Chudnoff on the Awareness of Abstract Objects¹

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Elijah Chudnoff's *Intuition* is a rich and systematic work. There is much in it I admire that I will not comment on here, but I would like to stress at the outset that there is a great deal of insightful argumentation packed into what is a relatively compact book of under 250 pages. I find much of what he says to be plausible. It will not surprise anyone, however, that my remarks will focus on what I don't find so plausible.

More specifically, my focus will be on Chudnoff's account of our awareness of abstract objects. On the view developed in *Intuition*, intuitions are intellectual experiences that play an epistemic role parallel to that played by perceptual experiences: both put us in contact with independent objects, making us aware of them, and this awareness in turn enables knowledge. Perceptual experience makes us aware of concrete objects, intellectual experience makes us aware of abstract objects, and awareness of either kind grounds knowledge of propositions made true by those objects. This parallelism is a guiding theme of Chudnoff's book.

A major challenge for such a view is, of course, the fact that abstract objects, unlike concrete ones, cannot stand in causal relations to the experiences in question. Perception conspicuously features a causal connection between the objects of perception and perceptual experience; if a causal connection is generally required for experience to put us into epistemic contact with mindindependent objects, then intuition experiences cannot put us into epistemic contact with abstract objects. Accordingly, Chudnoff denies that such a causal connection is necessary; instead, he offers an account of a link between intuition experiences and abstract objects meant to do the same kind of work that the causal link does in the case of perceptual awareness. The link is metaphysical in character, turning on the essence of particular intuition experiences, those that in fact put us in contact with abstract objects.

My doubts about Chudnoff's account do not turn on the mechanics, so to speak, of the link he forges between intuitions and abstract objects. That link is happily free of any hint of "occult faculties," divinely pre-established harmony, or other objectionable elements. My worry is rather about the epistemic significance of the link. Can the link described in fact establish a relation of awareness that can ground knowledge? In these remarks I focus entirely on fleshing out my doubts about this by developing an example that is meant to be parallel in all relevant respects to cases of intuitive awareness as described by Chudnoff.

In what follows, I first (§1) provide an overview of the key elements of Chudnoff's account. Then, in preparation for the critical argument itself, I describe (§2) in the abstract the strategy of

using a parallel example to cast doubt on his account. In the last section (§3) I develop the example and argue that it presents a significant challenge to Chudnoff's account.

Chudnoff's Account of Awareness

According to Chudnoff, while being aware of a concrete object by means of perceptual experience is of course different from being aware of an abstract object by means of intellectual experience, both kinds of awareness are determinates of a common determinable of awareness. So what does awareness in general require?

Chudnoff focuses on two features: *dependence* and *differentiation*. In the case of a perceptual experience that grounds knowledge, one is perceptually aware of some object θ in part because one's experience is causally dependent on θ and in part because one's experience enables one to differentiate θ from other objects in the environment. The crucial questions for an account of our awareness of abstract objects are, then, these: How could an intellectual experience be dependent on the relevant abstract object or objects? And how could it serve to distinguish that object from others?

Chudnoff develops what he calls "Formal Naïve Realism," formulated thus:

Formal Naïve Realism: If S is intuitively aware of an abstract object o by having intuition experience e, then e depends on o, in that: in accordance with the essence of e, o is part of the principle of unity that e's (material) parts instantiate and thereby determines e's phenomenal character.²

On Chudnoff's view, an intuition experience is not simple but composed of various mental episodes; so, there are ("material") parts to such experiences—episodes of imagination, attention, and so on, that constitute the intuition experience itself. The suggestion here is that a token intuition experience is necessarily constituted in a certain way, and that way is captured by a "principle of unity" where a statement of that principle of unity must mention the abstract object. Just as the essence of a particular statue of Plato, for example, may require that its parts be arranged in ways that result in a figure *resembling Plato*, the essence of a particular intuition experience making one aware of, say, the addition function, may require that its parts be arranged in the right ways, ways that are reflected in its phenomenology, where in describing those ways one would mention the addition function itself.

