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**The Intellectual Given**

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## **The Intellectual Given**

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Some things we know just by thinking about them: for example, that identity is transitive, that three are more than two, that wantonly torturing innocents is wrong, and other propositions which simply strike us as true when we consider them. But how? This essay articulates and defends a rationalist answer which critically develops a significant analogy between intuition and perception. The central thesis is that intuition and perception, though different, are at a certain level of abstraction the same kind of state, and states of this kind are, by their very nature, poised to play a distinctive epistemic role. Specifically, in the case of intuition, we encounter an *intellectual* state that is so structured as to provide justified and even knowledgeable belief without requiring justification in turn—something which may, thus, be thought of as *given*.

The essay proceeds in three stages. Stage one advances a fully general and psychologically realistic account of the nature of intuition, namely, as an intellectual presentation of an apparent truth. Stage two provides a modest treatment of the epistemic status of intuition, in particular, how intuition serves as a source of immediate *prima facie* justification. Stage three outlines a response to Benacerraf-style worries about intuitive knowledge regarding abstract objects (e.g., numbers, sets, and values); the proposal is a constitutive, rather than causal, explanation of the means by which a given intuition

connects a thinker to the fact intuited.

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## Introduction

### *§1. The Guiding Question*

Some things we can know just by thinking about them: for example, that identity is transitive, that Gettier's Smith does not know that the man who will get the job has ten coins in his pockets, that it is wrong to wantonly torture innocent sentient beings, and various other things that simply strike us, intuitively, as true when we consider them. The question is how. How can we know things just by thinking about them? This is *The Guiding Question* in what follows.

We can distinguish two traditional approaches to The Guiding Question: rationalism and empiricism, which offer distinct perspectives on the sources of justification, evidence, and knowledge. While both rationalism and empiricism may allow that we have justification for, evidence for, or knowledge of truths such as those cited above, what is distinctive of the relevant variety of rationalism is its claim that in certain cases the source of such justification, evidence, or knowledge is neither sensory experience nor the (allegedly "analytic") form or character of the relevant propositions, as Humeans contend, but rather a certain non-sensory conscious mental state—an intellectual striking, or 'intuition'. For example, when considering whether identity is transitive, it may *strike* one that it is; when considering whether Gettier's Smith has knowledge, it may *strike* one that he does not; or when considering whether wantonly torturing innocent beings is wrong, it may *strike* one that this is so. In this way, according to rationalists, certain truths are neither perceived nor inferred from what is perceived;

rather, they are, or at least can be, *intuited*.<sup>1</sup>

Opposition to this rationalist thesis is often motivated by the perceived obscurity of intuition, which is sometimes derided as an occult power akin to crystal-ball gazing.<sup>2</sup> Such derision appears to be fueled primarily by the suggestion, evidently endorsed by traditional rationalists such as Plato and Descartes, and even philosophers like Locke who are otherwise of a strongly empiricist bent, that intuition is a kind of direct, immediate apprehension akin to perception.<sup>3</sup> Locke writes in the *Essay* (IV.2.i):<sup>4</sup>

[T]he Mind...perceives the Truth, as the Eye doth light, only by being directed towards it. The Mind perceives, that White is not Black, That a Circle is not a Triangle, That Three are more than Two, and equal to One and Two...by bare Intuition...

However, the perceptual analogy has been charged with such vices as mysticism, magic, and metaphor. Paul Boghossian (2000, 231) has recently articulated the central criticism

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<sup>1</sup> This rationalist thesis is historically quite popular; it has even been endorsed by philosophers, such as Locke (see the quotation included in the text below), who have held empiricist views regarding, say, the origins of ideas, the principle of sufficient reason, or reasons for action. Rationalism—as defined here—has seen defense in recent years by Bealer (1992, 1998, 2002, 2008), Bonjour (1998), Jackson (1998, ch. 3), Katz (1998), E. Sosa (1998; 2002; 2006; 2007, ch. 3), Parsons (2000, 2008), Pust (2000), D. Sosa (2006), and Chudnoff (forthcoming a), among others.

<sup>2</sup> Cf. Ayer (1946, 73; 1956, 31), Salmon (1967, 39-40), Mackie (1977, 38), Chihara (1982, 215), Hintikka (1999, 130-133), Kitcher (2000, 75 ff.), Smith (2000, 23-24), Boghossian (2001), Casullo (2003, §6.3), Wright (2004a, 156-157), and Devitt (2005, §§3-4).

<sup>3</sup> Feigl (1958, 2) summarizes: “Intuition has...been contrasted, traditionally and quite generally, with indirect, mediate, relational, or inferential knowledge. Intuition is often identified with direct insight or immediate apprehension.”

<sup>4</sup> See also Millican’s (2002, 112-116) interesting historical study of Locke’s quasi-perceptual view of intuition.

thus:

[T]he idea that we possess a quasi-perceptual faculty—going by the name of ‘rational intuition’—...has been historically influential. It would be fair to say, however, that no one has succeeded in saying what this faculty really is nor how it manages to yield the relevant knowledge. ‘Intuition’ seems like a name for the mystery we are addressing, rather than a solution to it.

The primary goal of this essay is to systematically develop the quasi-perceptualist theory of intuition and defend it against this style of criticism.

Theorizing about intuition may be difficult, but, as I hope to show, it need not indulge in mystery. The plan is to approach a viable understanding of intuition in three stages. These stages correspond to the philosophy of mind, epistemology, and metaphysics of intuition.

In the first stage (Part I), I offer reasons to think that, when suitably disciplined, the perceptual analogy affords a plausible explication of the nature of intuition—what intuition “really is”. Intuition is neither a doxastic attitude, such as a belief or judgment, nor a mere tendency to form some such attitude, but rather a *presentation*: a conscious state or event that, like perception, *presents* the world as being a certain way. I outline a theory of presentation that locates this type of mental state in a plausible ontology of mind. The result is a view of intuition with several theoretical virtues. For example: it makes sense of common descriptions of what happens when one has an intuition; it

correctly classifies examples of intuition (or the absence thereof); it explains *prima facie* distinctions between intuition and “nearby” phenomena (e.g., guesses); and it accounts for several heretofore unexplained psychological roles of intuition (e.g., its role in belief formation).

In the second stage (Part II), I argue that these broadly metaphysical or ontological reflections serve an epistemological end, in that they enable a sober, non-skeptical perspective on how intuition, given what it is, serves as a source of justification and evidence. Intuition’s ontological profile is not an idle wheel, epistemically speaking, for intuition is analogous to perception *in epistemically significant respects*. Stated baldly, the central idea is that intuition and perception, though different, are at a certain level of abstraction the same kind of state or event, and states or events of this kind are, by their very nature, poised to play a distinctive epistemic role. In effect, the epistemology of intuition can be seen as a natural extension of the epistemology of perception: those non-epistemic features of perception which make it the case that perception serves as a legitimate epistemic source also make it the case that intuition serves as a legitimate epistemic source. Specifically, in the case of intuition we encounter an *intellectual* state or event that is so structured as to provide a type of epistemic status without requiring it in turn—something which may, thus, be thought of as *given*.

In the third stage (Part III), I sketch a framework (a series of theses and hypotheses) for understanding how intuition—the intellectual given—is able to serve not merely as a source of justification and evidence, but in addition how it “manages to yield knowledge” about properties, propositions, numbers, sets, functions, types, values,

norms, and other so-called abstracta. Many philosophers have wondered how, except by magic or divine intervention, the mind can span the great “abyss” that separates living and breathing, spatiotemporally-located thinkers from the non-spatiotemporal, causally inert entities that their intuitions are allegedly about.<sup>5</sup> I explore the possibility that successful intuitions *constitutively depend* on the facts intuited. Just as a naïve realist view of perception regards successful perception as an intentional state partly constituted by the empirical facts that are perceived, a naïve realist view of intuition regards successful intuition as an intentional state partly constituted by the non-empirical facts that are intuited. Such constitution is not trivial; in particular, it is not explanatorily idle. That the intuition constitutively depends on the fact intuited introduces, I suggest, the possibility of a constitutive, rather than causal, explanation of how intuition can be non-accidentally correct—and, in turn, how intuition may serve as a source of knowledge. I also suggest that such a non-causal, constitution-based approach is independently motivated by the possibility of acquiring knowledge of facts about, say, colors and shapes via hallucinatory experience, in which there need not be a causal relation between the experience and the fact known.

The result of this three-stage investigation is a version of rationalism that meets

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<sup>5</sup> Such a question presupposes a broadly realist (Platonist or Aristotelian) conception of various of the entities that our intuitions are often about: for example, properties, propositions, numbers, sets, functions, types, values, norms, and so forth. However, the view of intuition that emerges from stages one and two is compatible with a broadly anti-realist metaphysics (e.g., constructivism, nominalism, idealism). I myself accept realism; hence the question. But even putting my own commitments to the side, it seems that realism is—or at least should be—a metaphysical option; and there is something to be said in favor of an epistemological perspective that does not alone dictate metaphysics, but rather leaves room for metaphysical theorizing. So, there is pressure to develop a quasi-perceptualist theory of intuition that is compatible with realism. This is the ambition of Part III.

the challenge to supply an account of what intuition is, when and why intuition provides justification and evidence, and how intuition is able to serve as a source of knowledge. All without mysticism, magic, or metaphor.

This essay takes seriously a familiar phenomenon—that some things strike us, intuitively, as true—and tries to understand it. As we shall see, there are reasons to be impressed by this phenomenon, not the least of which is its similarity with perceptual experience. While such a comparison is not new, its sustained development and defense—the project of this essay—is. Indeed, I believe the comparison is not superficial, but runs deep, and moreover can help to answer The Guiding Question. Our intellectual engagement with reality has the same basic structure as our perceptual engagement with reality: psychologically, epistemologically, and metaphysically, intuition is basically just like perception, just not sensory.

## I. Mind

### §2. *Intuition and “Nearby” Phenomena*

The question of the nature of a given mental state or event, such as intuition, need not be regarded as merely (or even primarily) epistemological, for at bottom it concerns the metaphysics or ontology of mind. In fact, it is generally possible to engage such a question without taking a firm stand on associated epistemological issues—even though a certain trajectory of engagement might eventually be seen to have significant epistemological implications. That one’s answer to a certain ontological question might bear epistemological weight need not threaten the question’s autonomy, nor diminish its ontological importance. On the contrary, the fact that we might learn something about the epistemology of a given mental state or event, such as intuition, by first reflecting on its metaphysics—that is, by clarifying what intuition is—only serves to motivate such a project.

What, then, is intuition? Absent further elaboration, one who is considering this question may reasonably wonder whether it is ill-posed. What phenomenon is such that we are being asked what *it* is? As we will see, just as there are many distinct candidates for the generic title ‘intention’ (e.g., *intending* to  $\varphi$ , *intentionally*  $\varphi$ -ing,  $\varphi$ -ing with *intent*, and so forth<sup>6</sup>) or the generic title ‘knowledge how’ (e.g., knowledge how *to*  $\varphi$ , knowledge how *one*  $\varphi$ -s, knowledge how  $\varphi$ -ing *is done*, knowledge how *F*-s  $\varphi$ , and so forth<sup>7</sup>), there are many distinct candidates for the generic title ‘intuition’. While some of these

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<sup>6</sup> See e.g., Anscombe (1957) and Harman (2006).

<sup>7</sup> See, e.g., Bengson et al (2009, §1) and Bengson and Moffet (forthcoming).



phenomena can be easily sighted and subsequently untangled, at other times the requisite distinctions are relatively subtle. Since neglect of these distinctions is liable to breed (avoidable) confusion, we are encouraged to make an effort to identify our target and to distinguish it from various “nearby” phenomena.

The target in what follows is the conscious or occurrent mental state or event of intuiting that *p*, or *having the intuition that p*, where *p* is the content that, e.g., identity is transitive or Gettier’s Smith does not know.<sup>8</sup> Such contentful intuition may be distinguished from a variety of *prima facie* related but distinct phenomena, such as objectual intuition (intuiting objects, such as numbers or sets<sup>9</sup>) or a “special faculty” of intuition.<sup>10</sup> A distinction must also be drawn between our target, conscious or occurrent

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<sup>8</sup> I will understand content as that which is or specifies truth (accuracy, satisfaction, correctness) conditions (cf. Boghossian 1990, 173). For ease of exposition, I will make certain simplifying assumptions about the contents of various intuitions. See Williamson (2005; 2007, ch. 6), D. Sosa (2006), Ichikawa and Jarvis (2008), Chudnoff (forthcoming a, §7), Malmgren (forthcoming) for discussion of the precise content of certain Gettier intuitions. Fortunately, nothing significant turns on this matter here. Our project is phenomenological in the traditional sense that concerns study of the character or type (what I am calling the ‘nature’) of various mental phenomena, regardless of their content.

<sup>9</sup> See Gödel (1953/1959, 1964), Parsons (1995; 2000; 2008, 154 ff.), and Katz (1998, 44-45); cf. Bonjour (2001). We can also set to one side Kantian “intuition” or *Anschauung* (not *Einsicht* or *Intuition*), which apparently is a technical notion invoking all and only singular, immediate representations, both sensory and non-sensory (Kant 1800, §1; cf. 1781/1787, A320/B366-367). Bolzano (1837), Husserl (1913, §20 and elsewhere), and others in the Kantian tradition employ similarly technical notions. Findlay (2001, lxxxvi emphasis added), who translated Husserl’s *Logical Investigations*, writes: “*Anschauung*...I have rendered by ‘intuition’...since this is the traditional rendering of the term in translations of Kant, *and since the word has no proper equivalent in English*.”

<sup>10</sup> Consider Ewing (1941, 17): “If you ask me what intuition is as a faculty apart from its manifestations I should answer: ‘Nothing’; but it is very important to consider...intuition...as an actual act [or state] of mind, not merely a faculty.”

Focusing on states or events (or acts), rather than faculties, need not prejudge any substantive questions. Boghossian’s criticism in the quote above, for example, can be preserved by replacing every occurrence of ‘faculty’ with ‘state or event’. I will hereafter leave the second disjunct implicit, employing the broad use of ‘state’ familiar in contemporary philosophy of mind; on this use, *prima facie* dynamic mental phenomena (e.g., events) may qualify as states even though they

intuition, and its non-conscious or non-occurrent counterpart. There is a sense in which an instance of the schema

$x$  has the intuition that  $p$

can be true even if  $x$  is not, at that moment, actually having the intuition that  $p$  (intuiting that  $p$ )—perhaps because  $x$  is currently asleep, inebriated, or otherwise distracted. For instance, one may truly say of one's colleague that he has the intuition that Gettier's Smith does not know even though one's colleague is, at that moment, across the room laughing uncontrollably at a clever joke. In such a case, one's colleague might be disposed to actually have this intuition, but he is not right then and there having the intuition (intuiting) that Gettier's Smith does not know; as we say, it does not at that moment *strike* him that Gettier's Smith does not know. In such a case, our target, the conscious or occurrent mental state of having the intuition that  $p$  (hereafter, simply 'intuition'), is not present.

We may also distinguish our target from the phenomenon of *being intuitive* (a property of propositions, theories, and even locations and methods). The English words 'intuition', 'intuitive', and 'intuitively' are often employed more or less interchangeably, but there are also important differences that they can be used to mark: for instance, conscious intuitions alone require subjects and dates at which they first come into their subject's minds. Thus there are, for example, many propositions which, though intuitive,

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are not standing conditions.

have never in fact been contemplated, much less intuited. Also, while we may be willing to affirm that, say, so-called Moorean propositions (e.g., the proposition that one was born<sup>11</sup>) are *intuitive*, we are disinclined to say that we *have the intuition* (intuit) that they are true (Moore certainly did not say this). Similarly, it may be *intuitive* to one that flipping the switch turns on the light; but it is another question entirely whether one *has the intuition* (intuits) that flipping the switch turns on the light. For similar reasons we might distinguish our target, having the intuition that p, from the potentially different state of finding it intuitive that p: arguably, perhaps, one may *find it intuitive* that the soap dispenser is to the right of the sink without actually *having an intuition* (intuiting) that that is where the dispenser is located. To the extent that these can be distinguished, it is the latter phenomenon—the conscious or occurrent mental state of having the intuition that p—that is our target here.<sup>12</sup>

As it happens, there is no ordinary language locution that serves as a failsafe guide to this mental state. English expressions of the forms ‘x has the intuition that p’, ‘x finds it obvious that p’, ‘x sees that p’, ‘It is clear to x that p’, ‘It seems to x that p’, and so forth may have readings on which they report our target, but they also have readings on which they do not. Accordingly, let us instead continue to locate our target by

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<sup>11</sup> Cf. Moore (1925, §1).

<sup>12</sup> These distinctions may seem “strict”. Perhaps; but that need not be viewed as an objection. Besides, it is only to be expected: theoretical inquiries like ours often demand a sensitivity to and appreciation of potential distinctions that in most non-theoretical contexts would be imperceptible, if not inappropriate. There are a number of reasons that theoretically important distinctions might not be obvious at a glance. For example, they may be obscured by the well-documented sloppiness of casual discourse, concealed or rendered ineffectual by the practical character of standard conversational aims, inaccessible due to a lack of certain theoretical, logical, or conceptual resources, neglected due to ordinary inattentiveness, and so on. For further discussion of the English word ‘intuition’, see §8.

distinguishing concrete examples in which a subject has a particular intuition from some in which a subject does not. Consider:

### *The Gettier Intuition*

When reading Gettier's paper "Is Knowledge Justified True Belief?", Professor Typical considers whether Smith knows that the man who will get the raise has ten coins in his pockets. It strikes her that, even though Smith is justified in believing that this is so, Smith does not know it.

### *Ramanujan's Intuition*

The mathematical prodigy Ramanujan is on his way to visit his mentor, Professor Hardy, in London. He hails a cab and, as it stops, he notices that its number is 1729. This causes him to smile, for he immediately sees that this number has a very interesting property, namely, the property of being the smallest number expressible as the sum of two positive cubes in two different ways.<sup>13</sup>

### *The Imaginer*

When searching for material that will help her students understand the notion of an irrational number, Teach comes across a story in which  $\pi$ , sad about being such an irrational number, works hard to achieve his life's dream of being represented as a simple fraction. His mother is so proud:  $\pi$  is now a rational number! Teach

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<sup>13</sup> This example, like most of the cases described here, is based on a true story; see Hardy (1940, 12).

imagines this scenario and chuckles. She finds this little fable amusing to contemplate; but, of course, it does not strike her as possible, let alone true.

These examples enable us to distinguish our target from a few “nearby” phenomena. In *The Gettier Intuition*, Professor Typical has the intuition that Smith does not know, though he is justified in believing, that the man who will get the job has ten coins in his pockets. This intuition—the so-called “Gettier intuition”—is not a mere *guess*, *hunch* or *hypothesis* (conjecture, speculation).<sup>14</sup> Intuitions can also be distinguished from items of *common sense*: in *Ramanujan’s Intuition*, Ramanujan has a sophisticated mathematical intuition (viz., that 1729 is the smallest number expressible as the sum of two positive cubes in two different ways) that is not even remotely commonsensical.<sup>15</sup> Similarly for intuitions versus states of *understanding*, *imagining*, and *conceiving*. In *The Imaginer*, Teach does not have the intuition that it is true (or possible) that  $\pi$  is a rational number, though she understands this proposition and subsequently imagines or conceives that it is so.<sup>16</sup>

Another example:

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<sup>14</sup> See Cohen (1973-1974) for a detailed treatment of guessing and its kin.

<sup>15</sup> While *Ramanujan’s Intuition* shows that common sense is not necessary for intuition, it should be emphasized that common sense is also not sufficient: for example, it is common sense that a goldfish left out of water will die, or that dark clouds signal rain; yet few would claim to know such things by intuition (i.e., to intuit them).

<sup>16</sup> On imagining or conceiving impossibilities, see Kripke (1980, 103 ff.), Tidman (1994), Gendler (2000, §V), Chalmers (2002, 152-155), and Bealer (2008).

### *The Ardent Physicalist*

Professor Smith endorses a version of Physicalism that implies that zombies (viz., microphysical duplicates of conscious beings who themselves lack consciousness) are not possible. But she must admit that when she considers it, it still does strike her, as it evidently does many others, that there could be such beings. Nevertheless, because she is thoroughly convinced that Physicalism is true and regards her modal intuitions as prone to error, she chalks this up as a case in which things are not as they seem. In fact, she does not even feel inclined to believe that things are as they seem. She is so confident in Physicalism and so distrustful of her anti-Physicalist intuitions that, although the intuition remains, the temptation to accept it has vanished.

Professor Smith has the familiar intuition that zombies are possible, but she does not believe (judge, accept, opine) that they are. This recommends a distinction between our target and *doxastic attitudes*, viz., propositional attitudes like belief (*doxa*) that involve implicit or explicit endorsement or assent.

What about *dispositions* or *inclinations* (attractions, temptations) to form such attitudes, that is, the “tendencies that...‘move’ us in the direction of accepting certain propositions without taking us all the way to acceptance” (van Inwagen 1997, 309)? Such tendencies seem to accompany a wide variety of mental states, as illustrated by ordinary perceptions (which dispose or incline perceptual beliefs) and examples such as the following:

*The Impassioned Scientist*

Dr. Jones has just read an article detailing evidence against his theory of the disappearance of the Rocky Mountain Locust. The evidence presented in the article is overwhelming. Even so, being less than perfectly rational, Dr. Jones continues to feel inclined to believe his own theory, which has unwittingly become extremely precious to him. It is not that his theory still strikes him as true, despite what he has just read. Rather, he feels attracted to assent to it simply because, unbeknownst to him (“subconsciously”, as his therapist would say), he has a strong, persisting desire for his own theory to be correct.

Dr. Jones feels inclined to believe his own theory, but he lacks our target: he does not have the intuition—as the case is described, it no longer strikes him—that it is true.

To be sure, the observation that our target is distinct from *mere* dispositions or inclinations does not rule out the possibility that intuitions are *dispositions or inclinations that meet some further condition(s)*: “sophisticated” tendencies, as it were. No doubt it is difficult to prise intuitions and such dispositions or inclinations apart extensionally: plausibly, whenever one has an intuition, one is in some way, and to some extent, disposed or inclined to endorse its content, even if one ultimately does not do so. Yet, it does not follow that the intuition and the tendency must be one and the same. The thought that there is space for a distinction here might be motivated through reflection on cases like *The Ardent Physicalist*, whose coherence is difficult to deny. Although it

strikes Professor Smith that zombies are possible, she does not feel moved to accept that they are (her “temptation to accept it has vanished”). She is stubborn, and her theoretical convictions are strong; so although she still has the intuition, she does not still *feel* inclined to believe accordingly (“she does not feel inclined to believe that things are as they seem”). Granted, Professor Smith may still possess a *non-conscious* disposition or inclination to believe that zombies are possible, a disposition or inclination that is “stymied” by a countervailing disposition or inclination to accept Physicalism.<sup>17</sup> However, since our target is a *conscious* state, it can be distinguished from such a non-conscious disposition or inclination. But if (i) our target may be present while (ii) a *conscious* disposition or inclination is absent, as *The Ardent Physicalist* suggests, and (iii) our target cannot be a *non-conscious* disposition or inclination, then (iv) our target can be distinguished from both conscious and non-conscious dispositions and inclinations—even if, as is plausible, intuitions are necessarily *accompanied* by the latter. (We will return to this issue below.)

The foregoing distinctions—and the examples that inspire them—can be regarded as offering a preliminary characterization of what, *prima facie*, our target is not.<sup>18</sup> These

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<sup>17</sup> Cf. Earlenbaugh and Molyneux’s (2009, §5) distinction between competitive and net inclinations. For a discussion of the nature of inclination that may provide independent support for the distinctions suggested in the text, see Shapiro (2009). Haidt (2000, 819) suggests empirical evidence that weak intuitions in a subject with a high processing capacity do not always entail the corresponding conscious disposition or inclination. See also Wilson et al.’s (2000) empirical research on so-called dual attitudes, which might support the idea that one may fully “override” one’s conscious disposition or inclination to believe that p by reasoning to the contrary position, though the intuition that p itself remains.

<sup>18</sup> I believe that the examples in the text render unattractive an “eliminativist” view of our target, whether descriptive or revisionary (cf. Cappelen forthcoming). We plainly do have intuitions (e.g., the Gettier intuition, moral intuitions), as illustrated by the above examples. Our task here is



distinctions are not sacrosanct. But they do constitute a challenge to some currently popular theories of intuition, which attempt to achieve a kind of “minimalism” by identifying our target with mere guesses, hunches, hypotheses (conjectures, speculations), common sense, imaginings, conceivings, understandings, beliefs (judgments, acceptances, opinions), dispositions or inclinations (attractions, temptations), and the like.<sup>19</sup> Of course, we cannot dismiss out of hand the attempt to identify intuition with one or another of these other items. Here as elsewhere, there is room for investigating theories which initially appear to be focused on incongruent phenomena. Such theories, however, need not occupy the “default” position. Indeed, there is also room for investigating a non-minimalist approach that aims to preserve the foregoing distinctions by characterizing a type of conscious state distinct from these other items. Such a non-minimalist approach need not regard this state as wholly *sui generis*, or unanalyzable; nevertheless, to the extent that it does view this state as somehow distinctive, the approach should specify what exactly the would-be identifications miss by collapsing the foregoing distinctions.

