Inexpressible Ignorance

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Sometimes, ignorance is *inexpressible*. Lewis (2009) recognized this when he argued that we cannot know which property occupies which causal role. As he put it, "We cannot answer the question: which property occupies that role? But worse: not only can we not answer that question, we can't even ask it" (Lewis 2009, 215–16). This peculiar state of ignorance arises in a number of other domains too, including ignorance about our position in space and the identities of individuals. In all these cases, we are ignorant in a way that we cannot express.

What exactly is inexpressible ignorance? It is not hard to give an initial characterization of the phenomenon (section 1). The hard question is what it really consists in, for I will argue that, on many standard models of ignorance, there is nothing it *could* consist in (section 2). In particular, in cases of inexpressible ignorance, we arguably know all the *propositions* or *facts* there are to know about the domain, in which case the ignorance cannot be assimilated to ordinary cases of not knowing a proposition or fact. Instead, I will argue that the ignorance consists in a kind of "alienation" from reality, an alienation that can arise even if one knows all

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the propositions and facts. I try to articulate this sense of alienation in section 3.

If this is correct, it shows that avoiding alienation is an overlooked epistemic value: when aiming to "know" the world, we care not just about knowing the propositions and facts but also about not being alienated. It also shows that various objections to Lewis—for example, by Langton (2004) and Schaffer (2005)—miss their mark, since they assume that the ignorance consists in not knowing a proposition. I discuss these points along the way.

1. The Phenomenon of Inexpressible Ignorance

Before we can ask what inexpressible ignorance consists in, we need some initial characterization of the phenomenon. This is best done by example.

1.1 Where Am I?

Perhaps the clearest example arises if one takes seriously the Newtonian view of space. This is the view that space is a real substance: a three-dimensional, infinitely extended, Euclidean object that endures through time. To say that space is a real substance is to say (among other things) that it exists independently of matter. Were there no matter, on this view, there would still be *something*, namely, space itself.

It is well known that if this view of space were correct, the velocity of a body through Newtonian space—its "absolute velocity"—would be undetectable and, more generally, unknowable. To be sure, one could detect certain *changes* in a body's velocity—just think of the noticeable effects when your flight takes off—as well as its velocity *relative to another body*. But there would be no way to determine its absolute velocity.

The claim that absolute velocity is unknowable needs argument. I discussed such an argument elsewhere (Dasgupta 2015) and will not repeat it here. But the claim is made plausible by noting the proliferation of possibilities that follows from this Newtonian view. For given any Newtonian world W, there are infinitely many "boosted" worlds that differ only in the fact that the entire material history of the world is unfolding in smooth motion relative to W. The only difference between these worlds are facts about the absolute velocities of things: all relative positions and relative velocities are the same at all times. On the Newtonian view, these worlds are *genuinely distinct*, since they differ in the trajectory that each body makes through Newtonian space. But they are also *indiscernible*: they

look (and taste, and smell) exactly the same. And so (the thought is) one can never tell which of these worlds one inhabits. Which is to say (the argument goes) that you could never know what anything's absolute velocity is.

I emphasize that this is not the final argument: contemplating this proliferation of indiscernible possibilities just helps make the claim—that absolute velocity is unknowable—particularly vivid. Still, the claim is uncontroversial, no one who has written on the topic has questioned it, and I will assume that it is true.

Until about twenty years ago, an analogous claim about *position* was just as uncontroversial: namely, that if Newtonian space were real, then our position in it—our "absolute position"—would be unknowable, just like our absolute velocity. Once again, this is made vivid by contemplating a proliferation of indiscernible possibilities. For given any Newtonian world W, there are infinitely many "shifted" worlds that differ only in the fact that the entire material history of the world is uniformly shifted over and unfolds, say, three feet to the right of where it unfolds in W. The only difference between the worlds are facts about absolute positions: all relative positions and relative velocities are the same in all worlds. On the Newtonian view, these worlds are *genuinely distinct*, since they differ in where things are in Newtonian space. But they are *indiscernible*: they all look exactly the same. And so (the thought is) one can never tell which world one inhabits. Which is to say (the argument goes) that one can never know what anything's absolute position is.

1.2 Expressive Failures

But in 1993, Tim Maudlin demurred from this consensus. He noticed a difference between absolute velocity and absolute position: in the former case, the ignorance is *expressible*; in the latter case, it is not. And he concluded that we are not ignorant of absolute position, just absolute velocity. This is now the received view among philosophers of physics.[1]

This received view has two components. First, there is the claim that our (supposed) ignorance about absolute position is inexpressible. And second, there is the claim that *ignorance is always expressible*, so that if

1. See Maudlin 1993. See Pooley (n.d.) and references therein for recent adherents of the view. Horwich (1978) argued for a similar conclusion but with a different spin: since the (supposed) ignorance is inexpressible, said Horwich, it follows that there is no fact of the matter as to our absolute position in the first place.

we cannot express our (supposed) ignorance about absolute position, then we are not ignorant after all. I think that Maudlin was right about the first claim but wrong about the second: I think there can be inexpressible ignorance and that our ignorance of absolute position is an example.

But put that disagreement aside for a moment. Focus on the first claim, which we agree on. What does it amount to? Maudlin (1993, 189–90) says that, in the case of *velocity*, our ignorance can be expressed thus: "The universe as a whole may be at rest, or traveling uniformly five meters per second due north, or 888 meters per second in the direction between Earth and Betelgeuse, and so on. According to Newtonian dynamics *no possible observation* can reveal its actual state of motion." But in the case of *position* the situation is very different: "Various positional states of the universe as a whole are possible: It could be created so my desk is *here*, or three meters north of here, or 888 meters from here in the direction from Earth to Betelgeuse, and so on. Which is the *actual* state of the world? Now the answer is easy: In its actual state, my desk is here, not three meters north or anywhere else" (ibid., 190).

The idea is this. In the case of velocity, I cannot know how fast the universe as a whole is moving. And I can express this ignorance by uttering a true instance of the scheme

I cannot know whether S,

where S is a sentence. For example, I cannot know whether *the universe is at rest*, I cannot know whether *the universe is moving five meters per second due north*, and so on.

Now, in the case of position, my (supposed) ignorance is that I cannot know where my desk is in Newtonian space. But this time, I cannot express my ignorance by uttering a true instance of that scheme. For example, 'I cannot know whether *my desk is here*' is clearly false, since I know very well that my desk is right here! And 'I cannot know whether *my desk is three meters north of here*' is false too: I know that it is *not* three meters north of here! If I am ignorant, says Maudlin, I cannot express my ignorance by uttering a true instance of the above scheme.[2]

This is not a *proof* that there is no true instance of the scheme. To convince yourself that there is none, the best exercise is to try constructing one. The obvious idea is to give each region of Newtonian space a name by using a coordinate system, an assignment of a triple of three

2. To be clear, the data here is not (just) that I know that the sentence 'My desk is here' is true. It is that I know that my desk is here.

numbers to each point. Perhaps a true instance would then be 'I cannot know whether *my desk is located at (4, 3, 3)*'. But this does not work. In order for 'My desk is located at (4, 3, 3)' to express a hypothesis about where my desk is, the referent of '(4, 3, 3)' must be fixed. This is done by specifying an origin, three axes, and a unit. Thus, you might say that the origin is the corner of my chair, and similarly with the axes and the units. But with this specified, it is easy to know whether my desk is at (4, 3, 3): we just measure whether it is four units away from the corner of my chair along the *x* axis, and so on! Thus, the proposed instance is not true: I *can* know whether my desk is there after all.

The difference between velocity and position, says Maudlin, is this. We can refer to a position in Newtonian space only by demonstrating it or describing its relation to a material body. But we have the capacity for demonstrative knowledge and knowledge about relations to material bodies. So when we then formulate a sentence S that describes one of the shifted worlds, we can know whether it is true. But in the case of velocity, we can refer to the state of absolute rest as follows: 'at rest', or 'occupying the same region of Newtonian space over time'. This allows us to formulate a sentence S that describes one of the boosted worlds in such a way that we can never determine whether it is true.

This then is our initial characterization of the state of *inexpressible ignorance*. To say that I am *ignorant* is to say

(1) I cannot know where my desk is in Newtonian space.

And to say that my ignorance is *inexpressible* is to say that I cannot express it with a true instance of the scheme

(2) I cannot know whether S.

Thus, what is inexpressible is not *that* I am ignorant—this is easily expressed by asserting (1), or some cognate such as 'I cannot know my desk's position in Newtonian space'. Rather, the claim is that one cannot express the ignorance *with a true instance of (2)*.[3]

3. As I have put it, the ignorance is inexpressible if it is not expressible with a true instance of (2). This intuitive idea is tolerably clear, and for our purposes it will do. But for those interested in more detail about what the right-hand side of this condition amounts to, here are three comments. First, for (2) to express the ignorance, S must express a proposition that is true in all and only those worlds in which my desk is located in the region of Newtonian space it is actually located in—in particular, such a proposition is true only in one of the shifted worlds. For example, 'My desk is here' meets this condition, whereas 'My desk is two feet to right of my chair' does not. Second, it must be impossible to

The intended modal force of 'inexpress*ible*' is strong. If you lack the concept of absolute velocity, you cannot express your ignorance about velocity with 'I cannot know whether the universe is at rest' or indeed any instance of (2). Still, your language can be extended to produce an instance, so your ignorance is express*ible* in the intended sense. Maudlin's idea is that in the case of position it is *impossible* to extend our language in such a way as to produce a true instance of (2).

