are presented in experience make a difference to what the experience is like, in addition to what is presented?" (Martin 1998: 175).

Could one *simply* be acquainted with that? Not according to naïve realism as explained by Pautz and Fish, because then the sphere would look yellow, just as it does under natural daylight. For a naïve realist of this stripe, it is natural to search for some *other* state, acquaintance with which "shapes the contours" of one's conscious experience. And there are a number of candidates for such a state. For example, in addition to being yellow, the sphere has the temporary property of being-yellow-in-purple-light, so perhaps acquaintance with (something like) *this* state will explain why the phenomenal character of one's experience is of the "looking red" variety, and why your experience of the sphere under purple light differs phenomenally from your experience of it under natural daylight.

Fish endorses this strategy, at least for some color illusions. Fish distinguishes the familiar colors from (in his terminology) "shades". "[T]he shade a particular exhibits, while determined in part by its intrinsic color, is nonetheless a relational property of the particular" which depends on "things outside itself—the spectral distribution of the illuminant and the reflectance properties of the surround" (Fish 2009: 158). Applying this idea to the yellow sphere in purple light:

> the naive realist can hold that the fact that the subject is acquainted with in [seeing the yellow sphere in purple light] is not the fact [or Pautzian state] of an object's being a particular color, but rather the fact of an object's exhibiting a particular (relational) shade. (158)

An innocent observer would mistakenly take the sphere to be red, but that is no fault of her perceptual experience. The error lies on the cognition side of the perception-cognition border. The subject is acquainted with the state of the sphere's having a particular shade, one that (for a reason we need not examine here) gulls the subject into taking the sphere to be red.

French and Phillips reject this strategy for dealing with perceptual illusions, and the (a)-claim that motivates it, that the phenomenal character of an experience cannot differ without a difference in the objects of perceptual acquaintance. That is, they reject what they call "the Difference Principle":

> **Difference Principle:** Necessarily, if two experiences differ in phenomenal character, then they differ in character-constituting presented elements. (French and Phillips 2020: 4)

Here the "presented elements" are the items with which the perceiver is perceptually acquainted—Pautz's "states of objects", or something similar. French and Phillips are not the only naïve realists to suggest that two experiences acquainting the subject with the same mind-independent elements may nonetheless differ in phenomenal character—see also Logue 2012; Beck 2019; Sethi This volume; Soteriou This volume.

As this brief tour suggests, the core of naïve realism is not (a) (the Difference Principle), or (b) (the claim about constituency), but (c), the denial that perception is representational.[10]

2: Why naïve realism?

The dispute between naïve realism and representationalism is best fought on the battlefield of illusion, where the differences between the two approaches come into sharp relief. In the following section we will examine how French and Phillips use the denial of the Difference Principle to articulate a naïve realist account of illusions. In this section we discuss why they think that naïve realism is worth defending in the first place.[11]

"Naïve realism", they write, "can be motivated on the grounds that it best captures how perceptual experience seems from a first-person perspective, considering perception from a 'purely phenomenological point of view' (Broad 1952: 3-4). So motivated, naïve realism can be viewed as a theoretical articulation of our pre-theoretical or common-sense conception of perceptual experience" (French and Phillips 2023: 364).

Ignoring for the moment what the "common-sense conception" amounts to, this motivation seems rather weak. After all, perhaps our common-sense conception of motion has it that objects

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[10] See also Byrne and Green 2023: 1-5. Some naïve realists may insist that (a), or some watered-down version of (a), is also a non-negotiable commitment. Since this would logically strengthen naïve realism, it does not affect our critique in what follows.

[11] We confine our discussion to French and Phillips's specific motivations for naïve realism. Other motivations have been offered. For example, Campbell has argued that only naïve realism can explain certain aspects of the cognitive role of perceptual experience, such as its role in providing "knowledge of the reference of a demonstrative" (Campbell 2002: 149), and its role in explaining our grasp of concepts of mind-independent properties such as color (Campbell and Cassam 2014: 77-79; cp. Brewer 2019b). However, it is doubtful that naïve realists are really better positioned than representationalists to explain these abilities (McLaughlin 2010; Campbell and Cassam 2014: ch. 7; Pautz 2021: 202-207). For alternative arguments for naïve realism, see Martin 2002, 2004; Brewer 2011: ch. 4, and Logue 2012.

are either moving or at rest, with no qualification about reference frames needing to be added. We should not rush to build our physics on the "theoretical articulation" of this commonsense conception. Moreover, C. D. Broad (quoted by French and Phillips) did not himself take the "purely phenomenological point of view" to be particularly reliable. That point of view describes how the "forms of sense perception"

> appear to any unsophisticated percipient, and as they inevitably *go on appearing* even to sophisticated percipients whose knowledge of the physical and physiological processes involved assures them that *the appearances involved are largely misleading*. (Broad 1952: 4, second emphasis added)[12]

In any case, what is this common-sense conception of perceptual experience, and is naïve realism the best theoretical articulation of it? French and Phillips cite Hume as expressing the common-sense conception,

> …in a famous discussion in his *Enquiry*, where he writes that following a "blind and powerful instinct of nature", we believe that the "senses ... produce ... immediate intercourse between the mind" and mind-independent world, and "always suppose the very images presented by the senses, to be the external objects, and never entertain any suspicion, that the one are nothing but representations of the other" ([Hume 1748/2000]: §12.8-9). (French and Phillips 2023: 364)

On the common-sense conception, as Hume expounds it in this quotation, perception makes us aware of external objects without making us aware of any mental intermediary. When one sees an external object, one does not see it in virtue of seeing (or otherwise being aware of) something else such as a mental image or non-physical sense datum. (As French and Phillips note, Hume immediately goes on to argue that the commonsense conception is "soon destroyed by the slightest philosophy".)

