

KANT ON THE PURE FORMS OF SENSIBILITY

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‘Each individual equally, then, may reflect on it themselves... for their own part... in the common interest.’ (Bii, Kant’s ellipses, trans. modified)¹

I. Introduction

The *Critique of Pure Reason* aims to explain the possibility of synthetic a priori judgments (B19). It does so by appeal to certain structures in the way in which we cognize objects. Our cognition of objects requires the co-operation of two faculties, a passive, receptive faculty of sensibility and an active, spontaneous faculty of understanding (A50/B74). Each has its own representations by means of which we relate to objects. Sensibility gives us objects by means of intuitions; we think of objects by means of concepts (A19/B33). Kant’s explanation of the possibility of synthetic a priori judgments turns on the

¹ From the motto Kant added to the second edition of the *Critique*, taken from the preface to Bacon’s *Instauratio Magna*.

claim that each of these faculties has its own pure forms. Sensibility has space and time; the understanding has the categories.

The pure forms of sensibility are especially important to this project for they are embedded in Kant's signature doctrine of transcendental idealism. This is 'the doctrine according to which [appearances] are all together to be regarded as mere representations, and not as things in themselves, and accordingly that space and time are only sensible forms of our intuition, but not determinations given for themselves, or conditions of objects as things in themselves' (A369). Yet the pure forms of sensibility should engender a puzzlement unlike that of the pure forms of the understanding. There is a *prima facie* strangeness to the idea of an a priori element to sensibility which is unlike that of an a priori concept. The latter is familiar in the history of philosophy and Kant himself makes reference to Aristotle's and Leibniz's use of the notion (A79–81/B105–107; A260ff./B316ff.). But it is not clear what it would be for our capacity to be given objects to involve an a priori element. Kant tells us, in his characteristically modest way, that 'it did not occur to anyone that the senses might also intuit *a priori*' (*Proleg.* 4:375n.). The importance and centrality of the view is in corresponding strength to its strangeness.

Our aim in this chapter is to shed light on Kant's account of the pure forms of sensibility by focusing on a somewhat neglected issue: Kant's restriction of his claims about space and time to the case of human sensibility. Kant argues that space and time are the pure forms of sensibility for *human* cognizers. But he also says that we cannot know whether space and time are likewise the pure forms of sensibility for *all* discursive cognizers. A great deal of attention has focused on the first of these claims, both on how Kant argues for it and how it relates to transcendental idealism. But a satisfactory interpretation must also account for the second claim, and it must account for the fact that Kant endorses both of them. What we need is an explanation of why Kant thinks our knowledge that space and time are the pure forms of sensibility extends to all human beings but no further. This is our concern in what follows.

To have some labels and to orientate our discussion, we introduce the following theses:

(*Human Knowability*) We can know that space and time are the pure forms of sensibility for human cognizers.

(*Alien Undecidability*) We cannot know whether space and time are the pure forms of sensibility for all discursive cognizers.

Kant commits to both *Human Knowability* and *Alien Undecidability* in the Transcendental Aesthetic of the *Critique of Pure Reason*. Of course what he actually argues for there is what *Human Knowability* says we can know, namely that space and time are the pure forms of sensibility for human cognizers. But a commitment to *Human Knowability* itself presumably follows. Our primary concern here is the contrast between *Human Knowability*, a claim about what we can know, and *Alien Undecidability*, a claim about what we cannot know. Our aim is to explain this asymmetry.

We begin in §2 with *Alien Undecidability*, since this is the less familiar claim. We provide evidence that Kant holds the thesis and we clarify what it amounts to. In §3 we turn to *Human Knowability*. We explain the notion of a pure form of sensibility and sketch Kant's argument for the claim that space and time are pure forms of sensibility. This section provides an overview of Kant's reasoning in the Transcendental Aesthetic, but it does so with our two theses in mind. For our aim in this section is to argue that nothing in the argument of the Transcendental Aesthetic explains why Kant takes himself to be able to conclude, on its basis, only that space and time are the pure forms of sensibility for human cognizers but not whether they are the pure forms of sensibility for all discursive cognizers. What, then, does explain this commitment?

The proposal we explore in the rest of this chapter is that it is not Kant's argument in the Transcendental Aesthetic which explains his restriction but the method by which he conducts his investigation. We consider two ways of fleshing out this thought. In §4 we consider whether the receptive nature of sensibility explains the restriction of Kant's conclusions about space and time to human cognizers and argue that it does not. In §5 we consider the relation between different kinds of knowledge and possibility and ask whether the constraints on achieving synthetic a priori knowledge of real possibility

explain the restriction of Kant's conclusions to human cognizers. This approach is more successful at explaining *Alien Undecidability* but it can seem to undermine *Human Knowability*. In particular, the line of thought we examine suggests that each of us can know only the nature of our own particular pure forms of sensibility, a result which threatens to collapse Kant's view into a kind of solipsism. We conclude in §6 with a resolution to this problem that provides insight into the methodology of the Critical philosophy more generally.