1.3 Is It Ignorance?

Grant that our (supposed) ignorance about position in Newtonian space is inexpressible in this sense. That is the first part of Maudlin's view, and I agree with it. Turn now to his second claim, that *ignorance is always express-ible*—that if there is no true instance of (2), then (1) is false and we are not ignorant of where we are in Newtonian space after all.

Maudlin gave no argument for this second claim. And it is, on the face of it, most implausible. There are (remember) infinitely many shifted worlds that differ with regard to where we are in Newtonian space, all of which look *exactly* the same. In the case of velocity, this kind of proliferation of indiscernible possibilities suggested that I am ignorant. Why is the situation any different in the case of position? Why, just because I cannot *express* my ignorance, should it follow that I am not ignorant at all? Indeed, in the case of position, I appear to have *two* cognitive failings: a failure to know, and a failure to express that ignorance. Maudlin's view has the bizarre consequence that this *double* failure amounts to no failure at all!

know that S. As mentioned in the text, 'My desk is here' clearly fails this condition. And third, it must be that we cannot know that S *because* of our ignorance *about position*, rather than about some other subject matter. This third condition is needed because of the following kind of case suggested to me by Ofra Magidor. Suppose that epistemicism about vagueness is true, so that the phrase 'fairly close' has an exact extension that we can never know. Suppose further that the extension of 'fairly close' is any distance up to and including four meters. And suppose that my desk is exactly four meters from a region of space *r*. Then let S be 'My desk is fairly close to *r*, but if it had been any further away, it wouldn't have been fairly close to *r*'. Assuming epistemicism, this sentence satisfies the first two conditions just mentioned. But intuitively, 'I cannot know that S', for this S, does not express our ignorance *about position*, but rather our ignorance about the extension of 'fairly close'. Thus, the third condition is needed to rule out these kinds of cases. Of course, more could be said to analyze exactly what it is to be ignorant about a subject matter, but it would distract from our main line of thought to pursue that here.

There are other problematic consequences. Suppose we live in a world of eternal recurrence: every 3 trillion years, the history of the world repeats itself in all qualitative respects ad infinitum. Each epoch is indiscernible: they all look exactly the same. And suppose it is a world of *one-way* recurrence: there is a first epoch but no last. Then we can ask: Are we in the first epoch? Or the second? Or the third? There is no way to tell, for they are all indiscernible. So we are ignorant of which epoch we inhabit. And our ignorance is expressible with a true instance of (2): I cannot know whether *I inhabit the first epoch*, or whether *I inhabit the second epoch*, and so on.

But now suppose we live in a world of *two-way* eternal recurrence, in which there is no first epoch and no last. And let it be a world in which haecceitism is true of the epochs, so that there is a genuine difference between a world in which I inhabit *this* epoch and a world in which I inhabit one of the others. I claim that if we do not know which epoch we inhabit in the one-way recurrence case, we do not know which epoch we inhabit in the two-way recurrence case either. After all, in both cases the epochs are all indiscernible, so in both cases there is a proliferation of indiscernible worlds that differ only with regard to which epoch we inhabit.

But if that is right, then Maudlin's view—that ignorance is always expressible—is false. For in the two-way recurrence world, my ignorance is inexpressible. For now 'I inhabit the first epoch' does not express a hypothesis about which epoch I inhabit, since 'the first epoch' does not refer. In the world of two-way recurrence, we can refer to epochs only by demonstrating them—'*this* epoch'—or by describing their relation to material bodies—'the second epoch after the one that I inhabit'. But once we express hypotheses about which epoch we inhabit in these terms, the question of which one we inhabit is easily answered. Thus 'I do not know whether I inhabit *this* epoch' is manifestly false![4]

4. I stipulated that haecceitism is true of the epochs in the two-way world, but I did not say anything about this in the one-way recurrence world. This is because it does not matter to the argument. If haecceitism is true of the one-way recurrence world, so that there are genuine distinctions between worlds that differ only in a haecceitistic reordering of the epochs, then there would be inexpressible ignorance of which epoch we inhabit in the one-way case. Thus there would be two kinds of ignorance in the one-way case: the *expressible* ignorance of whether we inhabit the *first* epoch, or the *second*, and so on, and the *inexpressible* ignorance that results from our being unable to tell apart worlds that differ only in a haecceitistic reordering of the epochs. But the argument in the text just appeals to the claim that if there is *any* ignorance of which epoch we inhabit in the one-way case,

Or consider a third case, suggested to me by Ned Hall. Suppose we live in a world just like the two-way recurrence world, with the one exception that the epoch three thousand cycles ago differs from the rest *just* in the fact that one electron is a *little* to the left of its counterparts in other epochs. Then there is expressible ignorance: I cannot know whether I inhabit the first epoch after the one that differs from the rest, or the second one, and so forth. But if that one electron were a *little* over to the right, so that all the epochs perfectly resembled one another, then we would have the original two-way recurrence world again. So, in this third case, Maudlin's view implies that my ignorance of which epoch I inhabit *depends on* that electron's being where it is and not a little over to the right. Put differently, his view implies that, were that electron a *little* bit over to the right, I would not be ignorant of which epoch I inhabit. And this is hard to take seriously: surely my ignorance of which epoch I inhabit cannot be cured by minute changes in far-off epochs!

This suggests that Maudlin's view that ignorance is always expressible is false. Sometimes, ignorance is inexpressible. In these cases, there is indeed a double failure—a failure to know *plus* a failure to express one's ignorance—and this double failure does not constitute a success.

But what could this ignorance consist in? I will soon argue that standard models of ignorance struggle to answer this question. I will then try to develop a model of ignorance that does better.

1.4 Ubiquity

But why bother? Isn't inexpressible ignorance just a curiosity, in the pejorative sense? No, for it arises in a number of other cases. Let me describe two.

First, properties. What is the relation between a property and its causal role? One view, known as "quidditism," is that a property is independent of its causal role. According to quidditism, it is a contingent fact that mass occupies the causal role that it does, and likewise for charge. Indeed, on this view, it is possible for mass and charge to "switch roles"—that is, for mass to play the role that charge actually plays and vice versa. An alternative view is that properties are defined in terms of their causal

then there is ignorance of which epoch we inhabit in the two-way case. So the argument goes through regardless of whether haecceitism is true in the one-way case.

roles: to be mass just is to play a certain role. On this view, it is impossible for mass and charge to switch roles.[5]

Lewis (2009) claimed that if quidditism were true, we could never know which property occupies which causal role. Very roughly, he was moved by thinking about the proliferation of possibilities that follows from quidditism—that is, possibilities in which the properties switch roles. Since we only observe properties *via* their causal effects on us, the worlds are indiscernible (just like boosted and shifted worlds). So there is no telling which world we inhabit, and so no telling which property occupies which role. The property is "hidden" behind its role.

But Lewis recognized that the ignorance here is inexpressible: I cannot express it with an instance of the scheme

> I cannot know whether S.

For example, 'I cannot know whether mass plays the mass role' is false: 'mass' is introduced as a term that refers to whatever it is that occupies the mass role, so I know very well that mass plays the mass role! The case is like absolute position: one can only refer to a property like mass by demonstrating it ('the property instantiated *here*') or by describing its relation to causal roles ('the property that occupies the mass role'), and once I formulate a sentence S about which property plays which role in these terms, it is easy to determine whether it is true.

Second, individuals. Consider the scholastic Aristotelian view that a substance is a composite of prime matter and essential form, which then exhibits various accidents. It was agreed by both Aristotelians and their opponents that, on this view, prime matter would be unknowable. Thus, Ockham wrote: "However much matter is a thing actually existing and distinct necessarily from form, still it is not intelligible of itself (*per se*)—that is, it is not intelligible by a cognition that is simple and proper to it" (*Summula* 1.14; quoted in Pasnau 2013, 120). And it was also agreed that if accidents are distinct from substances, then substances are unknowable too. Thus, Gassendi wrote: "Although it is granted that a common subject or substance exists, it nevertheless remains veiled, nor can we either

5. This taxonomy of views is not intended to be exhaustive. In particular, one might hold that it is a contingent fact that mass occupies the causal role it does, but that it is a necessary fact that the determinate masses instantiate a certain structure; similarly for charge. On this view, it is impossible for mass and charge to switch roles because of the (necessary) structures of their determinates. But for simplicity, I bracket this view and stipulate that "quidditism" refers to a view on which it is possible for them to switch roles. See Lewis (2009) for a discussion of this issue.

understand or say what sort of thing it is, except through what affects it and what lies open to the senses, its qualities" (*Syntagma* 2.1.6.1, 1:372a; quoted in Pasnau 2013, 116). The idea is that the substance or prime matter is "veiled" or "hidden" behind its forms, much like a person might be hidden behind their raincoat.

This idea arguably generalizes to any view on which individuals are independent of their qualities (Dasgupta 2009). The idea is made vivid by (again) considering a proliferation of possibilities—those that agree qualitatively and differ just in which particular individual lies behind each constellation of qualities. These worlds are all indiscernible, so there is no telling which world we inhabit, and so no telling which particular individual lies behind which constellation of qualities.

Suppose that is right. Then once again the ignorance is inexpressible. For one can only refer to the underlying individual (or substance, or bit of prime matter) by demonstration ('*this* one') or by describing its relation to qualities ('the one that underlies this constellation of qualities'). And once we formulate a sentence S about which individual underlies the qualities in these terms, there is no problem determining whether it is true.

To be clear, in all the cases discussed so far—location, properties, and individuals—the claim that we are ignorant is conditional:

> *If* Newtonian space is real, *then* we are ignorant as to where things are in it.
>
> *If* quidditism is true, *then* we are ignorant as to which properties play which causal roles.
>
> *If* individuals are independent of their qualities, *then* we are ignorant as to which individual underlies which constellation of qualities.