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[12] Broad himself was a sense-datum theorist. Defining naïve realism as "the theory that the sensa which are appearances of a physical object are literally spatio-temporal parts of that object, and that the spatio-temporal parts of it which are not manifested in sensation are of precisely the same nature as those which are so manifested", Broad thought it "simply [a] waste of time to try to rehabilitate naïve realism" (Broad 1925: 422, 186).

However, if *this* is the common-sense conception of experience at issue, then representationalism theoretically articulates it just as well as naïve realism. Representationalists claim that when you veridically perceive a blue sphere, the object is perceptually represented as spherical and blue. Plausibly, perceptual representation requires representations—for example, mental maps, imagistic icons, or discursive representations in a language of perception. But such representations are not "presented by the senses" (unlike Hume's images). For, according to the representationalist, we do not *see* our perceptual representations, nor we aware of them in some other way. A perceptual representation of the blue sphere is rather a means by which one sees the sphere. Like the retina and optic nerve, perceptual representations enable us to see; they are not among the things we see. Indeed, as French and Phillips themselves point out, "the representationalist agrees with the naïve realist that the objects of experience are mind-independent, eschewing sense-data" (2023: 364).

Could there be some other component of the common-sense conception that the naïve realist endorses but the representationalist doesn't? The naïve realist, unlike the representationalist, claims that perceptual experience is non-representational.[13] But it seems quite unlikely that this is part of our common-sense conception of experience. The dispute over representationalism is in the realm of abstract theory, not something that might be adjudicated by the "purely phenomenological point of view". And in any case, although Hume writes of "representations" in the quoted passage, the contemporary version of representationalism was not on his radar.

What about the constituency claim? Earlier we dismissed that as either adding nothing to the naïve realist claim about acquaintance or else being a disputable addition, depending on how "constituent" is understood. On the first option, to say that this oak tree is a "constituent" of someone's experience is simply to say that the person bears the perceptual acquaintance relation to the oak. If the common-sense conception is silent on acquaintance, as the naïve realist understands it, then the common-sense conception is equally silent on this deflationary kind of constituency. The second option interprets "constituent" as "literal part." However, not only is it implausible that the common-sense conception is committed to the oak tree being a literal part of

[13] Note that some naïve realists grant that the visual system forms perceptual representations and that these representations play a causal role in our becoming acquainted with mind-independent objects (Campbell 2002; French and Phillips 2023). However, unlike representationalists, they deny that perceptual experience is itself representational.

one's "experience", but French and Phillips grant that the representationalist could also endorse a non-trivial constituency claim (French and Phillips 2023: 364, fn. 4).[14] So, even if one is attracted to the constituency claim, this does not clearly motivate accepting naïve realism over representationalism.

Naïve realism, then, is not well-motivated by French and Phillips's considerations, since these considerations do not favor naïve realism over its most prominent rival. However, another consideration may be more promising, namely that representationalism cannot account for the palpable difference between perceiving and thinking. Intuitively, *seeing* the oak connects us with the oak in a way that having beliefs about the oak cannot: the oak, one wants to say, is *presented*, not *re*presented. Here naïve realism is not motivated in isolation, by reflection on "how perceptual experience seems from a first-person perspective"; instead, naïve realism is proposed an alternative to the inadequacies of representationalism. (See Byrne and Green 2023: 4-5.) We will say more about this motivation for naïve realism in the final section.

3: French and Phillips: illusions and "ways of perceiving"

According to representationalists, illusions are analyzed as cases of perceptual misrepresentation, while according to naïve realists they are not. Consider the Jastrow illusion (figure 1). The bottom curved segment, B, looks larger than A, even though they are the same size. Representationalists claim that the segments look different in size because (perhaps *inter alia*) B is perceptually misrepresented as larger than A. Other familiar cases of illusion, such as the Müller-Lyer and Ebbinghaus illusions, are analyzed similarly in terms of perceptual error. Naïve realists need an alternative account of these cases. More generally, they need a non-representational account of what goes on in paradigm cases of illusion, where an object o looks or appears F, even though o is not F.[15]

[14] We do not take representationalism to be *committed* to such a constituency claim. However, certain versions of representationalism (specifically, those on which perceptual contents are partially constituted by environmental objects) are plausibly compatible with it (see also Fish 2009: 17).

[15] On "looks" and illusions, see Byrne and Green 2023: 5-7.

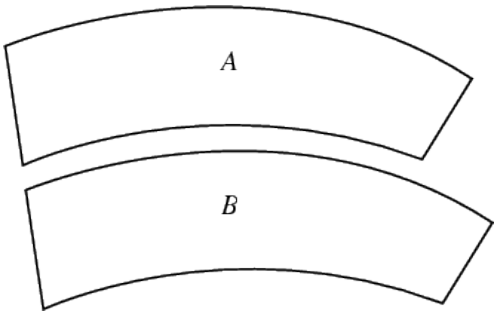

Figure 1. Jastrow Illusion.