2. Alien Undecidability

Consider the following passages (cf. A26–7/B42–3, B139, A230/B283):

...we cannot judge at all whether the intuitions of other thinking beings are bound to the same conditions that limit our intuition, and that are universally valid for us. (A27/B43)

It is also not necessary for us to limit the kind of intuition in space and time to the sensibility of human beings; it may well be that all finite beings necessarily agree with human beings in this regard (though we cannot decide this)... (B72)

Kant says in these passages that we cannot 'judge' or 'decide' whether space and time are the pure forms of sensibility for all 'finite' 'thinking' beings. Finite thinking beings are discursive cognizers—they are beings with sensibly conditioned intellects, which to say, beings for whom cognition of objects requires the co-operation of a sensible faculty of intuition, sensibility, and a spontaneous faculty of thought, the understanding. We take 'judge' and 'decide' to be epistemic notions and for now will proceed on the assumption that there is a generic conception of knowledge which can be used to formulate the content of these claims. (We turn to the question of what kind of knowledge is at issue below.) What Kant is saying here is that we cannot know whether space and time are the pure forms only of human sensibility or of sensibility in discursive cognizers as such. He is stating his commitment to *Alien Undecidability*.

Finally, we take it that the 'all' in 'all finite beings' and the 'other' in 'other thinking beings' refers to both actual *and possible* discursive cognizers. We can

thus read Kant's claim in these passages as a claim about possibility, and this gives us an alternative formulation of Kant's thesis:

(Alien Undecidability)* We cannot know whether discursive cognizers with pure forms of sensibility different from our own are possible.

Given that we can know that space and time are the pure forms of our own, human sensibility, this is equivalent to the formulation of the thesis given above. Yet what kind of possibility is at stake here? Presumably Kant thinks that sensible forms different from our own are *logically* possible; he does not think there is a contradiction in the mere concept of a non-spatiotemporal sensibility. We take it, then, that Kant's undecidability thesis concerns our inability to know whether discursive cognizers with non-spatiotemporal forms of sensibility are *really* possible.² To know that space and time were the pure forms of sensibility for all discursive cognizers would be to know that non-spatiotemporal forms of sensibility were really impossible. To know that space and time were not the pure forms of sensibility for all discursive cognizers would be to know that non-spatiotemporal forms of sensibility were really possible. *Alien Undecidability* is the thesis that we cannot know which of these is the case.

This goes some way towards clarifying *Alien Undecidability* and more will come out in what follows. But why does Kant endorse it? In the next section we turn to the more familiar claims involved in *Human Knowability* in order to argue that nothing in Kant's treatment of these claims explains his commitment to *Alien Undecidability*.

3. Human Knowability

Human Knowability is the thesis that we can know that space and time are the pure forms of sensibility for human cognizers. What does this mean? We start by outlining the notion of a pure form of sensibility. Sensibility is a passive, receptive faculty by means of which we acquire representations through objects affecting us (A19/B33). The effect of objects on our capacity for

² For relevant discussion, see Abaci (2019), Gurovsky (2020), Kohl (2021), and Gomes, Moore, & Stephenson (2022).

representation is *sensation*. Those representations which relate us to objects through sensations are *empirical intuitions*. Intuitions are singular representations which relate us immediately to objects (A19/B33). The undetermined object of empirical intuition, that which is represented by empirical intuition, is an *appearance* (A20/B34).

Kant situates these claims within a hylomorphic conception of sensibility: it has both matter and form. Its matter is sensation. Its form is that in which sensations are ordered in a certain way. Kant makes a further claim about this form: ‘Since that within which the sensations can alone be ordered and placed in a certain form cannot itself be in turn sensation... its form must all lie ready for it in the mind *a priori*’ (A20/B34). This *a priori* element to sensibility is the pure form of sensibility.

What, then, are the specific pure forms of our human sensibility? Kant announces the answer at the end of the opening paragraphs of the Transcendental Aesthetic: ‘in this investigation it will be found that there are two pure forms of sensible intuition as principles of *a priori* cognition, namely space and time’ (A22/B36). Note that Kant does not here make clear that his investigation, and thus his claims about space and time, will be restricted to human sensibility. Indeed, Kant only makes this fully clear after his principle arguments concerning space are complete, when he first articulates *Alien Undecidability* at A26–7/B42–3. Not only does this lead to some unfortunate phrasing on his part, as we will see below. It also means that Kant’s arguments proceed with little explicit mention of human sensibility. And this, we suggest, indicates something important. We now sketch these arguments in order to adduce their relation to *Alien Undecidability*.

The arguments proceed by means of two sets of expositions of each of the concepts of space and time. The metaphysical expositions of the concepts of space and time examine our concepts of space and time to argue for the claim that our original representations of space and time are *a priori* intuitions. The transcendental expositions of the concepts of space and time argue that it is a condition on some aspect of mathematical cognition that our original representations of space and time are *a priori* intuitions. We focus in what follows on the case of space.

A metaphysical exposition is that ‘distinct (even if not complete) representation of that which belongs to a concept’, one which ‘exhibits the concept as *given a priori*’ (B38). The metaphysical expositions of the concept of space consist of four arguments for the claim that our original representation of space is an a priori intuition. The first two argue that our original representation of space is a priori. The second two argue that our original representation of space is an intuition. The arguments are terse and their interpretation controversial.