What sort of arrangement might be at issue? The relevant arrangement is specified via the notion of differentiation. The phenomenology required by the essence of the intuition is one that

differentiates the relevant abstract object from others. If we have an intuition experience regarding a geometrical theorem, for instance, it may enable us to distinguish between a variety of elements in a plane figure, with some being the object of attention and others in the background. Or in another case, the parts of the experience may help us see similarities and differences between different mathematical functions. The particular experience might have occurred in a variety of ways, but what all of those ways have in common is that they enable the subject of the experience to contrast the relevant abstract object from others.

So far, this way of describing the link between the experience and the abstract object may seem rather indirect. After all, the abstract object seems only to come into the story as a way of capturing what all the various different possible occurrences of the particular intuition experiences must have in common. One may suspect that this reference to the abstract object is dispensable in principle. Suppose we have on hand a description of all the different possible ways this particular intuition event could have occurred, where each description is given without mentioning the abstract object at issue. Perhaps to have a convenient or just manageable way to describe all those possibilities we'd need to mention the abstract object, but this fact may seem to be of limited significance. Why not just give the disjunction of all the determinate descriptions and say that this captures the essence of the intuition experience?

The answer, I take it, lies in the explanatory role of essences. If we were simply to give the disjunction of all the determinate descriptions of possible ways for the experience to occur, we would indeed give a necessary truth about that particular experience, but we wouldn't have given an explanation of the sort appeals to essence are meant to give. Why are those arrangements possible and not others? Because part of what it is to be that particular event is to be an experience the parts of which are arranged in a way that enables differentiating that abstract object from others, and those are ways that allow such differentiation. So, in stating what it is to be that particular event, the abstract object must be mentioned. Giving the long disjunction of various determinate possible ways for the experience to occur would not, by contrast, succeed in stating what it is to be that event.

Both dependence and differentiation are captured in this account. The nature of the experience requires that it take a certain form, one that differentiates the relevant abstract object from others; further, since reference to that object is required just to state what it is to be that experience, the nature of that experience requires that the abstract object exists. That object, because of its abstract nature, will exist necessarily anyway, but the point here is about an explanatory dependence that goes beyond a mere modal claim. Still, a counterpossible modal claim is implied. That experience could not occur unless the abstract object existed, so, *per impossibile*, if the abstract object had not existed, the experience could not have occurred.

Finally, it should be stressed that on Chudnoff's account, the claims about essences are claims about *particular* intuition experiences, not *types* of experiences. As he makes explicit, he allows that even if a particular intuition e has an essence that puts the cognizer into contact with an abstract object, another event with the very same phenomenology could occur without having such an essence. The claim is not about what it is to have that phenomenology but about what it is to be that particular experience event.

Using a Parallel Case

The link described by Chudnoff seems possible; but does that link make sense of awareness of abstract objects? This is where my worry lies. To explore that worry and give it definite shape, we might describe other examples where a person has an experience linked in the very same to some other kinds of objects and ask whether this link ensures that this person is aware of those objects. Since awareness is supposed to be something grounds knowledge, we can ask whether, in such an example, the person is in a position to know the relevant things. If not, then this is a problem for Chudnoff's account.⁴

Suppose, more precisely, that we have an example in which (a) a subject *S* has an experience *e* such that *e* relates an object *o* in just the way intuition experiences relate to abstract objects according to Chudnoff and (b) S is (intuitively!) not in a position to know anything about that object *o*. Such an example would, if accepted, demonstrate that Chudnoff's account of how intuition experiences relate to abstract objects is unsuccessful. That account is supposed to describe a relation of awareness that puts a person in a position to know about the objects of which she is aware, after all; so if awareness as per Chudnoff fails to put one in that position, the account of awareness fails.

Dialectically, however, it is difficult to provide such an example for two reasons. First, at no point does Chudnoff commit himself to conditions *sufficient* for being aware of an object. In his statement of Formal Naïve Realism, Chudnoff describes conditions that are *necessary* for awareness of abstract objects, and elsewhere he describes awareness as having the consequence that a person aware of an object is thereby in a position to demonstrate it and form *de re* thoughts about it. But given this lack of commitment, any example we give is going to be one where it is open to him to say that, while the case is one that is similar to how he describes cases of intuitive awareness, it is not one in which the person's experience relates to the object in "just the way" he thinks intuition experiences relate to abstract objects in cases of awareness. It might be missing some feature that he hasn't elaborated on.