One might agree with the conditionals and then conclude—on the basis of a norm advising against believing in unknowable structure—that the metaphysical thesis expressed in the antecedent is false.[6] Having drawn that conclusion, you may then deny that there is any ignorance about the relevant subject matter after all. But that is not to deny the conditional claim—indeed your conclusion is *based* on the conditional claim. So, when I say that we are ignorant in these cases, I mean the conditional claim that *if* such-and-such metaphysics is correct, *then* we are ignorant.

6. Leibniz famously drew this conclusion in the case of space. Shoemaker (1984) and Ney (2007) draw this conclusion in the case of quidditism. And I drew this conclusion in the case of individuals in Dasgupta 2009.

I will assume that these conditionals are all prima facie plausible. I have not argued for them, save for turning your attention to the proliferation of indiscernible possibilities that follows from the antecedent of each. But that is enough show that they are plausible.

I will also assume that, in each case, the ignorance would be inexpressible. I have not argued decisively for this either, but again the assumption is plausible. According to Maudlin's view that ignorance is always expressible, this second assumption implies that the conditionals are all false, despite their prima facie plausibility.[7] But putting his view aside, these are three plausible cases of inexpressible ignorance.

2. What Inexpressible Ignorance Could Not Be

So far, I have given an initial characterization of inexpressible ignorance. I have argued (against Maudlin) that the state of inexpressible ignorance is possible, and I have suggested that it is potentially widespread.

But what does the ignorance consist in? The question is pressing. To say that I am *ignorant* of my desk's position in Newtonian space is to say

(1) I cannot know where my desk is in Newtonian space.

But to say that the ignorance is *inexpressible* is to say that I cannot express it with a true instance of

(2) I cannot know whether S.

Put like this, it is easy to side with Maudlin and see inexpressible ignorance as a contradiction in terms: if I *can* know whether S, for *any* relevant S, how could I be *ignorant*?

I will now argue that many standard models of ignorance cannot account for inexpressible ignorance: they imply that in these cases we are not ignorant at all. In section 3, I will develop a model that does better.

2.1 Epistemic Possibility

Chalmers (2006) outlines one model that manifestly cannot accommodate inexpressible ignorance. For Chalmers, an *epistemic possibility* is a maximally specific way the world might be, for all we know a priori. As we collect evidence, we rule out epistemic possibilities. So ignorance consists in multiple epistemic possibilities remaining open.

7. Like all natural language conditionals, none of these is material. So Maudlin's view implies that they are false even if they have false antecedents.

But what are epistemic possibilities? Chalmers identifies them with *sets of sentences* in an ideal language. Thus an epistemic possibility is open for a subject A iff it contains a sentence S such that S might be true, for all A knows.[8] So, for (1) to be true—for me to be ignorant of where my desk is in Newtonian space—each shifted world W must correspond to a sentence S_W such that, no matter how much evidence I collect, S_W might be true, for all I know. But since the ignorance is inexpressible, this condition is not met.[9]

So Chalmers's model cannot account for inexpressible ignorance. Is there another that can?

2.2 Knowing-wh

A natural place to look is the standard view of the semantics of expressions like 'know where' and 'know which'. This standard view, says Schaffer (2007, 385–86), is that "to know-*wh* is to know that *p*, where *p* happens to be the answer to the question *Q* denoted by the *wh*-clause. . . . So, for instance, to know what time it is, when it is 6pm, is to know that the time is 6pm. . . . To know-*wh* is to know the proposition that just so happens to be the answer." And what is the answer? The standard view is that, given a context, the question ('What time is it?') denotes a set of possible answers (that it is 1 p.m., that it is 2 p.m., and so on). The answer is the member of the set that is true.

Can this view account for (1)? We should distinguish the general view from Schaffer's implementation above. The general view is that to know-*wh* is to know the answer. Schaffer's implementation is *propositional*:

> To know-*wh* is to know *the proposition* that is the answer to the question.

In contrast, a *sentential* implementation avoids explicit talk of propositions:

> To know-*wh* is to know that S, where 'S' is the answer to the question.

It is clear that the sentential implementation cannot account for (1). The question is 'Where is my desk in Newtonian space?' On the sentential implementation, this denotes a set of possible answer-*sentences*: 'My desk is

8. I semantically ascended here, but only out of convenience. One could say that a possibility is open for A iff it contains an S such that for all A knows, S.

9. One might now try to develop Chalmers's model by identifying epistemic possibilities with sets of *propositions*, not sets of sentences. By the end of this section, it should be clear why this approach is not promising.

here', 'My desk is three feet to the north of here', and so forth. But since the ignorance is inexpressible, I *can* know that S, where S is the true answer-sentence. So according to this sentential implementation, (1) is false: I can know where my desk is after all.

If there is any mileage to thinking about this view of knowing-*wh*, it must lie in the propositional implementation. I believe that talk of propositions only obscures the real issues here, which is why I have avoided it so far. But since propositions are much loved by philosophers, it is worth discussing why the move to propositions does not help.

2.3 Knowing the Proposition That Is the Answer

Start by identifying the proposition that is the answer. Suppose that my desk is in fact located in region R of absolute space. Then the answer-proposition is one that is true in all and only those worlds in which my desk is in region R. Call this a *singular locational proposition*.

How to further characterize this proposition depends on general questions about propositions. On a Russellian view, it contains R as a constituent and is represented by the tuple

$$<\text{the location relation}, <\text{my desk}, \text{R}>>$$

On a Stalnakerian view, it is the set of all and only those possible worlds in which my desk is in region R. And on a Fregean view, it is a structured entity that contains modes of presentations as constituents (perhaps demonstrative ones). Let us assume the Russellian view for the moment, though we will revisit this below.

I claim that, on the face of it, we can know this proposition. For one thing, it looks like we can *entertain* it. For according to a plausible and modest externalism about content, we have the capacity for indexical and demonstrative thought that we verbalize with expressions like 'here', 'this', and so on. On this view, the truth-conditions of these thoughts concern the worldly items that are demonstrated in the mental act. So, if I think 'my desk is here' while demonstrating the region R, I entertain the singular locational proposition. For the sake of argument, let us assume this modest externalism for now.[10]

10. This modest externalism is consistent with the two-dimensionalist idea that there are *two* propositions associated with the thought. One, the "secondary" proposition, is the singular locational proposition. And the other, the "primary" proposition, is true in all and only those worlds in which my desk is in the region demonstrated by the thinker of the thought in that world, and so is true in all shifted worlds. (This terminology is from

Suppose, then, that I think, 'My desk is here', and—as the modest externalism states—come to believe the singular locational proposition. I claim that, in normal cases, the belief will count as knowledge. It is, after all, formed by a *reliable* method: if everything had been shifted over three feet and my desk was located at a different region S, my demonstration 'here' would have picked out S, and so the proposition I would have believed would have been true. And the belief plausibly enjoys other epistemic virtues such as being justified, rational, reasonable, warranted; and it plausibly counts as knowledge.

If this is right, I *can* know the answer-proposition. Which, on this propositionalist implementation, implies that (1) is false: I can know where my desk is in absolute space after all. So this view cannot account for inexpressible ignorance of where my desk is.

The same goes for other cases of inexpressible ignorance. Let us introduce the term '*m*' with the stipulation that it is to rigidly denote the property that occupies the mass role. Then the proposition that is the answer to the question 'Which property occupies the mass role?' is one that is true in all and only those worlds in which *m* occupies the mass role. Call this a *quidditistic proposition*. Given a modest externalism, I can believe it by thinking '*m* plays the mass role'. This method reliably produces a true belief, and the belief arguably counts as knowledge. So I can know the answer-proposition; so, according to the propositionalist implementation, I can know which property plays the mass role after all.[11]

I have argued that, *on the face of it*, we can entertain and know these answer-propositions. To be clear, I will ultimately develop a view that yields *a sense* in which we cannot entertain—and therefore cannot know—these propositions after all. But that will involve significant work. The current point is just that, on the standard way of thinking

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Chalmers 2006. Jackson [1998] calls them C and A propositions, respectively, but for our purposes, the central idea is the same.) The modest externalist says that when I think, 'My desk is here', one proposition entertained is the secondary proposition. The two-dimensionalist agrees and adds that the primary proposition is also associated with the thought.

11. Whittle (2006) argues for a similar conclusion in the case of quidditism. She writes, "We can know which property occupies a certain role, because we are able to identify the properties in question" (Whittle 2006, 469). And one can identify the property, says Whittle, if one knows that it uniquely satisfies some (perhaps indexical) description, such as 'this property' or 'the property that satisfies this causal role'. To her credit, she avoids talk of propositions, but if translated into such talk her view sounds close to the view just discussed in the text.

about mental content in a Russellian setting, on which the modest externalism is granted, we can entertain and know these propositions just fine.

Let me consider two objections. First, one might, in principle, deny the modest externalism and claim that we have no capacity for demonstrative thought and so cannot entertain the answer-propositions in the first place. But the modest externalism is so modest, and so plausible, that I take it that the burden lies on someone who denies it to explain why it is false. To this end, one might argue that the contents of our thoughts are fixed by our behavioral dispositions, and that one has the same behavioral dispositions in all the shifted worlds. It would follow that the contents of one's thoughts are the same in all shifted worlds; hence the minimal externalism I assume is false. But in response, this argument has a false premise: our behavioral dispositions are *not* the same in all the shifted worlds. To see this, suppose I am disposed to write a paper, and suppose that in the actual world my desk is located at region R. Then in the actual world I have the disposition to move toward R, while in a shifted world, in which my desk is located at a different region S, I have the disposition to move toward S. Thus, even if one takes the contents of our thoughts to be fixed by behavioral dispositions, this is consistent with the minimal externalism I assumed above.[12]

Of course, one might now try to refine the notion of a behavioral disposition in such a way that I have the same dispositions in all shifted worlds after all. Or one might follow Peacocke (1988) and argue that other constraints from a general theory of concepts imply that we cannot entertain the singular locational propositions. But this would all involve significant work, which is what I am trying to establish right now. *On the face of it*, we can entertain singular locational propositions just fine.