French and Phillips (2020, 2023, This volume) argue that the key to an adequate naïve realist account of illusion involves rejecting the Difference Principle, mentioned in section 1. According to the Difference Principle, any difference in phenomenal character is due to differences in "character-constituting presented elements"—that is, items with which the perceiver is perceptually acquainted. We have already seen a naïve realist application of the Difference Principle in the example of a red-looking yellow sphere in purple light. Following Fish, a naïve realist may hold that while such circumstances may lead the perceiver to mistakenly judge that the sphere is red, at the level of perception no error has occurred. The perceiver sees the sphere as it is, as having a "shade"—a "character-constituting presented element"—which is typically although not invariably associated with red objects. This so-called "illusion" turns out to be "the successful perception of somewhat unusual facts" (Fish 2009: 172). Likewise, the naïve realist may say that when viewing the half-submerged straight stick in water one successfully perceives its bent projective shape (Byrne and Green 2023: 8-9).

French and Phillips object to this strategy, and endorse "*simplicity*: the claim that presented elements are restricted to ordinary, mind-independent objects and their familiar, basic visible qualities" (This volume: xxx). Why do they prefer simplicity?

> The basic reason is theoretical modesty. It will be news to no-one that objects have textures we can feel, shapes we can see, and make sounds we can hear. These features are already part of our common-sense ontology. This evidently contrasts with relational appearance properties. (xxx)

The "unusual facts" (or features) that Fish postulates are to be abjured because they are theoretical posits in which we have no independent reason to believe:

> It is not part of our ordinary picture that objects have (or can be seen to have) properties such as *small when viewed from a distance* or *elliptical as viewed from an angle*. To populate the world with such esoteric features in order to account for our perceptual phenomenology involves the immodest thought that theoretical-cum-introspective reflection on perceptual appearances can reveal surprising and novel aspects of the mind-independent world. (xxx)

Admittedly, being "small when viewed from a distance" sounds a little spooky, but Fish's strategy involves properties that are uncontroversially instantiated, such as *subtending solid angle Ω at point x*, or *having intrinsic color c in light with spectral power distribution S and against a surround with reflectance properties R* (see also Pautz This volume). Groups or collections—another of French and Phillips' examples; see 20-1—are more disputable (at least among metaphysicians), but aren't flocks of birds and swarms of bees "part of common-sense ontology"?[16] Furthermore, those who hold that we are perceptually aware of relational appearance properties often take this to be motivated by contemporary perception science (e.g., Hill 2022: ch. 2). That "theoretical-cum-introspective reflection" can revise our pretheoretical views about the objects of perceptual awareness is only to be expected.

In any event, French and Phillips are right to seek an alternative, because the required "unusual facts" are apparently absent for some illusions—the Jastrow illusion being a case in point. What the naïve realist needs is a feature that the bottom segment B (say) has, that the top segment A lacks, and which could account for the different way the segments look. But what could that be? The segments are the same, and there is no distorting medium. A and B project the same image to the eye, so the "unusual facts" can't involve visual angles, or projective shape, or anything like that.[17] Indeed, Fish himself treats examples like the Jastrow illusion very differently, as involving a mistaken belief about how things look (criticized in Byrne and Green 2023: 10-11). One might propose that the illusion should receive a purely post-perceptual explanation. Perhaps we merely *believe* (or are *tempted* to believe) that A and B differ in size,

[16] One might object that some of these features (e.g., visual angles) are ecologically irrelevant, so perceiving them would confer no adaptive benefit on the organism. However, this is not the case for flocks of birds or swarms of bees, which are plausibly *more* important for us to detect than many "ordinary" objects (Green 2019).

[17] See also Green Forthcoming.

but the objects do not in fact perceptually appear this way: Perception simply acquaints us with the objects and their actual sizes. However, absent further details, this account leaves unexplained the etiology of the errant belief (or temptation), and its persistence despite knowledge to the contrary. As such, the representationalist can reasonably claim to have a superior account: We are persistently tempted to believe that B is larger than A *because* this is how perception represents the objects.

Retaining the Difference Principle while giving a naïve realist account of the Jastrow illusion is difficult, so we take French and Phillips' rejection of the Difference Principle to be well-motivated, albeit not for the reasons they give.[18] Further, a uniform account of illusions (at a suitably high level of abstraction) has the virtue of simplicity, and French and Phillips' theory delivers on that score.

They articulate their theory using a pair of cases derived from Fish (2009: 150):

> *Illusory Car Case (ICC): S* sees a red car illuminated by a street lamp; it looks orange to her.
>
> *Veridical Car Case (VCC): S* sees the same red car in natural daylight; it looks red to her. (French and Phillips 2023: 367)

French and Phillips note that the naïve realist has a straightforward explanation of why the car looks red in the veridical case, *VCC*: "The naïve realist holds that this experience is a matter of *S*'s acquaintance with the red car (or the red car and its redness), and that this accounts for the fact that things look red to her" (2023: 367). What about the illusory case, *ICC*? Why does the red car look orange? Rejecting the option of introducing new presented elements, they instead hold that *S* is acquainted with the car and its redness in *both VCC* and *ICC*. However, these elements are perceived in different *ways*:

> In *ICC*, *S* is acquainted with the car and its redness in a certain way: in conditions characterized by street lighting. In *VCC*, *S* is acquainted with the same objects but in a

[18] However, arguably "our pre-theoretical or common-sense conception of perceptual experience" (see section 2) *includes* the Difference Principle, in which case French and Phillips' motivation for preserving naïve realism is in tension with their theory.