In broad summary, the first argument holds that our original representation of space cannot be drawn from experience because a representation of space is required in order for us to represent anything as distinct from ourselves and thus we cannot represent objects without representing them spatially. This alone does not suffice to show that our original representation of space is a priori for the converse might also be true: it might also be true that we couldn’t represent things as spatial without representing objects. That would mean that the dependence goes both ways, contrary to what Kant wants. The second argument aims to rule out this possibility by arguing that although we cannot represent objects without representing space, we can represent space without representing objects. The lesson drawn from the combination of the two arguments is that our original representation of space is an a priori representation.³

The third and fourth arguments maintain that our original representation of space is an intuition. The claim here is not that we lack a *concept* of space: we clearly do have one, not least as evidenced by the fact that these arguments are termed by Kant the metaphysical expositions of the *concept* of space. Rather, the claim is that our original representation of space is as an intuition and that this is what underlies our concept of space. Kant here appeals to various features of space—its essential singularity, its status as an infinite given magnitude—and argues that only a representation which is originally an intuition could ground our representation of such features.⁴ When combined

³ See e.g. Warren (1998) and Messina (2015).

⁴ See e.g. Parsons (1964) and Friedman (1992, ch.1 part 2).

with the first two arguments, the conclusion Kant draws is that our original representation of space is an a priori intuition.

A transcendental exposition is an ‘explanation of a concept as a principle from which insight into the possibility of other synthetic a priori cognitions can be gained’ (B40). In the case of the transcendental exposition of the concept of space, the aim is to show that our original representation of space must be an a priori intuition if it is to be the ‘principle’—the fundamental source or ground—of some body of synthetic a priori cognition. In particular, Kant aims to show that the synthetic a priori cognitions of geometry require that our original representation of space be an a priori intuition. The general idea is that geometry is a body of synthetic and a priori truths since it involves necessary and universal claims which are not cognized merely through analysis of the concepts involved. This can be explained only if it is grounded in something which is a priori—as required by the necessity and universality of geometry—and yet intuitive—as required by the synthetic status of geometry. Geometric cognition thus rests on an originally intuitive representation of space, but one which is a priori.⁵

Kant draws two main conclusions from these expositions.⁶ First, that ‘Space represents no property at all of any things in themselves nor any relation of them to each other’ (A26/B42). Second, that ‘Space is nothing other than merely the form of all appearances of outer sense, i.e., the subjective condition of sensibility, under which alone outer intuition is possible for us’ (A26/B42).

This material raises a great many questions and the literature on it is enormous.⁷ We restrict ourselves to the question of whether there is anything here which explains why Kant, in the paragraph immediately following his two main conclusions, says that ‘We can accordingly speak of space, extended beings, and so on, only from the human standpoint’ (A26/B42), and then that ‘we cannot judge at all whether the intuitions of other thinking beings are bound to the same conditions that limit our intuition, and that are

⁵ See e.g. Shabel (2004) and Carson (1997).

⁶ And a third in the case of time, which concerns a difference stemming from the fact that time is the form of inner sense while space is the form of outer sense (A34/B50).

⁷ For wide-ranging discussions see e.g. Falkenstein (1995), Allison (2004), Shabel (2010), and Merritt (2010).

universally valid for us' (A27/B43). The point we want to make is that it is hard to see how anything in this material could license either claim. For there is no explicit appeal to anything about human sensibility in the expositions, and the main conclusions Kant draws from them are presented almost entirely neutrally with regard to their scope.

Almost entirely neutrally, because Kant does add, in the second of his conclusions quoted above, that 'Space is nothing other than merely the form of all appearances of outer sense...*for us*' (our italics). But this qualification raises more questions than it answers. So stated, such a conclusion looks to be *incompatible* with *Alien Undecidability*. For if space is nothing other than a pure form of human sensibility, that looks to imply that space is not also a pure form of any non-human sensibility, nor therefore of sensibility in discursive cognizers as such. Yet this is part of what *Alien Undecidability* says we cannot know.⁸

This tension does not run deep. Kant's 'nothing other than' formulation is unfortunate given his commitment to *Alien Undecidability*, but we can see what he must mean if we take a step back and look at the overall structure of his reasoning. Kant's expositions unveil something about the nature of our original representation of space, namely that it is an a priori intuition. Kant infers from this his first, negative conclusion: that such a representation (or any representation that depends on it) cannot therefore concern determinations of things in themselves.⁹ Rather—and this is his second, positive conclusion—our original representation of space (and any representation that depends on it) must concern, not things in themselves, but the mere form of appearances, which is to say, the form of sensibility. So viewed, it is clear that Kant's second conclusion is supposed to build upon his first. And in this way, we can see that Kant does not really mean that space is *nothing other* than a form of sensibility *for us*, in a way that would be incompatible with *Alien Undecidability*. He means that space is not a

⁸ The same issue arises in the case of time, e.g. 'time is nothing other than the subjective condition under which all intuitions can take place in us... Time is nothing other than the form of inner sense, i.e., of the intuition of our self and our inner state' (A33/B49). Our solution generalizes.

⁹ On the cogency of this inference see e.g. Hogan (2009) and Allais (2010).

determination of things in themselves but a form of sensibility for us, which is compatible with *Alien Undecidability*.

Good. But the puzzle remains that nothing in this line of reasoning seems to explain why Kant restricts his conclusions to *human* sensibility, nor why he subsequently commits to *Alien Undecidability*. And the same holds for the closely parallel discussion of time, except that by this point Kant has endorsed *Alien Undecidability*. But this only sharpens the issue—it makes it all the more remarkable that there is no explicit mention of Kant’s restriction in the expositions of the concept of time. So what explains Kant’s restriction?