Second, one might object that I have misidentified the answer-propositions. For example, one might suggest that each region in Newtonian space has some hidden qualitative profile, so that the proposition that is the answer to the question 'Where is my desk in Newtonian space?' is a proposition that specifies the hidden qualitative profile of region R. The idea is that *this* proposition is unknowable—perhaps even ungraspable.[13] But the proposal is not to the point. For it is no part of the Newtonian view of space that the regions have these hidden qualities. And yet we are trying to make sense of the idea that *if the Newtonian view*

12. Many thanks to an anonymous referee for encouraging me to discuss this point.

13. This is how Langton (1998) characterized Kantian ignorance of things in themselves.

were correct, then we would be ignorant of our position in space. So the proposal does not explain what *this* ignorance consists in.

So far, I have worked with a Russellian conception of propositions. Do other conceptions of propositions make the putative ignorance easier to account for? It is hard to see how. For example, on the Stalnakerian view, the singular locational proposition is the set of worlds in which my desk is in region R. But the analogous modest externalism, according to which we can entertain such a proposition by pointing at the region R and thinking 'My desk is here', is just as plausible as it was in a Russellian context.

What about a Fregean approach? The view would be that the singular locational proposition contains a mode of presentation (MOP) of the region R. But which MOP? Suppose it contains the MOP expressed by '*this* region', or by 'the region three feet to the right of my chair'. Then I *can* know the resulting proposition: I can know that my desk is at *this* region, and that it is at the region three feet to the right of my chair. Clearly, moving to Fregean propositions only helps if the MOP is *inexpressible*. So the Fregean must now indicate what this MOP might be, and indeed the view I offer below can be seen as an attempt to do just this. But the point, again, is that this involves significant work: *merely* moving to Fregean propositions does not solve the problem.

2.4 Knowing Which Proposition

We have not yet found a theory of ignorance that can accommodate

(1) I cannot know where my desk is in Newtonian space

or

(1′) I cannot know which property occupies the mass role.

But more than that: the discussion suggests that, on some popular conceptions of propositions and belief, we can know all the relevant propositions and yet still be ignorant. This shows how puzzling the phenomenon of inexpressible ignorance is. The phenomenon—at least on these views—is that we can be "alienated" from Newtonian space, and properties, even if we know all the propositions concerning them. The challenge is to articulate what this alienation consists in.

Perhaps the key lies in the following idea. I know that 'My desk is here' expresses a true proposition. But, one might say, I do not know which proposition it expresses. Similarly, I know that '*m* occupies the mass

role' expresses a true proposition, but perhaps I do not know which proposition it expresses. If so, then *this* is a sense in which I am alienated from properties and locations; so perhaps *this* is the sense in which (1) and (1′) are true.

Lewis (2009, 216) endorsed this view. Having listed various sentences that answer the question 'Which property occupies the mass role?' he says, "Each of our answer-sentences does indeed express one of the alternative contingent answer-propositions, but *we do not know which sentence expresses which proposition*. We know that 'It is the occupant of the [mass] role' expresses the true answer-proposition, but *that is no help in knowing which one is true*" (my emphasis).

This idea could be developed in two ways. One view is that since we do not know which proposition is expressed, we cannot entertain it or know it. A second view says that we can entertain and know the proposition, but we cannot know which proposition it is that we know. But we need not choose: on either view, the idea is that our alienation from properties and locations consists in not knowing which proposition is expressed.

But the trouble is that this just pushes the mystery one step down. We start with the idea that we cannot *know where* my desk is in Newtonian space. We then notice that this ignorance is inexpressible. Our question is what this ignorance consists in. The current idea is that it is an inability to *know which* proposition is expressed by 'My desk is here'. But this ignorance is inexpressible in exactly the same sense! I know that the proposition expressed contains *this* region (demonstrating R) as a constituent, that it is true in all and only those worlds in which my desk is located *here*, and so on. So I cannot express my ignorance of which proposition it is with a true instance of

I cannot know whether S.

So no progress has been made. Lewis may be right that we cannot know which proposition is expressed by the answer-sentences. But that is not an account of what inexpressible ignorance consists in—it presupposes one.

2.5 Canonical Identifications

A natural thought is that the ignorance consists in being unable to *identify* the subject matter in the right way. By "identify something," I mean the rough idea of picking something out or distinguishing it from other things (at this point there is no need for a theory of identification). So

the idea is that there is a canonical way of identifying something, such that one "knows what" *x* is (in the special sense under investigation) iff one can identify *x* in this canonical way. I can identify a region in Newtonian space only by demonstrating it or by describing its relation to bits of matter. Perhaps neither of these ways is canonical. If so, perhaps *this* is the sense in which (1) and (1′) are true.

I think this idea is promising. But what is the canonical method of identification? After setting aside some suggestions, I will develop one that I favor.[14]

One suggestion is that canonical identifications are *nonindexical*. On this view, one knows what *x* is iff one can identify it with a nonindexical description. The idea is that there are no such descriptions that pick out a given region of space or a property.[15] But even if that is so, the problem is why that should matter. Why should we care about being able to identify things nonindexically?

To see the force of the objection, recall that we are trying to capture a sense in which we are *ignorant* about something. Whatever the canonical way of identifying something is, it must be *epistemically valuable* to identify things like that, such that we are *lacking something important* if we cannot. Otherwise, we will not have shown why the cases in question are really cases of *ignorance*. But it is not clear why we should care about being able to identify things with nonindexical descriptions.[16]

14. This focus on canonical modes of identification can be seen as an application of Aloni's (2005a, 2005b, 2008) "conceptual covering" view of knowing-*wh*. Very roughly, her view is that context selects a set of concepts C, and one knows what *x* is in that context iff one knows that *x* is *c*, where *c* is in C. If we think of a canonical mode of identification as a concept, then in Aloni's framework, the current idea is that certain demanding contexts (present in metaphysics seminars) select for a canonical kind of concept that we are unable to grasp. Aloni's view might, in turn, be seen as a Fregean approach to the standard view of knowing-*wh* discussed in 2.3, on which the answer-proposition is a Fregean proposition with MOPs as constituents. As I said there, the challenge is then to say what these special MOPs are. Here, this translates into the challenge of saying what the canonical concepts, or modes of identification, are. The rest of this essay takes up this question. But as we will see in section 3.5, the account I propose can be developed in a number of ways, some of which resist being shoehorned into these frameworks. Since I want to stay neutral on those different ways of developing my account, I will focus more on the central idea itself and less on how it relates these general views of knowing-*wh*.

15. This idea was developed in the special case of absolute position by Roberts (2008).

16. One might say that unless one identifies things nonindexically one will not "know what" one is thinking about. But, of course, this just pushes the issue down a rung, for the question is then what this sense of "knowing what" amounts to.

Another natural idea is that a canonical identification picks something out by way of its necessary properties. On this view, one knows what *x* is iff one can identify it with a description that expresses a necessary property of *x*. But this will not do either. For consider a region of Newtonian space R, and consider the description 'is identical to *this* region' (said while demonstrating R). On the modest externalism discussed above, this predicates of R the property of being identical to R, and so counts as a canonical identification on the current view. But it does not constitute "knowing what" R is in the sense we are trying to capture.

To describe another suggestion, let a concept be *transparent* iff anyone possessing it can know a priori what it refers to. For example, 'water' is not transparent since one knows what it refers to only on the basis of empirical investigation, while 'bachelor' arguably is transparent.[17] Then one might suggest that canonical identifications are ones that use transparent concepts—that is, one knows what *x* is iff one can identify *x* with transparent concepts. The suggestion is tempting because the only way to pick out a particular region of Newtonian space is to use nontransparent concepts: for example, 'here' and 'the position (4, 3, 3)'.[18]

But why should we care about being able to identify things with transparent concepts? Sure, without transparent concepts we will not know what we refer to a priori. But this leaves open that we can come to know what we refer to empirically, so why are transparent concepts particularly valuable? To be clear, the problem is not that this view gets the cases wrong, but that it does not explain why these canonical identifications are epistemically valuable.

It is also unclear whether this suggestion constitutes much of an advance. We are trying to understand an elusive sense of "knowing what," yet this suggestion uses the notion of "knowing a priori what a concept refers to," and this is somewhat elusive itself. Is it true that I do not know a priori what 'water' refers to? I know a priori that it refers to the watery stuff around me; why does that not count? Any proposal along these lines

17. Here I use single quotes to refer to concepts, elsewhere I use them to refer to words.

18. Kelly (2013) suggested a view along these lines. Note that this is a natural way for a two-dimensionalist to approach the issue. In some two-dimensional frameworks, the idea would be that canonical ways of identifying something use concepts that have the same referent in all worlds considered as actual. Other two-dimensionalist frameworks might develop this idea differently, but I believe that all (reasonable) views in this vicinity are vulnerable to the objection in the text.

must now develop some theory of what it is to "know a priori what a word refers to"; but this sounds suspiciously close to our original task.[19]

3. Knowledge of Natures

Here I develop a different view. As before, the idea is that one knows what *x* is iff one can identify it in a canonical way. My suggestion is that a canonical identification picks something out by way of its *essence* or *nature*.