This is what I propose to do. Although it might seem ambitious to seek a unitary (as opposed to “family resemblance”) theory of intuition that succeeds in this aim, there may be, as I will eventually argue, significant theoretical advantages to such a view.

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not to find a way to rid ourselves of this target, but to understand what it is and, eventually, to determine what its potential significance might be.

<sup>19</sup> Gopnik and Schwitzgebel (1998, 78) suggest that intuitions are hypotheses. Parsons (1995, 59) registers the view that intuitions are items of common sense. Chalmers (2002, 155-156) suggests the view that modal intuitions are conceivings or imaginings (cf. Yablo 1993). The view that intuitions are doxastic attitudes or tendencies to such is suggested by Cohen (1981, 318), Lewis (1983a, x), Lycan (1988, 209), E. Sosa (1996, 1998, 2006, 2007a, 2009), Cummins (1998, 119), Williamson (2004; 2007, 3 and 215 ff.), Lynch (2006), Boghossian (2009), and Earlenbaugh and Molyneux (2009). Minimalism is opposed by Ewing (1941; 1951, 26 ff.), Bealer (1992; 1998, §1; 2002, §1), Pust (2000, ch. 2), and Huemer (2005, ch. 5; 2007, §1); cf. Conee (1998). Minimalism and its alternatives will be discussed further below.

Perhaps surprisingly, not all of these advantages are epistemic; in fact, several will emerge before we even begin to contemplate the associated epistemological issues. All the same, as we shall see, that which distinguishes intuition from “nearby” phenomena—the very thing that, I will argue, the aforementioned minimalist views miss—is precisely that which enables a principled explanation of how intuition can serve as a legitimate epistemic source: the topic of Part II. However, this explanation can come only in the wake of a positive, non-epistemic characterization of our target, one that articulates what the above examples merely illustrate. Such a characterization is the aim of the remainder of Part I, which hereafter explores the possibility of a fully general, unitary theory of intuition inspired by reflection on the perceptual analogy.

### *§3. The Perceptual Analogy*

As I shall understand it, the perceptual analogy focuses on similarities between our target and perceptual experience, rather than successful perception. Contrary to the suggestion of infallibilists, intuition is not success-entailing (i.e., not factive). One might have the intuition that  $p$  yet be wrong: for instance, one might have the intuition that for any predicate  $\varphi$  there is a set whose members satisfy  $\varphi$ , though this is not so (because this naïve comprehension axiom leads to contradiction).<sup>20</sup> Compare perceptual experience: one might have a visual experience in which it looks as if there is a red apple on the table, though this is not so (because the table is apple-less).

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<sup>20</sup> Readers without this particular intuition are invited to replace another example: e.g., the intuition that there are more whole numbers than even numbers. The example of naïve comprehension is due to Bealer (1992).

Of course, perceptual experience and intuition differ in many respects. For instance, it is plausible that perceptual experience alone has the property of being a perceptual experience, the property of being a mental state-type of which visual experience is a species, and so on. In addition, intuition lacks the rich sensory phenomenology of most perceptual experience (Williamson 2007, 217; cf. E. Sosa 2007, 48). And, on the face of it, perceptual experience deals only in particular cases while intuition presents both the particular and the general (cf. Hintikka 1999, 137 ff.).

These differences notwithstanding, there are also a number of similarities. A natural starting point is the simple observation, already implied by the foregoing remarks (though worth stating explicitly), that both perceptual experiences and intuitions are conscious, contentful, and non-factive. Consider an ordinary visual experience in which it looks as if there is a red apple on the table. In that moment when one has this experience, one is in a conscious state with the content that there is a red apple on the table—a content which is false or inaccurate if the experience is nonveridical.<sup>21</sup> Compare the intuition, familiar from trolley cases, that it is morally permissible for a bystander to pull a switch and thereby save five innocent lives by killing one innocent person. In that moment when one has this intuition (when it strikes one that this action is morally permissible), one is in a conscious state with the content that it is morally permissible for

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<sup>21</sup> The basic idea is simply that in having an experience things appear (look, etc.) a certain way, and things in fact may or may not be that way—an idea which, in my view, does not force us to take a stand on the debate between so-called representational and relational accounts of perception (Bengson et al forthcoming, §2.1). See Evans (1982, 122-124 *et passim*), Searle (1983, ch. 2), McGinn (1989, ch. 1), Peacocke (1992, ch. 3), Tye (1995), Pryor (2000), Byrne (2001), and Siegel (2006) for discussion of perceptual content. Those, like Travis (2004), who deny that any genuinely *perceptual* experience has content may replace ‘perceptual experience’ with ‘sensory experience’, ‘experience’, ‘appearance’ or another surrogate throughout.

a bystander to pull a switch and thereby save five innocent lives by killing one innocent person—a content which is false or inaccurate if, as Judith Jarvis Thomson (2008) has recently argued, the intuition is mistaken. In this way, like perceptual experience, intuition is a non-factive, conscious, contentful state.

There are, of course, many types of contentful state. On one hand, some such states (e.g., perceptual experiences, memories, introspections, beliefs, acceptances, and intuitions) are *representational*, in the following sense: they represent the world as being a certain way, namely, the way the world would be if their content was true. For instance, the belief that *p* represents the world as being such that *p* is true. On the other hand, some contentful states (e.g., hopes, desires, wishes, denials, and imaginings) are *merely contentful*: they do not represent the world as being the way it would be if their content was true. The hope that *p*, for instance, does not represent the world as being such that *p* is true.<sup>22</sup>

Among those contentful states that are representational, some are also *presentational*, in the following sense: they do not simply represent the world as being a certain way; in addition, they *present* the world as being that way. For instance, in having a visual experience in which it looks as if there is a red apple on the table, the world is not merely represented to one as being such that it is true that there is a red apple on the

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<sup>22</sup> The term of art ‘representational’ is sometimes used in such a way that includes merely contentful states. Peacocke (2004, 99) uses the terms ‘intentional’ and ‘representational’ to mark something like the distinction pointed out in the text. See also Martin (2002, 386 ff.), who uses the labels ‘semantic content’ and ‘stative content’—a terminology which might suggest, wrongly, that the difference in question simply amounts to a difference in content. A belief and a hope may have one and the same content, though the former state is representational (stative) while the latter is not.

table. In addition, in having this experience, it is thereby *presented* to one that there is a red apple on the table. One *has the impression* that this is so (even if, as it turns out, this is not so). Of course, the presentation need not be visual. It could be auditory, olfactory, gustatory, tactile, or even proprioceptive, as when it is presented to one that one's thumb is above one's forefinger, when one's hand is behind one's back (and thus not visible).<sup>23</sup>

It is the presentationality of perceptual experience of which Jim Pryor (2000, 547 emphasis added) appears to write when he points to

the peculiar 'phenomenal force' or way our experiences have of *presenting* [contents] to us. Our experiences represent [contents] in such a way that it 'feels as if' we could tell that [they] are true—and that we're perceiving them to be true—just by virtue of having them so represented.<sup>24</sup>

William Tolhurst (1998, 298-299) similarly observes that certain states enjoy a "felt givenness", in that they "are experienced as being revelatory of real features of the world;" "they have the feel of truth, the feel of a state whose content reveals how things really are." Here we find what Michael Martin (2002, 399 emphasis added) aptly

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<sup>23</sup> The presentationality of proprioceptive experience may be suggested by Anscombe's (1957, §8) insight that we are consciously aware of the position of our limbs, when we are, neither through observation nor through bodily sensation. Rather, in such cases it is *presented* to us that our limbs are positioned thus.

<sup>24</sup> Elsewhere Pryor (2004, 357) elaborates: "I think there's a distinctive phenomenology: the feeling of seeming to ascertain that a given proposition is true. This is present when the way a mental episode represents its content makes it feel as though, by enjoying that episode, you can thereby just tell that that content obtains. ...When you have a perceptual experience of your hands, that experience makes it feel as though...hands are being shown or revealed to you." Compare Heck (2000, 518 emphasis added): "for it to appear to me as if *p* is for me to be in a perceptual state that *presents* the world as being a certain way."

describes as “a state of being presented to *as if things are so*”.<sup>25</sup>

To appreciate what is distinctive of states that are presentational in this way, it may help to contrast them with states, such as beliefs and acceptances, that are merely representational (i.e., representational but not presentational). Beliefs and acceptances are, at bottom, cognitive endorsements; they do not themselves present their contents as being the case, but somehow *endorse* contents which might previously have been presented as being the case. Here it is useful to think of the difference between *having* the impression that *p* and being *under* the impression that *p*: in believing that *p*, one does not thereby *have* the impression that *p* is so, though one may be *under* the impression that it is.<sup>26</sup> Consider a few examples:

- a. One may be led to believe—perhaps because one has memorized—that the square root of 2209 is 47; but it may not be *presented* to one as being the case that this is so when one considers it.
- b. One might, like me, believe that 1729 is the smallest number expressible as the sum of two positive cubes in two different ways, though it is not actually *presented* (as it was to Ramanujan) that this is so.

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<sup>25</sup> This is what we might call ‘contentful’ presentationality: its being presented to *x* that *p* (as being the case that *p*, as being true that *p*, etc.), where *p* is a content. Such contentful presentationality may be distinguished from what might be called ‘objectual’ presentationality: *y*’s being presented to *x*, where *y* is an individual, property, or relation (cf. Chudnoff forthcoming a). While contentful presentationality may require objectual presentationality, or vice versa, this is not obvious. It would seem that one might accept that a mental state  $\sigma$  has contentful presentationality while denying that  $\sigma$  has objectual presentationality—for example, this is the position of some intentionalists about perceptual experience who reject the sense-data theory and naïve realism (see, e.g., Pautz 2007).

<sup>26</sup> Thanks to Dan Korman for discussion on this point.

- c. A non-mathematical example: one might have learned, and thus now believe, that it is common in India to eat solely with the fingers of the right hand, though it is not now *presented* to one that this is so—one simply believes it.
- d. Consider an expert on relativity theory who testifies that parallel lines actually intersect! One who hears this testimony might subsequently believe this remarkable claim—and thus be *under the impression* that it is so—even though one does not *have the impression* that it is so when one considers it.

Although beliefs, like other non-presentational states, may sometimes be accompanied by presentational states,<sup>27</sup> belief is not itself a presentational state. The contents of beliefs are not thereby—i.e., qua contents of belief—presented to the believer as being so. Similarly for acceptances. To believe or accept p is to take a certain cognitive stance towards p: it is not to be *presented* with p as so (to *have* the impression that p is so), but rather to *take* or *hold* p to be so (and hence to be *under* the impression that p is so).

One might take this discussion of the non-presentationality of belief to suggest that sensation is the mark of presentationality. But this is not so. Proprioceptive experience, in which it may be presented without proprietary sensation (nor an especially rich phenomenology) that one's limbs are positioned thus, and sensory imagings or imaginings, in which one enjoys sensation absent presentationality, are counterexamples

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<sup>27</sup> Perhaps this is why the general distinction between presentational states and merely representational states requires a bit of reflection to emerge. We will return to this issue below.

to attempts to understand presentationality in terms of sensation. Our concern is not sensation, but presentation: its being *presented* to one as being the case that p.

We have considered examples of states that are merely contentful, states that are merely representational, and states that are presentational:

<i>Merely contentful</i>	<i>Merely representational</i>	<i>Presentational</i>
hopes	beliefs	perceptual experiences
imaginings	acceptances	proprioceptive awareness

Now consider intuition. There is reason to think of intuition as a presentational state, that is, as a state which presents its content as being so. Consider the intuition that it cannot be the case that both p and not p. When one has this intuition, it is not simply that one is in a state that represents the world as being such that this principle of non-contradiction is true. One *has the impression* that it is. That is, in having this intuition, that it cannot be the case that both p and not p is thereby *presented* to one as being so (even if, as dialethists contend, it is not so).

Although the presentationality of intuition is arguably clearest in the case of basic logical and mathematical theorems, which, as Kurt Gödel (1964, 271) famously observed, sometimes “force themselves upon us as being true”, it need not be restricted to such cases. In having the Gettier intuition, for instance, it is *presented* to one as being the case that Smith does not know. One *has* the impression that Smith does not know, even if one is not *under* the impression that Smith does not know (i.e., does not *hold* that Smith



does not know)—perhaps because one is convinced for various theoretical reasons that knowledge is justified true belief, and thus that Smith does know.<sup>28</sup>

The presentationality of both intuition and perceptual experience can be further illustrated by—and may perhaps explain—cases of illusion. In a *visual illusion*, such as the Müller-Lyer illusion, one is *presented* with it as being the case that the lines are of different lengths. Similarly, in an *intellectual illusion*, such as the seeming truth of the naïve comprehension axiom, one is *presented* with it as being the case that for any predicate  $\varphi$  there is a set whose members satisfy  $\varphi$ . When the Müller-Lyer lines are scrutinized alone (e.g., without the aid of a ruler), one *has* the impression that the lines are of different lengths. Likewise, when the naïve comprehension axiom is considered alone (e.g., without the aid of further reasoning), one *has* the impression that for any predicate  $\varphi$  there is a set whose members satisfy  $\varphi$ . In neither case, however, is a suitably informed subject *under* the impression that things are the way they are presented as being.<sup>29</sup>

(The trolley intuition mentioned above, if false, may also qualify as an intellectual illusion: a certain item—an action—is attributed a property that it does not in fact have. Yet other false intuitions may be thought of as *intellectual hallucinations*: for instance, the intuition that the largest prime number is greater than the penultimate prime number.)

Here it is also worth considering the role of presentationality in understanding the phenomenon of blindsight. First, *perceptual blindsight*: in a forced-choice scenario, a

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<sup>28</sup> Á la Weatherson (2003).

<sup>29</sup> Cf. Cohen (1981), Bealer (1992, 2008), and E. Sosa (2006) for discussion of putative intellectual illusions, to which we will return at several points below.

subject may give reliably correct answers to various questions, such as whether there is an apple on the table; although the subject lacks the relevant presentation (viz., it is not sensorily presented to her as being the case that there is an apple on the table), she is disposed to respond appropriately nevertheless. Compare *intuitive blindsight*: in a forced-choice scenario, a subject may give the correct answer to various questions, such as whether identity is transitive or whether it could be the case that both p and not p, though it does not strike the subject either way; although the subject lacks the relevant presentation (viz., it is not intellectually presented to her as being the case that identity is transitive), she is disposed to respond appropriately nevertheless. Just as perceptual blindsighters lack the relevant perceptual experiences (sensory presentational states), intuitive blindsighters lack the relevant intuitions (intellectual presentational states). This provides a second illustration of the presentationality of intuition and perceptual experience.

#### *§4. Five Characteristics of Presentational States*

To this point our discussion of presentational states has been guided primarily by illustrations and examples. As with other interesting notions in the philosophy of mind (e.g., consciousness or intentionality), we should not expect there to be an uncontroversial armchair analysis of presentationality. Fortunately, though, as stressed by opponents of analysis and, in recent years, by proponents of a so-called “knowledge first” view (Williamson 2000, v), the absence of a set of necessary and sufficient conditions for a given philosophically interesting concept, property, or relation need not threaten its

theoretical utility. Moreover, we can be reassured that when it comes to the underlying metaphysics of presentation familiar positions are available: for instance, identity theorists will identify the property of being in a presentational state with the property of being in a certain type of neural state; functionalists will offer a functional characterization of presentationality;<sup>30</sup> naturalists will attempt to naturalize presentational states in one of the familiar ways (e.g., indicating, tracking, etc.); and so on. Such disagreements need not detain us here. For our purposes, it suffices to note a few general features of presentational states, several of which will play important roles in what follows. We will concentrate on five.

1. Presentational states are *baseless*, in the sense that they are not consciously formed, by a subject, on the basis of any other mental state(s). In fact, presentational states are not states that one *forms* at all, whether consciously or non-consciously; rather, one simply has—or fails to have—them. (This provides a useful contrast with a merely representational state, such as belief, which is a type of state that can be formed.) When one enjoys a visual experience in which it looks as if there is a red apple on the table, one does not consciously form this experience on the basis of some other mental state: one scans the scene before one's eyes, and it simply looks to one that this is so. Similarly, when Professor Typical reflects on the question whether Smith knows that the man who will get the job has ten coins in his pockets, it simply strikes her that Smith does not know. Although there may be other contentful states—e.g., computational states at the “subpersonal” level—which precede (and even play a causal role in generating) her

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<sup>30</sup> Ramsified functionalists may simply interpret the ensuing discussion as an attempt to specify certain core features of intuition's Ramsey sentence.

Gettier intuition, she does not consciously form this intuition on the basis of any such state.<sup>31</sup>

2. Presentational states are *gradable*: their overall quality may vary in different situations, depending upon the way that they present in those situations (e.g., more or less clearly, vividly, etc.). All else being equal, the overall quality of a presentational state such as perceptual experience or intuition is in some sense better when, say, one is not distracted and has time to scrutinize the scene or proposition in question than when one is distracted and rushed. In the former case, one's perceptual experience or intuition is likely to be *clear* or *vivid* (e.g., it is clearly or vividly presented that there is a red apple on the table, or that Smith does not know); in the latter case, it is likely to be *hazy* or *fuzzy*.<sup>32</sup>

3. Presentational states are *fundamentally non-voluntary* (i.e., passive or receptive). Unlike choices, decisions and even such states as imaginings, guesses, hunches, hypotheses, and judgments, which are in some sense active (activities), a presentational state is "something that happens to us".<sup>33</sup> Again, one simply *has* (enjoys,

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<sup>31</sup> The present approach is thus neutral with respect to various theories about the origins (or causes) of intuitions, which often posit antecedent tacit information processing or unconscious "reasoning". At the same time, the baselessness of intuitions may help to motivate the thought that they, like perceptual experiences, are still somehow non-inferential, despite having "subpersonal" origins. The issue of non-inferentiality is discussed in §10. See Osbeck (1999, esp. 241-242) for discussion of difficulties facing various attempts to straightforwardly connect empirical work on tacit cognitive processes and automaticity to philosophical issues regarding the nature and epistemic status of intuition.

<sup>32</sup> One might wonder whether the clarity of presentational states can be accounted for in terms of credence or confidence. But visual and logical illusions (for example) suggest that this is not so: it might be clearly presented to one that the lines are of equal length, or that every predicate defines a set, even though one has little or no credence or confidence that this is so (because one knows better).

<sup>33</sup> I borrow the expression from Wittgenstein (1967, 632); cf. Berkeley (1713/1906, 43).

suffers, hosts) them: they come upon us unbidden, as if from without. Having a presentational state such as perceptual experience or intuition can thus be understood as a *happening*, i.e., something that *happens to* one. Contrast imagining, guessing, hypothesizing, believing, and judging, which typically do not merely *happen to* one: they are not happenings but rather *doings*, i.e., things that one *does*. The implication is not that these other states (non-happenings) are wholly voluntary while only presentational states are non-voluntary; rather, the point is that there are varieties of non-voluntariness, and presentational states such as experiences and intuitions are non-voluntary in ways that beliefs, imaginings, guesses, hypotheses, or judgments are not.

One mark of the fundamentally non-voluntary (happening) character of presentational states such as perceptual experience or intuition is that one is not free to pick whether, what, and how to experience or intuit in the way that one is—or at least sometimes is—free to pick whether, what, and how to imagine, guess, hypothesize, or judge. Similarly, one is not free to manage or get rid of one's experiences or intuitions in the way that one is, or at least sometimes is, free to manage or get rid of one's beliefs (e.g., by revisiting or resorting old evidence or by seeking new evidence). When looking around at one's immediate environment, whether one has a visual experience, what the content of the experience that one has is, or whether the experience is clear and vivid, is not within one's conscious control. Likewise, when reflecting on a putative counterexample, thought experiment, or elementary logical or mathematical proposition, whether one has an intuition, what the content of the intuition that one has is, or whether the intuition is clear and vivid, is not within one's conscious control.

Let me be clear. The intention is not to deny that one can control one's perceptual experience and intuition in various indirect ways (as when one carefully attends to features of a visual scene or a hypothetical case). Nor is the intention to hold that only perceptual experience and intuition are non-voluntary. Rather, the aim is to discern a variety of non-voluntariness that is distinctive of presentational states such as perceptual experiences and intuitions. The resulting distinction between two varieties of non-voluntariness—specifically, happenings versus non-happenings (a distinction which may or may not be usefully drawn with the notion of control)—is theoretically useful. For example, the fundamental non-voluntariness of presentational states may explain why we are not responsible for them in the same way that we are responsible for our imaginings, guesses, hypotheses, and judgments, as well as why there is no norm of experience and intuition in the way that there may be a norm of belief, judgment, or assent. At any rate, it is this specific brand of non-voluntariness—fundamental non-voluntariness (happening)—which we are emphasizing here.

4. Presentational states are *compelling*, in the sense that they tend to dispose or incline assent to their contents. More precisely, a mental state  $\sigma$  compels assent to its content  $p$  in the relevant sense iff  $\sigma$  is such that for any subject  $x$  who possesses the cognitive sophistication required for doxastic attitudes and lacks putative reason to withhold endorsement of  $p$ , having  $\sigma$  disposes or inclines  $x$  to endorse  $p$ .<sup>34</sup> To say that presentational states are compelling is not to identify the property of being presentational

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<sup>34</sup> Note that this definition may imply a slight departure from the ordinary use of 'compels', which appears to pick out something stronger than a mere disposition or inclination. The reader is free to substitute another term (e.g., 'impels'), if that is preferred.

with the property of being compelling. After all, desirous or wishful thinking is compelling but not presentational (recall *The Impassioned Scientist* in §2). Moreover, while presentational states are conscious, their compellingness (i.e., the corresponding disposition or inclination to assent) need not be: one may be disposed or inclined to endorse  $p$  but not *feel* disposed or inclined to do so (recall *The Ardent Physicalist* in §2). That said, it is no accident that presentational states are compelling: such states compel assent *because* they present the world as being a certain way. Thus one is compelled to believe that there is a red apple on the table because it is presented to one as being the case that this is how things are (when one looks at the table).<sup>35</sup> Likewise, one is compelled to believe that Gettier's Smith does not know because it is presented to one as being the case that this is how things are (when one considers Gettier's case).

5. Presentational states do not merely compel assent; they also seem to *rationalize* such assent, in the (psychological) sense that they tend to make formation of corresponding beliefs seem rational, fitting, or appropriate from the first-person perspective. More precisely, a mental state  $\sigma$  rationalizes assent to its content  $p$  in the relevant sense iff  $\sigma$  is such that for any subject  $x$  who possesses the cognitive sophistication required for doxastic attitudes and lacks putative reason to withhold endorsement of  $p$ , having  $\sigma$  makes  $p$  seem to  $x$  to have the property of being worthy of belief.<sup>36</sup> To illustrate, consider again a perceptual experience in which it appears that there is a red apple on the table. Having this experience makes the belief that there is a

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<sup>35</sup> Cf. Peacocke (2004, 99).

<sup>36</sup> Arguably,  $p$  need not occurrently seem this way to  $x$  prior to reflection. See Tolhurst (1999, 297 ff.) and Martin (2002, 389-392) for relevant discussion.

red apple on the table seem appropriate to the experiencer, all else being equal. In general, when enjoying a perceptual experience as if  $p$  (i.e., in which it looks as if, or appears that,  $p$ ), absent putative reason to withhold endorsement, it will seem rational from the first-person perspective to form the belief that  $p$ . Similarly in the case of intuition. Having the intuition that Gettier's Smith does not know makes the belief that Gettier's Smith does not know seem appropriate to the intuiter. In general, in having the intuition that  $p$ , absent putative reason to withhold endorsement, it will seem rational from the first-person perspective to form the belief that  $p$ . (Hence standard practice in logic, mathematics, and philosophy, where intuitions frequently inspire formation of the corresponding beliefs.) In both cases, from the subject's perspective, matters are not neutral with respect to  $p$ ; hence, from the "inside",  $p$  seems worthy of belief (i.e., to-be-believed).

Left unsupplemented, these five characteristics may not yet yield a fully satisfactory account of what it is for a mental state to be presentational. Nevertheless, they do help to mark the distinction, introduced earlier by way of example (recall the table in §3), between those contentful states that are merely representational and those contentful states that are presentational. They thus go some distance toward explicating what is distinctive of presentational states such as perceptual experience and intuition.

We noted above (at the outset of §3) that perceptual experience and intuition differ in several respects. The foregoing discussion gives substance to the thought that, at the same time, they bear a number of non-trivial similarities: both are conscious, contentful, non-factive, gradable, baseless, fundamentally non-voluntary, compelling,



rationalizing presentational states, or presentations—conscious states that present, rather than merely represent, things as being a certain way.

#### *§5. Four Theoretical Virtues*

It was suggested in the last two sections that intuition and perceptual experience, though different, are at a certain level of abstraction the same kind of state or event, namely, *presentations*. Let us call this *the core quasi-perceptualist thesis*:

##### *The Core Quasi-perceptualist Thesis*

Intuitions are like perceptual experiences in being presentations.

In the next section I will suggest that this necessary condition for intuition can be amended so as to achieve sufficiency as well. But first let us take a moment to begin to examine the core quasi-perceptualist thesis. This section outlines four of its theoretical virtues. (Part II explores its epistemic credentials.)