The proposal we will explore in the rest of this chapter is that it is not Kant’s arguments in the Transcendental Aesthetic which explain his restriction but something about the methods by which he conducts his investigation: it is simply because we could have no means of knowing whether or not space and time are also the pure forms of sensibility for all discursive cognizers that we must restrict our claims to the case of beings like ourselves. This suggestion has immediate attractions. The most straightforward way to establish that something cannot be known is to identify some mismatch between that which is to be known and the possible methods one could have for knowing it. Say that it is a necessary condition on knowing something by means of vision that it reflect light. Then one will be unable to gain knowledge by means of vision of that which does not reflect light. If the only methods by which we could come to know that space and time are pure forms of sensibility cannot be used to establish whether space and time are such forms for all discursive cognizers, then it will not be possible for us to know whether they are.

In the following sections we consider two distinct ways of fleshing out this thought. The first holds that it is because Kant’s investigation concerns a *receptive* faculty that his conclusions must be limited to the case of human cognizers. The second holds that it is because of the constraints on achieving synthetic a priori knowledge that his conclusions must be limited to the case of human cognizers. We consider each in turn.

4. Receptivity

We argued above that Kant endorses *Alien Undecidability*: we cannot know whether space and time are the pure forms of sensibility for all discursive cognizers. A natural thought is that this restriction reflects something distinctive about the faculty of sensibility. This would explain why there is no comparable explicit restriction to our knowledge of the pure forms of the understanding.¹⁰

What would this distinctive thing be? Kant repeatedly distinguishes sensibility and the understanding in terms of receptivity and spontaneity:

If we will call the **receptivity** of our mind to receive representations insofar as it is affected in some way **sensibility**, then on the contrary the faculty for bringing forth representations itself, or the **spontaneity** of cognition, is the **understanding**. (A51/B75; cf. A19/B33, A50/B74)

Sensibility is receptive because it depends for its representations on affection. The understanding is spontaneous because it brings forth representations itself. And these appear to be definitional, in the contemporary sense: ‘sensibility’ is just the name for our receptive faculty (see also A19/B33, A27/B43). So a natural first thought is that *Alien Undecidability* is somehow explained by the fact that sensibility is a receptive capacity: it is because sensibility is a faculty by which objects are *given* to us that we are not in a position to know whether or not all discursive cognizers must order that which is given in the same way we do, namely in space and time.

One important piece of textual support for this approach concerns the wider passage in which Kant first sets out his commitment to *Alien Undecidability*:

The constant form of this receptivity, which we call sensibility, is a necessary condition of all the relations within which objects can be intuited as outside us, and, if one abstracts from these objects, it is a pure intuition, which bears the name of space. Since we cannot

¹⁰ See Gomes, Moore, & Stephenson (2022) for an extended discussion of the question of whether Kant allows that we can know whether the categories are the pure intellectual forms for all discursive cognizers.

make the special conditions of sensibility into conditions of the possibility of things, but only of their appearances, we can well say that space comprehends all things that may appear to us externally, but not all things in themselves, whether they be intuited or not, or by whatever subject they may be intuited. For we cannot judge at all whether the intuitions of other thinking beings are bound to the same conditions that limit our intuition and that are universally valid for us. (A27/B43)

There is a great deal going on in this passage. We want to draw attention to three features. First, that Kant begins by reminding us of the receptive nature of sensibility. Second, that he seems to connect this receptivity to the epistemic humility involved in transcendental idealism. Third, that it is in this context that he emphasises the epistemic humility involved in his commitment to *Alien Undecidability*. These same features are born out in the other passages in which Kant expresses this thesis (A26/B42, B71–2, B139, A230–1/B283).

They are significant because some have held that Kant has a ‘short argument’ for transcendental idealism which proceeds merely from the receptivity of sensibility, and such views often make much of the epistemic humility this idealism involves. Thus if one is tempted by a short argument of this kind, one might think that analogous reasoning can be used to construct a short argument from receptivity to *Alien Undecidability*. The idea would be that the receptivity of sensibility explains both the epistemic humility involved in transcendental idealism and the epistemic humility involved in *Alien Undecidability*.¹¹

Such an approach runs the risk of inheriting the many problems involved in attributing to Kant a short argument from receptivity to idealism.¹² But put these more general issues to one side for the sake of argument. How would the envisioned extension go? Consider Rae Langton’s view (1998). She argues that the epistemic humility involved in transcendental idealism should be understood as the claim that we cannot know the intrinsic properties of things. The argument from receptivity to epistemic humility then runs as follows: the receptivity of sensibility implies that we can have knowledge only

¹¹ See Dicker (2008, 102)

¹² See especially Ameriks (2001).

of what can affect us; the intrinsic properties of things cannot affect us; so we can have no knowledge of the intrinsic properties of things. Whence the epistemic humility involved in transcendental idealism.

How would these considerations extend to the present case? Say that we cannot be affected by the pure sensible forms of other discursive cognizers. And say that we cannot come to know the pure sensible forms of other discursive cognizers on the basis of inference from things which can affect us. Then we cannot have knowledge of the pure sensible forms of other discursive cognizers.