> *different* way: in conditions characterized by natural daylight. Despite sharing objects, the experiences accordingly have different conscious characters. (367)

Let's grant for the moment that we can perceive the car and its redness in different ways under different conditions, and that such differences affect the phenomenal character of experience (contra the Difference Principle).[19] Still, we need an explanation of why *ICC* but not *VCC* is a case of *illusion*. Why does the car look *orange* in *ICC* but not *VCC*? And here the answer is not obvious. For it is unclear why simply perceiving the car's redness in a new way (namely, a way characterized by sodium streetlights) should make the car look some way it isn't. Why does it not simply look red and bathed in street lighting? Here, French and Phillips appeal to Michael Martin's (2010, 2020) account of looks.[20] They hold that the car looks orange because it has a "look" which is relevantly similar to orangeness. This look is simply the car's redness (cp. Martin 2010: 161), but its redness is relevantly similar to orangeness under a "subjective measure of similarity" operative in the perceptual conditions:

> [T]he car looks orange because of a similarity between two basic visible properties, viz. redness and orangeness, a similarity made salient in the relevant conditions.…But in what way is redness similar to orangeness? The answer is that in the circumstances of [*ICC*], the subject looking at the red car will be inclined to find the actual color of the car before her as more like orangeness than anything else. Thus, the psychological impact that the red color of the car has on the subject in [*ICC*] is similar to the psychological impact that the orange color of a car has on a subject who sees it in natural daylight—a paradigmatic circumstance for encountering orangeness. On such a subjective measure of similarity, the red color of the car is relevantly similar to orangeness. (French and Phillips 2020: 12)

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[19] Compare Martin (1998): "Why cannot the *ways* in which things are presented in experience make a difference to what the experience is like, in addition to what is presented?" (175; see also Beck 2019).

[20] According to Martin, the looks of objects are to be identified with their "basic visible properties, including their colors and shapes" (2010: 161). A "looks"-statement such as "the pencil looks bent" functions to characterize a look of the pencil (for example, its straightness) via the adjectival complement "bent"—for example, the statement may function to convey that "the pencil has a way of looking which is like, or similar to, that way of looking which we associate with bent pencils, or bent things more generally" (2020: 100).

So, the redness of the car is similar to orangeness because it has a "psychological impact…on the subject"—equivalently, its "subjective impact" (This volume: xxx)—that is similar to the impact of an orange car encountered under "paradigmatic circumstances". That is why the car looks orange in *ICC*.

To assess this explanation, we must understand the notions of "subjective impact" and "paradigmatic circumstances". We start with the former.

4: French and Phillips: "subjective impact"

Although French and Phillips decline to offer a strict definition of "subjective impact", they tell us that the subjective impact of an object on a perceiver is partly a matter of how the object *strikes* the perceiver. For example, if a slanted penny looks elliptical, then this partly involves "the round coin, or the roundness of the coin, *striking* us as similar to ellipticity" (This volume: xxx; see also Phillips 2016: 357).[21]

Pautz (2023) argues that this appeal to "striking" threatens to turn French and Phillips' account into a mere terminological variant of representationalism. While representationalists say that the red car is "perceptually represented" as orange in *ICC*, French and Phillips say that the car "strikes" one as orange. More generally, whenever a non-F object illusorily looks F, representationalists will say that the object is perceptually misrepresented as F, while French and Phillips say that it strikes one as F. Without some explanation of how striking differs from perceptual representation, one might doubt whether French and Phillips have supplied a genuine rival to the representationalist account of illusion—and, indeed, whether their account even deserves the naïve realist label.

French and Phillips attempt to rebut the charge that their account collapses into representationalism. They identify two disanalogies between the role that striking plays in their account and the role that representation plays for the representationalist. Here is the first disanalogy:

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[21] One concern with this example is that the sense in which an ordinary slanted coin "strikes" one as like an ellipse is very different from the sense in which the car in *ICC* "strikes" the perceiver as orange. Ordinary perception of a slanted coin is not typically illusory or misleading, while perception of the car in *ICC is* supposed to be illusory. We return below to the distinction between genuine cases of illusion and other kinds of perceptual similarity, and whether French and Phillips can adequately capture it.

> First of all, even if we agree that *striking* is to be understood in representational terms, this does not involve abandoning naïve realism…. For our claim is not that the experience in which the round coin looks elliptical to us is *constituted* by the coin striking us as similar to an elliptical coin. It is that the experience in which the round coin looks elliptical to us is constituted by being presented with the round coin in a certain way. And to be clear, being presented with the round coin in the way in question cannot be identified with the coin striking us as similar to an elliptical coin. Instead, how the coin strikes us is an indirect characterisation of the experience in question in terms of its impact: how we are struck as a result of having such an experience. (This volume: xxx)

Later, French and Phillips elaborate that on their view, striking is a "post-experiential" phenomenon (29). So, while representationalists claim that one's experience of the red car in *ICC* is *constituted* by perceptually representing the car as orange, for French and Phillips the experience is *not* constituted by the car's striking one as orange. Rather, it is constituted by perceiving the car's redness in a particular way. Perceiving redness this way strikes the perceiver as similar to certain cases of perceiving orangeness, but this fact is external to experience proper. Accordingly, even if the car's striking one as orange involves representing the car as orange, this representation occurs downstream from perceptual experience.[22] So, if "striking" is a representational state at all, then it is presumably some kind of perceptual judgment.