The first theoretical virtue is relatively minor, though genuine. In short, the core quasi-perceptualist thesis seems to be in a good position to explain the common use of perceptual verbs to describe what happens when one has an intuition. In many cases, rationalists and empiricists alike have found it natural to describe the state we are in when we have an intuition thus: we can just *see* (or *perceive*) that things are thus-and-so. For instance, A.J. Ayer writes in his moderate empiricist manifesto *Language, Truth, and Logic* (1946, 79 emphasis added):

If one knows what is the function of the words ‘either’, ‘or’, and ‘not’, then one can *see* that any proposition of the form ‘Either  $p$  is true or  $p$  is not true’ is valid, independently of experience.

Here is Locke in the *Essay* (1689, II.27.15 emphasis added):

For should the soul of a prince, carrying with it the consciousness of the prince’s past life, enter and inform the body of a cobbler, as soon as deserted by his own soul, every one *sees* he would be the same person with the prince.

A similar type of description is used by Spinoza in the *Ethics* (2p40s2 emphasis added).<sup>37</sup>

Given the numbers 1, 2, and 3...we arrive at the fourth number [6] from the ratio which, in one intuition [uno intuito], we *see* [videmus] the first number to have to the second.

To be sure, further inquiry may reveal that an intuition which initially seemed successful was in fact mistaken (as in the case of the naïve comprehension axiom). In such a case, it is natural to say that one did not see, but rather *seemed to see*, what one initially thought one saw. Compare a perceptual experience which initially seemed successful but was in

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<sup>37</sup> §7 below offers further examples.

fact mistaken (as in the case of the Müller-Lyër illusion): it is natural to say that one did not see, but rather *seemed to see*, what one initially thought one saw. That intuitions are like perceptual experiences in being presentations makes straightforward sense of why intuition reports sometimes take this form: in intuiting, no less than in seeing or seeming to see, it is presented to one as being the case that things are a certain way.

A second virtue is more significant: the thesis correctly classifies the examples in §2. In *The Gettier Intuition*, *Ramanujan's Intuition*, and *The Ardent Physicalist*, it is presented to the subject either that Smith does not know, that 1729 has a certain mathematical property, or that zombies are possible. These cases may be contrasted with *The Impassioned Scientist* and *The Imaginer*: it is not presented to Dr. Jones that his theory is correct, nor to Teach that it is true (or possible) that  $\pi$  is a rational number. The thesis also delivers the correct verdicts about (a) – (d) in §3, wherein it is not presented as being the case that the square root of 2209 is 47, that Ramanujan's number has its special mathematical property, that it is common in India to eat solely with the fingers of the right hand, or that parallel lines actually intersect. Although these things are believed, they are not in those cases intuited.

Third, the thesis uniquely captures the *prima facie* distinctions suggested by these examples. That intuitions are presentations serves to distinguish them from states of understanding, imagining, or conceiving, which are merely contentful, and guesses, hunches, hypotheses (conjectures, speculations), or beliefs (judgments, acceptances, opinions), which are merely representational. It also seems to capture the *prima facie* difference between intuitions and mere dispositions or inclinations (attractions,

temptations): the former are presentations, but the latter are not—as illustrated by the possibility of feeling inclined to believe that *p* even when *p* is not presented to one as true, à la desirous or wishful thinking. Recall that, in *The Impassioned Scientist*, the less-than-perfectly-rational Dr. Jones feels tempted to believe his own theory; but it is not presented to him as true.<sup>38</sup> The core quasi-perceptualist thesis thus enables a principled explanation of the distinctions between intuitions and various “nearby” phenomena in terms of the presentationality of the former versus the non-presentationality of the latter.

A fourth virtue concerns the thesis’s ability to account for several psychological roles of intuition. It appears to be part of our standard conception of intuition that it is among the ways we have of *coming to believe* (i.e., of forming beliefs).<sup>39</sup> For instance, in *The Gettier Intuition*, Professor Typical may come to believe that Smith does not know as a result of having the intuition that Smith does not know. She could then be said to form her “Gettier belief” on the basis of her “Gettier intuition”. In this sense, intuition is *formative*. Relatedly, intuition is also *explanatory of belief*: in many cases, we may be said to believe that *p* *because* we have the intuition that *p*. Why does Professor Typical believe that Smith does not know? Because she has the intuition that Smith does not know (i.e., because it strikes her that Smith does not know, as we might say). That one has the Gettier intuition may thus explain why one has the corresponding intuitive belief.

Of course, perceptual experience is also formative (among the ways we have of coming to believe) and explanatory of belief (we may believe that *p* because we have an

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<sup>38</sup> Another type of case resembles example (d) from §3: responding to a charismatic speaker who says that *P*, a susceptible hearer might then feel inclined to believe *P* even if he does not then have the intuition that *P* is true.

<sup>39</sup> Cf. Audi (2002, 76 ff.).

experience as if p). We should expect intuition and perceptual experience to be alike in these ways if both are presentations. In general, if a mental state  $\sigma$  compels and rationalizes assent, one may come to believe that p by having  $\sigma$ . In turn, the fact that one has  $\sigma$  may explain the presence of the corresponding belief. We saw in §3 that we need not think that it is a brute or inexplicable fact that intuition and perceptual experience compel and rationalize assent: they do so because they present the world as being a certain way. That intuitions and perceptual experiences are presentations thus helps to explain why both are formative and explanatory of belief.<sup>40</sup>

Intuition often plays a further psychological role. It is not uncommon to have intuitions about matters one has not previously considered (whether explicitly or implicitly) or about answers to questions on which one has yet to take a stand. Further, the practice of counterexamplifying illustrates that we can have intuitions that run directly contrary to our own background theory or considered view; that is, our intuitions may turn out to radically conflict with those propositions we accept or endorse, or are disposed or inclined to accept or endorse, whether implicitly or explicitly. To quote Timothy Williamson (2007, 243 emphasis added),

As Gettier counterexamples show, intuition can be *revolutionary* as well as conservative.<sup>41</sup>

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<sup>40</sup> The data are not so easily accommodated by minimalism. For example, minimalists who maintain that our target is a mere belief must deny that it is explanatory of belief, since the fact that one has the belief that p cannot explain why one has the belief that p.

<sup>41</sup> Similar observations are made by Ewing (1941), Gödel (1953/1959, 346-347), Bealer (1998, 209-210), Peacocke (2000, 275 ff.; 2004, 153), Huemer (2005, 103-104), and Goldman (2007, 1-

The core quasi-perceptualist thesis implies that intuition is a fundamentally non-voluntary, non-doxastic state akin to perceptual experience, which is well-known to sometimes present the world as being quite different than the way we believe or are disposed or inclined to believe it is. As a result, this thesis seems to be in a good position to explain the potentially novel or revolutionary character of intuition. For insofar as intuitions are like perceptual experiences in being presentations, they possess the type of passivity and belief-independence required to underwrite their capacity to inspire doxastic revolution.

The flip-side of this power or influence is that insofar as they are presentations, intuition and perceptual experience also possess the type of passivity and belief-independence required to underwrite their capacity to *mislead* as well.<sup>42</sup> Thus the core quasi-perceptualist thesis can explain the potentially misleading character of our target. However, if we were to embrace the minimalist view that intuitions are nothing but corresponding hypotheses (conjectures, speculations), common sense, beliefs (judgments, acceptances, opinions), or dispositions or inclinations (attractions, temptations), then we would seem to be unable to explain the influence of intuitions on such states. For example, if the intuition that *p* is identical to the inclination to believe that *p*, then the intuition cannot influence—whether by contravening or misleading—the inclination, contra the potentially revolutionary and misleading character of intuition. Presentations,

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<sup>42</sup> Cf. Earlenbaugh and Molyneux (2009, §4.1), who discuss the potential misleadingness of *finding it intuitive that p*.

by contrast, are exactly the kinds of things that can influence inclinations and other such states, for better or for worse, *without being among them*.

Let us summarize. The core quasi-perceptualist thesis that intuitions are like perceptual experiences in being presentations allows us to

- i. make sense of common descriptions of what happens when one has an intuition;
- ii. correctly classify examples of intuition, or the absence thereof;
- iii. explain *prima facie* distinctions between intuition and “nearby” phenomena; and
- iv. account for several (heretofore unexplained) psychological roles of intuition.

The core quasi-perceptualist thesis thus displays a significant—and, I submit, unique—explanatory power and theoretical unity.

#### *§6. Quasi-perceptualism*

Let us call a presentational state  $\sigma$  of  $x$  *translucent* iff, in having  $\sigma$ , it is presented to  $x$  that  $p$  is so, and there is no content  $q$  (where  $q \neq p$ ) such that it seems to  $x$  that  $p$  is presented as being so by  $q$ 's being presented as being so. Perceptual experience is translucent in this sense. When enjoying a perceptual experience as if there is a red apple on the table, for instance, it is presented to one as being the case that there is a red apple

on the table. But it typically does not seem to one that this is presented as being so *by* something else being presented as so. On the contrary, as so-called direct realists have observed, it typically seems to one that one is directly presented with the fact or state of affairs itself.

Now, in having a perceptual experience, one may be presented with multiple contents, some of which hold (at least in part) in virtue of the others. For example, in having an experience as if there is a red apple on the table, it may be presented to one that there is a red apple on the table and, in addition, that the facing surface of the apple is red. Although one is presented with both contents, and the former holds in virtue of the latter (at least in part, we may suppose), in having that experience—an experience as if there is a red apple on the table—it typically seems to one that it is presented as being the case that there is a red apple on the table but not *by* its being presented to one as being the case that the facing surface of the apple is red.

Contrast a case of “secondary” perception, in which one comes to see that the gas tank is empty *by* seeing that the gas gauge reads ‘E’ (cf. Dretske 1969, 153 ff.). It may be presented to such a person that the gas tank is empty, though she lacks perceptual experience of the gas tank and its properties; rather, the gauge serves as her perceptual guide, as it were. Presumably, in such a case it will seem to her that it is presented as being the case that the gas tank is empty by being presented with its being the case that the gas gauge reads ‘E’. Thus the mental state that she is in when she sees that the gas tank is empty is not translucent: phenomenologically, it is not direct. Hence it is a state of “secondary” perceptual awareness, not a perceptual experience.



Translucence enables a similar distinction in the intellectual case. On one hand is intuition, which is translucent in the indicated sense. When one has the intuition that identity is transitive, for instance, it is presented to one as being the case that identity is transitive. But it typically does not seem to one that this is presented as being so *by* something else being presented as so. Similarly, when one has the intuition that Gettier's Smith does not know, it is presented to one as being the case that Gettier's Smith does not know. But it typically does not seem to one that this is presented as being so *by* something else being presented as so. On the contrary, it typically seems to one that one can "just see", directly, that it is so.

As in the case of experience, in having an intuition one may be presented with multiple contents, some of which hold (at least in part) in virtue of the others. For example, in having the intuition that Gettier's Smith does not know, it may be presented to one as being the case that Smith does not know and, in addition, that it is lucky that Smith's belief is true. Although one is presented with both contents, and the former holds in virtue of the latter (let us suppose), in having the Gettier intuition—the intuition simply that Smith does not know—it typically seems to one that it is presented as being the case that Smith does not know but not *by* its being presented to one as being the case that it is lucky that Smith's belief is true.

Contrast a case involving a philosopher who is persuaded by Williamson's (2000, ch. 4) argument for the anti-luminosity thesis (viz., that there are no states such that if we have them, then we are in a position to know that we have them). Such a philosopher would presumably say that this anti-luminosity thesis is now presented to her as being

true, when she considers it, though she does not have the intuition that it is true; rather, she has simply “followed the argument where it leads”. Presumably, in such a case it will seem to her that it is presented to her as being the case that no state is luminous *by* various other things being presented as being so, namely, those (putative) facts denoted by the premises which (putatively) entail the conclusion. Thus the mental state that she is in when it is presented to her as being the case that the anti-luminosity thesis is true is not translucent: phenomenologically, it is not direct. Hence it is what we might call a state of “secondary” intellectual awareness, not an intuition. Only the latter has a direct realist phenomenology.

We can now formulate the quasi-perceptualist theory of intuition:

*Quasi-perceptualism*

Intuitions are translucent intellectual presentations.<sup>43</sup>

A corollary thesis would seem to hold for perceptual experiences, understood as translucent sensory presentations. Intuitions and perceptual experiences are both conscious mental states that are not mediated by any other conscious state (hence

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<sup>43</sup> An *intellectual* presentation can be understood *positively*, for example, as a presentation that essentially involves the deployment or exercise of concepts. Or it can be understood *negatively*, as a wholly non-sensory presentation, that is, as a presentational state that does not essentially involve or somehow presuppose sensing a sense-datum, sensorily entertaining a proposition, being sensorily acquainted with a universal or trope, and so on. (Thanks to Adam Pautz.) While I myself lean towards a positive characterization, the quasi-perceptualist thesis itself is neutral on this issue. The thesis is also consistent with but does not imply the view, opposed by certain disjunctivist theories of intuition, that successful and unsuccessful intuition—much as perceptual experience—belong to the same “fundamental kind” (cf. Martin 2004). See §33 in Part III for discussion of a type of disjunctivism about intuition.

baseless) and do not proceed via the presentation of some intermediate content (hence translucent). This is not to suggest that intuitions and perceptual experiences must always be “snap” or “unreflective” responses;<sup>44</sup> on the contrary, just as a translucent sensory presentation with a certain content may occur only in the wake of substantial looking and searching, a translucent intellectual presentation with a certain content may occur only in the wake of substantial contemplation and reflection. The point is simply that intuitions, like perceptual experiences, cannot be conceived as consciously mediated transitions from the presumed truth of one proposition to that of a second proposition (because they are translucent), nor as the products of such transitions (because they are baseless).<sup>45</sup> Presumably, there is a notion of inference that requires such transition, and so we may understand translucent presentations, whether intellectual or sensory, to be “non-inferential”, or immediate and direct.

Supposing that we regard presentational states, which are baseless (i.e., not mediated), as “immediate apprehensions” and allow the precise notion of translucence to serve as an explication of the casual notion of “directness”, the result is a non-metaphorical version of the traditional conception of intuition as a kind of *direct, immediate apprehension akin to perception*. In subsequent sections (§§7-11, the remainder of Part I), we will prepare the ground for an investigation (to be undertaken in

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<sup>44</sup> Nor is to take a stand on the question of whether intuitions are the products of *non-consciously* mediated transitions (recall note 31).

<sup>45</sup> Cf. Descartes (1626-1628, Rule III): “[W]e distinguish at this point between intuition and...deduction; because the latter, unlike the former, is conceived as involving a movement or succession.” Cf. Price (1932, 151-152 emphasis in original): “In discursive consciousness (as the name suggests) there is a *passage of the mind* from one item to another related item, for instance...from premise to conclusion. ...In intuitive consciousness, on the other hand...there is no passage of the mind.” Price observes that perceptual experience is ‘intuitive consciousness’ in this sense.

Part II) into the epistemic status of intuition by first contemplating several variants on and challenges to this conception.

### *§7. So-called Philosophical Intuitions*

There are many different types or classes of intuitions. Quasi-perceptualism recognizes and accepts this diversity, and thus it sees no need for the requirement that intuitions have necessary contents (cf. Bonjour 1998, 15-16, 101 and 114). While members of a certain class of intuitions may have necessary contents, it is not clear that all intuitions must be like this. As George Bealer (1998, 207) has observed, one might have the nonmodal intuition that a house undermined will fall. Examples like this suggest that if the aim is to understand intuition in general, not simply some subset of intuitions, then an additional modal condition will be overly “philosophical”.<sup>46</sup>

Nor should we restrict ourselves to intuitions concerning explanation. A.C. Ewing (1951, 26; cf. 1941), who displays much sympathy to a perceptual analogy, maintains that in having the intuition that S is P,

we do not see merely that something, S, is in fact P, but...why it is P. ...[W]ith a truth such as that  $5 + 7 = 12$  I do not see merely that it is a fact but...I can see that the nature of 5 and 7 constitutes a fully adequate and intelligible reason why their sum should be 12 and not some other number.

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<sup>46</sup> A modal content requirement has also been criticized—in my view, rightly—as over-intellectualizing intuition (Boghossian 2001, 636-637; cf. Pust 2000, 38; Goldman 2007, 10; Ludwig 2007, 136).

This passage suggests a view according to which, in having the intuition that *p*, one does not just directly and immediately apprehend (see) that *p* is true; in addition, one apprehends the *reason why* *p* is true. Presumably, however, one might have the intuition that a house undermined will fall, but not yet see the reason why this is so (notice the need for physics). Or one might have the Gettier intuition even though one must subsequently engage in substantial epistemological theorizing in order to ascertain the reason why Gettier's subject lacks knowledge (not to mention a "fully adequate and intelligible reason why" this should be so). Evidently, an explanatory content condition is too philosophical even for so-called philosophical intuitions, of which this Gettier intuition is allegedly a paradigm case.

In recent years, Bealer has articulated a conception of intuition that, while less demanding than Ewing's, is also not entirely unsympathetic to a perceptual analogy. Bealer (1992, 101-102) writes:

When you have an intuition that *A*, it *seems* to you that *A*. Here 'seems' is understood, not in its use as a cautionary or 'hedging' term, but in its use as a term for a genuine kind of conscious episode. For example, when you first consider one of de Morgan's laws, often you draw a blank; after a moment's reflection, however, something happens: it now really *seems* obvious. You suddenly 'just see' it. ...[T]his kind of seeming is *intellectual*, not sensory or introspective.

Bealer (1998, 207) distinguishes between “physical” and “rational” intellectual seemings, only the latter of which is deemed philosophically significant:

When we speak of intuition [in philosophical investigation], we mean “rational intuition”. This is distinguished from what physicists call “physical intuition”. We have a physical intuition that, when a house is undermined, it will fall. This does not count as...rational...for it does not present itself as necessary: it does not seem that a house undermined *must* fall; plainly, it is *possible* for a house undermined to remain in its original position or, indeed, to rise up. By contrast, when we have a rational intuition—say, that if P then not not P—this presents itself as necessary: it does not seem to us that things could be otherwise; it must be that if P then not not P.<sup>47</sup>

Bealer’s “present-itself-as-necessary” condition thus applies to a proper subset of intuitions—where intuitions in general are, on Bealer’s view, understood to be *sui generis* intellectual seemings.<sup>48</sup>

One worry about the attempt to identify intuitions with intellectual seemings is that the class of intellectual seemings that present themselves as necessary (the class of

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<sup>47</sup> Bealer (1998, 207) leaves the notion of presenting-itself-as-necessary unanalyzed: “I am unsure exactly how to analyze what is meant by saying that [a rational] intuition presents itself as necessary. Perhaps something like this: necessarily, if x intuits that P, it seems to x that p and also that necessarily P. But I wish to take no stand on this.”

<sup>48</sup> See also Pust (2000, ch. 2) and Huemer (2005, ch. 5; 2007, §1).

rational seemings) appears to be *narrower* than the class of intuitions, as Bealer acknowledges (recall the house intuition); yet the class of intellectual seemings that either present themselves as necessary or do not (the union of the classes of rational and physical seemings) appears to be *broad*er than the class of intuitions. In some cases the conclusion of an argument *seems* to be true, in virtue of the apparent truth of the premises, which also seem true, though we would not want to say that we have an *intuition* that the conclusion is true. As suggested in §6, many of those who find Williamson's argument for the anti-luminosity thesis persuasive would admit that they do not have the intuition that it is true. Nevertheless, the thesis presumably does *seem* true to them, when they consider it, given that they find the premises in the argument for it unobjectionable. We can call such a seeming, which is an intellectual seeming but not an intuition, a 'reflective' seeming. The existence of reflective seemings entails that intuitions cannot be identified with intellectual seemings.

The difference between intuitions and reflective seemings appears to be that whereas the former are translucent, and thus "direct", the latter are not translucent, and are thus "indirect". (This indirectness is evident in the anti-luminosity example.) At best, intuitions are intellectual seemings possessing a variety of further properties, such as translucence. I suspect that proponents of the intellectual seemings theory would accept this refinement. However, the upshot may be that the resulting, modified intellectual seemings theory is not a genuine alternative to quasi-perceptualism. To be sure, it would yield a genuine alternative if there were reason to accept Bealer's present-itself-as-necessary condition, which finds no corollary in quasi-perceptualism. But, once again, if

the aim is to understand intuition in general, not simply some subset of intuitions, then such a condition will be overly philosophical.<sup>49</sup>

Some recent work on the nature of intuition has actually focused on so-called philosophical intuitions.<sup>50</sup> It is important to recognize the limitations of such an approach. While we can delineate a class of intuitions that are somehow significant in philosophical investigation and give members of this class the label ‘philosophical intuitions’, we can also delineate a class of intuitions that are somehow significant to chess playing and give them the label ‘chess intuitions’. But it is not clear how such delineation helps us to understand our target—to clarify what intuition “really is”.<sup>51</sup> It is a virtue of quasi-perceptualism that it allows but does not restrict itself to the indicated delineation.

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<sup>49</sup> It may be thought best to avoid placing emphasis on the notion of intellectual seeming for three further, independent reasons. First, it is not clear that the notion of an intellectual seeming fully captures certain intuitions, namely, those sustained by the ordinary notion of a flash of insight; such intuitions might be thought to be prior to, and subsequently *give rise* to, intellectual seemings or attractions; see the discussion of insight in §8 below. Second, there is substantial, perhaps intractable, controversy over how to understand intellectual seemings: Sosa (2007b, 2009) and Boghossian (2009) claim that they are nothing more than felt attractions or temptations to assent, and Williamson (2007, 217) claims that they are nothing more than conscious inclinations to judge, whereas Bealer (1992, 1996, 1998, 2002) claims that they are *sui generis*. Third, it is widely held that ‘seems’, like ‘appears’ and ‘looks’, have several distinct non-hedging uses (cf. Chisholm 1966 and Jackson 1977): in this way, ‘seems’ is ambiguous or underspecified, and the path to regimentation is not clear. These may be seen as reasons to prefer to understand intuition in the way suggested by quasi-perceptualism, namely, through the notion of presentation explicated in §§3-4.

<sup>50</sup> See, e.g., Gopnik and Schwitzgebel (1998), Pust (2000), E. Sosa (2006), Goldman (2007), and Fedyk (2009).

<sup>51</sup> Moreover, we might worry that all intuitions are potentially significant in philosophical investigation, in which case the delineation is useless, not simply ad hoc. Otherwise the delineation seems harmless enough, and might even provide some sort of terminological tidiness.



## §8. *Attractions and Insights*

Quasi-perceptualism implies that intuitions are like perceptual experiences in being conscious mental states distinct from such states as dispositions, inclinations, temptations, and attractions to assent or belief (judgment, acceptance, opinion). However, Ernest Sosa has recently suggested that while we should accept that perceptual experiences are distinct from perceptual attractions (conscious attractions to perceptual belief), we should not accept that intuitions are distinct from intellectual attractions (conscious attractions to intuitive belief). He argues that whereas it is possible for the content of one's perceptual experience to diverge from the content of that to which one is attracted to assenting in having that experience, thus showing that the two states are distinct (see argument (a) in Sosa 2009, §1), it is not possible for the content of one's intuition to diverge from the content of that to which one is attracted to assenting in having that intuition. For example, a chess "novice" confronted with a chessboard in good viewing conditions may have a perceptual experience whose content is highly specific or determinate, e.g., *that there are sixty-four squares alternating black and white*;<sup>52</sup> but the content of her attraction—that to which she will be attracted to assenting—may be something less specific, e.g., *that there are many squares alternating black and white*. Sosa (unpublished ms) claims that, by contrast, we do not find any analogous examples in the case of intuition.

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<sup>52</sup> That the experience itself has such specific or determinate content is far from obvious and will not be accepted by all philosophers of perception. See, e.g., Pautz (2007), Tye (2009a), and Bengson et al (forthcoming, §2.1) for relevant discussion regarding the potential non-specificity or non-determinateness of the content of perceptual experience.

The first thing to notice about this argument is that, even if there were no such examples in the case of intuition, it would not yet follow that intuitions are identical to attractions. Apparently, all that could be concluded is that the contents of intuitions do not diverge from the contents of (corresponding) intellectual attractions—a conclusion that is wholly consistent with quasi-perceptualism.<sup>53</sup>

Setting that concern aside, it is worth taking a moment to explore whether there are in fact analogous examples in the case of intuition. A candidate might involve a “novice” possessing native mathematical abilities (comparable to Ramanujan’s), who prior to receiving formal training shows early signs of genius; she might have an informal mathematical insight about how to solve a particularly difficult proof, but she lacks the formal tools required to formulate (even to herself, “in her head”) what she saw. In such a case, the content of her intuition may be highly specific or determinate, e.g., *that the way to solve the proof is by ...* ; but the content of her attraction—that to which she is attracted to assenting—may be something less specific, e.g., *that there is a way to solve the proof, and it has to do with ...* . Thus she might have to poke around for a bit until she hits on the solution (or its exact articulation), at which point she might exclaim, “That’s it; that’s what I saw!” Such an exclamation would provide some reason to think that the content of her intuition—what she saw—was in fact highly specific, even while the content of her attraction was not. If such a case is possible, then Sosa’s argumentative strategy may

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<sup>53</sup> The considerations in §2 are also relevant here. For they indicate that *whether or not* the contents in question do not diverge, intuitions are *not* identical to corresponding dispositions, inclinations, temptations, or attractions.

actually be employed to uncover additional support for the thought, favorable to quasi-perceptualism, that intuitions are distinct from intellectual attractions.<sup>54</sup>

Of course, while intuitions and attractions are distinct, they would appear to be intimately related nevertheless. Plausibly, just as perceptual experiences *give rise* to corresponding perceptual attractions, intuitions *give rise* to corresponding intellectual attractions.<sup>55</sup> We need not think that it is a brute or inexplicable fact that intuition and perceptual experience behave in this way: such states make it attractive to think that the world is a certain way because they *present* the world as being that way. That intuitions and perceptual experiences are translucent presentations thus helps to explain why both spontaneously prompt (i.e., bring about without any conscious transition) corresponding attractions.