How plausible is this argument? We take it for granted that we cannot be affected by the pure forms of other discursive cognizers. Could we come to know their pure forms through inference from knowledge of things which do affect us? Kant seems to allow that we can know the pure forms of non-human animals through observation of their behaviour and inference to the mental structures which best explain it.¹³ But we could not use such inference to come to know that space and time are the pure forms of sensibility for *all* discursive cognizers given the inability of experience to support strictly universal judgements (B3). And we could not use such an inference to come to know that space and time are *not* the pure forms of sensibility for all discursive cognizers unless we were able to experience behaviour which somehow justified positing the existence of non-spatiotemporal forms. Given that all our experience is structured in accordance with space and time, any behaviour we observe will involve interactions which look better explained by positing spatiotemporal sensible forms. Thus if we cannot be affected by the pure forms of other discursive cognizers, nor come to know them on the basis of inference from knowledge of things which do affect us, we have an argument from receptivity to *Alien Undecidability*.

So far, so good. But what about *Human Knowability*? One worry is that Langton's argument would equally rule out our being able to know that space and time are the pure forms of sensibility for human cognizers.¹⁴ For surely

¹³ See, especially, *CPJ* 5:464 n. but also e.g. *LM* 28:277; *FS* 2:60. Cf. McLear (2011; 2020) and Golob (2020).

¹⁴ See Van Cleve (2002, 232–34) for relevant discussion.

we are not *affected* by our own pure sensible forms. This unhappy result can be avoided if we allow that we can have a non-receptive way of knowing the pure forms of our own faculties. Plausibly, for instance, Kant thinks it is only our knowledge of things distinct from us that requires affection and so must be receptive, whereas he allows that we can know certain things about ourselves non-receptively.¹⁵ And this would then allow for a unified explanation of both *Alien Undecidability* and *Human Knowability*. We cannot know whether space and time are the pure forms of sensibility for all discursive cognizers because this is not something that can be given through affection yet knowledge of things distinct from us requires affection. We can know that space and time are the pure forms of sensibility of human cognizers because knowledge of our own sensible forms does not require that they affect us: it is not receptive knowledge.

This is a powerful and unified explanation. And we can see now why it is properly understood as a point about methodology. Receptivity is relevant to *Alien Undecidability* because it sets a constraint on knowledge: we can know of things distinct from us only in so far as they affect us. It is this constraint on knowledge of things distinct from us which explains *Alien Undecidability*. And it is the fact that this constraint is absent when it comes to knowledge of ourselves which allows for *Human Knowability*.

Nevertheless, this line of reasoning makes a subtle mistake: it begs the question against the claim that we *can* know that space and time are the pure forms of sensibility for all discursive cognizers. For suppose that this is the case—suppose that space and time are the pure forms of sensibility for all discursive cognizers. The considerations concerning receptivity rule out our being able to know this receptively. If we can know that space and time are the pure forms of sensibility for all discursive cognizers, it is not because we can be affected by them. But as soon as we allow that there is a non-receptive way of knowing our own pure forms of sensibility, we can appeal to that way of knowing ourselves to explain how we could know that space and time are the pure forms of all discursive cognizers. Such knowledge would still be non-receptive knowledge of our own case. For we are discursive cognizers just as much as we are human cognizers. So if there is a non-receptive way of

¹⁵ For relevant discussion see e.g. Kitcher (2017), Kraus (2020), and Stephenson (2018, §4)

knowing ourselves, it looks as though it should be equally effective in explaining how we could know that space and time are the pure sensible forms of all discursive cognizers as it is in explaining how we can know that space and time are the pure sensible forms of all human cognizers.

The issue here is that Kant's commitment to *Alien Undecidability* sits alongside a commitment to *Human Knowability*. An explanation of this asymmetry requires a differential treatment of the sensible forms of other discursive cognizers and the sensible forms of human cognizers. Langton's explanation of epistemic humility appeals only to a distinction between that which can affect us and that which cannot. But if our own pure forms and the pure forms of other discursive cognizers fall on the same side of this distinction, it alone cannot explain Kant's asymmetric treatment of the cases.

This points to a general lesson for any attempt to explain Kant's restriction of our knowledge of the pure forms of sensibility to human cognizers. We need not just an explanation of why we cannot know whether space and time are the pure forms of sensibility for all discursive cognizers. We need, in addition, an explanation which is compatible with the fact that we can know that space and time are the pure forms of sensibility for human cognizers. Considerations that appeal to the receptivity of sensibility cannot meet this constraint.

5. Knowledge and Possibility

Consider the following simple argument. We cannot have analytic knowledge of whether space and time are the pure forms of sensibility for all discursive cognizers. We cannot have synthetic a posteriori knowledge of whether space and time are the pure forms of sensibility for all discursive cognizers. And we cannot have synthetic a priori knowledge of whether space and time are the pure forms of sensibility for all discursive cognizers. Since these exhaust our ways of knowing whether space and time are the pure forms of sensibility for all discursive cognizers, we cannot know whether space and time are the pure forms of sensibility for all discursive cognizers. So *Alien Undecidability* is true.