Notice that this account makes not just striking, but illusions themselves, post-experiential in an important sense. *ICC* counts as a case of illusion because the car looks orange even though it is red. French and Phillips explain this fact about how the car looks to the perceiver in terms of how the car strikes the perceiver: its redness strikes the perceiver as similar to exemplars of orangeness viewed under paradigmatic circumstances. And if the car's striking the perceiver this way is a post-experiential matter, then the car's looking orange is a post-experiential matter as

[22] However, elsewhere French and Phillips suggest that the phenomenal character of an experience is explained by how that experience (or the mind-independent elements presented in the experience) strikes the subject: "Why does the way in which the subject perceives the scene affect the phenomenal character of their experience as it does? Our answer here will advert to how the various elements of the scene *strike the subject*—and in particular, to the visually relevant subjective similarities and differences with paradigm cases of perception" (2020: 13, emphasis added). But if striking is to *explain* the phenomenal character of experience, as this passage suggests, then presumably striking cannot occur wholly downstream from perceptual experience.

well. After all, if A (viz., striking one as similar to paradigm cases of orangeness) is post-experiential, and B (viz., looking orange) constitutively depends on A, then presumably B is also post-experiential.

But could the car's looking orange really be post-experiential? Plausibly not, if we understand the phenomenal character of perceptual experience to include how things *perceptually seem* to the subject of the experience. In *ICC*, it perceptually seems to *S* as if the car is orange—a claim that French and Phillips would surely grant. Presumably, then, orangeness should figure *somewhere* in a characterization of the phenomenal character of *S*'s experience (see also Pautz This volume). But it is unclear how it can, if the car's looking orange to *S* is wholly downstream from *S*'s experience.

Furthermore, the claim that illusions emerge only in perceptual judgment is empirically dubious. Various illusions arise early in perceptual processing and are present in non-human animals with meager cognitive capacities.[23] The Müller-Lyer illusion (Busch and Müller 2004b), the Ebbinghaus illusion (Busch and Müller 2004a), and the illusory contours of Kanizsa figures (Davis and Driver 1998) all contribute to pop-out in visual search. For example, there is evidence that the Müller-Lyer line with outward-facing arrow wings, which looks longer than its counterpart with inward-facing wings, is assimilated to objectively longer lines early in the process of search guidance, and independent of the perceiver's goals. Proulx and Green (2011) asked participants to detect the presence of a vertically oriented target line among lines at oblique orientations. When the vertical line was fitted with outward-facing wings (figure 2, bottom), it was detected significantly faster than when it had inward-facing wings (figure 2, middle), even though wing orientation was irrelevant to the search task. Indeed, when targets had outward-facing wings, reaction time was virtually unchanged with increasing display size. This finding follows earlier work suggesting that objectively larger objects capture attention automatically, even when size is irrelevant to the search task (Proulx 2010). For the purposes of automatic attention capture, then, the visual system treats the line with outward-facing wings as if it were longer than it is. Why? Presumably because the visual system *misrepresents* the line as longer than it is, and this representation is formed prior to attentional capture. Moreover, while many aspects of the visual search process are contested, the leading

[23] See Feng et al. 2017 for a review of visual illusions in non-human animals such as chicks and fish.

view remains that automatic attentional capture ("pop-out") depends on early stages of perceptual processing—plausibly at or prior to the level of experience (Wolfe 2021), and perhaps as early as V1 (Koene and Zhaoping 2007).

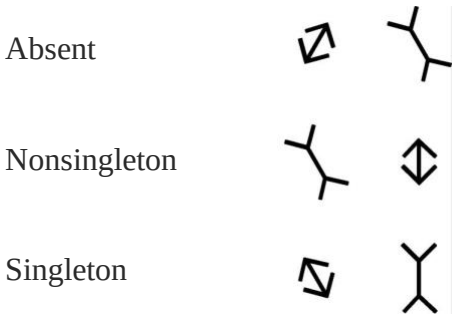

Figure 2. Display types from Proulx and Green (2011). In the "Absent" case, no vertical line was present. In the "Nonsingleton" case, a vertical line was present but was fitted with inward-facing wings, making it appear shorter. In the "Singleton" case, a vertical line was present and had outward-facing wings, making it appear longer.

If French and Phillips's goal in making "striking" a post-experiential phenomenon was to avoid positing errant representations at earlier stages (i.e., at or prior to the level of experience), the evidence suggests that this goal cannot be achieved because such representations are needed. The visual search evidence indicates that the visual system treats lines with outward-facing wings as longer than they really are, and the received scientific explanation of this is that the visual system *misrepresents* their length. Indeed, French and Phillips stress that they do not wish to dispute contemporary "accounts of visual processing," including their commitment to non-factive representational states (2023: 370). While they might attempt to offer an alternative explanation of the search evidence that avoids commitment to perceptual misrepresentation, this would require, at the very least, a significant revision to standard accounts of visual processing.[24] Thus, the post-experiential account, which treats illusory looks as creatures of perceptual judgment, is both phenomenologically dubious and empirically implausible.

The second disanalogy between striking and perceptual representation is that, according to French and Phillips, striking needn't be a representational matter at all:

[24] Although see Phillips (2016) for a discussion of the Müller-Lyer illusion that floats some alternative explanations more congenial to the naïve realist.

> Second, it is far from clear that being struck by a similarity or difference *is* in all cases a matter of experiential representation. Evans (1982; see also Martin 2010) provides an alternative model: "for one thing to strike me as like another is simply a reaction which those things occasion in me; it is not a judgement, to which the question of truth or falsity can significantly be applied" (293)…[T]he idea that striking is not a judgement, open to evaluation as true or false, but perhaps simply a feeling, pulls us away from a representational model. (This volume: xxx)

The idea, we take it, is that for two objects to strike the perceiver as similar is for them to evoke a feeling of similarity, but this feeling differs from either a perceptual representation (as representationalists understand them) or a perceptual judgment because it cannot be assessed for accuracy. Suppose you first see the red car under sodium lights and then you see an orange car under natural daylight. French and Phillips suggest that your feeling of similarity might not be accompanied by any representation of the *respect* in which they are similar. After all, if such a representation were formed, then presumably it would be assessable for accuracy—for either the cars are similar in the represented respect or they are not.[25]

Granting for the sake of argument that feelings of similarity can be understood non-representationally, this proposal has the advantage of explaining illusion in a wholly nonrepresentational manner, removing any lingering whiff of representationalism from French and Phillips's account. However, the retreat from a representational model also invites difficulties.