Hence we may offer the following treatment of *intuitive attractions*:

To be intuitively attracted to assent is to have an attraction to assent

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<sup>54</sup> We may find examples involving experts as well. Andrew Wiles is reported to have had a flash of insight that his 1993 failed proof of the Taniyama–Shimura conjecture for semistable elliptic curves—the second half of Frey’s strategy for proving Fermat’s Last Theorem—could be saved by returning to his original Horizontal Iwasawa theory approach, which he had earlier abandoned in favor of the Kolyvagin–Flach approach. Wiles subsequently saved the proof in this way. It is possible that Wiles’ insight consisted of an intuition with the highly specific content *that the way to solve the proof is by ...*, where ... are the precise steps he subsequently took to solve the proof, although Wiles was attracted to the non-specific content *that the way to solve the proof is given by the Horizontal Iwasawa theory*. The hypothesis that Wiles’ intuition had the specific content rather than the non-specific content would be supported if his subsequent actions proceeded in the specific way described by the specific content. At the very least, it seems that such a case is possible, which is all that is needed to make the point.

<sup>55</sup> This is compatible with the observation, recorded in §2, that it is possible to have such an attraction in the absence of a corresponding intuition, as in *The Impassioned Scientist*, or to have an intuition in the absence of a corresponding felt (conscious) attraction, as in *The Ardent Physicalist*.

spontaneously prompted by intuition, viz., a translucent intellectual presentation.

The relation between intuitions and dispositions or inclinations to belief is encoded in the compellingness of intuition (as explicated in §4). This suggests the following treatment of *intuitive inclinations* (cf. intuitive dispositions and intuitive temptations):

To be intuitively inclined to belief is to have an inclination to belief spontaneously prompted by intuition, viz., a translucent intellectual presentation.

Finally, in having an intuition, one may not only be disposed, inclined, tempted, or attracted to belief; one may actually go on to form (and subsequently have) that belief on the basis of that intuition. Here we encounter *intuitive belief*:

To intuitively believe is to have a belief based on intuition, viz., a translucent intellectual presentation.

Insofar as viewing intuitions as translucent intellectual presentations allows—and, moreover, helps to explain (cf. §5)—these connections between intuitions and various other mental states, quasi-perceptualism can be seen as enabling a better understanding of the place of intuition (and, indirectly, these other states) in our overall mental economy.

The preceding example involving mathematical proof introduces one further observation about the theoretical potential of quasi-perceptualism. This example might be

taken to indicate that quasi-perceptualism, in locating a conscious state distinct from a mere disposition, inclination, temptation, or attraction, may secure the resources needed to provide a plausible view of mathematical *insight*. Perhaps also for insight in non-mathematical domains: for example, insights in logic, philosophy, morality, and various other regions of practical and theoretical life. The notion of insight—having an insight, or a flash of insight<sup>56</sup>—need not be deified as transcendent nor dismissed as embarrassing. Insight is an ordinary occurrence, which we would do well to understand. Presumably, insight (in general) concerns truths that bear some special interest or significance: perhaps, for example, they enable improved understanding of the nature or importance of the phenomenon or domain in question. If we combine this thought about the interest or significance of truths insighted with the familiar idea that a flash of insight is a type of direct and immediate apprehension, we arrive at the following quasi-perceptualist view of what happens when “the light bursts upon one”:

To have an insight is to have a translucent intellectual presentation regarding a truth that possesses a particular type of interest or significance, e.g., a truth such that understanding it yields a more accurate or perspicuous conception<sup>57</sup> of the nature or importance of that which the presentation is about.

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<sup>56</sup> We may distinguish the notion of *having an insight* from the notion of *some insight*, the latter of which does not seem to pick out a conscious mental state or event. There are also the notions of *gaining* insight, *acquiring* insight, or *harboring* insight—or some insight(s). We will not pursue all of these notions here.

<sup>57</sup> See Bengson and Moffett (forthcoming, §5.2) for discussion of the metaphysics and epistemology of conceptions.

Quasi-presentationalism would seem to enable us to take seriously the idea that a flash of insight is not merely a belief, judgment, disposition, inclination, temptation, or attraction, and to do so without resorting to mysticism, magic, or metaphor. I hasten to emphasize that this proposal is offered as only a rough stab at a (presumably not-yet-satisfactory) view. Hopefully, however, the basic idea that an insight is a particular type of translucent intellectual presentation may serve as a constructive beginning for all that.

I have tried to show that quasi-perceptualism allows a straightforward treatment of the relations between intuitions and dispositions, inclinations, temptations, and attractions. It may also help to disinfect the legitimate but elusive notion of insight. These may be regarded as among quasi-perceptualism's several virtues (to be added to those listed in §5), which seem to go unmatched by its minimalist rivals.

### *§9. Introspecting Intuitions*

Quasi-perceptualism holds that intuition is a conscious mental state, distinct from guesses, hunches, hypotheses, beliefs, dispositions, inclinations, temptations, and attractions, that is like perceptual experience in being a translucent presentation. Opponents may be inclined to object to this thesis on introspective grounds. For example, minimalist Williamson has charged that introspection of intuition reveals no such distinctive psychological state. He observes that geometrical intuitions can be accompanied by vivid sensory imaging; but, nevertheless, introspection shows intuition to be nothing more than a conscious inclination to belief. Reporting on his Gettier intuition, which he takes to be typical, Williamson (20017, 217) writes:

For myself, I am aware of no intellectual [conscious state] beyond my conscious inclination to believe the Gettier proposition. Similarly, I am aware of no intellectual [conscious state] beyond my conscious inclination to believe Naïve Comprehension, which I resist because I know better.

Sosa (2007, 55 emphasis in original) concurs:

What [is] lack[ing when one has an intuition] is any correlate of the visual sensory experience beyond one's conscious entertaining of the propositional content, something that distinctively exerts [an]...attraction to assent. No such state of awareness, beyond the conscious entertaining itself, can be found in *intuitive* attraction.

The objection, in short, is that quasi-perceptualism belies the introspective data: when the objector introspects her own Gettier intuition, for example, she fails to find a state that is like perceptual experience in being a translucent presentation, as characterized above.

The first thing to notice about this objection is that it may lead quickly to stalemate. For a quasi-perceptualist would naturally respond by questioning whether it is really true that, when the objector considers Gettier's example, it is not presented to her—as it is to the *quasi-perceptualist*—as being the case that Gettier's Smith lacks knowledge. Presumably, in turn, the objector would question the veracity of the

proponent's claim that she enjoys such a presentation. Absent a reason to think that one side rather than the other is guilty of committing an introspective error, this objection-response pair ends in stalemate—an unsatisfying, even if a dialectically tolerable (for the quasi-perceptualist), outcome.

It is worth pausing to reflect on such stalemate, which might recall appeals to introspection in early twentieth century introspective psychology that led to intractable disagreement. One of the most notable was the impasse between Edward Titchener (and his followers at Cornell) and members of the Würzburg School of Germany over the phenomenology of conscious thinking. While the latter claimed that it is possible to enjoy conscious thinking without sensations, images, or feelings, the former objected that introspection showed that this is not so. Edwin Boring (1946, 176, quoted in Lyons 1986, 159 fn. 49) recounts another such dispute:<sup>58</sup>

There is always to be remembered that famous session of the Society of Experimental Psychologists in which Titchener, after hot debate with Holt, exclaimed: 'You can see that green is neither yellowish nor bluish!' and Holt replied: 'On the contrary, it is obvious that green is that yellow-blue which is just exactly as blue as it is yellow.'

Such anecdotes may temper enthusiasm for objections, such as Williamson's and Sosa's, that rely on introspection or introspective reports alone. Clearly we do well to avoid such

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<sup>58</sup> See also Boring (1953).



clashes of introspections and the stalemates they engender.

In an effort to progress beyond stalemate, the quasi-perceptualist might observe that the introspective objection, articulated by Williamson and Sosa, is meant to challenge a certain (non-minimalist) view or characterization of intuition, and in particular the discriminating quasi-perceptualist view that this characterization underwrites. However, this characterization was offered as part of a *theory* of our target, a theory centered on a threefold distinction between, and subsequent explication of, types of contentful state (recall §§3-6); the target itself was identified in a theory-neutral way, using a series of more or less familiar examples (recall §2). Perhaps the objector wishes to object to some aspect of that theory on introspective grounds: for instance, when she introspects her Gettier intuition, she fails to find a mental state that has all of the relevant features (viz., baselessness, gradability, fundamental non-voluntariness, compellingness, rationalizingness, and translucence).<sup>59</sup> But those features and their theoretical explication (of the sort offered in §§3-6)—a venture that is both difficult and liable to controversy (a point emphasized in §10 below)—may not be always or fully accessible through a simple act of introspection. First, additional (non-introspective) reflection may be required. Second, it must be borne in mind that to *find* a given state or feature via introspection, the introspector typically must know what to look for, and in particular how to single it out or recognize it under the description in question (viz., the description *being like perceptual experience in being a translucent presentation*), knowledge which introspection alone

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<sup>59</sup> Alternatively, it may be that the objector fails to find a mental state with a robust sensory phenomenology (a sensory presentation) and hastily infers that she therefore lacks any presentational state whatsoever. Let us assume that the objector is not making this mistake.

cannot guarantee (cf. Chudnoff forthcoming b). Consequently, introspection alone is unable to decide the matter: it cannot by itself refute quasi-perceptualism.

The point is twofold:

- A. There is a gap between *finding* a given state or feature via introspection and *having* that state. The former requires far more than the latter, such as knowledge of what to look for, and how to single it out or recognize it under the description in question. Consequently, the failure to find a given state or feature via introspection does not imply that one does not have it.
- B. There is a threefold distinction between (i) introspectible features of a conscious mental state, (ii) non-introspectible features of a conscious mental state, and (iii) a theoretical explication, based on (non-introspective) reflection, of a conscious mental state and its features. Classes (ii) and (iii) are not the domain of introspection alone.

It follows from (A) and (B) that the fact that one fails to introspect certain features or their theoretical explication does not support the claim that a state with such features does not exist. Thus the introspective objection fails, and not simply because of a clash of introspections: stalemate is overcome.

Notice that, in developing this response, the quasi-perceptualist need not charge the proponent of the introspective objection with an introspective error. It may really be true that the objector fails to *find* a mental state that satisfies the description *being like*

*perceptual experience in being a translucent presentation* when she introspects her intuition, just as she reports, even though the objector nevertheless *has* such a state. Failing to find something even though it is present is a common predicament. We have all had the experience of losing or overlooking something: we are unable to find our key (wallet, paper, book, etc.), yet it is there, only unnoticed. Or we fail to recognize our seat (car, jacket, partner, etc.), and walk right past it. That we sometimes have immense difficulty finding or noticing or recognizing a certain feature, or a feature-so-described, of what we are inspecting, even when we are looking for such a feature, fully informed that such a feature is there, awaiting notice, is also illustrated by research on change blindness (see, e.g., Simons and Levin 1997). Introspection may pose still further difficulties, especially when what is at issue is a theoretical explication of a state and its features, which demands (non-introspective) reflection.<sup>60</sup>

These considerations indicate the need for caution when accusing a given theory—in the present case, the quasi-perceptualist theory of intuition—of having somehow belied the introspective data. Introspection alone is unable to refute quasi-perceptualism. On the contrary, to the extent that one finds that it really does *strike* one that Gettier's Smith lacks knowledge (or that identity is transitive, etc.), introspection may turn out, upon further investigation (as suggested in §§3-6), to be a friend to that thesis.

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<sup>60</sup> It is of course possible that the objector does not find a translucent intellectual presentation because she does not in fact have a translucent intellectual presentation. Here we confront the possibility of intuitive blindsight (recall §3): it may well be that some individuals simply lack certain intellectual presentations, even though they may display the appropriate responses nevertheless. We can allow that this is not the correct diagnosis of the source of the introspective objection considered in the text, though it remains an important possibility or option all the same.

*§10. Disagreement about Intuition*

Disagreement about the nature of intuition does not end at introspection. Even when introspection is supplemented with further reflection, substantial disagreement remains. What are we to make of such disagreement? Albert Casullo (2003, 164) writes:

If [intuitions] are...familiar, then it is reasonable to expect that descriptions of them offered by sympathetic proponents, who have carefully considered and reflected on the matter, should converge, at least in their broad outlines. Yet, if one surveys these descriptions, one finds enormous variation.

Casullo illustrates by noting significant differences between several of the most prominent views of intuition. Indeed, while some theorists maintain that intuitions are imaginings, others hold that they are (non-sensory) understandings; still others maintain that intuitions are simply beliefs (judgments, acceptances, opinions) or dispositions or inclinations (attractions, temptations) to belief. And then there are quasi-perceptualists, who hold that intuitions are translucent presentations.

Interestingly, the variation one finds in views of the nature of intuition resembles variation in views of the nature of perceptual experience. Doxasticists, such as David Armstrong (1968), maintain that perceptual experiences are simply beliefs (judgments, acceptances, opinions) or dispositions or inclinations (attractions, temptations) to belief. Non-doxasticists, by contrast, hold that perceptual experience is completely different

from belief and its kin. This is not to say that non-doxasticists agree about the correct alternative to doxasticism. Certain “sense-data” theorists, such as Henry Habberley Price (1932), maintain that perceptual experience always involves awareness of a particular, whereas adverbialists, such as Roderick Chisholm (1957), deny that it ever does. Yet another perspective is offered by intentionalists, such as Michael Tye (1995), who maintain that perceptual experience is a distinctive propositional attitude.<sup>61</sup> A survey of views of perceptual experience would be severely incomplete, if not narrow-minded, if it omitted mention of the full range of (currently heterodox) views, including the position that perceptual experiences are imaginings (the view of certain idealists and Neo-Kantians, as well as those impressed by Martin Heidegger’s “re-interpretation” in *Kant and the problem of metaphysics*<sup>62</sup>) or the position that perceptual experiences are sensory understandings (the view of Neo-Cartesians impressed by Descartes’s remarks on the cognitive aspect of perception in the *Meditations* and elsewhere, e.g., the Sixth Replies). This brief survey suffices to convey the point that philosophical views of perceptual experience by sympathetic proponents do not all converge, not even in their broad outlines.

Clearly the presence and extent of such disagreement about the nature of perceptual experience does not by itself impugn any particular view or set of views regarding perceptual experience. At most it shows that characterizing perceptual

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<sup>61</sup> Even among intentionalists there is substantial disagreement. While certain conceptualists, such as McDowell (1994), hold that perceptual experience is essentially a conceptual state that simple-minded creatures do not possess, certain nonconceptualists, including Tye (1997), hold that even simple-minded creatures have perceptual experiences. Cf. Bengson et al (forthcoming).

<sup>62</sup> As discussed by Friedman (2000, 2 and 61).

experience properly, in a theoretically satisfying way, is difficult and liable to controversy. Likewise, the presence and extent of disagreement about the nature of intuition does not by itself impugn any particular view or set of views regarding intuition, including the quasi-perceptualist view defended here. At most it shows that characterizing intuition properly, in a theoretically satisfying way, is difficult and liable to controversy.

Whether in the case of perceptual experience or intuition, neither difficulty nor controversy is an objection. It would seem that in both cases divergent characterizations are to be assessed, not for their agreement or disagreement with alternative approaches, but rather for their ability or inability to accurately characterize the phenomenon they have targeted (as analyzandum, explicandum, or explanandum). We saw in §5 that the core quasi-perceptualist thesis accurately characterizes our target, the conscious mental state of having the intuition that *p*. If so, then the fact that it diverges from, rather than converges with, minimalist approaches is simply an indication that minimalist approaches are not accurate characterizations of our target—although they may still be accurate with respect to one or another “nearby” phenomenon.

### *§11. ‘Intuition’ and Intuition*

Quasi-perceptualism implies that intuition is a distinctive mental state, differing substantially from various other mental states with which, according to quasi-perceptualism, intuition should not be confused. It might be objected that quasi-perceptualism’s fairly discriminating picture of intuition conflicts with the way that

philosophers and laymen tend to use the English word ‘intuition’, which seems to be regularly employed in a far less discriminate—and, perhaps, primarily rhetorical—manner. The objection is that, notwithstanding its virtues, in the end quasi-perceptualism fails, since it does not abide the linguistic facts.<sup>63</sup>

Although I think that this objection is not in the end successful, it cannot be dismissed without discussing the relation between the English word ‘intuition’ and our target, intuition. After a few remarks about ‘intuition’ in casual discourse, I will consider a family of worries that focus on indiscriminate uses by philosophers. Engaging these worries will, I hope, lead to a better understanding of the theoretical aims and scope of the present project.

There is little room to doubt that casual uses of the English word ‘intuition’ are sometimes indiscriminate. However, casual uses are often misleading in certain theoretical projects. Such use is, after all, *casual*. While it is tempting to think that ordinary discourse by non-philosophers is innocent of various theoretical biases, and thus should be privileged—imprecision, vagary and all—innocence is not always a recommendation. Williamson (2007, 191) observes in another context:

Although the philosophically innocent may be free of various forms of theoretical bias, just as the scientifically innocent are, that is not enough to confer special authority on innocent judgment, given its characteristic sloppiness.

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<sup>63</sup> This type of objection is pressed by Williamson (2007 ch. 7) and Cappelen (forthcoming).

Sloppiness is not the only danger. Innocence is often due simply to naivety or ignorance, which presents its own limitations. In effect, innocence can actually undermine the relevance of casual use in certain theoretical projects.

Casual discourse can be insensitive to theoretically important distinctions for a variety of reasons (recall note 12) and in a variety of ways. To illustrate, consider the theory of ambiguity. Casual uses of the term ‘ambiguous’ by the philosophico-linguistically innocent are often rather indiscriminate. In particular, such uses often do not discriminate between ambiguity and distinct linguistic phenomena, such as underspecification, vagueness, and context-sensitivity. While such casual uses may be of sociological or anthropological interest, their philosophical significance is limited. Indeed, privileging casual uses of ‘ambiguity’ would only lead theorists of ambiguity, whose project demands a level of precision rarely (if ever) displayed in casual discourse, into trouble. The same may be said for ‘intuition’ in casual discourse. So, while the observation that casual uses of the term ‘intuition’ are often indiscriminate is perhaps of great sociological or anthropological interest, its philosophical significance is limited.

This is not to say that we can just ignore any uses of the term ‘intuition’ that we do not happen to like. Rather, the point is simply that, as in the case of ambiguity, what is needed is a theory that successfully captures the target—in the present case, the conscious mental state of having the intuition that *p*, examples of which were discussed in detail in §2. If such a theory is discriminate whereas casual uses are not, so much the worse for casual uses.

What about non-casual uses of the term ‘intuition’, in particular, its uses in



philosophical discourse? Consider the following anecdote, offered by Williamson (2007, 214):

I have heard a professional philosopher argue that persons are not their brains by saying that he had an intuition that he weighed more than three pounds. Surely there are better ways of weighing oneself than by intuition.

Williamson (*ibid*) immediately comments:

[S]uch inapposite appeals to intuition should not be dismissed...They are clues to the role of the term “intuition” in contemporary analytic philosophy.

I think we can and should agree that “there are better ways of weighing oneself than by intuition.” But the philosophical interest of the example does not extend much beyond this. Plainly, inapposite appeals to intuition by philosophers “should not be dismissed” by those wishing to understand the social or cultural *role* of such appeals (e.g., the apparently rhetorical function of certain uses of the term ‘intuition’). Such uses may be an important object of study, sociologically or anthropologically speaking. However, their philosophical significance remains far from clear. Notice, after all, that the uses in question are *inapposite*, and *recognizably so*—just recall Williamson’s anecdote (whose description employs this very epithet). Given that such uses are so clearly inapposite, they cannot serve as reliable guides when theorizing about the nature of our target: what

it “really is”.

We have just witnessed the need to distinguish the broadly sociological or anthropological project of explaining the role of a given term in a certain community or practice from the present, philosophical project of determining the nature of a certain mental state, which was earlier located through examples. Such a distinction may help us in assessing Williamson’s (2007, 218) contention that

Although we could decide to restrict the term “intuition” to states with some list of psychological or epistemological features, such a stipulation would not explain the more promiscuous role the term plays in the practice of philosophy.<sup>64</sup>

It is true that a discriminating philosophical theory of the conscious mental state of having the intuition that *p* may not explain the role the term ‘intuition’ plays in a certain practice (e.g., philosophy)—no more than a discriminating philosophical theory of ambiguity would explain the role the term ‘ambiguous’ plays in a certain practice (e.g., literary analysis or casual conversation). Of course, it does not follow that any such prior stipulation of the sort Williamson suggests is necessary to engage the philosophical question of the nature of our target, the mental state of consciously having the intuition that *p*.

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<sup>64</sup> Interestingly, Williamson typically uses scarequotes rather than single quotes around the term ‘intuition’, presumably in order to express his disapproval. In the end he goes so far as to suggest that “Philosophers might be better off not using the word “intuition” and its cognates” (2007, 220). In my view, which is expressed below, such a focus on terminology misses the point, philosophically speaking.

It might be said that even after we agree to set aside various sociological and anthropological projects, focusing instead on the indicated philosophical project, and we agree to exclude casual and inapposite uses of the term ‘intuition’ from our data set, there remains a problematic type of indiscriminateness. Here again is Williamson (2007, 217 emphases added):

Can we at least restrict *intuitions* to non-inferential beliefs or inclinations to believe? The belief that one weighs more than three pounds is inferential. So is the belief that there either was or wasn’t a cat on this spot exactly five hundred years ago. Yet philosophers often count such *beliefs as intuitive*, and rejection of them as counterintuitive. If there is a narrower sense of “*intuitive*”, it is often not the operative one when appeal is made in practice to *the intuitiveness of some theories* as a virtue and the counterintuitiveness of others as a vice.

The conclusion is supposed to be that we should abandon as unduly restrictive any view that, like quasi-perceptualism, regards intuition as a distinctive mental state. However, the passage slides without comment between intuitions, intuitive beliefs, and the intuitiveness of a theory, as if we must accept that these phenomena are one and the same. But this is not so; on the contrary, by sliding between diverse phenomena the argument risks invalidity. As we saw in §2, our target need not be viewed as the phantom that allegedly answers to all and only uses of the term ‘intuition’ and its cognates (‘intuitive’, ‘intuitively’, etc.). Plausibly, there is no single entity picked out by disparate

uses of ‘intuition’ and its cognates but, rather, a variety of *prima facie* related but distinct phenomena—prominent among them being intuitions, intuitive beliefs, and the intuitiveness of a theory—sometimes lumped together under a generic (and perhaps “promiscuous”, to borrow Williamson’s term) label.

Hopefully this discussion makes clear the theoretical aims and scope of the present project. From our current perspective (*viz.*, the perspective of philosophical theorizing), what ultimately matters is not so much the contingent social role or ordinary use of a particular English term, or set of possibly interrelated English terms, but, first, whether there is a mental state of the sort described in §§2-6 and, second, whether such a mental state might possess some special philosophical (e.g., epistemic) significance. Recall that we first located our target, not through sociological speculation or reflection on particular ordinary language locutions, but with examples. And we saw in §5 that the core quasi-perceptualist thesis accurately characterizes this target. Hence, in my view, the suggestion that a mental state that satisfies this characterization only imperfectly deserves the label ‘intuition’ is merely terminological. Whether we choose to call it ‘intuition’ or something else, such as ‘intellection’, ‘insight’, or ‘quasi-perception’, it seems that once we have accurately characterized our target the philosophically interesting question is what work such a state might do.

We briefly addressed the psychological side of this question in our discussion of the psychological roles of this state in §5 (e.g., it is formative, explanatory of belief, and revolutionary; cf. §8). Part II takes up the epistemological side of this question—in particular, whether and how the perceptual analogy might help us better understand the

epistemology of intuition. It is to this investigation that we shall now turn. I will argue that those features that underwrite a quasi-perceptualist characterization of intuition, ontologically speaking, also play a central role in helping to explain—and to deflect skepticism about—intuition’s epistemic status.

## II. Epistemology

### *§12. Intuitive Justification and Intuitive Evidence*

It is, arguably, standard practice in logic, mathematics, and philosophy to regard at least some intuitions about particular cases and “first principles” (or axioms) as possessing a positive, if not privileged, epistemic status.<sup>65</sup> For instance, the Gettier intuition is widely regarded as serving a decisive blow against the traditional analysis of knowledge.<sup>66</sup> Similarly, the intuition that wantonly torturing innocent sentient beings is wrong is not—or at least not typically—seen as “up for grabs”. Similarly for the intuition that identity is transitive and the non-contradiction intuition. In these cases, and many more, the intuition alone has been considered enough to confer positive epistemic status on the rejection of the contrary position. By contrast, mere guesses, hunches, dispositions to judge, or beliefs formed via astrological calculations or wishful thinking, for example, have not been regarded as enjoying any such epistemic status.