Still, an example that fit all the conditions he does describe as necessary will be *prima facie* one that he ought to count as awareness—at least in the absence of any story about what further

necessary conditions have been left unsatisfied. If we have this kind of example, then, and want to use it to attack Chudnoff's account, we should rely on a premise to the effect that there is no awareness-relevant difference between that case and the cases of intuitive awareness he accepts.

There is a second difficulty in trying to use a parallel case to cast doubt on Chudnoff's account. In describing the kind of example one might search for, I spoke of the subject's not being in a position to know. It would be easier to assess, for a hypothetical case, the question as to whether or not the subject knows the proposition at issue. But the theory of awareness doesn't interact quite so easily with knowledge; on Chudnoff's view, awareness of an object is a ground of knowledge, but a ground need not be a condition that always suffices for what it grounds. He argues explicitly (§6.2) that a condition can ground knowledge without sufficing for it, and I don't propose to take issue with that argument here. The point is that in a case where the person knows on the basis of awareness, that awareness is a ground, but that ground can be defeated in various ways. Given this, all that is ensured by a person's being aware of an object is that she is in a position to gain knowledge about it. So we need to evaluate the example on the basis of that question: is she, in the example at issue, in such a position?

That question is a bit harder to assess than the more straightforward "Does she know?" But it becomes easier if we approach it by asking whether, in the case at hand, there is some identifiable defeating factor such that the subject *would* know if that factor were absent? Is the alleged awareness here something with the power to ground knowledge but is merely stymied because of this other factor? If no such factor can be identified, we have reason to think that the subject isn't really in a position to know in the first place.

With these points in mind, I will construct an example that is parallel in all relevant ways to a case in which a person gains knowledge via intuition in the fashion imagined by Chudnoff, yet where that person fails to be in a position to know the relevant proposition. The example is modeled on cases of veridical hallucination.

The Veridical Hallucination Plus Example

Cases of veridical hallucination are familiar from the literature on perception. Say that you have a hallucination of a brown dog in front of you, and in fact there is a brown dog in front of you, though that actual dog plays no role in causing your visual experience. Even if the entire scene before you matches perfectly what has been by chance conjured up by your brain chemistry, it is clear that you do not in fact *see* that dog, you are not *aware* of it, and you certainly are not in a position to *know*, on the basis of that experience, that there's a brown dog in that spot.

Since intuition experiences are, on Chudnoff's account, like hallucinations in being causally dissociated from their objects, it seems apt to build our example starting with cases of veridical hallucinations. Let's develop the example in two stages.

First, we generalize the situation of the hallucinator as follows. Imagine a world in which human-like subjects exist, where those subjects enjoy sensory experiences that are, phenomenologically, exactly like our perceptual experiences, yet those experiences are *never* caused by objects in the surrounding environment. Let Amy be one of these subjects, and let us focus solely on visual experiences. As with everyone else in this world, Amy's visual experiences are caused by factors internal to her central nervous system, but not by objects in the environment, and there is no significant indirect constraint running from those environmental conditions to those internal conditions that produce the experiences. Now say that Amy has a particular visual experience v with the phenomenal content *there is a brown dog in front of me.*⁵ Suppose, further, that Amy believes that there is a brown dog in front of her as a result of v and that, in fact, there *is* a brown dog in front of her.

So far, this is a straightforward case of a veridical hallucination, albeit with the hallucinatory activities rendered statistically normal. The visual experience accurately represents the scene but fails to count as perception, and of course Amy fails to gain knowledge of the dog in front of her from that experience. She is right merely by luck. Call the example specified thus far the *Veridical Hallucination* (VH) example.

Now let us produce a different example by building into the VH example additional elements, namely, those introduced by Chudnoff's Formal Naïve Realism. Call this new example *Veridical Hallucination Plus* (VH+), as we have *added* conditions to VH.