Consider the problem of distinguishing cases of *illusion* from cases of *perceptual similarity without error*. When you view a rectangular surface at a slightly oblique angle with ample depth cues, normally you will veridically perceive the surface as rectangular and slanted (e.g., Epstein et al. 1977; Howard et al. 2014). Nonetheless, there is (it is often claimed) a sense of *similarity* between the surface and a trapezoidal surface viewed straight-on (e.g., Lande 2018). Indeed, this similarity shows up in the form of slowed visual search for trapezoids in the context of slanted rectangles (Morales et al. 2020). Still, this is not a case of *illusion*, because the surface is not errantly taken to *be* trapezoidal, either in perception or in perceptual judgment. A

[25] Another possibility is that what is represented is the weaker claim that the cars are similar in *some* (restricted) respect, but this would again be assessable for accuracy.

representational model offers a satisfying explanation of how this case differs from French and Phillips's *ICC*: in the latter, the car is errantly taken to be orange even though it is not, and this involves misrepresenting the car as orange. In contrast, while we have a sense of similarity between the slanted rectangle and the trapezoid, we do not misrepresent the rectangular surface as trapezoidal (although we may represent the two as sharing some other property, such as subtended solid angle—e.g., Green and Schellenberg 2018). If French and Phillips were to adopt a representational account of striking, they could avail themselves of a parallel explanation. On such a view, the reason why one's perception of the slanted rectangle is not illusory is that, while one has a feeling of similarity between the slanted rectangle and the trapezoid, nonetheless the rectangle is not *represented* as trapezoidal—and so it does not *strike* one as trapezoidal. However, if for the rectangle to strike one as trapezoidal *just is* for one to have a sense of similarity between it and a paradigm trapezoid, then this sort of explanation is unavailable.

5: French and Phillips: "paradigmatic circumstances"

So much, then, for French and Phillips' notion of subjective impact. Let's turn to the second key notion in their account: paradigmatic circumstances. The red car looks orange, they suggest, because it has a similar subjective impact on the perceiver to orange cars (or perhaps orange things more generally) perceived under paradigmatic circumstances. And they offer natural daylight as a paradigmatic circumstance for perceiving orange cars.

Before evaluating this account, it's worth emphasizing why the appeal to paradigmatic circumstances is needed. While French and Phillips do not give a general theory of the factors that underwrite similarities in subjective impact, they speculate about what these factors might be in particular cases. Thus, regarding the similarity in subjective impact between *ICC* and *VCC*, they write:

> [S]uppose (purely for the purpose of illustration) that the car's redness is a matter of its having a certain surface reflectance profile. And suppose that the product of the interaction of sodium streetlight with this profile which is incident at the retina is closely matched with the product of the interaction of natural daylight with the surface reflectance profile of a paradigm orange object. Because of this match in light incident at the retina, the redness of the car in [*ICC*] is liable to strike *S* as more like orangeness than anything else. (2020: 12-13)

Here, French and Phillips suggest that one factor that might explain the similarity in subjective impact between the red car in *ICC* and the orange car in *VCC* is similarity in the wavelength composition of the light that the two objects supply to the retina—i.e., their associated "color signals".[26] However, if *this* is why the red car in *ICC* is subjectively similar to the orange car in *VCC*, then presumably it is also subjectively similar to countless non-orange cars viewed under appropriate conditions. For example, the red car under sodium streetlights supplies a similar color signal to a white car viewed under orange light, so the two should presumably be similar in how they "strike" the perceiver. More generally, the red car in *ICC* will have a similar subjective impact to illuminated cars such that the illuminant and the car's reflectance combine to send a similar color signal to the eye. Thus, French and Phillips must explain why the car looks *orange* in *ICC* rather than (say) *white*.

The answer, we take it, is that when we restrict our attention to *paradigmatic* circumstances for perceiving cars (or the colors of cars), the red car in *ICC* is similar in subjective impact to orange cars but not to white cars. The red car does not strike us as similar to white cars seen under natural daylight, but does strike us as similar to orange cars seen under natural daylight. But why is natural daylight privileged in this way? What makes it a "paradigmatic circumstance" for perceiving the car's color?[27]

French and Phillips do not answer this question, although it is likely that they intend to rely on Brewer's (2011, 2019a) theory of looks, which cashes out the notion of "paradigm" in more detail. Indeed, they acknowledge that their account of looks is heavily indebted to Brewer's (French and Phillips 2020: 12), going so far as to suggest that their view "may be understood as a variant of Brewer's view" (This volume: xxx, n. xxx). So let us consider whether Brewer's account can help them.

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[26] See, e.g., Byrne and Hilbert 2003: 10.

[27] French and Phillips would likely grant that there are multiple paradigmatic circumstances for perceiving the car's color, and natural daylight is just one of them. While they don't list any other paradigmatic circumstances for perceiving colors, they propose further examples when it comes to perceiving shapes and sizes. Thus, a paradigmatic circumstance for perceiving the shape of a round penny involves seeing the penny head-on (i.e., with its surface perpendicular to the line of sight) (This volume: xxx), and a paradigm circumstance for encountering the size of a tree involves seeing the tree at a distance of 10 meters (xxx).