This suggests the following two epistemological questions regarding quasi-perceptualism:

[Question 1] Is quasi-perceptualism in a position to preserve, rather than

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<sup>65</sup> Kornblith (2004, §1.2), following Bealer (1992), refers to this practice as the ‘standard justificatory procedure’. See also Pust (2000, ch. 1), Hales (2006, 80), Goldman (2007, §1), Williamson (2007, 214-215) and Parsons (2008, 319 ff.).

<sup>66</sup> Skeptics about the force of Gettier intuitions, such as Stich (1998), Weinberg et al (2001), and Weatherson (2003), may focus instead on counterexamples to a mere true belief analysis of knowledge, such as Swain et al’s (2008) uncontroversial *Coinflip*, reproduced in §17.1. See below for discussion of such skepticism.

undermine, the thesis that intuition may serve as a legitimate epistemic source?

[Question 2] Can it do so without simultaneously allowing the same epistemic status to be granted to such apparently epistemically indigent states as mere guesses, hunches, dispositions to judge, and beliefs formed via astrological calculations or wishful thinking?

The aim of this section is to show that both questions can be given affirmative answers.

Quasi-perceptualism is consistent with a variety of epistemological positions. This can be illustrated by considering a few positions that resemble those which have loomed large in recent debates over the epistemology of perception. It will be useful to formulate these positions as epistemologies of presentation in general, though the crucial point is simply that all of them can be easily modified so as to cover the epistemology of intuition as well as perceptual experience.

According to what I will call an *alethic* view, having a presentation with the content *p* confers some positive epistemic status on believing that *p* (and, when all goes well, renders that belief an instance of knowledge<sup>67</sup>) iff one's presentations are truth-conducive (e.g., reliable). There are also a number of non-alethic epistemologies. For example, according to what I will call *conservativism*, it is not required that one's presentations *be* truth-conducive; rather, what matters is that one *rationaly believe* that

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<sup>67</sup> I use the place-holder 'when all goes well' in order to remain neutral, at least for the time being, between competing solutions to various Gettier-type problems, which seek to identify what turns a justified true belief into knowledge. The possibility of intuitive knowledge is the topic of Part III below. For now we will focus on evidence and justification.

they are. More generally, the conservative can be understood as saying that having a presentation with the content  $p$  confers some positive epistemic status on believing that  $p$  so long as one has independent warrant for believing (or accepting) some other proposition  $\Phi$ , e.g., the proposition that one's presentations are truth-conducive, a proposition concerning some alternative—perhaps skeptical—hypothesis, and so forth.<sup>68</sup> This conservative view can be contrasted with another non-alethic approach, which I will call *liberalism*, according to which one does not need such independent warrant; rather, says the liberal, having a presentation with the content  $p$  confers some positive epistemic status on believing that  $p$  so long as one simply lacks warrant for *disbelieving*  $\Phi$ —that is, as I will say, so long as one lacks reason to *question* one's presentation.<sup>69</sup>

These positions need not be exclusive. Thus an epistemic “pluralist” may maintain that there are varieties of positive epistemic status, and each of the above positions accurately characterizes one or another of them. To illustrate, it is open to one to hold that justification (justifying belief) and evidence (being evidence for belief) are distinct types of positive epistemic status requiring distinct treatments. Additional types might include warranting belief, supporting belief, making belief permissible/obligatory, and so forth. I will focus on justification and evidence.

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<sup>68</sup> I have represented the relevant proposition with a variable because different theorists will privilege different propositions. Some contextualists will hold that  $\Phi$  varies from context to context (e.g., in a philosophy seminar it may be the proposition that one is being deceived by an Evil Demon). The account to be pursued here can readily be modified in order to accommodate this perspective, if necessary.

<sup>69</sup> Versions of alethicism about perceptual experience are offered by Goldman (1986), E. Sosa (2007), and others. Conservatism about perceptual experience is defended by Wright (2004b) and White (2006). (While I will focus on independent warrant for *belief*, conservatives may instead invoke *acceptance* or *trust*; nothing in what follows will depend upon this detail.) Liberalism about perceptual experience is endorsed by Dretske (2000), Pryor (2000, 2004), Huemer (2001, 2005, 2007), Martin (2002), Peacocke (2004), and Silins (2007), among others.



Alethicism seems to allow an attractive view of evidence, a type of positive epistemic status that is plausibly related to truth-conduciveness. What are the implications of this perspective for intuition? The attempt to establish (or refute) the claim that a given mental state—whether it be intuition, perceptual experience, memory, or introspection—is in fact truth-conducive is a notoriously delicate matter: worries about generality,<sup>70</sup> for instance, signal that the rules of that game are not yet clear. This is not the place to debate the rules or to attempt to win the game. However, it should be noted that to the extent that arguments for the truth-conduciveness of intuition (e.g., track-record arguments citing the successes of elementary mathematical and logical intuition, epistemic self-defeat arguments, self-support arguments) are successful, an alethicist epistemology would vindicate, from a broadly externalist standpoint, the thesis that intuition serves as a legitimate epistemic source.<sup>71</sup> Assuming that other presentations (notably, perceptual experiences) are also truth-conducive, whereas such states as mere guesses, hunches, dispositions to judge, and beliefs formed via astrological calculations or wishful thinking are not, an alethicist epistemology would imply that presentations are, as a kind, epistemically privileged with respect to these other, epistemically indigent states—thus delivering affirmative answers to both [Question 1] and [Question 2].<sup>72</sup>

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<sup>70</sup> The so-called generality problem is pressed in Feldman (1985) and Conee and Feldman (1998).

<sup>71</sup> Externalists who maintain the bold thesis that “E = K” (Williamson 2000) will hold that intuition is like perceptual experience in having evidential value *only* when it amounts to knowledge. But to the extent that evidence and justification can be pulled apart, it remains open to such externalists to adopt a different view of the justificatory status of perceptual experience and intuition (perhaps one of the views outlined in the text).

<sup>72</sup> The literature on the truth-conduciveness of intuition is enormous. See, for example, Bealer (1998, 2008), Cummins (1998), Goldman and Pust (1998), Weinberg et al (2001), E. Sosa (2002, 2006, 2007), Kornblith (2004), Pust (2004), Huemer (2005, 107-108 and 137 ff.), D. Sosa (2006), Goldman (2007), Weinberg (2007), Liao (2008), and Swain et al (2008). Versions of alethicism

While alethicism is a plausible (though arguably not obligatory) approach to understanding evidence, including intuitive evidence, it offers a less attractive view of justification. Justification can be understood as a type of epistemic status that concerns what is epistemically appropriate (which is stronger than what is merely permissible, and the associated notion of blamelessness, but weaker than what is obligatory, and the associated notion of duty). Recent work in epistemology indicates that the thesis that a subject is *prima facie*<sup>73</sup> justified in believing on the basis of some mental state  $\sigma$  iff  $\sigma$  is truth-conducive is problematic, as suggested, for example, by standard cases of envatment and clairvoyance.<sup>74</sup> An envatted experiencer is responding appropriately when believing that the world is the way she experiences it as being, even though her experiences are not truth-conducive. Insofar as it is possible to evaluate the epistemic status of a believer's believing independently of her status as a mere "truthometer", as in such a case,<sup>75</sup> there is pressure to develop an account of justification—including intuitive justification—that proceeds independently of the issue of truth-conduciveness.

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about intuition are endorsed by Bealer (2000), E. Sosa (2007), and Goldman (2007). An issue that often arises in this context concerns the demand to *explain* the truth-conduciveness of intuition. I assess the demand for such explanation in §29 and outline such an explanation in §§31-34 and Appendix I in Part III below.

<sup>73</sup> Let me say something about the notion of the *prima facie* and its connection to the notion of the *pro tanto*. A state or act might be said to enjoy a certain normative status only in the absence of defeaters: if a defeater is present at time  $t$ , it no longer has that status at  $t$  (though, again, it remains true at  $t$  that it *would* have that status if no defeater was present). This normative property—the property of having a certain normative status absent defeaters—can be usefully contrasted with the normative property that a state or act has when it enjoys a certain normative status even if defeaters are present: if a defeater is present at time  $t$ , it still has that status at  $t$ , though the status is simply overridden at  $t$ . Here we find what is sometimes referred to as the distinction between *prima facie* and *pro tanto* normative status. While I will proceed using the notion of the *prima facie*, the discussion is largely neutral on which of these notions is to be preferred.

<sup>74</sup> See Cohen and Lehrer (1983); Cohen (1984); Bonjour (1985, ch. 3).

<sup>75</sup> See also Enoch (forthcoming).

In the remainder of this section, I will examine the prospects of a non-alethic view of the justificatory status of presentations, focusing on the conservative and liberal approaches described above. What is needed for a defense of conservatism or liberalism is a plausible philosophical articulation of the overall position, including an account of *how* presentations provide prima facie justification in the way that the position implies. As formulated above, both conservatism and liberalism about a given mental state  $\sigma$  tell us the conditions under which  $\sigma$  provides prima facie justification, namely, when one has independent warrant for believing  $\Phi$  (in the case of conservatism) or when one lacks warrant for disbelieving  $\Phi$  (in the case of liberalism). But they do not yet tell us *in virtue of what*  $\sigma$  so justifies. This is an explanatory gap that must be filled, if only because not all mental states provide such prima facie justification; again, such states as mere guesses, hunches, dispositions to judge, and beliefs formed via astrological calculations or wishful thinking presumably do not. This asymmetry requires explanation. What non-epistemic feature(s) could  $\sigma$  possess—but mere guesses, hunches, and the like lack—that would *make it the case* that  $\sigma$ —but not these other states—provides such justification, and thus deserves a conservative or liberal treatment?

To simplify the discussion, I will henceforth focus on developing a particular brand of liberalism. Two caveats. First, this is not the only version of liberalism—though it is, for reasons discussed below, an attractive option. Second, the view can readily be modified to accommodate a conservative perspective: those who accept a conservative epistemology are invited to replace the relevant liberal clause (‘one lacks reason to question one’s presentation’) with the relevant conservative clause (‘one has independent

warrant for believing  $\Phi'$ ) where appropriate. The reason is this. Even though the liberal and conservative theses articulated above offer competing perspectives on the *conditions under which* a given mental state  $\sigma$  provides prima facie justification—in other words, they disagree about what counts as a genuine defeater for a perceptual or intuitive belief—they may nevertheless agree about that *in virtue of which*  $\sigma$  provides such justification (under those conditions). Our concern henceforth will be the latter issue.

Let us begin with perceptual experience. In virtue of which non-epistemic features might perceptual experience be such as to provide the indicated justification? One candidate answer appeals to its *presentationality*. As Martin (2002, 396 emphasis added) writes,

It seems reasonable to us that we should come to believe that our environment is a certain way, *given that* our experience *presents* that environment as being that way.<sup>76</sup>

As we saw in §§3-4, insofar as perceptual experiences present the world as being a certain way, from the perspective of an experiencer, matters are not neutral. In having an experience as if  $p$ , it is presented, non-voluntarily, to the subject of the experience as being the case that  $p$ ; the world is presented  $p$ -ly, as it were. Given that this is how things are from the subject's point of view, namely, biased toward  $p$  in a way that appears, from the “inside”, to make  $p$  worthy of belief, it seems unreasonable to criticize such a subject

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<sup>76</sup> Cf. Pryor (2000, 547 n. 37; 2004, 357).

as doing something epistemically improper in subsequently coming to believe that p, absent reason to so believe (e.g., absent special reason to doubt her perceptual experience's reliability). Quite the opposite: it would seem that such a subject has at least some reason to believe that p; it is *appropriate* for her to so believe. Given that it is presented as being the case that p, coming to believe that p is something the subject is *prima facie* justified in doing.<sup>77</sup>

A parallel approach to intuition would exploit the core quasi-perceptualist thesis that intuition, too, is presentational. Insofar as intuitions present the world as being a certain way, from the perspective of an intuiter, matters are not neutral. In having the intuition that p, it is presented, non-voluntarily, to the subject as being the case that p; the world is presented p-ly, as it were. As before, given that this is how things are from the subject's point of view, namely, biased toward p in a way that appears, from the "inside", to make p worthy of belief, it seems unreasonable to criticize such a subject as doing something epistemically improper in subsequently coming to believe that p, absent reason to so believe (e.g., absent special reason to doubt her intuition's reliability). Quite the opposite: it would seem that the subject has at least some reason to believe that p; it is *appropriate* for her to so believe. In the case of intuition as in the case of perceptual experience, given that it is presented as being the case that p, coming to believe that p is something such a subject is *prima facie* justified in doing.

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<sup>77</sup> Although I have focused on perceptual experience, these remarks seem to apply equally to proprioceptive experience, in which it is presented, often without proprietary sensation, that one's limbs are positioned thus (recall note 23). That such presentations justify belief signals that the justificatory status of presentation cannot be attributed solely to certain presentations' sensory character.

The proposal, in short, is that there is an epistemically significant link between presentations and the beliefs one forms on their basis, a link that obtains independently of whether presentations are in fact truth-conducive. Given their non-neutrality, presentations provide *prima facie* justification for beliefs in any case in which their contents are otherwise “innocent”—that is, when subjects lack reason to question them.<sup>78</sup>

Call this view *presentationalism*:

### *Presentationalism*

Given the nature of presentations, so long as  $x$  lacks reason to question  $x$ 's presentation, then  $x$  has at least some *prima facie* justification for believing that things are the way they are presented as being.

Presentationalism tells us that in virtue of which certain mental states provide *prima facie* justification for corresponding beliefs, namely, their presentationality. But it is important also to be clear about what it does not tell us. For example, it is not committed to the puzzling thesis that Williamson (2007, ch. 7) labels ‘evidence neutrality’ (viz., the thesis that whether a proposition constitutes evidence is in principle uncontentiously decidable), and not simply because presentationalism is a thesis about justification rather than evidence: for insofar as two subjects have different presentations,

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<sup>78</sup> The conservative may say instead that given their non-neutrality, presentations provide *prima facie* justification for corresponding beliefs in any case in which their subjects have independent warrant for believing  $\Phi$ . The conservative is thus free to replace the liberal clause ‘so long as  $x$  lacks reason to question  $x$ 's presentation’ with the conservative clause ‘so long as  $x$  has independent warrant for believing  $\Phi$ ’ in the formulation of the epistemic thesis to follow.

presentationalism allows that they will be *prima facie* justified in believing different things. Presentationalism also does not imply that a presentation may by itself help one rationally overcome reasonable doubts about or genuine skeptical challenges to its content, or to consequences thereof, since such doubts and challenges may deliver a reason to question the presentation.<sup>79</sup> A related point is that presentationalism does not entail that any actual beliefs are in fact justified, since it is consistent with the hypothesis that all subjects have reason to question their presentations. Consequently, presentationalism can be accepted even by those sympathetic to skepticism regarding the epistemic significance of certain presentations (e.g., specific intuitions or perceptual experiences).<sup>80</sup>

So much for what presentationalism does not say. Again, what it does say, or specify, is that in virtue of which certain mental states provide *prima facie* justification for corresponding beliefs, namely, their presentationality. There are several reasons to like this account.

First, it is supported by reflection on standard cases of envatment—where subjects have the relevant presentations and hence possess *prima facie* justification for the corresponding beliefs; it is likewise supported by reflection on the phenomenon of blindsight—where subjects lack the relevant presentations and hence lack corresponding

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<sup>79</sup> Or, recalling conservatism, they may remove one's independent warrant for believing  $\Phi$ . Either way, this might explain the dialectical ineffectualness of "Moore's proof" or the possibility of warrant-transmission-failure; cf. Sosa (1997), Pryor (2004), and Wright (2004b).

<sup>80</sup> It can also be accepted by those sympathetic to certain versions of holism, coherentism, and various other epistemological views. Presentationalism is not incompatible with such views, insofar as they focus on evidence (or some other epistemic property) or specify sufficient conditions for, rather than explanations of, the justificatory status enjoyed by presentational states.

justifications.<sup>81</sup>

Second, presentationalism provides a straightforward explanation of the fact that some mental states do, while other states—such as mere guesses, hunches, dispositions to judge, and beliefs formed via astrological calculations or wishful thinking—do not, provide *prima facie* justification: to wit, the former but not the latter are presentational. Of course, this explanation only becomes possible once we accept that intuitions are distinctive in being presentations, like perceptual experiences. That is, it requires a perspective according to which our target has a distinctive feature, namely, presentationality. Insofar as the minimalist views discussed in Part I miss out on this feature, because they deny that intuition is distinctive, they miss out on this explanation. (This may be viewed as among the problems confronting minimalism.)

A third reason to like presentationalism is that it has the resources to make sense of subtle epistemic disparities, such as the epistemic difference between a subject with a clear, vivid intuition or perceptual experience and a subject whose intuition or perceptual experience is hazy or fuzzy. In the latter case, one may have some reason to question one's presentation (*viz.*, it is hazy or fuzzy); one does not have this reason when one's presentation is clear and vivid, and is, therefore, in an epistemically superior position: one

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<sup>81</sup> Envatment was mentioned above; see Eilan (1998) and Dretske (2006) for similar verdicts on blindsight. Cases such as these have been taken to indicate that we cannot expect to fully comprehend the epistemic significance of certain mental states if we ignore the conscious features. While this may be so, plainly not just any conscious feature will do, as evidenced by the possibility of mere imagers who willfully induce certain sensations (e.g., they image a red sphere) but lack corresponding justifications (the imager is not thereby justified in believing in the existence of a red sphere). The conscious feature that seems to matter is not sensation, but presentationality. Perceptual experiencers and intuiters suffering envatment are such that it is presented to them that the world is a certain way: the world is presented *p-ly*, so they are *prima facie* justified in believing accordingly. Not so for blindsighters or mere imagers. Presentationalism offers an illuminating account of this difference.



is *more* justified. In this way, the gradability of presentations may ground a corresponding gradability in prima facie justification.

This observation is connected to a further point. The fact that not all presentations are created equal might carry important implications for philosophical methodology. Specifically, some presentations (e.g., transitivity intuitions) may, while others (e.g., anti-coincidence intuitions) may not, be clear or vivid enough to justify building one's whole theory around them. It would appear to be a virtue of presentationalism that it illuminates the source of such disparity.

Presentationalism might also be motivated through a comparison with alternative proposals. Consider, for instance, the view that certain mental states (notably, perceptual experiences) provide prima facie justification because they are “irresistible” or, in the terminology introduced above, compelling: specifically, certain states provide prima facie justification for corresponding beliefs because they compel those beliefs (cf. Dretske 2000). This irresistibility thesis suffers from the problem that desirous or wishful thinking is also compelling; recall *The Impassioned Scientist*.<sup>82</sup> To avoid such counterexamples, the irresistibility thesis must be supplemented with a restriction to a subclass of compelling states. But why those compelling states and not others? It is difficult to see how the restriction could avoid being arbitrary or ad hoc. Moreover, if what is supposed to *make* such states epistemically valuable is their compellingness, then it is not clear how such a restriction would be coherent, let alone motivated. Presentationalism, by

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<sup>82</sup> See also Markie (2006, §2). The irresistibility thesis seems to be an epistemological correlate of the problematic idea that because the kleptomaniac is compelled to steal, she is justified in stealing.

contrast, rules out such states in a principled manner: desirous or wishful thinking are not presentational states (recall virtue (iii) in §5). It follows that counterexamples to the irresistibility thesis are not counterexamples to presentationalism, which has the resources to explain the epistemic asymmetry to which our reactions to such cases appear to be attuned.<sup>83</sup>

Presentationalism offers a general epistemological framework within which to understand the epistemology of intuition. If true, it provides a down-to-earth account of the justificatory status of intuition, as it is conceived by quasi-perceptualism. It thus enables quasi-perceptualism to preserve—and, in fact, to explain—the epistemic status accorded to intuition by rationalists, answering [Question 1].<sup>84</sup> And this without simultaneously allowing the same status to be granted to such apparently epistemically indigent states as mere guesses, hunches, dispositions to judge, and beliefs formed via astrological calculations or wishful thinking, answering [Question 2]. In effect, the view provides a principled explanation of why intuitions, but none of these other phenomena, serve as sources of *prima facie* justification. Hence the view is not overly permissive. At the same time, it is not overly restrictive or skeptical: for instance, it allows (but need not entail) a positive verdict about the standard practice in logic, mathematics, and philosophy of regarding at least some intuitions—e.g., those clear and vivid intuitions

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<sup>83</sup> Presentationalism enjoys analogous advantages over Huemer's (2007, see esp. 40) suggestion that certain mental states provide *prima facie* justification simply because most beliefs happen to be based on such states: "at some point, one must believe something because it seems to oneself to be true." For relevant discussion, see Markie (2006, §1).

<sup>84</sup> Note that insofar as presentationalism cites justification-conferring properties that are independent of the "connection" between presentations and that which they are purportedly about, presentationalism renders intuition's status as a source of justification immune to Benacerraf-style worries about the "connection" between intuitions and what is successfully intuited. Such worries will be addressed in Part III.

that we lack reason to question—about particular cases and “first principles” or axioms as possessing a positive epistemic status.

*§13. Beyond Practical, Pragmatic, and Default Entitlement*

It might be objected that the presentationality of certain mental states must be regarded as introducing a type of normative status that is merely pragmatic or practical, not genuinely epistemic. In other words, all that presentationality delivers is practical or pragmatic entitlement, not epistemic justification. However, to the extent that we can sharply distinguish the epistemic from the practical and pragmatic in a principled manner, as the objection assumes (perhaps contrary to the possibility of so-called pragmatic encroachment), I believe that there is reason to regard the normative connection between presentations and beliefs formed on their basis as genuinely epistemic. For, to put the point negatively, this connection is not (or at least not merely) a matter of “what works” or an issue of practical agency, that is, the status of belief insofar as it yields appropriate action (e.g., ensuring survival or increased well-being). Rather, to put the point positively, it concerns the status of believing as such.

The negative observation may suffice to make the central point, and thus to defend presentationalism against attack. Yet, it is also worth exploring one way that presentationalists might elaborate and defend the positive thought. Thus we might consider, for example, an individual who believes that the world is exactly the way it is presented to her as being, absent reason not to so believe. Such an individual is thereby

being a *good believer* in so believing.<sup>85</sup> Of course, she may also be doing what works, or somehow qualify as a good practical agent—such further assessments are consistent with the present point, namely, that what can be assessed as good is her believing as such (her believing *qua believing*, as it were). In short, her believing is appropriate, and not merely in its connection to outcomes or actions. Contrast an individual who believes that the world is exactly the way she needs to believe it to be in order for her to act appropriately. Such a person is not thereby being a good believer in so believing—though she may, perhaps, thereby be being a good practical agent or pragmatist (cf. a believer who accepts Pascal’s wager). Or consider an individual who believes that the world is precisely the *opposite* of the way it is presented to her as being, though she lacks any reason for contravening her presentations: she has no reason to believe that the world is otherwise than how it is presented to her as being, but she believes this anyway. Such an individual is not being a good believer, unlike the individual whose beliefs do fit her presentations. To the extent that it is one’s status as a believer rather than (or at least rather than merely) one’s status as a practical agent that varies in light of changes in fit between one’s presentations and one’s beliefs, it seems reasonable to regard the normative status in question as epistemic rather than merely practical or pragmatic.

There is another type of objection to the epistemic significance of presentationality, this time focusing on so-called default—rather than practical or pragmatic—entitlement. According to Hartry Field (2006, 74):

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<sup>85</sup> As suggested by cases of envatment (recall §12), this particular assessment can be made independently of the truth-conduciveness of her presentations.

[S]ome of our beliefs count as entitled *by default*: we need no positive reason for them, experiential or otherwise, to count as entitled to believe them.<sup>86</sup>

The possibility of such default entitlement introduces the worry that the presentationality of intuition does not by itself add any epistemic significance to intuitive beliefs that such beliefs do not already possess. The objection would then be that whether or not presentationalism identifies an epistemically relevant feature of certain mental states, it does not identify a feature that can in fact contribute anything of significance to our overall epistemic standing, at least not in the case of intuition. For intuitive beliefs independently enjoy a certain normative status, viz., default entitlement, and presentationality alone can never by itself add to, and thus never contribute to the improvement of, this status. As a result, whether or not presentationality is epistemically significant in principle, it remains epistemically insignificant in practice.

One might question the pseudo-mereological or scorecard view of normative status that the objection seems to presuppose. Thus we might resist picturing epistemic significance as something to which presentationality (or anything else, for that matter) might “add”, as if normative status could be understood on the model of building blocks

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<sup>86</sup> Field (*ibid*, 81-82) seeks to explain such default entitlement in terms of our attitudes: “[W]e don’t have to regard our being default-entitled to [certain beliefs] as a mysterious metaphysical phenomenon: it’s basically just that we *regard it as* legitimate to have these beliefs...even in absence of argument for them, and that we have no other commitments that entail that we should not so regard them.” I expect that many epistemologists would balk at the transition from merely *being regarded as legitimate to believe that p*, absent reason to question p, to *being entitled to believe that p*. Fortunately for the theorist of entitlement, this approach is not compulsory. Thus a proponent of default entitlement might instead follow Wright (2004a), who offers an alternative explanation in terms of the seemingly rational character of certain “cognitive projects”, which confer “unearned warrant” upon their “presuppositions”. Wright (2004b) suggests that such default entitlement enables satisfaction of the type of conservative clause discussed in §12.

or points. Is it really that one has a certain amount of normative status, then tallies—or fails to tally—a bit more? Presumably not. Or at least not obviously.<sup>87</sup>

But let us set this worry aside and confront the objection head-on. Even granting the basic picture of normative status implicit in the objection, one might wonder why the fact that certain beliefs—in this case, intuitive beliefs—independently enjoy a given normative status, viz., default entitlement, must prevent anything else—in this case, the presentationality of intuition—from improving that status. Consider another type of case: the fact that certain perceptual beliefs independently enjoy testimonial entitlement need not prevent something else, such as perceptual experience, from improving their normative status; and vice versa. Absent a reason to think that the present case requires special treatment, it seems quite possible for the presentationality of intuition to likewise improve the normative status of intuitive beliefs.