The view is inspired by Ockham's discussion of the idea that prime matter is "hidden" behind its forms, which I quoted earlier in section 1.4 (*Summula* 1.14; quoted in Pasnau 2013, 120). He said that matter "is not intelligible by a cognition *that is simple and proper to it*" (my emphasis). If a cognition that is "simple and proper to it" is one that reveals its nature, this becomes the view I have in mind.[20]

This view does better than those just discussed. For, as I will argue in section 3.4, we cannot identify properties or regions of Newtonian space by their natures. And I will argue in section 3.6 that it is *epistemically valuable* to identify things by their natures, such that we are *lacking something important* if we cannot. That is why we count as *ignorant* if we cannot.

But what exactly is it to identify something by its nature? Care is needed here, so I will develop the view I favor in steps.

3.1 Knowing an Essence

Here is the rough idea. Consider Kit Fine's favorite set, {Socrates}. There are many ways to identify it. One is with the description 'Fine's favorite set'. But suppose that it is essential to {Socrates} that it is the unique set that contains Socrates as its sole member. Then the description 'the unique set that contains Socrates as its sole member' identifies it by its nature. So, on the current view, one knows what {Socrates} is if one knows that it is the unique set that contains Socrates as its sole member.[21]

19. This objection applies to other two-dimensional approaches, though the problem surfaces in different places depending on the particular two-dimensional approach at issue. In some frameworks, the notion of "knowing a priori what" an expression refers to is ultimately defined in terms of the notion of a semantically neutral expression. But in characterizing semantic neutrality, we confront the very issues discussed in the text.

20. To be clear, I doubt that Ockham himself would agree with this characterization of his view, since I doubt he would say that prime matter has a nature.

21. One might add the requirement that one knows that this is essential to {Socrates}, but we will not need this extra requirement.

Or consider Hilary Putnam's favorite substance, water. One way to identify it is with the description 'Putnam's favorite substance'. But suppose that it is essential to water that it is the unique substance composed of H_2O. Then the description 'the unique substance composed of H_2O' identifies water by its nature. So, on the current view, one knows what water is if one knows that it is the unique substance composed of H_2O.

I use 'essence' in the way popularized by Fine (1994, 1995). He understands essence in the model of real definition, the worldly analogue of nominal definition. While a nominal definition is a statement of *what a term means*, an essential truth is a statement of *what something is*. Following Fine, let the logical form of a statement of essence be

(*) It is essential to x that $\phi(x)$,

where x is an item of any ontological category and '$\phi(x)$' is a sentence. I take this to be synonymous with saying that *it lies in the nature of* x that $\phi(x)$, or that it is *part of what* x *is* that $\phi(x)$.

One might now propose that

S knows what x is iff S knows that $\phi(x)$,

where it is essential to x that $\phi(x)$. But this is not quite right. For it is essential to {Socrates} that it is a set, but merely knowing that {Socrates} is a set does not imply knowing what {Socrates} is in the sense we are trying to capture. After all, the description 'is a set' does not *identify* {Socrates}; it does not uniquely pick it out.

The general point is that an essential truth of the form (*) may be only a *partial* statement of what x is. It is essential to {Socrates} that it is a set, but this is only *part* of what it is. A *full* statement of what {Socrates} is might be this: it is the unique set that contains Socrates as its sole member.

So, just as we distinguish full from partial definitions, we should distinguish full from partial essences. Let us regiment the former as follows:

It is essential to x *in full* that $\phi(x)$.

And to be clear, let us stipulate that

If it is essential to x in full that $\phi(x)$, then it is essential to x that $\phi(x)$.

That is, an essential truth of the form (*) is at least a partial statement of what something is and may or may not be a full statement. Under what conditions does a truth of the form (*) count as a full essence? This is a

delicate question, and I will not settle it here. But at a *minimum*, a full essence must *identify* the thing in the following sense:

If it is essential to x in full that $\phi(x)$, then $(\forall y)(\phi(y) \supset x = y)$,

where the conditional '$\supset$' is material. I stress that this is a minimum: to approach a sufficient condition, we would at least require that the conditional is strict, but we will not need this stronger condition in what follows.

We should not assume that everything has a full essence. Perhaps the only essential truth about scarlet is that it is a determinate shade of red. This does not constitute a full essence, since it does not identify scarlet in the above sense, but it may be all there is to say about what scarlet is. Or it may be (as I suggest in 3.4) that the only essential truth about a given point in Newtonian space is that it is a point-sized region of space. But again, this would not be a full essence since it does not identify it.

We might now try saying this:

S knows what x is iff S knows that $\phi(x)$,

where it is essential to x *in full* that $\phi(x)$. This is closer to what we need. The picture is this. Just as an explicit definition is a complete statement of *what a word means* without remainder, a full essence is a complete statement of *what a thing is* without remainder. Fully knowing what the word means requires knowing the complete definition: if all I know about what 'bachelor' means is that all bachelors are unmarried, I have only partial knowledge of what it means. Similarly, fully knowing what the thing is requires knowing its full essence, not just a partial essence.

But this is still not quite right. For, suppose you know that it is essential to {Bale} in full that it is the unique set containing Bale as a member. But suppose you do not know who Bale is—perhaps all you know of him is that he is a Welsh footballer. Then, in the relevant sense, you do not know what {Bale} is either. You know that it is essential to the set to contain *some thing*, Bale, but since you do not know what that thing is, you do not know (in the relevant sense) what the set is either.[22]

The natural fix is to require that one knows what all the items mentioned in the predicate 'ϕ' are. If our only account of "knowing what" is the above, this yields a regress of sorts: to know what x is, I

22. Thanks to Kris McDaniel for a discussion of this point.

must know what various other things are; to know what those other things are, I must know what various further things are; and so on. But the regress is not obviously vicious. Unless infinite descending chains are ruled out, the situation is consistent with my knowing what many things are.

Still, there is an alternative approach that halts the regress. Suppose there is a direct way to identify something by its nature, a way that does *not* involve knowing a full essence. We can then define "knowing what" inductively. At the base level, there will be things, the Xs, such that we know what they are directly. If something *y* has a full essence given in terms of the Xs, then we can know what *y* is by knowing that full essence. And if something *z* has a full essence given in terms of *y*, then we can know what *z* is by knowing that full essence. And so on up the hierarchy.

But what is this direct way to know what something is?

3.2 Acquaintance

Here is a natural idea. Consider a determinate color, like scarlet or canary yellow. Some philosophers are attracted by the thesis of revelation, the idea that "the intrinsic nature of canary yellow is fully revealed by a standard visual experience as of a canary yellow thing" (Johnston 1992, 223). The contrast here is with water. When you see water, its nature is hidden; chemical investigation is required to uncover it. But when you see scarlet, the idea is, you see it as it really is in itself. Its nature is manifest.[23]

The phenomenon is clearly connected to knowledge. If the nature of scarlet is revealed to you, this can yield *knowledge* of its nature—knowledge of what scarlet really is in itself. Again, the contrast is with water. Merely looking at water does not yield knowledge of what substance water really is; chemical investigation is required. But revelation comes hand-in-hand with the idea that seeing scarlet can yield knowledge of what color it is.

What does this knowledge consist in? As mentioned in the last section, some believe that scarlet does not have a full essence—that there is no definition of what scarlet is in other terms.[24] If that is right, knowing what scarlet is cannot consist in knowing its full essence.

23. For more on revelation, see Johnston 1992, Campbell 1993, and Byrne and Hilbert 2007.

24. Indeed, Byrne and Hilbert (2007) argue that revelation about color implies what they call "color primitivism," which is close to the view that scarlet has no full essence.

Instead, the natural idea would be that when one sees scarlet, one comes to know what color it is "directly," not via some defining description.

Let us say that a subject S is *acquainted* with x iff the nature of x is directly presented or revealed to S (this is just a label, not an analysis). If there is such a phenomenon as acquaintance, the natural idea just mooted is that there is also a phenomenon of knowing what x is *by acquaintance*, distinct from knowing x's full essence. If so, we can formulate our inductive definition of knowing what x is, as follows:

1. If S knows what x is by acquaintance, then S knows what x is.
2. If
   (a) it is essential to x in full that $\phi(x)$, and
   (b) S knows that $\phi(x)$, and
   (c) S knows what all the items mentioned in the predicate 'ϕ' are,
   then S knows what x is.
3. That's all, folks!

This definition obviously hangs on the notion of acquaintance. I will not try to define it here. Nor will I argue, of any particular thing, that we are acquainted with it. But I will assume that the notion is intelligible and that we have some intuitive grasp of it. The example of color serves to illustrate the intuitive idea, regardless of whether one ultimately believes that the example is accurate. Other examples might include sounds, smells, and tastes, as well as pains and other phenomenal states, and sense-data (if there are such things). It should be clear that 'acquaintance' as used here is a term of art and should not be confused with its use in ordinary language or the literature on direct reference, where it may be appropriate to say that I am acquainted with Jones even though Jones's nature has not been directly revealed to me. My use here is more akin to Russell's use of the term.[25]

In the examples just listed, the acquaintance is mediated by experience. But we should not assume that this is always true. One might argue that we are acquainted with the logical constants. On this view, when we think about conjunction, the nature of conjunction is

25. Though my use does not exactly coincide with Russell's. For one thing, Proops (2014) argues that Russell was interested in acquaintance largely insofar as the knowledge it yields is independent of knowledge of truths. I take my use of 'acquaintance' to be largely orthogonal to those issues, but a full discussion of these points would take us some way off our main thread.

revealed to us regardless of whether we know its full essence. One might argue the same about mathematical items like natural numbers too. Perhaps fictional characters are another example. If these are examples of acquaintance, they are cases in which (i) we know their natures, and yet (ii) this is not *because* we know a full essence.