In his most well-known exposition of the view, Brewer characterizes paradigm exemplars of a kind as "instances of the kinds in question, whose association with the terms for the kinds partially constitutes our understanding of those terms, given our training in the acquisition of the relevant concepts" (Brewer 2011: 104). More perspicuously, he explains that an exemplar is a paradigm of Fness when it is perceived in circumstances where it is "a perfectly appropriate exemplar for the acquisition" of the concept F (107). For instance, a paradigm exemplar of redness is a red object encountered under circumstances in which it can be used to acquire the concept RED. Assuming that the red car under natural daylight is an appropriate exemplar for acquiring the concept RED while the red car viewed under sodium light is not, it follows that the former is a paradigm exemplar of redness while the latter is not.

While Brewer speaks of "paradigm exemplars," French and Phillips speak of "paradigmatic circumstances." Nonetheless, the two notions can be straightforwardly linked. Paradigmatic circumstances for perceiving Fs may simply be those circumstances in which an instance of Fness is a paradigm exemplar of Fness (in Brewer's sense). So, because the red car in VCC is a paradigm exemplar of redness, the circumstances in which it is perceived (viz., natural daylight) are paradigmatic circumstances for perceiving redness.

However, a problem arises when we ask *why* the red car is a suitable exemplar for acquiring the concept of redness in *VCC* but not in *ICC*. Here, the obvious answer is simply that the former *looks red* while the latter does not. In general, if you wish to teach someone the concept F using visual examples, one should pick only those things that look F. If so, then the notion of paradigm exemplars is unfit to figure in a reductive account of looks. We have developed this problem for Brewer's view at length (Byrne & Green 2023); a parallel problem arises for French and Phillips.

According to French and Phillips, the red car looks orange in *ICC* because it has a similar subjective impact to orange cars viewed under paradigmatic circumstances—namely, in natural daylight. Above, we saw why this restriction to paradigmatic circumstances is crucial to explaining why the car looks orange and not countless other colors. However, if the reason natural daylight is a paradigmatic circumstance for perceiving an orange car is just that this is a condition in which the car *looks orange*, then French and Phillips's account reduces to the claim that the car in *ICC* looks orange because it has a similar subjective impact to orange cars perceived in those circumstances where they look orange. But this simply falls back on the "looks orange" locution that was to be explained.

In fact, we suspect that the situation for French and Phillips is worse than it is for Brewer, because one of Brewer's potential escape routes is closed off to French and Phillips. One way to avoid the foregoing difficulty would be to identify the *paradigmatic* circumstances for perceiving a color with all and only those circumstances in which one can be *acquainted with* the color, as Brewer (2019a) proposes (again, swapping "paradigmatic circumstances" for "paradigm exemplars"). Perhaps we can be acquainted with the car's color when we perceive it under natural daylight, but not when we perceive it under sodium light. Accordingly, the reason the car looks orange in *ICC* is that it has a similar subjective impact on the perceiver to orange cars viewed under those circumstances in which we can be acquainted with their orangeness. And the reason it does *not* look, say, white is that it does *not* have a similar subjective impact on the perceiver to white cars viewed under circumstances in which we can be acquainted with their whiteness (which, we may assume, include natural daylight but not orange light). This account would explain why the car looks orange in *ICC* in "looks"-independent terminology.[28]

However, this gambit crucially involves restricting the circumstances in which we can be acquainted with an object's F-ness to the paradigmatic circumstances for perceiving Fs, and no others. Unlike Brewer, French and Phillips cannot impose this restriction. Recall that a cornerstone of their view is that we can be acquainted with the very same environmental objects and features in both veridical perception and illusion.[29] We are acquainted with the same things—the car and its redness—in both *VCC* and *ICC*. It is just that we are acquainted with them under non-paradigmatic circumstances in *ICC*, leading them to strike us as other than they are. As such, French and Phillips *cannot* say that we are acquainted with a car's color only under the paradigmatic circumstances for perceiving it. More generally, they cannot use the range of conditions in which we are acquainted with an object's F-ness to delimit the range of paradigmatic circumstances for perceiving Fs.

Summing up: French and Phillips's account enjoys advantages over competing naïve realist treatments of illusion (see section 3 above). However, their central notions of "subjective

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[28] We also object to this revision of Brewer's view (Byrne and Green 2023: 13-5). But we grant that it is an improvement.

[29] See their *Austerity* thesis: "Illusions do not differ from veridical cases…neither in relational nature, nor in the kind of character-constituting presented elements to which they are relations" (French and Phillips 2020: 3).

impact" and "paradigmatic circumstances" are problematic, raising serious difficulties for the view. In what remains, we offer a brief positive case for representationalism.

6: Representationalism (briefly) defended

Earlier, we expressed dissatisfaction with French and Phillips' motivation for naïve realism, and suggested an alternative, namely that representationalism cannot explain the conspicuous difference between perception and cognition. Seeing is not believing. Neither is it supposing, or (sensuously) imagining. Seeing a yellow pencil in daylight, where the pencil's color is manifest to the perceiver, is obviously different from believing or supposing that the pencil is yellow, and also from visualizing the pencil as yellow. In some intuitive sense, the seen pencil and its features are present to the mind in a way that the believed, supposed, or visualized pencil is not.[30] As Broad puts it (contrasting "hearing a bell" and "thinking of a bell"), "every one recognises that there is a deep difference between the situations…in the perceptual situation we are 'in more immediate touch with' the bell than in the thought-situation" (1925: 144).