A third type of response aims to show that presentationality is in fact more significant than default entitlement. Compare two individuals, Alpha and Beta. Neither Alpha nor Beta have any reason to question a certain axiom  $\Theta$ , belief in which Alpha and Beta are entitled by default. However, whereas it is presented to Alpha that  $\Theta$  is true, when she considers it, it is *not* presented to Beta that  $\Theta$  is true, when he considers it. Actually, it is not presented to Beta either way: while it is presented to Beta that either  $\Theta$  or not- $\Theta$  is true, intuition is silent about whether  $\Theta$  is true. Suppose that both Alpha and

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<sup>87</sup> Skepticism about a pseudo-mereological or scorecard view of normative status is consistent with acceptance of the gradability of justification and, more generally, the near-platitude that normative status comes in degrees. Such gradability (or degrees) merely implies that one can be more or less justified. This need not be understood as specifying an “amount” to which several distinct parts or players somehow add or contribute.

Beta believe  $\Theta$ . However, whereas Alpha believes  $\Theta$  on the basis of her presentation, Beta believes  $\Theta$  for “no positive reason, experiential or otherwise” (and thus has only default entitlement). Is Beta just as justified as Alpha in believing  $\Theta$ ? Presumably not: although both individuals enjoy equal default entitlement, Alpha seems to be in a better epistemic position vis-à-vis  $\Theta$  than Beta, given that  $\Theta$  is presented to them in these different ways, when they consider it. Those who hesitate might find it useful to compare Alpha with Chi: it is not only *not* presented to Chi that  $\Theta$  is true (as with Beta); in addition, it is presented to Chi that  $\Theta$  is *false*. Yet Chi believes  $\Theta$  nevertheless (“for no positive reason, experiential or otherwise”). Surely Alpha is more justified in believing  $\Theta$  than Chi, despite the fact that they enjoy equal default entitlement. The reason is simple:  $\Theta$  is presented to Alpha as true while  $\Theta$  is presented to Chi as false.

This returns us to the suggestion that was made above. Insofar as assessment of one’s epistemic status varies in light of changes in fit between one’s presentations and one’s beliefs, it seems reasonable to regard presentationality as epistemically significant. Presentationalism provides a theoretical framework for understanding such assessment. Absent reason to think that this assessment is somehow untenable, presentationalism can be regarded as offering an account of a type of positive epistemic status that leads beyond practical, pragmatic, and default entitlement.

#### *§14. Immediate Justification*

I have argued that the epistemology of intuition can be treated as a natural extension of the epistemology of perception. This section aims to go further by

suggesting that intuitions and perceptual experiences are equally equipped to play the role of “unjustified justifiers”, that is, to provide *prima facie* justification without requiring it in turn.

According to quasi-perceptualism, intuitions are a type of translucent presentation, which are neither consciously mediated transitions from the presumed truth of one proposition to that of a second proposition nor the products of such transitions: in this sense, they are non-inferential. So, if presentationalism is correct, translucent presentations confer *non-inferential prima facie justification* upon beliefs formed on their basis. Such justification is not inherited, preserved, or transmitted from any other conscious state: it is the presentationality of translucent presentations, and nothing else, that is the source or origin of such justification. Accordingly, we may classify the *prima facie* justification translucent presentations confer upon beliefs as basic, direct, or *immediate*, that is, as justification that does not come from, and does not require, any other justification in turn. Quasi-perceptualism together with presentationalism thus implies that intuitions, like perceptual experiences, can be understood as direct and immediate apprehensions that serve as “unjustified justifiers”. They are, in this sense, *given* (or, if you like, *prima facie given*).<sup>88</sup> In having a perceptual experience as if there is a red apple on the table, it is thereby *given* to one as being the case that there is a red apple on the table. In having the intuition that it cannot be the case that both *p* and not *p*,

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<sup>88</sup> I will assume, following many contemporary epistemologists (Williams 1977, ch. 2; Fales 1996; Bonjour 2000; Dretske 2000; Feldman 2003, 75; Pryor 2005; Goldman 2008), that such features as infallibility, incorrigibility, self-justification, and non-contentfulness or “non-conceptualness” (e.g., acquaintance with sense-data; see Price 1932, ch. 1 and Ayer 1940) are not essential to the notions of the given or immediate justification. Contra Sellars (1956), the given—in this sense, at least—is not a myth.



it is thereby *given* to one that it cannot be the case that both p and not p.

Not all philosophers will be happy to conceive of intuition as the intellectual given. However, it is worth noting that resistance cannot be justified by familiar (empirically-grounded) appeals to the alleged instability, relativity, or “hopelessness” of certain intuitions (Cummins 1998; Stich 1998; Weinberg et al 2001; Weinberg 2007; Swain et al 2008). Such appeals, even if accurate, would not threaten quasi-perceptualism or its epistemological implications. I myself am doubtful that they are accurate (see §§16-23 for discussion). But even supposing that they are, at most they would indicate that we now have a standing reason to question certain intuitive presentations, in which case those intuitions would not in fact justify—a conclusion not at odds with the view, which I have been defending, that such intuitions are nevertheless *poised* to do so.<sup>89</sup>

How, then, might one justify resistance to the thesis that intuitions are the intellectual given? Sosa has recently argued that intuitions, unlike perceptual experiences, cannot provide the relevant sort of immediate justification. He claims that whereas perceptual experiences are epistemically unevaluable pre-attraction states of awareness, and are thus capable of providing immediate justification for beliefs (2007a, 47-50 and 54), intuitions

cannot provide [immediate] justification, being themselves epistemically evaluable. In general...a consideration can be assigned the *wrong* weight, as it attracts one too strongly or too weakly. Why should *intuitive* attractions be any

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<sup>89</sup> A model may be empirically-discovered auditory illusions (e.g., Deutsch 1992), or perhaps experiences as of spatiotemporally distal events whose veracity we have standing reason to doubt.

exception? (2007a, 51 emphasis in original)

The argument, in short, is this:

1. Intuition is an “attraction to assent” (2007a, 49 and 54).
2. Whereas perceptual experiences are not epistemically evaluable (i.e., assessable for justification or unjustification), able thereby to provide prima facie justification without requiring justification in turn, an attraction to assent “*is* thus evaluable...as it attracts one’s assent too much, or too little” (2007a, 49) or “too strongly or too weakly” (2007a, 51), and thus can be epistemically justified or unjustified.
3. Therefore, intuitions, unlike perceptual experiences, do not provide immediate justification: they are not states of awareness that provide prima facie justification without requiring justification in turn.

Sosa (2007a, 55 emphasis in original) summarizes:

Only one conclusion seems in order: that intuitions, unlike visual experiences, are *not* states of awareness that lie *beyond justification and unjustification*, able thereby to provide [immediate] justification while halting the regress of justification.

Neither premise in the above argument is beyond scrutiny. A brief examination will prove instructive, for the challenges they face help to illuminate what is distinctive about the quasi-perceptualist theory of intuition.

Start, first, with the premise (2) that attractions to assent can be epistemically justified or unjustified. It is not clear that this is so. No doubt attractions can be evaluated, just as an archer's shots and an aesthete's pleasures can be evaluated (e.g., for accuracy or sophistication). Yet the archer's shots and aesthete's pleasures cannot be *epistemically* evaluated. Arguably, the same is true of a subject's attractions. While *belief* in the proclamations of a charismatic speaker may be epistemically unjustified for a subject who is aware that the speaker is unreliable, it may seem odd to say that such a subject's *attraction* to the proclamations, which may remain despite the subject's success in overriding it (by withholding assent), is epistemically unjustified. Again, such an attraction, even when overridden, may in some sense be evaluable; as Sosa rightly observes, an attraction may "attract one too strongly or too weakly". But it does not follow that it is thereby *epistemically* evaluable. In general, that one's mental state or 'performance', to borrow Sosa's (2007a, ch. 2) terminology, could have been better (e.g., because it is weaker or stronger than it could be) does not entail that one's state or performance is itself thereby assessable for *epistemic justification* or *epistemic unjustification*. For instance, perhaps a given visual experience could have been better: perhaps it is extremely hazy or fuzzy, or simply not as clear or vivid as it could be. One's visual experience itself is not thereby epistemically unjustified (though, to be sure, believing on its basis may be). Similarly, though it may be that an attraction to assent

could have been better, it does not follow that one's attraction itself is thereby epistemically unjustified (though, again, believing on its basis may be).<sup>90</sup>

Of course, the delicate question of whether attractions to assent are epistemically evaluable is urgent in the present context only if we grant the premise (1) that intuitions just are such attractions. One might be hesitant to grant this premise for a variety of reasons. In Part I we considered several reasons to distinguish intuitions from mere dispositions, inclinations, temptations, and attractions (recall §§2-5 and §8). To be sure, those considerations are compatible with the plausible idea that intuitions are intimately related to such states: for example, intuitions may *give rise* to corresponding attractions to assent. However, an intimate relation is not enough for the above argument to succeed. If intuitions are not identical to attractions to assent, but merely give rise to them, then the epistemic evaluability of intuitive attractions to assent will not imply the epistemic evaluability of intuitions. (Compare: the epistemic evaluability of perceptual beliefs or perceptual attractions does not imply the epistemic evaluability of that which gives rise to them, namely, perceptual experiences, as Sosa acknowledges.) It would appear, then, that absent reason to think that intuitions can be nothing other than attractions to assent,<sup>91</sup> the argument does not establish its conclusion.

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<sup>90</sup> Perhaps shots, pleasures, attractions, experiences, and the like may themselves be evaluated for some sort of "animal" normative status (Sosa 2007a, ch. 2), but plainly such "justification" would fall short of what we are after (cf. Shapiro 2009, §3). The contention that intuitions are epistemically evaluable may be motivated by the plausible thought that a thinker's overall rational standing is sometimes affected by which intuitions she has (though not, in contrast, by which perceptual experiences she has). While this thought, if true, would establish that intuition is linked to rationality, it does not imply that intuitions are themselves epistemically evaluable (i.e., evaluable for epistemic justification or unjustification), and thus it cannot impugn the givenness of intuition.

<sup>91</sup> Sosa's reason appears to be the introspective consideration criticized in §9.

A second reason to resist granting the premise (1) that intuitions are attractions to assent is broadly dialectical. This premise will not impress the quasi-perceptualist, who will cite the considerations adduced above in defense of her view that in having the intuition that *p*, it is translucently presented to one as being the case that *p*. While one normally will, as a result of having such a presentation, be attracted to assenting to *p*, such an attraction is distinct from the intuition. Indeed, according to the quasi-perceptualist, the intuition *gives rise* to the corresponding attraction: one is attracted to assenting to *p* *because* it is presented to one that *p*. The striking thus precedes the attraction: one is struck, *then* pulled (attracted). In this way, intuition, like perceptual experience, can be understood as a *pre*-attraction state of awareness: a translucent presentation. Consequently, intuition is able to provide immediate justification, and hence serve as the intellectual given.

#### *§15. Integrating the Psychology and Epistemology of Intuition*

Discussion of intuition often divorces issues regarding the epistemology of intuition (e.g., does intuition justify?) from issues regarding the psychology of intuition (e.g., what is intuition?). This may be a mistake, for it makes it difficult to achieve an integrated perspective on the psychology and epistemology of intuition.

Part I argued that intuition and perceptual experience, though different, are at a certain level of abstraction the same kind of state or event. Whereas *x* has the perceptual experience as if *p* iff it is translucently sensorily presented to *x* that *p*, *x* has the intuition that *p* iff it is translucently intellectually presented to *x* that *p*. We have now seen that this

parallelism in the metaphysics or ontology of mind has epistemological implications, for translucent presentations are poised, by their very nature, to provide an important type of epistemic status without requiring it in turn.

While this alone does not answer The Guiding Question, articulated in §1, it does offer a promising beginning. Quasi-perceptualism offers an integrated psychology and epistemology of intuition: it articulates what intuition is and, *in so doing*, accounts for its positive epistemic status. It also exhibits several additional theoretical virtues, demonstrated by its potential to explain various psychological and epistemic data in a unified manner. So, although the perceptual analogy has often been dismissed as encouraging a theoretically useless metaphor, the converse may be true: by embracing the perceptual analogy, and in particular by integrating the psychology and epistemology of intuition, rationalists may begin to meet the challenge to supply a sober treatment of their favored epistemic source.

#### *§16. Skepticism about Intuition*

Whereas skepticism about perception may be regarded as merely “academic” or at best posing a potentially illuminating philosophical challenge, there actually are skeptics about intuition (cf. D. Sosa 2006, 633). Such skeptics do—or will—not simply question the present treatment of intuitive evidence and intuitive justification, but rather hold that intuition fails to possess any positive epistemic value.

It is useful to distinguish between several different brands of skepticism about intuition. The most prominent version of *philosophical* skepticism takes the form of

Benacerraf-style worries concerning the possibility of successful intuition and intuitive knowledge in light of the apparent absence of a causal relation between intuitions and what is intuited. The most prominent version of *empirical* skepticism is experimental: empirical studies are taken to suggest that intuitions are systematically biased. Both are instances of *grounded* skepticism, in that they hold that there are, or can be, conditions under which intuition has a positive epistemic status; it is just that those conditions—namely, the presence of a certain type of relation between intuitions and what is intuited (in the case of Benacerraf-style worries), or a certain kind of unbiasedness (in the case of experimental attacks on intuitions)—are not, or cannot be, satisfied. This can be contrasted with *flat-footed* skepticism, which simply dismisses intuition, maintaining—implicitly or explicitly, but in either case flat-footedly—that there simply are *no* conditions under which intuition has a positive epistemic status.<sup>92</sup> Flat-footed skepticism is difficult to motivate as a position and perhaps impossible to engage as a challenge.<sup>93</sup> So, we shall set it aside. Our energies are best spent trying to meet—and, I think, seeking

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<sup>92</sup> Cf. Harman (1973, 12) and Hellman (1994, 3).

<sup>93</sup> After all, what qualifies as an adequate versus inadequate response to such dismissal? In this connection, it should be noted that flat-footed skepticism may face a dilemma of illegitimacy (indefensibility) or incoherence. Suppose that certain intuitions (e.g., elementary mathematical and logical intuitions) were shown to be extremely reliable; in such a case, would it really be true that such intuitions have no positive epistemic value—none whatsoever? To escape the conclusion that the flat-footed skeptical position or challenge is illegitimate (unjustified, dogmatic, based merely on “faith”, etc.), the flat-footed skeptic may try to defend the legitimacy of her position or challenge. But how? Any defense that is offered—for example, the defense that in such a case we would still lack an explanation of how such intuitions could be reliable—would seem to articulate a condition that is being claimed to be such that it is not, or cannot be, satisfied. But to the extent that she articulates such a condition, and grounds her skepticism in the failure of such intuitions to satisfy it, the flat-footed skeptic is no longer flat-footed, but rather grounded. This is not to join the chorus of those who accuse skepticism of being “self-refuting”. Rather, it is to suggest that there may be a type of incoherence in *flat-footed* skepticism: any defense of the position or challenge’s legitimacy thereby undermines that position.

to learn from—the challenges posed by the two prominent forms of grounded skepticism mentioned above. We will address Benacerraf-style worries in Part III. Here, let us consider empirical attacks on intuitions.

One popular such attack begins with the casual empirical observation that intuition yields conflict or divergence: roughly, different intuiters disagree about matters intuitive. This seems indisputable. Of course, intuitions do not always disagree. Furthermore, casual empirical observation reveals that perceptual experience, memory, and introspection also yield conflict or divergence—which may indicate that mere conflict or divergence alone cannot be so problematic as to warrant skepticism about intuition. There is certainly more to be said about the issue of conflict or divergence; it will be addressed further, albeit somewhat indirectly, in what follows: for example, when we discuss the phenomenon of substantial agreement on “clear” cases (in §22) and how to avoid intuitional error (in §24, which might suggest that conflict or divergence may often be inoculated by citing individual attention to divergent features of the case or question, divergent responses to context-sensitivity or pragmatic effects, divergent understandings of the question or case, divergent levels of intelligence, and so forth). The aim of the remainder of Part II will be to sympathetically elaborate and critically examine such empirical skepticism about intuition.

We will focus on four recent empirical studies that have been thought to suggest several troubling conclusions about intuitions or some important subset thereof: for instance, that intuitions about knowledge are culturally relative; that intuitions about intentional action have an affectively biased source; and that epistemic and moral



intuitions are vulnerable to ordering and wording effects.<sup>94</sup> Such experimental work has been taken to “show” (“demonstrate”, “establish”, “reveal”, etc.) that the kinds of intuitions to which philosophers working in ethics, epistemology, philosophy of action, philosophy of language, etc. appeal are systematically biased, and therefore epistemically suspect.<sup>95</sup> Stacey Swain, Joshua Alexander, and Jonathan Weinberg (2008, 153) summarize the opposition thus:

[There is] an existing body of empirical research demonstrating that intuitions vary according to factors irrelevant to the issues. ...[This research] raises questions about the reliance on intuitions.... We take the growing body of empirical data impugning various intuitions to present a real challenge for philosophers who wish to rely on intuitions as evidence.

My aim is to examine this “growing body of empirical data” and argue that it poses no threat to the epistemic status of intuition.

The response to be pursued here offers a constructive, evenhanded challenge to

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<sup>94</sup> See Petrinovich and O'Neill (1996), Weinberg et al (2001), Nichols et al (2003), Machery et al (2004), Bishop and Trout (2005, 108-109), Nadelhoffer (2006), Nadelhoffer and Nahmias (2007), Nichols and Knobe (2007), Weinberg (2007a), Nadelhoffer and Feltz (2008), Sinnott-Armstrong (2008), Swain et al (2008), Mallon et al (2009), Zamzow and Nichols (2009), Stich (forthcoming), and Wright (forthcoming). Several of these studies are summarized in §17.

<sup>95</sup> See, e.g., Weinberg (2007a, 319 emphasis added): “Intuitions have been *shown* to vary from group to group in a manner inconsistent with philosophers’ reliance on them.” Such assertions are representative; see, e.g., the quotation immediately below (in the text), as well as the citations in the previous note.

recent experimental attacks on intuitions (moral, epistemic, and otherwise).<sup>96</sup> It is a *challenge* because it suggests that such attacks neglect a considerable gap between the answers elicited by the relevant empirical studies and the intuitions about which naysayers naysay. It cannot innocently be assumed that subjects' answers expressed how things struck them—what intuitions they had, if any. The point may look simple, but it is not insignificant. For, I will argue, it implies that we are at the present time unwarranted in drawing any negative conclusions about intuitions from the relevant empirical studies. While it may be tempting to dismiss this challenge on the grounds that it must require an overly narrow conception of intuition (or an unjustified appeal to the “right” intuitions, etc.), one which vindicates intuitions only given an implausibly restrictive background theory or at the cost of rendering them “useless”, such a perfunctory response would be mistaken. As we shall see (in §19), the challenge does not require any such narrowing; in this sense, it is *evenhanded*.

Although the challenge does cast doubt on experimental attacks on intuitions, the aim is nevertheless *constructive*. This is not an exercise in “idle skepticism” about the relevant experimental research. On the contrary, we will explore concrete implications and applications, including a practical lesson that may help experimentalists in their efforts to study intuitions empirically, a practical lesson that may help rationalists in their efforts to intuit responsibly, and a novel explanation of the relevant empirical studies that actually supports rather than undermines intuition's epistemic status.

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<sup>96</sup> Such attacks have received criticism from, e.g., D. Sosa (2006), Kauppinen (2007), Ludwig (2007), Moffett (2007), Sosa (2007a), Liao (2008), Stanley (2008), Deutsch (2009), Williamson (2009, §3), Cullen (forthcoming), and Devitt (forthcoming). The challenge developed in what follows is independent of yet compatible with many of these—and other possible—criticisms.

§17 summarizes four empirical studies that have been used to draw negative conclusions about intuitions. §§18-19 highlight the role of the aforementioned assumption in the experimental attacks on intuitions and then argue that the assumption is not innocent, but false. §20 suggests that although this implies a pessimistic assessment of skepticism based on the relevant empirical findings, it is wholly consistent with—and, in a sense, can support—future experimental research. §§21-22 consider several non-revisionary, intuition-friendly explanations of the empirical findings. §23 proposes a conciliatory position that locates the kernel of truth in the experimental attacks while §24 paves the way towards a responsible rationalism—a version of rationalism that realizes an appropriate sensitivity to the potential for error and, correlatively, the capacity for correction when such errors are found.

### *§17. Four Empirical Studies*

Empirical research has revealed interesting features of perception, memory, and other knowledge-sources.<sup>97</sup> Perhaps it can also reveal something interesting about the intuitions upon which philosophers seem to rely—something good or *bad*.

#### *§17.1 Order Effect*

In an influential defense of skepticism about intuition, Jonathan Weinberg, Shaun Nichols, and Stephen Stich (2001, §3.2) hypothesized that “Epistemic intuitions depend, in part, on the order in which cases are presented.” Stacey Swain, Joshua Alexander, and

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<sup>97</sup> For example, Deutsch (1992) discusses research on several empirically-discovered auditory illusions. Simons and Levin (1997) discuss research on change blindness.

Jonathan Weinberg (2008) attempted to test this hypothesis with a study that employed the following three cases, intended to resemble examples familiar from debates in epistemology:<sup>98</sup>

### *Coinflip*

Dave likes to play a game with flipping a coin. He sometimes gets a “special feeling” that the next flip will come out heads. When he gets this “special feeling,” he is right about half the time, and wrong about half the time. Just before the next flip, Dave gets that “special feeling,” and the feeling leads him to believe that the coin will land heads. He flips the coin, and it does land heads.

### *Chemist*

Karen is a distinguished professor of chemistry. This morning, she read an article in a leading scientific journal that mixing two common floor disinfectants, Cleano Plus and Washaway, will create a poisonous gas that is deadly to humans. In fact, the article is correct: mixing the two products does create a poisonous gas. At noon, Karen sees a janitor mixing Cleano Plus and Washaway and yells to him, “Get away! Mixing those two products creates a poisonous gas!”

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<sup>98</sup> Their study also employed a fourth case intended to resemble Goldman’s (1976) fake-barn example; this case, which did not seem to elicit an order effect, has been omitted here for ease of exposition. *Truetemp* is allegedly based on an example described by Lehrer (1990, 163-164).

### *TrueTemp*

One day Charles was knocked out by a falling rock; as a result his brain was “rewired” so that he is always right whenever he estimates the temperature where he is. Charles is unaware that his brain has been altered in this way. A few weeks later, this brain rewiring leads him to believe that it is 71 degrees in his room. Apart from his estimation, he has no other reasons to think that it is 71 degrees. In fact, it is 71 degrees.

When *TrueTemp* immediately followed *Coinflip*, subjects’ dominant response was that Charles *knew* that the temperature was 71 degrees (60%); but when *TrueTemp* immediately followed *Chemist*, subjects’ dominant response was that Charles did *not* know that the temperature was 71 degrees (60% vs. 40%).<sup>99</sup>

This result seems problematic. After all, the only ostensible difference lies in the order in which the subjects in the studies considered the cases. Yet, whether an individual (Charles) has knowledge presumably does not depend upon such things as the order in which the subjects in the studies considered the cases. Thus Swain et al (2008, 153) conclude,

[I]ntuitions vary according to factors irrelevant to the issues thought-experiments are designed to address.

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<sup>99</sup> See Swain et al (2008) and Wright (forthcoming).

### *§17.2 Cultural Relativity*

Weinberg et al (2001, §3.2) also hypothesized that “Epistemic intuitions vary from culture to culture.” They attempted to test this hypothesis with a study that employed the following “intuition probe”, intended to resemble “examples that ha[ve] loomed large in the recent epistemology literature [on] ‘Gettier cases’” (*ibid*, §3.3.2):

#### *Car*

Bob has a friend, Jill, who has driven a Buick for many years. Bob therefore thinks that Jill drives an American car. He is not aware, however, that her Buick has recently been stolen, and he is also not aware that Jill has replaced it with a Pontiac, which is a different kind of American car.

The dominant response by subjects classified as ‘Westerner’ (European descent) was that Bob “only believes” that Jill drives an American car; but the dominant response by subjects classified as ‘East Asian’ (Chinese, Japanese, or Korean descent) or ‘person from the Indian sub-continent’ (Indian, Pakistani or Bangladeshi descent) was that Bob “really knows” that Jill drives an American car (74% vs. 50-60%).<sup>100</sup>

This result seems problematic. After all, the only ostensible difference lies in the cultural heritage of the subjects. Yet, whether an individual (Bob) has knowledge presumably does not depend upon such things as the subject’s cultural heritage. Weinberg et al (*ibid*, §2.2) conclude:

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<sup>100</sup> Similar results were obtained in studies employing cases intended to resemble examples familiar from debates in the theory of reference (see Machery et al 2004).