Something like this must surely be right. But it is not straightforward to fill in the details. Here is one way to approach the matter. Assume, for the

moment without explanation, that we've already said enough to establish the first two premises: we can have neither analytic nor synthetic a posteriori knowledge of whether space and time are the pure forms of sensibility for all discursive cognizers. That would leave us with synthetic a priori knowledge. This anyway seems the plausible place to motivate Kant's commitment to *Alien Undecidability*. For one lesson of the previous section was that an explanation of Kant's commitment to *Alien Undecidability* should dovetail with an explanation of *Human Knowability*. And our knowledge that space and time are the pure forms of human sensibility is plausibly an instance of synthetic a priori knowledge. So focusing on the possibility of and obstacles to synthetic a priori knowledge looks well-placed to provide an explanation of why we can know that space and time are the pure forms of sensibility for human cognizers but cannot know whether space and time are the pure forms of sensibility for all discursive cognizers.

The suggestion, then, is that Kant's commitment to *Alien Undecidability* can be explained if there is some obstacle to our possessing synthetic a priori knowledge of whether space and time are the pure forms of sensibility for all discursive cognizers which does not rule out our possessing synthetic a priori knowledge that space and time are the pure forms of sensibility for human cognizers. Is there such an obstacle? A proper answer to this question would require an account of how Kant thinks we know synthetic a priori claims in general and such an account would, in effect, be an account of Kant's Critical methodology itself. But without attempting to take on these bigger questions just yet, we can note that Kant repeatedly emphasises the connection between our synthetic a priori knowledge and our knowledge of our own mental faculties: philosophical knowledge is a kind of self-knowledge (Axi, Axx, Bxviii, Bxxiii, A13/B26; MFNS4:472–3). And this opens up the possibility of arguing as follows: since synthetic a priori knowledge is based on our own case, our knowledge of the pure forms of sensibility can only be knowledge based on our own case. And if it is based on our own case, the most we can conclude is that space and time are the pure forms of *human* sensibility. Whether they are more than this, we cannot say.

This reasoning is superficially attractive but it suffers from exactly the same problem as the short argument from receptivity: it begs the question against the claim that we can know that space and time *are* the pure forms of

sensibility for all discursive cognizers. For suppose that space and time are the pure forms of sensibility for all discursive cognizers. And assume, for the reasons given above, that knowledge of this fact would be a case of synthetic a priori knowledge. Then we could still account for our ability to have such knowledge by saying: synthetic a priori knowledge in philosophy is a kind of self-knowledge and we can know that space and time are the pure forms of sensibility for all discursive cognizers through reflection on our own case. For we are discursive cognizers, so knowledge of the structure of the sensible faculty of all discursive cognizers would also be a kind of self-knowledge. Or, at least, there is nothing in the fact that synthetic a priori knowledge in philosophy is a kind of self-knowledge which would rule out synthetic a priori knowledge that space and time are the pure forms of sensibility for all discursive cognizers.

On its own, then, this approach won't work. But there is a more careful version of the thought that looks more promising.

We begin by reformulating the simple argument from above in light of the fact that, as we argued in §2, *Alien Undecidability* is equivalent to the claim that we cannot know whether discursive cognizers with pure forms of sensibility different from our own are really possible. Call such cognizers *aliens*. Then the simple argument for *Alien Undecidability* runs as follows. We cannot have analytic knowledge whether aliens are really possible. We cannot have synthetic a posteriori knowledge whether aliens are really possible. And we cannot have synthetic a priori knowledge whether aliens are really possible. Since these exhaust our ways of knowing whether aliens are really possible, we cannot know whether aliens are really possible. So *Alien Undecidability* is true.¹⁶

We will not spend much time on the first two premises of this argument. We take the first to be uncontroversial given our assumption that there is no contradiction in the mere concept of an alien, a discursive cognizer with forms of sensibility different from our own. Conceptual analysis cannot establish

¹⁶ A structurally analogous argument might be used to support the claim that we cannot know whether the categories are the pure intellectual forms for all discursive cognizers. See Gomes, Stephenson, & Moore (2022, pp.147–151) for formulation and discussion.

real possibility (Bxxvi), and it can only establish real impossibility by means of establishing logical impossibility, which our assumption entails cannot be done. So we cannot have analytic knowledge whether aliens are really possible.

The second premise is similar. One conjunct is straightforward. Experience cannot establish that something is really impossible; at most it can establish that something is contingently non-actual (and even this might be doubtful). The other conjunct is only slightly less straightforward, since if actuality entails real possibility (Bxxvi), then one might think that we could establish that aliens are really possible by establishing that they are actual. But we've already suggested that the pure forms of cognitive faculties different from our own are not the kind of thing that can be receptively known through affection, either directly in experience or indirectly via inference to the best explanation of something we experience. If this is right, then nor can we have synthetic a posteriori knowledge that aliens are really possible via synthetic a posteriori knowledge that they are actual. So we cannot have synthetic a posteriori knowledge whether aliens are really possible.

This leaves us with synthetic a priori knowledge. If we can show that we cannot have synthetic a priori knowledge whether aliens are really possible, we have our explanation of *Alien Undecidability*. How do we argue for this final premise if not via the self-knowledge approach from above? Here is a closely related but more careful proposal.

Say that something is formally possible if and only if it is in agreement with our own forms of experience (A218/B266). It is presumably trivial that discursive cognizers with non-spatiotemporal forms of sensibility are not formally possible. With three assumptions, we can use this claim to show that we cannot have synthetic a priori knowledge whether such cognizers are really possible.