However, if representationalism is correct, then *all* of these states are fundamentally matters of mental representation, which seems to slight the specialness of perception. Representationalism must therefore be wrong as an all-encompassing theory, and the sensible retreat—avoiding the sense-datum theory—is to naïve realism. While believing, supposing, and sensory imagining are representational, perception is not, and involves a non-representational relation which—for want of anything better—we can call "acquaintance". French and Phillips' particular version of naïve realism may have serious problems, but—according to this line of thought—naïve realism in *some* form or another must be right.

However, the problem with this alternative motivation for naïve realism can be brought out by an analogy with knowledge. Knowing is not believing. Knowing that the pencil is yellow is obviously different from believing or supposing that the pencil is yellow, or even from being justified in believing that the pencil is yellow—one can be in these latter states without knowing that the pencil is yellow. In some intuitive sense, the known fact that the pencil is yellow is present to the mind in a way that the believed, supposed, or justifiably believed fact is not. However, if representationalism is correct, then *all* of these states are fundamentally matters of

[30] On sensory imagination in the context of the dispute between representationalism and naïve realism, see Martin 2002.

mental representation, which seems to slight the specialness of knowledge. The obvious retreat is to a non-representational account of knowledge, on which knowing that the pencil is yellow is not to represent—in particular, not to *believe*—that it is yellow, but to be (for want of a better term) *acquainted* with the fact that the pencil is yellow.

This is not a good argument for non-representationalism about knowledge. An uncontroversially representational state, namely belief, may be partly constitutive of knowledge even though knowledge affords a special kind of contact with reality that mere belief does not. Knowledge, unlike belief, is factive; it may also be unanalyzable in terms of more basic components. None of this means that knowledge is not representational. Admittedly, knowledge cannot *mis*represent, but infallibility and representation are not incompatible: "Everything is self-identical" represents that everything is self-identical, but that sentence with its actual meaning could not represent falsely. A "knowledge-firster" of the most uncompromising kind (Williamson 2000) has no reason to disown representationalism about knowledge.

Of course, the representationalist about perception still faces the problem of explaining exactly *how* perceptual representations differ from those formed in thought or visualization. However, there are various accounts on offer that purport to do just this, all of which have virtues.[31] Assuming some such account can be made to work, the representationalist may simply take it on board, thus explaining the difference between perception and thought without conceding that perception is non-representational.

French and Phillips approvingly quote the following passage from John Campbell:

> Suppose we have a medium which, like glass, can be transparent. But suppose that, unlike glass, it is highly volatile, and needs constant adjustment and recalibration if it is to remain transparent in different contexts. Suppose, in fact, that the adjustment required is always sensitive to the finest details of the scene being viewed. The upshot of the adjustment, in each case, is…simply that the medium becomes transparent. You might think of visual processing as a bit like that. It is not that the brain is constructing a conscious inner representation whose intrinsic character is independent of the environment. It is, rather, that there is a kind of complex adjustment that the brain has to

[31] For an overview, see Clarke and Beck 2023. For specific proposals see, for instance, Beck 2018, Green 2020, and Block 2023.

> undergo, in each context, in order that you can be visually related to the things around you; so that you can see them. (Campbell 2002: 119)

French and Phillips take Campbell's analogy to show how naïve realism is compatible with contemporary vision science, and the general Helmholtzean idea that "perception involves constructing or inferring a representation of external reality based on impoverished proximal input" (2023: 369). The representations and computational processes postulated by vision science are part of the process of adjustment that allows Campbell's volatile medium to become transparent, putting us in "perceptual contact with the external world" (370).

One should not press analogies too hard, but there is nothing here so far for a representationalist to dispute (apart from Campbell's remark about "conscious inner representations"[32]). And we can see why representationalism has the edge over naïve realism by considering cases where the conceded "representation of external reality" produced by the visual system is in error. Return to *ICC*, in which the red car under sodium street lights looks orange to *S*. According to vision science (we may assume), *S*'s visual system is "computing the likely distal source of proximal input" (French & Phillips 2023: 370) and comes up with the *wrong* answer—an orange object, not a red one. Since the entire point of this mechanism is to make the organism aware of the nature of its environment, its deliverances will not remain buried in a perceptual module, they will be "the input to a thinking, concept-applying and reasoning system" (Evans 1982: 158). There is no supernatural filter preventing erroneous outputs of perceptual computations from intruding into *S*'s perceptual consciousness. Illusions thus involve perceptual error, which is exactly what the naïve realist denies.

7: Conclusion

Between this paper and its companion (Byrne and Green 2023), we have considered several leading naïve realist theories of illusion, concentrating on the accounts defended by Fish, Brewer, and French and Phillips. All face serious difficulties. French and Phillips's account, in

[32] Assuming these are (neural) symbols of some kind, any sensible representationalist will insist that the perceiver is not conscious *of* them, and that they are not conscious in any other sense. As French and Phillips note, Campbell also stresses that perception is factive (2023: 370); moreover, "see that p" arguably entails "know that p" (Williamson 2000: 37-8). But just as the factivity of knowledge does not imperil its representational nature, neither does the factivity of perception.

particular, appeals centrally to the notions of "subjective impact" and "paradigmatic circumstances," both of which generate problems for the view. Moreover, to the extent that naïve realism fits with a common-sense conception of perception, or the difference between perception and thought, representationalism fits equally well. We conclude that the representationalist theory of illusion remains viable and enjoys considerable advantages over its naïve realist competitors. Illusions are cases of perceptual misrepresentation.[33]

[33] Thanks to Ori Beck and Farid Masrour for detailed comments on an earlier draft of this chapter.

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