To be clear, even if we are acquainted with scarlet, we need not assume that one brief glance of something scarlet was sufficient for this. It might be that many experiences of scarlet are necessary, including ones that contrast it to other colors, and so on. We need not even assume that experiencing the shade is necessary for acquaintance with it: perhaps acquaintance with neighboring shades would be sufficient, so that one can be acquainted with the missing shade of blue by experiencing its neighbors. Moreover, we need not say that S is acquainted with scarlet only if the nature of scarlet is *fully* revealed to S. One might think that, on seeing scarlet, its nature is only partly revealed, or (what may amount to the same thing) revealed only in a certain way.[26] For there would remain a contrast with water, so long as one maintained that looking at water does not even partly reveal its nature. Clearly, there are weaker and stronger notions of acquaintance in the offing, but it would be distracting to settle here exactly which one is best for our purposes.

I should also emphasize that one can recognize the notion of acquaintance without endorsing some of the controversial theses that have been associated with it. One such thesis is Russell's idea that the contents of our thoughts can consist only in things that we are acquainted with. Another such thesis is that there is an infallibility condition on acquaintance—for example, that one is acquainted with x only if it is inconceivable that one be in the same epistemic state and yet for x to not exist. My assumption that acquaintance is intelligible does not commit us to these optional theses.[27]

So much for acquaintance; what about the state of *knowing* by acquaintance, mentioned in clause 1? This can be understood in two ways: as knowledge of an object, or as knowledge of a proposition. On the first view, knowing x by acquaintance is not a relation to a proposition

26. For example, one might worry that the view that scarlet is fully revealed leads to problems with phenomenal sorites cases (thanks to Christopher Peacocke for a discussion of this issue). Or one might be attracted by the Spinozistic idea that colors have two natures, a physical one and a phenomenal one, and that seeing scarlet only reveals its phenomenal nature.

27. Amijee (2013) discusses a number of related theses concerning the necessary conditions for acquaintance.

but a relation to *x*. What relation? Perhaps the relation of acquaintance itself, in which case knowing what *x* is by acquaintance *just is* being acquainted with *x*. Or it may be another relation—there is no need to settle the issue here.

On the second view, knowledge by acquaintance is propositional knowledge. A natural way to think about this view is the following: Suppose a subject sees scarlet and becomes acquainted with it (its nature is revealed to the subject). Based on this acquaintance, she then forms the belief that scarlet is *that color*, where 'that color' is a perceptual demonstrative concept available only to thinkers who are (or have been) acquainted with scarlet. If this belief is knowledge, it constitutes her knowledge of what scarlet is by acquaintance. So her propositional knowledge is *based on* her acquaintance with scarlet; her acquaintance is the justificatory or evidential basis of the knowledge.[28]

Nothing much will hang on which view we pick. But there are reasons to prefer the second view—for one thing, it brings clauses 1 and 2 into line by treating them both as cases of propositional knowledge—so I will assume it in what follows.[29] Now, one might think that this second view implies that scarlet has a full essence after all—that it is essential to scarlet in full that it is *that color*. But this is a mistake. For as I use the term, a statement of essence (full or otherwise) is a *real definition*: it defines what the thing is in other terms, just as a standard definition of a word states what the word means in other terms. And the proposition that scarlet is *that color* is not a definition of scarlet: it is merely a proposition that one can entertain only once one is acquainted with scarlet, knowledge of which constitutes the fact that one knows what it is on the basis of that acquaintance.

3.3 The Metaphysics of Nature

The possibility of acquaintance raises the ontological question of what natures or essences are. If this question is hard to hear, it might be because Fine's regimentation of talk of essence deflates it. Recall that on Fine's view, such talk is regimented with the operator

28. An important question is then what it is for a belief to be "based on" acquaintance. Johnston (2011) develops one account.

29. This second view allows my account to be seen as an application of Aloni's "conceptual covering" view of knowing-*wh* (see note 14). The covering concepts, in this case, will include the perceptual demonstratives mentioned in the last paragraph.

(*) It is essential to x that $\phi(x)$.

If this is *all* that essentialist talk amounts to, then there is no such thing as "the essence" or "the nature" of x. Or, if there is, it is just the set of propositions to which the above operator truly attaches.

But if acquaintance is possible, this cannot be all that talk of essence and nature amounts to. For, we said that when acquainted with scarlet, something—the nature of scarlet—is revealed to us. But what is this entity, *the nature of scarlet*? Not, presumably, a set of propositions to which the above operator truly attaches. For one thing, that would jar with the phenomenon: when I see scarlet, what is revealed does not seem to be a proposition. For another thing, we have been working on the assumption that scarlet and its neighboring shades have no full essence. This means that there is nothing essential to them that distinguishes them from one another: if it is essential to scarlet that φ (scarlet), then the same goes for its neighbors. Yet acquaintance with scarlet is different from acquaintance with those neighbors: something different is revealed in each case.

Thus, the kind of entity that is revealed in acquaintance is not, in general, a set of propositions to which the above operator truly attaches. Let us use the term 'real nature' to refer to the entity that is revealed in acquaintance, and 'essence' to refer to the set of propositions to which the above operator truly attaches.[30] If acquaintance is possible, we cannot in general identify real natures and essences. What then are real natures?

It is hard to say. The real nature of x cannot just be another item alongside x. For then we could ask what its real nature is, and that question seems misplaced: it *is* a real nature, not something that could *have* a real nature. We might call something's real nature the "what it is" of the thing, but this is just a label, not reductive theorizing.

It may be possible to nominalize talk of real natures away. Rather than talking of *the nature of* scarlet, we might talk of scarlet *as it is in itself*. Thus, instead of saying that in acquaintance *the nature of* scarlet is presented to us, we might say that *scarlet* is presented to us *as it is in itself*. But still, the point remains that none of this talk can be assimilated to the Finean operator above. For ease of prose, I will continue to talk freely of this thing, the real nature of scarlet, but nothing will hang on this.

30. To be clear, being revealed is not a defining feature of real natures. There may be real natures that can never be revealed to human beings.

Even if it is unclear what real natures are, we know something about their role: they must "give rise to" Finean essences. When we say that a proposition is true "in virtue of the nature of *x*," this should be interpreted literally, and not just as a rhetorical flourish, as saying that the truth of the proposition "flows from" this thing that is the real nature of *x*. Otherwise, it is hard to see how the two ways of knowing what *x* is—by acquaintance, and by knowing a full essence—are a natural pair, similar in something more than name. If the real nature of *x* "gives rise to" the essence of *x*, then it is clear why these two ways of knowing what *x* is are a natural pair: they are both ways of knowing this thing, *the real nature of x*.

These issues are obscure in the extreme (though I do not mean that in the pejorative sense). Still, let us push on as best we can. The upshot is that once we recognize the possibility of acquaintance, we must distinguish something's real nature from its essence.

3.4 In Search of Lost Essence

I "know what" something is iff I can identify it by its nature. That is the slogan, which I developed into an inductive definition. But we must now show that this proposal accounts for the *ignorance* in cases of inexpressible ignorance. This requires showing two things: (i) that in cases of inexpressible ignorance, we cannot know what things are in this sense (section 3.4), and (ii) that we care about knowing what things are, such that not knowing what they are is properly called ignorance (section 3.6).

Start with (i). Consider the property *m* that plays the mass role. And suppose that quidditism is true. Can we know what *m* is, in the sense defined above? We are clearly not *acquainted* with *m* in the same way that we are acquainted with scarlet. But nor can we know the full essence of *m*. Why not? Because if quidditism is true, then *m* does not *have* a full essence! So it follows from our definition that we cannot know what *m* is.

The crucial premise is that if quidditism is true, then *m* has no full essence—that is, there is no truth of the form

> It is essential to *m* in full that $\phi(m)$.

Why think this? No doubt there are essential truths about *m*. Perhaps it is essential to *m* that it is a property, that it plays some causal role or other, and so on. But if this is true of *m*, then it is also true of many other properties, so these essential truths do not identify *m* even in the *very weak* sense defined in 3.1, so it does not constitute a full essence.

And no doubt there are truths that identify *m* in the weak sense of 3.1. For example, perhaps anything occupying the mass role is *m*. But this is not essential to *m*. For if quidditism is true, then properties are *independent* of their causal roles—that is, they are not defined in terms of their causal roles. So it is not part of *what m is* that it occupies the mass role; it is not essential to *m* that it occupies that role.

So there may be truths that identify *m*, and there may be essential truths about *m*. But if quidditism is true, then there are no essential truths that identify *m*; so *m* has no full essence.

Remember, I am using a *minimal* necessary condition on what an essence must be like to be full: just that it identify the thing. Plausibly, it must also *necessarily* identify the thing (see section 3.1). So even if there is some essential truth that happens to identify *m*, it does not follow that *m* has a full essence. Still, I am confident of the strong claim that there is no essential truth that even identifies *m*.

This conclusion that *m* has no full essence might also be reached in other ways. For one might argue that quidditism implies that a property like mass is a *fundamental entity*, and that fundamental entities are not defined in terms of others. Given that I understand an essential truth as being a definition, it follows that *m* has no full essence.