The first assumption is that the only way to gain (theoretical) synthetic a priori knowledge of real possibility is by establishing formal possibility and then inferring real possibility from formal possibility.¹⁷ However, since we

¹⁷ See Stang (2016) and Stephenson (2023). For a contrasting view see Leech (2017), who argues that Kant would reject this inference.

cannot show that aliens are formally possible—for they are not—we cannot establish that they are really possible by showing that they are formally possible. Given our assumption, it follows that we cannot have synthetic a priori knowledge that aliens are really possible.

Can we instead have synthetic a priori knowledge that aliens are really impossible? Recall that aliens are formally impossible. Plausibly this is a case of synthetic a priori knowledge—it follows trivially from the claim that our own forms of sensibility are space and time, which is something we know synthetically and a priori. So can we have synthetic a priori knowledge that aliens are really impossible by inferring it from their formal impossibility? We cannot *in general* infer real impossibility from formal impossibility. God, freedom, and immortality are formally impossible—they are not in agreement with our forms of experience—yet it is crucial for Kant that we cannot infer from this that they are really impossible. But can we perhaps assume that the inference from formal impossibility to real impossibility holds for the specific case under consideration? If so, then we could move from the formal impossibility of aliens to their real impossibility.

The problem with this move is that the claim that formal impossibility entails real impossibility for the case at hand assumes precisely what is at issue in the present context. For it is trivial that other forms of sensibility are not in agreement with our own forms of sensibility. So to assume that lack of agreement with our own forms of sensibility entails the real impossibility of aliens with other forms of sensibility just is to assume that such cognizers are really impossible. Our second assumption, then, is that we are not entitled to the claim that formal impossibility entails real impossibility in the relevant case. And if there are no other ways of gaining synthetic a priori knowledge that something is really impossible—this is our third assumption—then we cannot have synthetic a priori knowledge that aliens are really impossible. It follows that we cannot have synthetic a priori knowledge *whether* aliens are really possible.

This completes our revised simple argument for *Alien Undecidability*: we cannot know (in any way) whether discursive cognizers with other forms of sensibility are really possible, or equivalently, whether space and time are the pure forms of sensibility for all discursive cognizers. And this is because of the

methods by which we can establish claims about real possibility and impossibility.

6. We are Human Beings

But there is still a problem. Remember our constraint: we argued above that any explanation of our inability to know whether space and time are the pure forms of sensibility for all discursive cognizers must not block our ability to know that they are the pure forms of sensibility for all human cognizers. Equivalently, any explanation of our inability to know whether aliens are really possible must not block our knowledge that human cognizers with non-spatiotemporal forms of sensibility are really impossible. For we need an explanation of Kant's commitment to *Alien Undecidability* that does not undermine his commitment to *Human Knowability*. And this presents a problem because it looks as though the reasoning we just set out could be co-opted to show that we cannot know that human cognizers with non-spatiotemporal forms of sensibility are really impossible.

Here is the reasoning. How can we know that know human cognizers with non-spatiotemporal forms of sensibility are really impossible? Since there is no contradiction in the concept of a non-spatiotemporal form of human sensibility, we cannot know this analytically, by showing that human cognizers with non-spatiotemporal forms of sensibility are logically impossible and thus really impossible. Nor can we have a posteriori knowledge based on experience of what is really impossible. So we must have some other, synthetic a priori way of showing the real impossibility of human beings with non-spatiotemporal forms of sensibility. What could that be?

The only available alternative looks to involve showing the formal impossibility of human cognizers with non-spatiotemporal forms and from this inferring their real impossibility. And if formal impossibility means incompatibility with our spatiotemporal forms, then human cognizers with non-spatiotemporal forms are formally impossible. But can we infer from this that they are really impossible? We noted above that we cannot *in general* infer real impossibility from formal impossibility. So perhaps Kant thinks that in this particular case, we can assume that the inference from formal impossibility to real impossibility holds? Well, no, and for analogous reasons

to those set out above. For the claim that formal impossibility entails real impossibility for this particular case assumes precisely what is at issue: it assumes that human beings with non-spatiotemporal forms of sensibility are really impossible.

Our reasoning here parallels what was said about alien sensibilities above. It is trivial that non-spatiotemporal forms of sensibility are not in agreement with spatiotemporal forms of sensibility. So to assume that lack of agreement with spatiotemporal forms of sensibility entails the real impossibility of non-spatiotemporal forms of human sensibility just is to assume that human cognizers with non-spatiotemporal forms of sensibility are really impossible. And if there are no other ways of showing that something is really impossible, then we cannot know that human cognizers with non-spatiotemporal forms of sensibility are really impossible.