In VH+, Amy's particular experience v is essentially such that it could not occur unless the concrete situation of there being a brown dog in that location indeed existed. Another experience with the same content might occur without there being any such dog, but this one—the particular experience v—could not. That situation is, of course, a truth-maker for Amy's belief that there is a brown dog in front of her. Further, in VH+, the essence of v is such that it necessarily differentiates that brown-dog situation from other kinds of situations of a sort that might be visually represented. So, if v occurs, it must be one that is different in salient ways from a visual experience representing a black cat up ahead, or one representing a region of space devoid of animals, or the like. The situation of there being a brown dog in that location is a principle of unity for v, in that v could not exist without its various elements being arranged in one of the ways that allow for such differentiation.

Finally, these points about v are points about the essence of v, not just modal facts. What it is to be that particular visual experience is, in part, to be something that occurs only when there is a

brown dog in that location and to be phenomenologically shaped so as to enable the subject to distinguish it from other visual experiences with related but contrasting contents. Given these additions, VH+ appears to be parallel to examples of knowledge gained by intuition as depicted by Chudnoff. Does it seem that Amy knows, in VH+, that there is a brown dog in front of her? Or even that her experience puts her in a position to know?

I don't think so. The additional conditions we included in specifying VH+ do not make any appreciable difference to our impression that this is still a case of veridical hallucination. The difference between VH and VH+ seems to be irrelevant as to whether she is aware of the dog—at least, that is how it strikes me.

Keep in mind that the story in VH+ is the same as that in VH with respect to the causes of the visual experiences that Amy has. They are caused by factors internal to Amy in a way unconstrained by the environmental conditions. The fact that the particular experience v requires, as part of its essence, that it not occur unless there is a brown dog in that location does not itself imply anything about the causal generation of v. The point is obvious, but it bears emphasis for the following reason. Often enough, claims about essences of particular entities are bound up in various ways with claims about the origins of those entities. For many ordinary material objects, after all, it is plausible that their origins are essential to them. It may be that in trying to imagine VH+ we will be tempted to incorporate the supposition that the causal story behind v involves the thing mentioned in describing its essence, namely, the situation of there being a brown dog in that location. Such temptation must be resisted. If we imagine a case where the dog situation is causally involved in generating v, the example will of course fail to be appropriately parallel to the case of intuitions and abstract objects as Chudnoff understands it.

If Amy is in a position to know that there's a brown dog in front of her in VH+, this must be due to the necessities imposed by the essence of v, even though those necessities are independent of causal relations between v and the dog. While I do not have an argument to offer here, I confess that it seems to me hard to believe that those necessities could do that kind of work.

A point that may be relevant concerns the individuation of events in general. The intuitions that Chudnoff is talking about are, of course, *events*: they are experiences, things that occur at times to cognitive subjects. The essential properties of particular events are, however, notoriously difficult to establish. What's more, it is not so clear that those essential properties are of much explanatory significance. Consider two views about events: an extremely fine-grained and a very coarse-grained view. On the first, if an event is a slow walking through a forest, it could not occur without being a slow walking through a forest, and indeed every property instantiation involved in that event is essential to that event. On the second, all that is essential to an event is that it occur in a certain region of space and time, so that the slow walk through the forest could have been, say, an event of

a corpse being dragged along by the feet through that same region. Neither view is especially plausible given our ordinary way of thinking about events, of course, but plausibility is not to the present point. The present point is, rather, this: it's not clear whether these two views disagree on what the world is like. It is tempting, at least, to see them as two ways of describing the same basic reality. Where an advocate of the first view may say that an event in one world is a different event from one in another world because they involve distinct properties, an advocate of the second view may say that it is the same event, but acknowledge, of course, that there are different properties involved in the two possible situations. What difference does it make which way the events are counted?

Now, I don't in fact hold that the two views are equivalent. But it is easy to feel the temptation here, and that is the point to which I want to draw attention. Given how it is *prima facie* hard to see a significant difference between those two views, how likely is it that there is a significant difference between a situation in which Amy has a visual experience with all the same *non-essential* properties as v and the situation in VH+?