Have I ignored the obvious? One might suggest that it is essential to *m* in full that $m = m$! This essential truth would clearly identify *m*. But even if so, and even if I know that $m = m$, it does not follow that I know what *m* is. For our definition requires that we know what all the items mentioned in the predicate '$x = m$' are. So, in order to know what *m* is, we must already know what *m* is. No progress has been made.

And in any case, I deny that it is essential to *m* that $m = m$. Recall that essence is the worldly analogue of definition: the essence of *x* is a statement that defines *what x is*. And just as

> *x* is a bachelor iff *x* is a bachelor

does not count as a nominal definition of what 'bachelor' means, the statement that $m = m$ does not count as a statement of what *m* is.[31]

The upshot is this. We are not acquainted with *m*. Nor can we know a full essence of *m*, for *m* does not have a full essence. So it follows on our proposed account of "knowing what" that we cannot know what *m* is.

31. This is not to deny that the proposition that $m = m$ is an essential truth. It is just to say that if it is, it is not essential *to m*. An alternative is that it is essential to (or at least follows from what is essential to) identity.

So much for properties. In the case of individuals, the same considerations show that if they are independent of their qualities, then we cannot know what they are. But in the case of position in Newtonian space, the argument is a little more involved. We are not acquainted with positions, so again the crucial question is whether we can know their full essences. Start by considering a point-sized region *p*. Does *p* have a full essence?

Let us go through the options. Presumably, there are essential truths about *p*: it is essential to *p* that it is a spatial region and that it is point sized. But this is true of *any* point in Newtonian space, so this does not identify *p*. And presumably there are truths that identify *p*. Perhaps any point that is right now occupied by the corner of my laptop is *p*. But this is not essential to *p*, for it makes reference to matter. Newtonian space is (by hypothesis) supposed to be *independent* of the matter situated within it, so it cannot be defined in terms of matter.

So the only truths available are those that describe *p* in relation to other regions of Newtonian space. But which other regions? The problem is that in Newtonian space there is no privileged region in relation to which the others are defined. We could arbitrarily pick the point *q* that is three feet to the right of *p*, and it will be true that any point three feet to the left of *q* is identical to *p*. So this relation to *q* identifies *p*. But as I understand the Newtonian view of space, this relation is not essential to *p*: being three feet to the left of *q* is not part of the definition of *what p is*. After all, what is *p*? A point-sized region of space. On the Newtonian view of space, that strikes me as all there is to say about what it is. Point *p* stands in a relation to another point *q*, but this relation—even though it identifies *p*—does not come into a specification of what *p* is. If that is right, then points in Newtonian space have no full essence.

That strikes me as the most plausible view of Newtonian space, but I have no decisive argument for it. So, suppose that it is, after all, essential to *p* that it is three feet to the left of *q*. There is nothing special about *q*, so presumably the view would be that all of *p*'s metric relations to other points are essential to it. And what goes for *p* goes for any point. It follows that for any point, its metric relation to any other point is essential to it. Put in terms of definition, the view is that all points are *interdependent*, with each one defined in terms of its relation to all other points: *p* is defined in terms of its relation to *q*, and *q* is defined in terms of its relation to *p*.[32]

32. This clearly violates a noncircularity condition on definition. But such a noncircularity condition is controversial, so I do not rule this view out on that basis.

This is in contrast to the view I find plausible above, on which the points are *independent*. These two views seem to be the only plausible alternatives: the middle ground would be a view on which p is defined in terms of q, but not vice versa, and that strikes me as *clearly* no part of the Newtonian view of space. On the Newtonian view, no points are prior to others in the order of definition: all points are "on a par," whether that means that they are all independent, or all interdependent.[33]

So, suppose that the points are interdependent after all. Suppose that it is essential in full to p that it is three feet to the left of q and suppose that we know this. Do we now "know what" p is? Not quite. Remember, our definition requires that we "know what" all the items mentioned in the predicate 'x is three feet to the left of q' are. Thus, to know what p is, we must already know what q is. But we are not acquainted with q; so applying the current proposal over again, we can know what q is only by virtue of (i) knowing a full essence of q that states its metric relation to some third point r, for example that q is three feet to the left of r, and (ii) *knowing what r is*. And so on. Now, according to our inductive definition, this must at some point bottom out in knowledge by acquaintance. But it clearly never will: we are not acquainted with any points of Newtonian space. So, on our definition, we cannot know what any of these points are.[34]

33. We should distinguish the view that the points are interdependent from a "structuralist" view on which they are *nothing more than* nodes in a geometric structure. On this structuralist view, uniform shifts do not generate genuinely distinct possibilities, since if everything were shifted over, things would still occupy the same position in the structure. Thus, according to structuralism, I am not ignorant of my position in space, since the case for ignorance rested on the proliferation of distinct yet indiscernible shifted possibilities. Since we are investigating the metaphysics of views that lead to ignorance, structuralism is not under consideration here. In contrast, the view that points in Newtonian space are interdependent is supposed to be a view on which uniform shifts are still genuinely distinct possibilities. At least, if it is not, then we can ignore the view for the same reason that we can ignore structuralism.

34. One might suggest relaxing the inductive definition, so that there can be "infinite descending chains" of knowing what. The idea would be that we know what p is by virtue of (i) knowing the essential relation between p and q, and (ii) knowing what q is; and we know what q is by (i) knowing the essential relation between q and r, and (ii) knowing what r is, and so on ad infinitum (note that the chain cannot circle back to the beginning, else knowing what p is would require already knowing what p is). There is a regress here, but perhaps it is not vicious. Still, I take it to be an extremely implausible model of what knowing what p would consist in: I do not see how knowing that p is three feet to the left of q, that q is three feet to the left of r, that r is three feet to the left of s, and so on ad infinitum, would constitute knowing what p is in the sense under investigation. To the contrary, the case strikes me as good motivation for the inductive definition as it is currently stated.

Thus, points in Newtonian space are not defined in terms of their relation to matter. If, in addition, they are not defined in terms of their relations to each other (independence), then they have no definition; that is, no full essence. If, instead, they are defined in terms of their relations to each other (interdependence), then they have full essences, but it remains the case that we cannot know what they each are. Either way, we get the desired result: for any point *p* of Newtonian space, we do not "know what" *p* is, on our sense of "knowing what."

So much for *points*. It is much more plausible that *extended* regions of Newtonian space have full essences: perhaps it is essential in full to any extended region R that it is the unique mereological sum of its point-sized constituents. But this will not help knowing what R is. For on our definition, knowing what R is requires knowing what the constituents of that full essence—the point-sized regions—are. And we have just argued that this is impossible.[35]

3.5 The Nature of Inexpressible Ignorance

I have proposed a model of inexpressible ignorance, on which the ignorance consists in not "knowing what" something is in the sense defined. It is worth contemplating the nature of this ignorance. Earlier I argued that, at least on some views, there is no *proposition* or *fact* that we do not know. Should we now revise that conclusion?

It depends on how the model is developed. There are two ways to develop it into a view on which there is an unknown proposition. First, we know that if quidditism is true, properties like mass lack full essences. But perhaps they have real natures—we have not settled that question one way or the other. Suppose they do, and suppose there is a proposition that specifies the real nature of each point. These are propositions that we cannot know.

But be clear about *why* we cannot know them. It is not that we can entertain and believe them but lack enough justification to know them. Rather, we cannot entertain or believe them in the first place. We are like Mary in the black-and-white room: just as she is not acquainted with red and so cannot *entertain* what it is like to see red, we are not acquainted with the real natures and so cannot entertain propositions about them.[36]

35. Thanks to Kris McDaniel for a discussion of this point.

36. This phenomena of not knowing "what it is like" to have a certain experience has recently been discussed in depth by Paul (2014). As Paul emphasizes, it leads to questions

There is a second way to develop the model into a view on which there is an unknown proposition. Recall the quidditistic proposition that *m* occupies the mass role. Earlier we assumed a modest externalism on which we can entertain such propositions, and it quickly followed that we can know them too. But we can now define a sense in which we cannot entertain or know them: one *fully* entertains P iff one entertains P and knows what P's constituents are; and one *fully* knows P iff one knows P and fully entertains P. Then we cannot fully know these propositions.

But again, be clear about *why* we cannot fully know them. It is not that we can fully entertain them and simply lack the justification to know them. It is rather that we cannot fully entertain them in the first place.

So these are two ways to develop the model on which there is a proposition about the subject matter that we cannot—in a sense—entertain, and hence cannot know. Thus, we arrive at something resembling Peacocke's (1988) view that we cannot entertain propositions about absolute space.[37]

But the model can also be developed into a view on which there are no unknown propositions. For one thing, one might argue that properties like mass lack real natures. Or we might argue that they have them, but that there are no propositions that specify the real nature of each point (perhaps because of how strange real natures are—see section 3.3). On either of these views, there is no proposition concerning the real nature of each point that we do not know.

Which is the best way to develop our model? This depends on delicate questions about propositions, belief, and real natures, and I have no desire to settle them here.[38] The point is that on *all* these views, the ignorance consists in one of two situations: (i) there is a proposition that we do not know, because we cannot *entertain* it in the first place; or (ii) there is no proposition that we do not know.

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about how we are to decide whether to have such an experience. On the face of it, the kind of ignorance that Paul discusses is connected to the phenomena of lacking acquaintance, in the sense discussed here. It would be interesting to develop this connection in more detail, but I cannot do this here.

37. But we got here by a different road: while Peacocke reached that conclusion by thinking about constraints from a general theory of concepts, we got here by thinking about the nature of knowledge.

38. This is why I have refrained from saying much about how my account fits with more general accounts of knowing-*wh* such as Aloni's (see note 14). For saying much about that would require taking a stance on these questions.