But, of course, this is exactly what Kant thinks we *can* know. So what has gone wrong? The line of thought under consideration in the previous section held that Kant's reason for confining our knowledge to the case of human cognizers is that we cannot use our methods for obtaining knowledge of real possibility and impossibility to know whether discursive cognizers with non-spatiotemporal forms of sensibility are really possible. And the problem is that if these methods are ill-equipped for determining whether space and time are the pure forms of all discursive cognizers, they look similarly ill-equipped for determining whether space and time are the pure forms of all human cognizers. I can know that space and time are the pure forms of *my* sensibility—but whatever obstacle prevents me from extending that knowledge to all discursive cognizers looks as though it should equally prevent me from extending it to all human beings. Put bluntly, both claims seem to involve an arrogant overreaching from my own case to that of others: space and time are the pure forms of sensibility for *me*; whether they are more, I cannot say.¹⁸

What should we make of this worry? The problem is particularly acute when Kant's claims are formulated in terms of *human beings*, for then it can seem

¹⁸ For related discussion concerning solipsism, see Hacker (1986), Williams (1973), Lear (1984), and Moore (1985).

as presumptuous to make a claim about the pure forms of all human cognizers as it is to make a claim about all discursive cognizers. But alongside his talk of human beings, the human standpoint, and so on, Kant also frames his claims about the pure forms of sensibility using the first-person plural. We have seen this repeatedly above (especially at A26–7/B42–3; cf. A19/B33, A33–5/B49–52). Here are two further instances:

Our expositions accordingly teach the **reality** (i.e., objective validity) of space in regard to everything that can come before us externally as an object... (A27–8/B43–4)

Our assertions accordingly teach the **empirical reality** of time, i.e., objective validity in regard to all objects that may ever be given to our senses. And since our intuition is always sensible, no object can ever be given to us in experience that would not belong under the condition of time. (A35/B52)

The puzzle we have raised prompts the question of how we are to understand this use of the first-person plural. How do we determine who falls within its limits? Who are *we*?

Well, presumably we are human beings. And that can make these claims look presumptuous on Kant's part. For how can he rule out the possibility of other human beings with non-spatiotemporal forms of sensibility? But this objection only has force if we have an independent grip on the notion of a human being such that identification of *my* pure forms did not immediately extend to include all the pure forms of human beings. If that were the case, there would be a real issue in accounting for Kant's confidence that his identification of the pure forms of sensibility extends to all human beings. But what if we took the opposite tack and took the notion of a human being to be determined in part by the reach of the first-person plural? On this view, there would be no gap between an identification of *our* pure forms and an identification of the pure forms of human beings in general: to identify our pure forms would just be to identify the pure forms of human cognizers.¹⁹

¹⁹ This is compatible with there being an aspect of ourselves, of humans, that is the subject of empirical investigation. See e.g. the *Anthropology*. For general discussion of Kant on the human being, see e.g. Cohen (2009, 35–60), Frierson (2013) and Tolley (2022).

This can start to ameliorate the force of the challenge. For if we have no independent account of the human being, then our synthetic a priori knowledge of the pure forms of our own sensibility suffices for synthetic a priori knowledge of the pure sensible forms of all human cognizers. There are still questions about how we know that space and time are the pure forms of our own sensibility. But once we have such knowledge, there is no further question about how we know that space and time are the pure forms of sensibility for all human beings. If the notion of the human being is determined in part by the reach of the first-person plural, then there is no gap between identifying the pure forms of sensibility for us and identifying the pure forms of sensibility for human cognizers in general.

Is there still a gap between the first-person singular and the first-person plural? Ought Kant have said only that space and time are the pure forms of sensibility for *him*, others be damned? We think not. The first-person plural is primarily a device of co-operation—it opens up the possibility of shared projects and shared activities, allowing us to do things together. And the use of the first-person plural here is simply a way of including within its reach anyone who follows the reasoning that Kant lays out in the *Transcendental Aesthetic*. The reference of the first-person plural is just whoever is able to take on the Critical project, carry out Kant's first-personal investigations for themselves, and come to the same conclusions about our pure forms.²⁰

This means that the first-personal way in which we identify the pure forms of sensibility, the first-personal method of the *Critique of Pure Reason* and indeed the Critical philosophy in general, is no obstacle to our obtaining knowledge of *our* pure forms of sensibility, since the reach of that knowledge extends as far as those who are able to partake in the project of the *Transcendental Aesthetic*. And since our notion of human being is determined in part by the reach of the first-person plural, there is similarly no obstacle to our obtaining knowledge of the pure forms of sensibility for *human* cognizers, precisely as Kant says.

²⁰ Whence the invitation to readers to join a common task, expressed in the passage from Bacon that Kant added as motto to the second edition of the *Critique* (Bii). See O'Neill (1989, 6–9) on the public use of reason and its connection to the Bacon passage. Cf. McDowell (2000, 96–97) and Lear (1984, 232–33).

There *is* still an obstacle to our gaining knowledge of the pure forms of sensibility for all discursive cognizers, since the method by which we gain synthetic a priori knowledge of our pure forms cannot determine whether these are shared by all discursive cognizers, again precisely as Kant says. For who is to say whether there could be discursive cognizers with other forms of sensibility who would undertake their own Transcendental Aesthetic? We cannot determine this, and so must remain undecided.

It is thus Kant's first-personal methodology which explains his commitment to *Alien Undecidability*. This is no barrier to *Human Knowability* because we have no independent grip on the notion of the human being, independent, that is, of the reach of a first-person plural. If what it is to be human just is to be able to follow Kant's reasoning in the *Critique of Pure Reason*, then Kant is right to express his claims about the pure forms of sensibility as claims about *us*. It is Kant's view of the human being and his transcendental method which explain the knowledge he thinks we can and the knowledge he thinks we cannot have about space and time.²¹

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