There really are people—normal, flourishing people—whose epistemic intuition[s] are systematically different from “ours”.

### *§17.3 Wording Effect*

Lewis Petrinovich and Patricia O’Neill (1996) gave subjects the following case, intended to resemble trolley examples familiar from debates in normative ethics:

#### *Trolley*

A trolley is hurtling down the tracks. There are five innocent people on the track ahead of the trolley, and they will be killed if the trolley continues going straight ahead. There is a spur of track leading off to the side. There is one innocent person on that spur of track. The brakes of the trolley have failed and there is a switch that can be activated to cause the trolley to go to the side track. You are an innocent bystander (that is, not an employee of the railroad, etc.). You can throw the switch, saving five innocent people, which will result in the death of the one innocent person on the side track. What would you do?

Half of the subjects were asked to express their agreement or disagreement with options that employed *killing* language: (a) “Throw the switch, which will result in the death of the one innocent person on the side track” and (b) “Do nothing, which will result in the death of the five innocent people.” The other half were given options that employed

*saving* language: (a') "Throw the switch, which will result in the five innocent people on the main track being saved" and (b') "Do nothing, which will result in the one innocent person being saved." Subjects were more likely to agree to both (a') and (b') rather than (a) and (b) (mean agreement of +0.6 versus -0.78 on a -5 to +5 scale).

This result seems problematic. After all, the only ostensible difference lies in the language used to describe the action.<sup>101</sup> Yet, the moral status of a given action presumably does not depend upon such things as the language used to describe the action. Walter Sinnott-Armstrong (2007) concludes: such "effects show ways in which our moral intuitions do not track the truth".<sup>102</sup>

#### *§17.4 Affective Bias*

As an illustration of the so-called Knobe effect, or side-effect effect, consider the following cases, due to Joshua Knobe (2003), which resemble examples familiar from debates in philosophy of action:

##### *Harm*

The VP of a company went to the chairman of the board and said, "We are thinking of starting a new program. It will help us increase profits, but it will also

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<sup>101</sup> A fine-grained ("Kimian") view of events might allow that the actions, too, are distinct (see Kim 1973). While this issue deserves further exploration, I will set it aside here.

<sup>102</sup> Sinnott-Armstrong also discusses several further empirical studies that seem to suggest similar effects, including Tversky and Kahneman (1981) and Haidt and Baron (1996). Some of the studies seem to suggest that subjects' responses to *Trolley* are vulnerable to the type of ordering effect discussed in §17.1; see also Zamzow and Nichols (2009). Experimental research using fMRI technology has also been claimed to support negative conclusions about moral intuitions; for discussion, see Greene (2003, 2008), Singer (2005), Berker (2009), and Kamm (2009).



harm the environment.” The chairman of the board answered, “I don’t care at all about harming the environment. I just want to make as much profit as I can. Let’s start the new program.” They started the new program. Sure enough, the environment was harmed.

### *Help*

The VP of a company went to the chairman of the board and said, “We are thinking of starting a new program. It will help us increase profits, but it will also help the environment.” The chairman of the board answered, “I don’t care at all about helping the environment. I just want to make as much profit as I can. Let’s start the new program.” They started the new program. Sure enough, the environment was helped.

Subjects’ dominant response was to say that in *Harm* the chairman harmed the environment intentionally, whereas in *Help* the chairman did *not* help the environment intentionally (70-80%).<sup>103</sup>

This asymmetry seems problematic. After all, the only ostensible difference between the two scenarios is that in *Harm* the environment was *harmed* as a result of the chairman’s action and in *Help* the environment was *helped*. Yet, whether an individual acted intentionally presumably does not depend upon such things as whether a side-effect of the action *harmed* rather than *helped*. Thomas Nadelhoffer (2006, 208) has thus

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<sup>103</sup> See, e.g., Knobe (2003), Nadelhoffer (2004, 2006), Nichols and Ulatowski (2007), Phelan and Sarkissian (2008), and Wright and Bengson (2009).

proposed that the Knobe effect is due to an affect-driven bias in moral intuitions:

[M]oral intuitions [about, e.g., harm]...often have...a negative [biasing] effect on our ability to impartially consider the evidence surrounding a case.<sup>104</sup>

### *§17.5 Beyond Fallibility*

These studies and others like them have been used to support the negative conclusion that intuitions or some important subset thereof are unduly sensitive to or affected by non-alethic factors, such as subjects' cultural heritage, subjects' affective states, the order in which subjects consider cases, or the language used to describe the matter under consideration. The worry is not simply that intuitions are fallible.<sup>105</sup> Rather, the objection is that these studies indicate that intuitions display systematic bias or error. Furthermore, they are claimed to do so in the very same contexts in which, or about the very same cases regarding which, philosophers rely on them. While we can accept sporadic fallibility at the "margins", we cannot philosophize responsibly with systematic error about the core issues. Thus the contention is that such intuitions have an *epistemically bad-making feature*.

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<sup>104</sup> Nadelhoffer (2006, 213-214) elaborates: "once morally loaded features are built into scenarios, these features often trump or override the standard application of the concept of intentional action—thereby distorting our judgments about intentionality...[A]ffective responses often undermine our ability to apply the concept of intentional action in an unbiased way."

<sup>105</sup> This we already knew from the logical and semantical paradoxes, for example (recall the non-factivity of intuition, emphasized in Part I). Moreover, it is extremely plausible that all of the standard knowledge-sources—including perceptions and memories—are fallible. So, if fallibility were the extent of the worry, then there would be no cause for worry.

§18. *The Experimental Argument against Intuitions*

Let us try to state the argument suggested in the preceding section more precisely. Doing so will, I think, help to uncover an important assumption underlying such attacks. It will be useful to begin with a brief characterization of the experimental methodology employed in the relevant studies. Its basic structure is simple; essentially, it has two steps or parts:

- i. Subjects are presented with a question about a particular “vignette” (an example, case, scenario, situation, state of affairs, etc.).
- ii. Subjects are instructed to select one of two (or more) answers to the question.

This basic structure can be implemented in myriad ways. For example, the vignette might be a written description or oral narrative. The question might precede or follow the vignette. The answer might be sought using a binary (e.g., yes/no) format, a Likert scale (e.g., 1 = definitely yes; 5 = definitely no), or in some other way. We can ignore such details here. For our purposes, what matters is simply the notion of a subject selecting one of two (or more) answers to a question about a vignette. We can call such an answer—an answer that a subject gives to such a question—a *forced-choice answer*.

Here is where the assumption comes in. In order to secure the relevance of studies that elicit forced-choice answers to debates about intuitions, it is necessary to make an inference from an observation about how it is with subjects’ *forced-choice answers* to a

conclusion about how it is with subjects' *intuitions*.

To illustrate, recall the order effect studies: subjects' forced-choice answers regarding whether an individual in a vignette possessed knowledge of a particular proposition varied depending upon what other vignette had already been considered. In this way, subjects' *forced-choice answers* were unstable. Of course, to move from this empirical observation about the survey results to a conclusion about a particular mental state, viz., that subjects' *intuitions* were unstable, we must assume that subjects' forced-choice answers expressed subjects' intuitions. This looks to be how Swain et al reason. They observe (2008, 139) that

subjects first presented with [*Chemist*] are less willing to attribute knowledge in the TrueTemp Case, and subjects first presented with [*Coinflip*] are more willing to attribute knowledge in the TrueTemp Case.

From this observation regarding subjects' forced-choice answers—what subjects were more or less “willing to attribute”—Swain et al (*ibid*) conclude that

intuitions about [the TrueTemp] case are easily manipulated.

Similar reasoning—from subjects' forced-choice answers to subjects' intuitions—has been applied in the case of the cultural relativity studies. Jennifer Nagel (2007, 808) summarizes:

If we want to know about what intuitions people actually have, we can use familiar empirical methods to find out: we can conduct polls and determine that, say, 74% of self-identified Western Rutgers undergraduates have the intuition that Bob does not know that Jill drives an American car.

Likewise for the affective bias and wording effect studies. In each case, we encounter an inference (move, transition) from subjects' forced-choice answers to what intuitions the subjects had, if any.

Let us call the assumption at work here the *answers-express-intuitions thesis*, or [AIT]:<sup>106</sup>

[AIT] A subject's forced-choice answer expresses an intuition of the subject's.

To my knowledge, this assumption has never seen explicit statement or defense, despite its importance to experimental attacks on intuition's epistemic status. Again, the conclusion of these attacks is that subjects' intuitions possess a certain epistemically bad-making feature. We can represent the argument for this conclusion schematically, as follows:

1. Subjects' forced-choice answers have feature F. [Empirical observation]

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<sup>106</sup> Since the inference (move, transition) at issue is made without comment, it seems appropriate to call it an assumption. But nothing in the text turns on this particular label.

2. F is an epistemically bad-making feature. [Epistemological claim]
3. A subject's forced-choice answer expresses an intuition of the subject's.  
[AIT]
4. Therefore, subjects' intuitions have an epistemically bad-making feature.  
[From 1, 2, 3]
5. Subjects' intuitions are representative. [Statistical generalization]
6. Therefore, intuitions have an epistemically bad-making feature. [From 4 and 5]

Call this the *experimental argument against intuition*. I will not challenge the empirical observation, epistemological claim, and statistical generalization (premises (1), (2), and (5)), though it is of course far from obvious that they are all true.<sup>107</sup> In the next section, I will argue that [AIT]—premise (3) in the experimental argument, without which the argument would be invalid—is false.

#### §19. *A Gap between Intuitions and Answers*

Sometimes individuals give an answer to a question even though they do not have

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<sup>107</sup> For example, it has been suggested that subjects' forced-choice answers may not in fact possess many of the features they only *seem* to possess. In particular, Sosa (2007a) has convincingly argued that subject's forced-choice answers may seem to be culturally relative when they are not, simply because subjects are either answering *differently interpreted questions* or answering the same questions about *differently interpreted vignettes*. Cullen (forthcoming) argues in a similar vein that in giving forced-choice answers, subjects "tend to rely most heavily on contextual and pragmatic cues when the meaning of the survey or their task is unclear." One or another of these hypotheses may receive local confirmation in Sytsma and Livengood (forthcoming); see also Nichols and Ulatowski (2007). We will not pursue this important style of objection further here.

any intuition one way or another about it—it does not strike them any which way.<sup>108</sup> To illustrate, consider the following example:

### *Trivial Pursuit*

When playing Trivial Pursuit with a group of new friends, Teenager is asked which of the following was the first Elvis song to reach #1 on the Billboard Top 100 in 1957: “Too Much”, “Jailhouse Rock”, or “Heartbreak Hotel”. Teenager knows very little about Elvis. It does not strike her that any of these songs is, or is not, the correct answer. But she knows that she must give some answer, and she recalls having heard “Jailhouse Rock” many more times than the other songs. So long before her thirty seconds runs out, she says “Jailhouse Rock”.

In this case, Teenager gives a forced-choice answer, even though she has no intuition either way: it does not strike her that “Jailhouse Rock” is the answer, but she offers (guesses) this answer nevertheless. This illustrates a *blind answer*: an answer without intuition.

Here is another example of a blind answer:

### *Theorem*

A few classes into a standard introductory logic course, Student is asked whether

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<sup>108</sup> Since [AIT] concerns forced-choice answers about cases like those described in §17, we will set aside examples involving answers about, e.g., a subject’s immediate environment (which express perceptual experiences), a subject’s inner life (which express introspective states), or a subject’s history (which express mnemonic states).

the following formula is a theorem:

$$[(P \rightarrow Q) \rightarrow R] \rightarrow [P \rightarrow (Q \rightarrow R)].$$

Student looks and thinks. It does not strike him that it is a theorem. But it also does not strike him that it is not a theorem. When the instructor urges Student to go ahead and take a stab at it, Student reflects that the formula looks similar to  $P \rightarrow P$ , a theorem discussed in the last class. He quickly hypothesizes that the formula he is now considering is also a theorem.

As in the case of Teenager, Student gives a forced-choice answer, even though he has no intuition either way: it does not strike him that the formula is a theorem, but he offers (takes a stab at, quickly hypothesizes) this answer nevertheless. His answer is blind.<sup>109</sup>

The point here does not rely on, though it is clearly compatible with (and might be reinforced by), the view that intuition is a distinctive mental state (as argued in Part I). The possibility of blind answers—answers without intuitions—is wholly consistent with a number of different views of the nature of intuitions: whether intuitions are conscious dispositions or inclinations to judge or translucent intellectual presentations, the point is simply that it is possible to give an answer to a question without having the intuition that—it striking one that—the answer is such and such. This point does not require that intuitions be viewed as intellectual accomplishments that only the philosophically elite or privileged are able to have and enjoy—a perspective that has been criticized as

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<sup>109</sup> Intuitive blindsight, discussed in §3, may be understood as delivering blind answers that are, or tend to be, correct.



vindicating intuitions only at the cost of rendering them “useless”.<sup>110</sup> Relatedly, the point does not depend on the contentious suggestion that there is a special class of intuitions—the “right” intuitions—and only those intuitions count: for example, intuitions with a particular etiology (e.g., intuitions based solely on competence with the relevant concepts),<sup>111</sup> modally robust intuitions (e.g., intuitions that “present-themselves-as-necessary”),<sup>112</sup> pure intuitions (e.g., intuitions untainted by the “influences of pragmatic distractions”),<sup>113</sup> or intuitions of experts.<sup>114</sup> The present point is much simpler, as it were. For it requires only the following observation, which I will call the *first observation*:

*First Observation*

Sometimes things strike us a certain way; other times they do not, even though we may still be able to give an answer to a question about whether things are that way, when pressed.

In the foregoing examples, a forced-choice answer was present while an intuition was absent. But even if there is an intuition present, the forced-choice answer need not express that intuition. Sometimes individuals have an intuition that says one thing (it strikes them one way) but the answer they give says another—perhaps the contrary,

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<sup>110</sup> Cf. Weinberg (2007b). See §24 for relevant discussion.

<sup>111</sup> See Ludwig (2007, 135 n. 17 and 152); cf. Kauppinen (2007, §3).

<sup>112</sup> See Bealer (1998, 213); cf. Moffett (2007) and Sosa (2007b).

<sup>113</sup> See Cullen (forthcoming).

<sup>114</sup> See, e.g., Hales (2006, 171), Ludwig (2007, 149 ff.), and Williamson (2007, 191 and 2009, §3). Cf. Weinberg et al (2001, §4.4-6), Machery et al (2004, B8-9), Nadelhoffer and Nahmias (2007, 129), Weinberg (2007b, 2009), and Weinberg et al (forthcoming).

perhaps something closely related but distinct, perhaps something else entirely.<sup>115</sup> Familiar examples include having the intuition that naïve comprehension holds, yet judging—and thus answering, if asked—that it does *not* hold or having the intuition that zombies are possible, yet believing (because one is a Physicalist)—and thus answering, if asked—that zombies are *not* possible, as in *The Ardent Physicalist* (from Part I, §2).

To be sure, these examples involve a “theoretically informed” answer that diverges from one’s intuition. But even an answer that is not “theoretically informed” in these ways might diverge from one’s intuition. Consider the following example:

### *Trash Bin*

In the middle of a seminar presentation for which Grad has prepared an elaborate handout, the professor (Prof) makes a loud noise, wads up the handout, and tosses it in the trash bin. Later that evening Grad explains to a friend that although it seems clear that the self-absorbed professor’s primary goal in discarding the handout was not to *humiliate her*, but rather to *express his disapproval of the topic*, Grad was nevertheless humiliated by Prof’s action. The friend asks Grad: “Do you think that Prof humiliated you intentionally?” Grad pauses. Actually, it strikes Grad that probably Prof did not humiliate her intentionally. At the same time, Grad thinks, Prof is certainly blameworthy for humiliating her. After all, he should have known better: presumably, he knew that he had reason not to act as he did, yet he still did it anyway; so, maybe the humiliation was intentional after

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<sup>115</sup> Another possibility is that an individual does not give an answer at all: one might “plead the fifth”, as it were.

all. Grad looks at the friend and shrugs: “I guess if I had to say, I’d say yes.”

Grad has the intuition that Prof probably did *not* humiliate her intentionally (it strikes her that probably he did *not*). But Grad gives a different answer to the question of whether Prof humiliated her intentionally, namely, that probably he did. For Grad engages in a brief line of reasoning that implies that it *was* intentional, and answers accordingly. This illustrates a *stray answer*: an answer that conflicts with or otherwise departs from an intuition.

Here is another example of a stray answer:

### *Incest*

Open-minded is asked the following question: “Might incest between consenting adults (who may or may not enjoy passionate sex) ever, in some situation, be morally permissible?” He asks himself whether there might be *some* situation—even just one—in which incest between consenting adults is morally permissible. It strikes Open-minded that there could be at least one such situation. But as he tries to imagine this situation, one which may involve passionate sex between siblings—perhaps even him and one of his own siblings!—he finds himself having a strong negative emotional reaction. On the basis of this reaction, he answers that incest can never be morally permissible.

Open-minded has the intuition that incest between consenting adults might be morally

permissible (it strikes him that there could be some situation in which it is). But he gives a different answer to the question, namely, that incest between consenting adults can never be morally permissible. For he has a strong negative emotional reaction, which departs from his intuition, and he answers accordingly. His answer is stray.

Once again, the possibility of stray answers does not require a particular view of intuition. Nor does it threaten to render intuitions “useless” or implicitly presuppose some antecedent theory of the “right” intuitions. All that is needed to make the point is the following simple observation, which I will call the *second observation*:

#### *Second Observation*

Sometimes things strike us a certain way, even though we may answer that things are not that way, but rather some other way, when pressed.

It should be clear that [AIT] is false: a subject’s forced-choice answer need not express an intuition of the subject’s.<sup>116</sup> To be sure, it *could* express how things strike the subject, when she reflects; plausibly, answers sometimes do. However, as illustrated by the above examples, answers may also be—and sometimes are—blind or stray: they can express hypotheses, guesses, emotional reactions, inferences, or other conclusions that

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<sup>116</sup> Some experimentalists focus on a complex mental-state-cum-speech-act, namely, *appealing to intuitions* (see, e.g., Weinberg 2007a). Since one can appeal to a mental state in the relevant sense only if one has that mental state, the failure of [AIT] implies that there is a considerable gap between, not only intuitions and answers, but also *appealing to intuitions* and *appealing to answers*.

need not so strike.<sup>117</sup>

An opponent might suggest that, despite the failure of [AIT], we are warranted in accepting:

[AIT\*] Subject's forced-choice answers *typically* express (i.e., track or indicate) an intuition of the subject's.

The problem is that there is nothing particularly unusual about the above examples: there is no reason to think that blind or stray answers are rare, anomalous, or atypical. So, we cannot simply assume that subject's forced-choice answers typically express an intuition of the subject's, as [AIT\*] claims. One might object that the default position should be that subjects' forced-choice answers *are* typically expressions of intuitions, and that the "burden of proof" lies on those who think they are not. An alternative perspective would be that the default position is that subjects' forced-choice answers are *not* typically expressions of intuitions, and that the "burden of proof" lies on those who think they are. Both perspectives are equally undesirable. Absent arguments (reasons) to prefer one position over another, we do well to avoid any such posturing.

To summarize, the immediate relevance of the empirical studies to which anti-rationalists appeal in experimental attacks on intuitions rests on a version of the answers-

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<sup>117</sup> See Cohen (1973-1974) for detailed treatment of subtle differences between guesses, hypotheses, conjectures, and so on. It does not suffice to save [AIT] by restricting the principle to *non-random* or *non-arbitrary* or *systematic* forced-choice answers. Hypotheses, guesses, emotional reactions, inferences, and other similar mental states need not be random or arbitrary or non-systematic (see §§21-22 for illustration), though I shall suggest below that they do display instability and related behavior.

express-intuitions thesis—premise (3) in the experimental argument. But this thesis is false. It follows that we have good reason to worry that the empirical studies in question are not relevant to those debates.

*§20. A Rationalist Rejoinder*

The failure of [AIT] does not simply undermine the experimental argument against intuition. It does not just play defense, as it were; it can play offense as well. For it provides the basis for an argument that the empirical studies in question do not warrant any negative conclusions about intuitions:

1. Forced-choice answers may express a variety of mental states, many of which are not intuitions.
2. If (1), then an empirical study that elicits forced-choice answers cannot warrant any negative conclusions about intuitions or a subset thereof, unless:  

[\*] The study employs experimental controls or is accompanied by supplemental argumentation that affords assurance that subjects' forced-choice answers are best understood as indicating how the cases struck the subjects—what intuitions the subjects had, if any.
3. The empirical studies in question do not satisfy [\*].
4. Therefore, those empirical studies do not warrant any negative conclusions about intuitions or a subset thereof.

Call this *the rationalist rejoinder* to experimental attacks on intuitions.

Premise (1) follows from the failure of [AIT] (recall §19). Premise (2) is a near-platitude: it simply observes that if there is no reason to think that subjects' forced-choice answers in a given empirical study express intuitions rather than other mental states, then that study does not warrant any negative conclusions about intuitions (rather than, for example, the other mental states). Consequently, anti-rationalists wishing to block the above argument do well to focus their efforts on premise (3). This suggests the following practical lesson for experimentalists aiming to study intuitions empirically:

#### *Practical Lesson*

If an empirical study that elicits subjects' forced-choice answers is to warrant some negative conclusion about intuitions or some subset thereof, then that study must satisfy [\*]: it must employ experimental controls or be accompanied by supplemental argumentation that affords assurance that subjects' forced-choice answers are best understood as indicating how the cases struck the subjects—what intuitions the subjects had, if any.

It should be clear that the intention of this lesson is not to “immunize” intuitions against experimental attacks. On the contrary, the aim is constructive: to identify what

would be needed to compose a defensible experimental attack on intuitions.<sup>118</sup>

### §21. *Explaining the Empirical Findings*

The failure of [AIT] undercuts the experimental argument, enables a rationalist rejoinder, and introduces a practical lesson for experimentalists aspiring to study intuition empirically. Still, one wonders: how can rationalists explain the empirical findings without appealing to subjects' intuitions? In response to this question, I shall suggest that in each case the hypothesis that subjects' answers were blind or stray allows a straightforward explanation of the empirical findings.<sup>119</sup>

#### §21.1 *The Order Effect Studies*

What one quickly hypothesizes, obligingly guesses, or hastily infers is likely to vary depending upon what one has just considered. For example, in *Theorem*, Student is asked for the first time whether the following formula is a theorem:

$$[(P \rightarrow Q) \rightarrow R] \rightarrow [P \rightarrow (Q \rightarrow R)].$$

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<sup>118</sup> There is reason for optimism that empirical studies *could* satisfy [\*]. While it is difficult to see how the familiar survey methodology employed in the empirical studies under discussion might enable the requisite assurance—indeed, the literature on survey methodology openly discusses its many shortcomings (see, e.g., Stolte 1994 and Barter and Renold 1999)—a sophisticated and subtle interview methodology (cf. Belson 1981) may have the resources to achieve this end.

<sup>119</sup> The explanations to follow invoke mental states other than intuitions. Such explanations clearly should not be ruled out simply because they do not invoke intuitions. This is another way of coming to see the plausibility of the present challenge to experimental attacks on intuitions. If such non-intuition explanations cannot be ruled out, then we must lack assurance that subjects' forced-choice answers express subjects' intuitions, in which case negative conclusions about intuitions are unwarranted.



It is not difficult to imagine that Student’s answer to this question—about which he lacks an intuition and is very uncertain—is unstable. For instance, Student’s answer might vary, depending upon whether Student first considers

$$P \rightarrow P,$$

as he did in *Theorem*, or

$$[(P \ \& \ Q) \vee R] \rightarrow [P \ \& \ (Q \vee R)],$$

which may inspire Student to be cautious or make him aware of the importance of—and thus lead him to be attentive to—grouping as well as order. Because of the difference in the “contrast class”, he will probably be far less likely to quickly hypothesize, guess, or infer that the original formula is a theorem after first considering the latter than after first considering the former.

It is not implausible that subjects in the order effect studies were like Student in harboring a non-trivial amount of uncertainty and lacking an intuition about the answer to the question they were asked about the subject in *TrueTemp*, namely, whether Charles had knowledge of the temperature. If, like Student, subjects are quickly hypothesizing, guessing, or inferring whether Charles knew that the temperature was 71 degrees, then it would make sense that their answers about whether Charles knew varied depending upon what other cases they had just considered: *Coinflip* or *Chemist*. Swain et al (2008, 142

and 143) write:

Since the Coinflip Case obviously did not involve knowledge, it was expected to make the Truetemp Case seem more plausibly a case of knowledge by comparison.

...

It was expected that a very clear case of knowledge [*Chemist*] would make the Truetemp Case seem less plausibly a case of knowledge by comparison.

It is natural that such a difference in the “contrast class” should lead to different answers about Charles, as Swain et al expected, if subjects are quickly hypothesizing, guessing, or inferring. After first considering Karen the chemist, who had knowledge, they would be more likely to hypothesize that Charles did *not* know—because of the contrast. After first considering Dave the coinflipper, who did not have knowledge, they would be more likely to hypothesize that Charles *did* know—again, because of the contrast.