Let us spell out a bit the two situations. Say that Amy could have had a visual experience v^* instead of v, where v^* has the same phenomenology as v, the same causal origins as v, and is like v in that it, too, is accompanied by the concrete situation involving the brown dog. The only differences between them are facts about which properties are essential to them. The essence of v^* does not include the actual existence of the concrete situation involving the dog; nor does it include the constraint on possibilities captured by referring to differentiating that situation from others. Let us say that v^* could in fact occur in all the ways v can and more, so that the modal profiles of v^* and v overlap as much as possible. A difference is that v^* could have occurred in a situation where the dog situation does not exist; another difference is that v^* could have occurred with a phenomenology that does not provide for differentiating the dog situation from others. But let us add, finally, that the possibilities in which v^* occurs without that dog situation existing and the ones in which its phenomenology fails to provide the relevant contrasts are themselves worlds very far away from the actual.

In light of this, how plausible is it that the difference between v and v^* makes for a difference between being aware of the brown dog and thereby in a position to know there's a brown dog in that location and merely suffering something like a veridical hallucination that such a dog exists?

Let us pull these considerations together to construct an explicit argument. The conclusion to be reached is that Chudnoff's account of our awareness of abstract objects is inadequate—more precisely, inadequate in that it leaves it mysterious just how such awareness might work. The conditions he produces as conditions on awareness are insufficient for awareness and it is far from

clear what other factors could be mentioned that would help. So the big puzzle for the alleged parallelism between perception and intuition is unsolved.

To set up the argument, in addition to using VH+ I will use another example. The other example will be "SCI" for a "Standard Chudnoff Intuition" case. For fairness, I use one of his actual examples.

So here is SCI. Basil is a human with significant intellectual abilities, and he considers the claim that two circles can have at most two common points. In considering this, he has an intuition, an experience such as the one Chudnoff describes on page 50 of *Intuition*, and he subsequently believes, on the basis of that experience, that two circles can have at most two common points. This proposition is true and justified by such an experience. His experience—call it ϵ (for "circles")—depends on an appropriate abstract geometrical object g in that: in accordance with the essence of ϵ , ϵ existence requires the existence of g, and what it is to be ϵ is in part to have a phenomenology that enables g to be contrasted with other relevant abstract objects.

The argument then may be expressed thus:

- 1. In VH+, Amy does not know that there's a brown dog in front of her in virtue of having visual experience *v*.
- 2. There is no awareness-relevant difference between Amy in VH+ and Basil in SCI.
- 3. There is no identifiable factor in VH+ not present in SCI that defeats Amy's would-be knowledge that there's a brown dog in front of her.
- 4. Hence, Chudnoff's account of our awareness of abstract objects is inadequate.

With premises 2 and 3, the only support I can offer is indirect: if I am given a suggested awareness-relevant difference, I can argue that the proposed difference is not to be found, or that it is not relevant; likewise with a suggestion about defeating factors and premise 3. In closing, I'll consider one suggestion for each.

Regarding premise 2, I want to consider a suggestion Chudnoff made in response to an earlier version of this example. He suggested that there was indeed a relevant difference between VH+ and his kind of example, noting that it is one thing to say that the existence of an experience "depends for its existence" on the relevant object (the situation involving the dog, or some situation involving abstract objects) and saying that "its phenomenology depends on" the relevant object. The example as I've presented it here, at least, builds in such dependence of phenomenology on the object. Insofar as I understand what Chudnoff might have in mind by saying that the phenomenology of an intuition depends on the abstract object it allegedly makes us aware of, the

phenomenology of Amy's experience *v also* depends on the object it allegedly makes us aware of (the situation of the brown dog being in that location).

Recall that I stipulated, in describing VH+, that as part of its essence, v necessarily differentiates the dog situation from others that might be visually represented, so that the dog situation is a kind of principle of unity for v; no experience event could be v unless it had a phenomenology that provided for such contrasts. If this is what Chudnoff means by saying that the "phenomenology depends on" the object—and it seems to be all he *could* mean—then our v in VH+ indeed features such dependence, and the two cases do not yet differ in an epistemically significant way. I wonder if he might be thinking (surely unconsciously) of the dependence as a kind of causal dependence, where the abstract object as it were reaches down and shapes the phenomenology. Of course, he will not want to appeal to that as a relevant difference. So the second premise remains plausible.