Either way, this is very different from ordinary cases of ignorance, in which there is a proposition—for example, that the next president of the United States will be a Democrat—that I can entertain and believe, but that I do not know. In these cases, I lack knowledge because I lack sufficient "epistemic juice"—where this might be *justification* or *warrant* or *rationality* or *reliability* or *safety*, and so on—for the belief to count as knowledge. By contrast, according to our model, inexpressible ignorance has *nothing to do* with lacking enough epistemic juice.

It follows that various attempts to show that we are *not* ignorant in these cases do not succeed. For example, Schaffer (2005) argued that even if quidditism is true, we are not ignorant of which property occupies which causal role, contra Lewis. His strategy was to argue "that (i) quidditistic skepticism is just a *species* of skepticism about the external world; and (ii) whatever answer one offers to skepticism about the external world will thereby answer quidditistic skepticism" (Schaffer 2005, 19). So, he argues that *reliabilist* responses to external-world skepticism are also responses to quidditistic skepticism, that *contextualist* responses to external-world skepticism are also responses to quidditistic skepticism, and so on. Langton (2004) argues similarly, focusing on contextualism.

But this strategy is based on a mistake. For external-world skepticism is the claim that our belief in a given proposition—that there is an external world—lacks sufficient epistemic juice to count as knowledge. Yet inexpressible ignorance has nothing to do with this. Which is to say that Schaffer's claim (i) is false: quidditistic skepticism is not a species of external-world skepticism. Responding to Lewis by using standard responses to standard skeptical arguments is to misconstrue the content of Lewis's claim.[39]

3.6 The Aim of Inquiry

It remains to show that we care about knowing what x is (in the sense defined), such that when we do not know, we are properly called *ignorant*.

It may seem obvious that we do care, but in fact the issue is delicate. It helps to think first about why we care about propositional knowledge. Presumably, a skeleton answer goes something like this. As inquirers, one

39. Locke (2009) offers a different line of objection to Schaffer's and Langton's approach. I should say that not everyone conceives of external-world skepticism in the way just mentioned. According to Putnam, our situation in the traditional skeptical scenario might be more akin to our situation when we are inexpressibly ignorant.

of our guiding aims is to know true propositions. Call this the *alethic aim* of inquiry. So, when we do not know a true proposition, we *lack* something that we aimed to get. Thus we care about propositional knowledge insofar as we care about achieving our aims.

This is clearly just a sketch. For one thing, the alethic aim needs refinement. Do we aim to know *any* old truth? Or just the *important* ones? Moreover, the question remains of why we have the alethic aim. Is it constitutive of what it is to be an inquirer? Or is there a more pragmatic explanation? But let us set aside these details for now and ask whether there is a similar answer to why we care about knowing what things are.

It would go like this. As inquirers, one of our guiding aims is to know what things populate our world, in the sense of "knowing what" defined earlier. Call this the *objectual aim* of inquiry. So, when we do not know what something is, we *lack* something that we aimed for. So, again, we care about knowing what something is insofar as we care about achieving our aims. Indeed the two aims can be seen as dovetailing together: the objectual aim directs us to finding out which things populate our world, and the alethic aim then directs us to finding out what is true of them. When we do not achieve either aim, we call ourselves ignorant.

Is this answer on the right track? One worry is whether we in fact have the objectual aim. But let me set aside that issue, for there is a more pressing worry.

The worry is that even if we have the objectual aim, the above answer works *only if* things have real natures or full essences. To see the worry, consider mass, and suppose that quidditism is true of it. It follows that mass has no full essence. Suppose, in addition, that it has no real nature. Then we cannot know what mass is (in our defined sense) because *there is nothing there to know.* There is no real nature to know directly by acquaintance. And there is no full essence to know either. So we cannot know what it is, but only because (as it were) there *is* nothing that it is. But if there is nothing that it is, the worry is, we can hardly be said to *lack* something if we do not know what it is.

The worry is supported by an analogy with propositional knowledge. Suppose that Bob's distribution of hair is such that there is no fact of the matter whether he is bald. In particular, suppose that neither the proposition that he is bald nor the proposition that he is not bald is true. In this case, I cannot know whether Bob is bald because there is no fact of the matter. But this does not mean that the alethic aim is unfulfilled. For the alethic aim is clearly restricted to those cases in which *there are* truths out there to know about: in those cases, the alethic aim is to

know them. But when there are no truths out there to know, the aim "does not apply," in the sense that not knowing does not mean that the aim is unfulfilled. That is why we do not say that I am ignorant in this case.

Similarly, the objection is, the objectual aim is restricted to cases in which there is something there to know—cases in which something has a real nature or a full essence. So if *p* has no real nature and no full essence, the objectual aim "does not apply": not knowing what *p* is does not mean that the aim is unfulfilled, and so does not mean that I am ignorant.

One response, of course, is to insist that everything has a real nature. Along with Quine's dictum that there can be no existence without identity, we might say that there can be no identity without nature. But I want to avoid these obscure issues concerning real natures as far as possible. So let me outline another response that concedes that *p* lacks a real nature.

The response must deny the analogy with propositional knowledge. Sure, when the *truth* runs out, the alethic aim can be achieved if one lacks propositional knowledge, *precisely because* there is no proposition there to know. But when the *real natures* run out, the objectual aim is not achieved if one does not know what the thing is, *even though* there is nothing that it is. Thus we should say that while the alethic aim is restricted in the above sense, the objectual aim is unrestricted.

The idea that an aim can be unrestricted in this sense is not absurd. Suppose my aim is to collect an example of every British penny minted since 1975. But suppose there happens to be no remaining examples of pennies minted in 1977. Then my aim will go unfulfilled—the fact that there are no pennies from 1977 does not mean that my aim is somehow achievable! True, it is not *my fault* that it goes unfulfilled, but it goes unfulfilled nonetheless. So this aim is unrestricted. The idea is that the objectual aim is like my aim to collect pennies. If *p* lacks a real nature and a full essence, then the aim will go unfulfilled. True, it is not *my fault* that it goes unfulfilled, but it goes unfulfilled nonetheless.

So the idea that the objectual aim is unrestricted is not absurd. But still, one might object that it is ad hoc or unprincipled to think that the alethic aim is restricted but the objectual aim is not. The objection is natural if one thinks that "knowing what" just is knowing another proposition about the world, so that there is really just one aim, the alethic aim, and the objectual aim is just a species of it. On that view, it is hard to see why the one aim should be restricted but not the other.

But in response, we should insist that neither aim is a species of the other. For one thing, if one thinks that knowledge by acquaintance is not

propositional knowledge, it will follow immediately that the objectual aim is not a species of the alethic aim. But even when "knowing what" is a matter of knowing propositions that specify a full essence, it is still a mistake to think that the aim to know this essence is a species of the alethic aim. This mistake rests on a misleading picture of essence, on which there are two ways to have a property, an essential way and an accidental way, and the essential truths about something are truths about which properties it has in the essential way. On this picture, the essential truths are truths concerning which properties are had *by a given domain of things*. If one is in the grip of this picture, one will think that knowing a full essence just is knowing more truths, so the objectual aim will look like a species of the alethic aim.

But this picture is misleading. For I am taking essence to be the worldly analogue of definition. On this view, the essential truths specify *what the things are* in the first place. It is not that there is an *independently given domain* and the essential truths are certain truths about what properties they have. Rather, the essential truths specify *what the domain is*. On this view, there is a deep division between essential truths and other ("accidental") truths. The former are prior to the latter: the essential truths define the things—they give us the raw materials, as it were—and only then are there things for the accidental truths to be *about*. The alethic aim concerns the accidental truths, and the objectual aim concerns the essential truths. Given the deep division between the two kinds of truths, we should not assume that one aim is a species of the other.

And if neither aim is a species of the other, the burden is back on my opponent to argue that the objectual aim is restricted. Pointing out that the alethic aim is restricted is neither here nor there.

Indeed, on the contrary, one can argue that the objectual aim is *not* restricted. After all, we think that the alethic aim is restricted because we think that being ignorant about whether Bob is bald *depends on* there being a fact of the matter as to whether he is bald. But we do not think that being ignorant about what something is depends on its having a real nature. The case of quidditism illustrates the point. Suppose you are in the grip of the thought that a property is "hidden" behind its causal role, that we can never tell the difference between indiscernible worlds in which two properties switch roles. Then you will think that you do not know which property occupies the mass role *regardless of* whether the properties have so-called real natures. The question of whether it has a real nature is, intuitively, neither here nor there. So there is prima facie

reason to think that while the alethic aim is restricted to cases in which there is truth, the objectual aim is not restricted to cases in which there are real natures.

In sum, the objectual aim is to know what things are. If we do not know what a property or a location in Newtonian space is, then the objectual aim is unfulfilled. That is why not knowing what they are properly counts as ignorance.

4. Conclusion

I have outlined a model of what the ignorance consists in, in cases of inexpressible ignorance. Having seen what it involves, one might reject it. But without an alternative model, this means siding with Maudlin and saying that there is nothing it does consist in.

Other than the brief arguments in section 1.3, I have nothing definitive against this attitude. But be clear about what it involves. It involves saying that Leibniz was confused when he argued that Newton's view of space leads to facts about position that are beyond our ken, that Ockham and Gassendi and the entire scholastic and early modern tradition were confused when they agreed that prime matter was "hidden" behind its forms, and that Lewis was confused when he claimed that properties are "hidden" behind their causal roles.

If you think that they were on to *something*, you think that there is inexpressible ignorance. And if so, you must have some account of what it consists in. Why not the account just offered?

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