The third premise might be challenged as well, and again I am leaning on comments made by Chudnoff in response to an earlier presentation. Recall that in VH+, visual experiences are never caused by objects in the environment. As a result, even though Amy's experience ν is veridical, many, presumably most, of her visual experiences will not be, and she has no way of telling the difference between them. In contrast, intuition experiences will not, we can hope, manifest such a scandalously low proportion of veridical cases. Suppose we compare VH+ to Alvin Goldman's well-known example of the countryside littered with many barn facades, where our subject happens to look at the one real barn and form the belief that there is a barn there. Here, it is plausible to say that the experience is a ground of knowledge, but knowledge is blocked by the defeating factor of there being many barn facades in the vicinity. Perhaps, then, we could say that VH+ is a case where Amy is indeed aware of that brown-dog situation, and it is a ground for knowledge, but it fails to be knowledge only because of the presence of all those other experiences—all those visual facades, so to speak.

This does not seem to me to explain what is going on. Suppose we tweak VH+ so that Amy has a run of incredibly good luck; for a period of three weeks, say, the visual experiences she has are all both veridical and linked by their essential nature to the concrete situations in her vicinity. In that case, would she know that there's a brown dog in front of her? Presumably not. But notice that there is no way, given the general background of VH+, to ensure that frequent veridicality is anything other than luck: since the environmental objects never cause visual experiences, any such run of truth is not distinguished from the single case in our original VH+ by anything than the sheer amount of good fortune.

What's most important to appreciate here is that in imagining Amy having this long run of good luck, we are bringing her case closer yet to the case of Basil in SCI. If we are presuming that

intuition experiences are often veridical while also bearing in mind that those experiences are not causally connected to those abstract objects, the amended VH+ seems quite parallel to SCI. Yet it still seems Amy fails to know. So premise 3 seems to stand as well: the factor we identified does not seem to make the difference between SCI and VH+.

There are surely other possibilities to consider here, and I am very curious to hear Chudnoff's suggestions.⁷ But I want to say that even if, as I am now inclined to think, that his account of our awareness of abstract objects is inadequate, an adequate account might well incorporate some of the elements he describes. As I agree with him that there is, indeed, intuitive knowledge, then there must be some appropriate account of it, and I am willing to bet that the appropriate account will not require occult faculties, divinely pre-established harmony, or other such desperate measures. My own leaning is to return to some version of Understanding-Based Reliabilism, a view he takes pains to attack in *Intuition*. But that is a task for another day.

Notes

¹ The text below is substantially revised from remarks first delivered at the Florida Philosophical Association conference in November 2014 in Tampa, Florida, for a symposium on Elijah Chudnoff's book *Intuition* (Oxford University Press, 2013). All page numbers cited in the text are references to that book.

² Chudnoff, *Intuition*, 223.

³ Chudnoff, *Intuition*, 212, footnote 6.

⁴ My thinking about this strategy is very much shaped by Chudnoff's suggestion to me at the 2014 FPA conference that my example is best used in a kind of "bad company" argument. More precisely, that argument would take as premises that (i) the person in my example lacks knowledge and (ii) there is no epistemically relevant difference between my example and the descriptions he offers of intuitive knowledge. The inference to draw is that fitting the descriptions he offers of intuitive knowledge does not explain such knowledge. As is spelled out in this section, matters are a bit more complicated than that.

⁵ If it matters, we could adjust this aspect of the example so that the content is not just *there is a brown dog in front of me* but further *I am aware that there is a brown dog in front of me*. That would ensure that the phenomenology is, in Chudnoff's terms, presentational. I have left this off just to keep things simpler, but if it's deemed important, we could add such content to the example. So far as I can tell, adding presentational phenomenology does not make a difference as to how we should think about the conditions under which one is indeed aware of something, which is our topic here.

⁶ This suggestion was made in his reply to me at the 2014 FPA symposium. The text in quotes is taken from his handout distributed during that session.

⁷ Perhaps one might challenge premise 3 by pointing to the fact that VH+ does not have built into it the presentational phenomenology that Chudnoff describes; the content of Amy's *v* is just *there is a brown dog in front of me* and not *I am aware that there is a brown dog in front of me*. As I noted above (footnote 3) I made that choice deliberately for simplicity, but I am happy to add it to the example, as I think it extremely unlikely to make a difference. What matters is whether the subject is aware of the object, not whether the subject has an experience that includes the content that the subject is aware of the object.