This means that we can provide a plausible explanation of the order effect studies without appealing to subjects’ intuitions about knowledge—to how the cases struck them. The troubling instability of subjects’ answers may be explained by the hypothesis that those answers were *blind*: they expressed, not intuitions, but rather quick hypotheses, obliged guesses, or hasty inferences.

### §21.2 *The Cultural Relativity Studies*

We can explain the results of the cultural relativity studies in a similar manner. What one quickly hypothesizes, obligingly guesses, or hastily infers is likely to vary depending upon one's background—cultural or otherwise. For example, in *Trivial Pursuit*, Teenager's guess was influenced by her background: she has heard “Jailhouse Rock” many more times than the other songs. Such influence is unsurprising. Indeed, it seems we can imagine numerous ways in which one's background might affect one's answer to a question, especially a question about which one harbors non-trivial uncertainty and lacks an intuition.

This means that we can provide a plausible explanation of the cultural relativity of subject's answers about *Car* without appealing to subjects' intuitions about knowledge—to how the cases struck them. The troubling cultural relativity in subjects' answers may be explained by the hypothesis that those answers were *blind*: they expressed, not intuitions, but rather quick hypotheses, obliged guesses, or hasty inferences.

### §21.3 *The Wording Effect Studies*

The answer that one gives to a question often varies depending upon the description under which one entertains or conceives the issue under consideration. For example, in *Incest*, Open-minded attempts to imagine consensual incest under the description *passionate sex between he himself and one of his siblings*. This triggers an emotional reaction that results in a negative answer, departing from his intuition, to the question of whether consensual incest might ever be morally permissible. In this way,

Open-minded's answer is influenced by the description under which he imagines consensual incest. Such influence is unsurprising. Indeed, it is difficult to deny that the description under which one entertains or conceives an issue might affect one's answer to a question, especially when one has an emotional reaction that conflicts with another, less emotional response (such as how it strikes one when one considers it).

The implications of this observation for the wording effect studies are straightforward. In those studies, subjects were invited to imagine the action in question either under the description *saving lives* (recall the options that employed saving language) or under the description *causing death* (recall the options that employed killing language). The former description makes salient a positive feature of the action in question, whereas the latter description makes salient a (very) negative feature of that action. Given this, it would not be surprising if the latter description triggered a negative emotional reaction that resulted in their answering with less agreement to the options.<sup>120</sup> If these answers *departed* from subjects' intuitions, as in the case of Open-minded, then the answers would qualify as stray. If subjects *failed to have* intuitions (it did not strike them one way or the other), then the answers would qualify as blind.

Either way, we can provide a plausible explanation of the instability of subject's answers about *Trolley* without appealing to subjects' intuitions about morality—to how the cases struck them. The troubling instability in subjects' answers may be explained by the hypothesis that those answers were *blind* or *stray*: they expressed emotion-induced reactions, rather than intuitions.

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<sup>120</sup> The empirical literature documenting the myriad effects of emotional reactions induced by reflection on death (one's own and others') is enormous.

#### §21.4 *The Affective Bias Studies*

We might explain the results of the affective bias studies in a similar manner. Perhaps subjects had the intuition that the chairperson in *Harm* did *not* harm the environment intentionally, but a negative emotional reaction to the badness of a foreseen consequence of the chairperson's action led them to answer that he harmed the environment intentionally. If so, then the troubling asymmetry in subjects' answers may be explained by the hypothesis that subjects' answers about *Harm* were *blind* or *stray*: they expressed emotion-induced reactions, rather than intuitions.

An alternative explanation is also available. This alternative equally avoids invocation of intuition, but it places less emphasis on the role of affect, instead emphasizing the evaluative or normative character of action. First, notice an asymmetry in blameworthy versus praiseworthy actions: whereas knowingly bringing about a bad outcome is normally sufficient to merit blame, knowingly bringing about a good outcome is not normally sufficient to merit praise. To merit praise, one must, in addition, bring about the good outcome *for the right reasons*. Second, notice the following connection between blameworthiness/praiseworthiness and intentional action:

[Heuristic] Typically, if someone is blameworthy/praiseworthy for bringing about a bad/good outcome, then they did so intentionally.

Of course, the inference from blameworthiness/praiseworthiness and bad/good outcome

to intentional action is defeasible: [Heuristic] simply articulates an *indicator* for intentional action. But since we often operate in conditions of severe uncertainty, such an indicator—and the defeasible inference it underwrites—may be quite useful.

These two factors—an asymmetry in praiseworthiness versus blameworthiness and the availability of a defeasible inference from praiseworthiness/blameworthiness to intentional action—may allow an explanation of the Knobe effect. In *Harm*, the chairperson was blameworthy for harming (he knowingly brought about this bad outcome); so, [Heuristic] implies that he probably harmed intentionally. In *Help*, the chairperson was *not* praiseworthy for helping (he did not knowingly bring about a good outcome for the right reasons); so, there is no reason to use [Heuristic] to answer that he helped intentionally.<sup>121</sup>

Does this explanation of the Knobe effect appeal to subjects' intuitions about whether the chairperson acted intentionally? No. *Trash Bin* offers a model for viewing such answers as blind or stray. Grad is uncertain about whether Prof humiliated her intentionally by wadding up the handout and throwing it in the trash bin. Although it did not strike Grad that Prof humiliated her intentionally, Grad did find Prof *blameworthy* for bringing about a *bad outcome*. So, using [Heuristic], Grad could quickly reason that Prof's action was intentional. Similarly, subjects may have been uncertain about whether

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<sup>121</sup> This explanation of the Knobe effect sees detailed defense in Wright and Bengson (2009). While this particular explanation enjoys substantial empirical support, it is not the only intuition-silent, inferential hypothesis available. For example, the explanation of the Knobe effect offered by Holton (forthcoming) simply replaces the indicated asymmetry in blameworthiness versus praiseworthiness with an asymmetry in intentionally violating a norm versus intentionally conforming to a norm; [Heuristic] would thus be modified accordingly. This affords basically the same treatment as that which follows.

the chairperson acted intentionally. Although it did not strike subjects that the chairperson harmed the environment intentionally, they did find the chairperson *blameworthy* for bringing about a *bad outcome*. So, using [Heuristic], subjects could quickly reason as Grad did. Schematically:

1.  $x$  was blameworthy for A-ing (a bad outcome, knowingly brought about by  $x$ ).
2. Typically, if someone is blameworthy for bringing about a bad outcome, then they did so intentionally. [Heuristic]
3. So,  $x$  probably A-ed intentionally.

In both cases, then, the conclusion may be the result of a quick inference, not a striking. If such a conclusion *departed* from subjects' intuitions, as in the case of Grad, then subjects' answers would qualify as stray. If subjects *failed to have* intuitions (it did not strike them one way or the other), then their answers would qualify as blind.

Either way, we can provide a plausible explanation of the Knobe effect without appealing to subjects' intuitions about intentional action—to how the cases struck them. The asymmetry in subjects' answers to *Harm* may be explained by the hypothesis that those answers were *blind* or *stray*: they expressed conclusions—inferences—rather than intuitions. In effect, the empirical findings do not yet show that intuitions about

intentional action are driven by an affective bias.<sup>122</sup>

## §22. *Turning the Tables*

The last section argued that the results of the four empirical studies summarized in §17 can be explained with blind or stray answers. Explanations that invoke blind or stray answers have the virtue of making straightforward sense of the epistemic bad-making features of subjects' forced-choice answers: quick hypotheses, obliged guesses, hasty inferences, and emotionally-clouded reactions are not traditionally construed as knowledge-sources.<sup>123</sup> Moreover, the empirical findings may in fact support the idea that intuitions have epistemic *good*-making features. The order effect studies provide a useful illustration.

Two features of the order effect studies are worth highlighting. First, as noted in §17.1, the order effect studies elicited *unstable* forced-choice answers about Charles in *TrueTemp*. But the studies also elicited *stable* forced-choice answers about Dave in *Coinflip* and Karen in *Chemist*. Second, there is an important difference between *TrueTemp*, on one hand, and *Coinflip* and *Chemist*, on the other. Most people are aware of the inadequacy of an unreliable “special feeling” about a lucky coin toss for knowledge, and the adequacy of expert testimony for knowledge. This makes the latter

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<sup>122</sup> It is suggested in Wright and Bengson (2009) that the two-factor explanation described in the text may actually remove the need to view subjects' answers as biased. For to the extent that both an asymmetry in blameworthiness versus praiseworthiness and [Heuristic] are reasonable, the resulting asymmetry in subjects' answers to *Harm* versus *Help* may also be reasonable.

<sup>123</sup> Quick hypotheses, obliged guesses, and hasty inferences are among those mental states that rationalists and their opponents can mutually agree have no positive epistemic status. It seems reasonable, then, to regard the relevant studies as simply providing further motivation for such agreement.



pair of cases familiar and intuitive. Perhaps it is for this reason that Swain et al (2008, 142-143) repeatedly describe *Coinflip* as a “clear case of non-knowledge” and *Chemist* as a “clear case of knowledge”. Swain et al do not describe the unfamiliar case involving Charles in these ways. And rightly so: as they themselves suggest, it is not a clear case (recall the quotations in §21.1), especially not to subjects who have never before reflected upon the potential inadequacy of mere reliability for knowledge—and, inter alia, the potential relevance of “access”.

(Actually, cases like *Truetemp* are not regarded as clear *even among contemporary epistemologists*. First, there is some controversy about whether mere reliability might be sufficient for a type of knowledge (see, e.g., Sosa 2007b, ch. 2). Second, examples resembling *Truetemp* have had comparatively little influence on subsequent epistemology. They certainly have not been taken to constrain epistemological theorizing in the same way as, say, Alvin Goldman’s (1976) fake barn example—which, importantly, Swain et al (2008, 146) found reason to think is *stable*.)

These two observations indicate that we have two asymmetries:

[A1] Answers about Charles in *TrueTemp* were *unstable*. But answers about Dave in *Coinflip* and Karen in *Chemist* were *stable*.

[A2] *Coinflip* and *Chemist* are clear cases: they are *familiar and intuitive*. But *Truetemp* is not a clear case: it is *unfamiliar and not intuitive*.

Now compare the following two hypotheses:

[Asymmetry] *TrueTemp* elicited (unstable) *blind or stray answers*, whereas *Coinflip* and *Chemist* elicited (stable) *intuitions*.

[Symmetry] *Truetemp* elicited (unstable) intuitions, whereas *Coinflip* and *Chemist* elicited (stable) intuitions.

The first hypothesis [Asymmetry] explains [A1]: the asymmetry in forced-choice answers is due to a corresponding asymmetry in the mental states those answers expressed. [Asymmetry] also fits nicely with [A2]: it would be unsurprising if subjects have intuitions about cases that are familiar and intuitive, but do not have intuitions about cases that are unfamiliar and not intuitive. By contrast, the second hypothesis [Symmetry], which is the naysayers' original hypothesis, does not explain [A1] and does not fit so nicely with [A2]. Evidently the former hypothesis is to be preferred.

If this is correct, then the order effect studies enable an abduction-based warrant for the rationalist-friendly conclusion that subjects' intuitions (about Dave and Karen) were stable, whereas subjects' quick hypotheses, obliged guesses, hasty inferences, and other non-intuitive responses (about Charles) were unstable.<sup>124</sup> (Parallel reasoning applies *mutatis mutandis* to the cultural relativity studies, in which answers about certain cases were not culturally relative (Weinberg et al 2001, §4.2).) In this way, the empirical

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<sup>124</sup> The number and diversity of cases about which we have clear and vivid intuitions may only serve to strengthen this warrant. As Williamson (2007, 164) observes, "Philosophical controversy will naturally make the unclear cases salient. That should not blind us to the wide range of clear cases."

studies may be seen as supporting rather than undermining intuition's epistemic status.<sup>125</sup>

### §23. *A Conciliatory Position*

What have we learned? First, answers need not express intuitions: [AIT] is false. This undercuts the experimental attack, enables a rationalist rejoinder, and introduces a practical lesson for experimentalists. Second, the empirical findings can be explained without intuitions: blind or stray answers fully account for the data in a plausible manner. Third, these explanations do not simply defend intuition: they also make straightforward sense of the epistemic bad-making features of subjects' answers. Fourth, the empirical findings may in fact support the idea that intuitions have epistemic *good*-making features—thus undermining rather than supporting skepticism about intuition.

I submit that the foregoing discussion supports the following disjunctive conclusion: rather than “showing” that intuitions have some epistemically bad-making feature, experimental attacks on intuitions are either

- a. based on the results of empirical studies whose relevance to debates about intuition remains an open question (recall §§19-20), or
- b. based on the results of empirical studies that may be seen as supporting rather than undermining intuition's epistemic status (recall §§21-22).

Either way, this research does not warrant any negative (anti-rationalist) conclusions

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<sup>125</sup> In a section titled “Radical experimentalism also relies on intuitions”, Liao (2007, §3) presents a different, *tu quoque* argument for a similar conclusion.

about intuitions or a subset thereof.

This is not to suggest that intuitions never go wrong—that they are somehow epistemologically invincible. (On the contrary, as emphasized above, intuitions are no less fallible than other knowledge-sources.) Nor is it to claim that the relevant empirical studies fail to warrant *any* negative epistemic conclusions whatsoever. Even if the studies do not yet show that *intuitions* have an epistemically bad-making feature, they seem to show that *forced-choice answers, as a general class*, do. For they provide reason to think that such answers may be culturally relative, have an affectively biased source, and be vulnerable to ordering and wording effects. In short, the empirical studies cited by naysayers indicate that forced-choice answers, as a general class, may display systematic bias or error.

Here we find a conciliatory position, which both sides—rationalists and anti-rationalists—should find congenial. Although experimental attacks on *intuitions* fail, experimental attacks on *answers* may succeed. In this way, the empirical studies to which anti-rationalists appeal can be seen to contain an important philosophical (epistemological, methodological) insight: namely, that when engaging traditional philosophical questions about free will, knowledge, morality, truth, and the like, we cannot rest content with just any old answer.

#### *§24. Toward a Responsible Rationalism: Avoiding Intuitional Errors*

Rationalists in particular can learn an important lesson from this discussion: to wit, not all answers are created equal. Certain things strike us as true, when we consider

them. In this, intuitions differ from other answers, which do not so strike and (recalling §12) do not have the same positive epistemic status.

The potential significance of this twofold difference can be brought out by reflecting once again on Williamson's anecdote (2007, 214 emphasis added), a selection of which bears repeating:

I have heard a professional philosopher argue that persons are not their brains by *saying* that he had an intuition that he weighed more than three pounds.

This story illustrates an important point. One can of course *claim* to have a particular intuition, but it must be recognized that *claiming* or *saying* that one has an intuition—that one was somehow struck—is by itself inadequate. One must at all times be sensitive to whether one was *in fact* struck, and *how*—what intuition one had, if any. Accordingly, rationalism both can and should endorse a Williamson-esque injunction against insincere, indiscriminate, or otherwise inapposite appeals to intuition, which plainly ought to be foresworn.<sup>126</sup>

Of course, a responsible rationalism must go further. Philosophers' appeals to how things strike them stand to be disciplined, and thereby improved, by a concerted effort to realize an appropriate sensitivity to the potential for error—and, correlatively, the capacity for correction when such errors are found. For example, one must:

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<sup>126</sup> Cf. Bonjour (1998, 134).

- engage in careful study of the subject;<sup>127</sup>
- mark relevant distinctions (i.e., avoid conflation or equivocation);
- be attentive to potentially significant features of the case or question;
- be sensitive to the strength and clarity (or lack thereof) of a given intuition;<sup>128</sup>
- identify and eliminate conceptual or linguistic misunderstandings;
- disambiguate (scope, lexical, etc.);<sup>129</sup>
- note context-sensitivity;
- flag pragmatic effects;
- consider a variety of examples;
- seek interlocution with and corroboration from epistemic peers;
- check for consistency and coherence;
- be wary of esoteric or outlandish cases;
- avoid alcohol and other drugs.

No doubt this list is incomplete; there is room for additional counsel.<sup>130</sup> For example, contemporary rationalists do well to heed Descartes' fastidious methodological precepts in the *Regulae* (1626–1628), including the demanding Rule IX:

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<sup>127</sup> See Ewing (1941, 39): "A person is not likely to have new, clear, true, and fruitful intuitions in regard to a subject if he has made no study of that subject."

<sup>128</sup> See Williamson (2007, 236): "on any reasonable view, intuitions vary in strength. An adequately fine-grained theory of intuitions would have to distinguish weaker ones from stronger ones in [epistemic] impact." Recall that quasi-perceptualism acknowledges the gradability of intuitions; presentationalism allows a corresponding gradability in intuitive justification.

<sup>129</sup> Zwicky and Saddock (1979) provide a useful guide.

<sup>130</sup> See especially Bealer (2008) for a valuable discussion of several sources of intuitional error.

We ought to turn our entire attention upon the smallest and easiest points, and dwell on them a long time, until we get accustomed to behold the truth by distinct and clear intuition.

In this way, by intuiting responsibly, we may come to have justification for and, when all goes well, knowledge of things just by thinking about them.

### III. Metaphysics

#### §25. *Realist Rationalism*

So far we have focused on the nature of intuition and the status of intuitive evidence and intuitive justification: mind and epistemology. Although we have also contemplated the possibility of intuitive knowledge, we have not yet attempted to *explain* this possibility, in a sense to be clarified below. As we shall see, there is substantial work—broadly metaphysical in character—yet to be done.

The perspective endorsed in Parts I and II (in particular, the conjunction of quasi-perceptualism and presentationalism) is consistent with a variety of positions concerning the metaphysical status of what is, or might be, known via intuition. For example, the perceptual analogy defended thus far is compatible with *nominalism*, *constructivism*, or *idealism*.<sup>131</sup> However, many rationalists have been attracted to a broadly *realist* conception of certain of the objects of intuitive knowledge: numbers, sets, ratios, values, norms, and so forth.<sup>132</sup>

#### *Realism*

What are known in some cases are facts about mind-independent abstract entities

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<sup>131</sup> Cf. the so-called “mentalism” of Goldman and Pust (1998) and Goldman (2007). This point was discussed in note 5 in §1.

<sup>132</sup> This realist thesis is consistent with both Platonism (*ante rem* realism) and Aristotelianism (*in re* realism) about abstracta. It is endorsed at least locally (i.e., about some domains) by Frege (1884/1953), Moore (1903), Russell (1912/1959), Quine (1948), Gödel (1964), Parsons (1965, 2008), Putnam (1971), Steiner (1975), Lewis (1983b), Zalta (1983), Hale (1987), Maddy (1990), Bealer (1993), Armstrong (1997), Balaguer (1998), Katz (1998), and Carmichael (forthcoming), among others.



(hereafter ‘abstract facts’).<sup>133</sup>

To say that an entity is *abstract* is to say that it lacks spatiotemporal location and causal powers: it is causally inert. As I shall understand them, *facts* are distinct from true propositions. On a familiar view, a so-called correspondence theory, true propositions are not identical to facts; rather, they *correspond* to facts. Viewed from another angle, while true propositions are intrinsically representational entities (they represent how the world is, or what is the case), the facts which make propositions true are themselves non-representational, worldly entities (they are how the world is, or what is the case).

When combined with realism, rationalism may come to seem especially perplexing. Here, for example, is Paul Benacerraf (1973, 415-416):

I find [the appeal to intuition] both encouraging and troubling. What troubles me is that [we lack] an account of...the link between our cognitive faculties and the objects known. ...We accept as knowledge only those beliefs which we can appropriately relate to our cognitive faculties. ...[S]omething must be said to bridge the chasm...between the...subject matter of mathematics and the human knower. ...[T]he absence of a coherent account of how...intuition is connected to

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<sup>133</sup> Some of the objects of intuitive knowledge seem to be concreta: for example, one might know via intuition that if cats meow then cats meow, or that if kainite is a compound salt then it is not the case that it is not the case that kainite is a compound salt. While I will focus on intuitive knowledge of abstract facts, the explanatory strategy pursued in what follows may also be applied to intuitive knowledge of concrete facts. It may also be applied to intuitive knowledge of “hybrid” or “mixed” facts (viz., facts concerning both abstracta and concreta, whether mind-independent or mind-independent).

the [facts known] renders the over-all account unsatisfactory.

Although Benacerraf here focuses on intuitive knowledge of mathematics, the problem is far more general, arising wherever we find an appeal to intuition of abstracta. How does—or *could*—intuition work? How could it put us in touch with abstract facts? As many philosophers have noted, the answer is not at all clear.<sup>134</sup> Thus, Phillip Kitcher (1984, 59) does not speak only for himself when he concludes, “Benacerraf’s point casts doubt on the ability of [intuition] to generate knowledge.”

I will attempt to outline one way that realist rationalists might address this problem. I should emphasize that, in sketching the proposal, I will not be arguing for either realism or rationalism: the discussion that follows is not intended to establish that we actually have any intuitive knowledge of abstracta. Instead, the aim is to explore how intuition could provide knowledge of abstracta, *if it does*. While this project requires that we specify certain conditions that must be satisfied in order to have such knowledge, our primary goal in so doing is not to address the semi-empirical question of whether any actual subject satisfies these conditions, but rather to engage the explanatory question of how such conditions might or could be satisfied, *if they are*. Hence the project is not the epistemic one of defending or vindicating claims to intuitive knowledge of abstracta, but rather the explanatory one of articulating a framework that would allow us to explain

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<sup>134</sup> Concerns of this general type have been pressed by Ayer (1946, 73; 1956, 31), Hart (1977, 124-125), Bell (1979, §II), Field (1989, 230-239; 2006), Rosen (1990), Boghossian (2000, 2001), Kitcher (2000, 75 ff.), Oliver (2000, 119), Cheyne (2001), Hale and Wright (2002), Casullo (2003, §5.4), Peacocke (2004, 153), Wright (2004a, 156-157), Devitt (2005, §§3-4), and Williamson (2007, 215).

such knowledge, *if any there be*. The strategy will be to focus, as naïve realists do, on the constitution of an individual's mental states, considering the possibility of a non-causal, constitutive explanation of such knowledge.

Before pursuing this strategy, we will need to do a fair amount of work to clarify the question, identify its philosophical significance, and spell out what is required (and not required) to answer it. §§26-29 aim to precisify the problem confronting realist rationalism in a way that sympathetically improves upon the rough characterization given above. §30 argues that, contrary to widespread opinion, the problem has fairly limited epistemological implications—but that, despite this, it remains a serious and important (broadly metaphysical) challenge very much worth engaging. Subsequently, §§31-34 sketch a potential solution, while §35 responds to several questions about the overall explanatory strategy. §36 concludes by articulating several virtues of the proposal.

(There are also two appendices. Appendix I distinguishes several different questions about intuition and then outlines an explanation of its reliability, an issue that §29 suggests is in an important certain sense posterior to the problem articulated in §27 (and subsequently addressed in §§31-34). Appendix II discusses the causal theory of perception and contemplates an explanatory theory of both perception and intuition that is consistent with the proposal sketched in §§31-34.)

#### *§26. Non-accidental Correctness*

Suppose that the following conditions are satisfied:

- i. it is true that p,
- ii.  $x$  has the intuition that p,
- iii.  $x$  believes that p, and
- iv.  $x$ 's belief that p is based on  $x$ 's intuition that p.

Does it follow that  $x$  knows that p? No. Compare a case of perceptual experience in which analogous conditions are satisfied. As Paul Grice (1961) observed, even if it is true that p, one has a perceptual experience as if p, one believes that p, and one's belief that p is based on one's perceptual experience, one might fail to know that p since one's perceptual experience might be *accidentally* correct. For example, a brain lesion might cause one to hallucinate that there is a red apple present; by a sheer coincidence, there is a red apple present; then one got lucky. (David Lewis (1980) called this phenomenon 'veridical hallucination'.) In such a case, even though one's experience is correct (true, accurate, veridical), one's experience is not related to the fact in such a way as to rule out accidentality. So one's experience is not able to serve as a source of knowledge.<sup>135</sup>

For a similar reason, even if conditions (i) – (iv) are satisfied, one does not thereby know that p, since one's intuition might be *accidentally* correct. In short, an intuition might get it right, but only accidentally so. For example, a brain lesion might cause one to have the intuition that Goldbach's conjecture holds; suppose it does in fact hold; then one got lucky. (We might call this phenomenon 'veridical *intellectual*

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<sup>135</sup> Some kinds of luck may be consistent with knowledge (see Unger 1968; Pritchard 2005, ch. 6 discusses varieties of epistemic luck). We are here concerned with the kinds of luck that, as illustrated by the example in the text, do undermine knowledge.

hallucination'.) In such a case, even though one's intuition is correct, one's intuition is not related to the fact in such a way as to rule out accidentality. So one's intuition is not able to serve as a source of knowledge.

The basic point is familiar. In order for one's perceptual experience or intuition to be successful, and thereby serve as a source of knowledge, it must not be an accident that one's experience or intuition is correct. To know that *p* via intuition, then, the following condition must be satisfied:

- v. it is not an accident that *x*'s intuition that *p* is correct.

This condition is analogous to a condition that holds in the case of perceptual experience. In both cases, veridicality is not enough for success: one's mental state must be related to the fact in question in such a way as to rule out accidentality.

Eventually we will see that condition (v) gives rise to a principled explanatory challenge to realist rationalism of the sort described in the preceding section. But first let us critically examine a few approaches that seek to undermine or somehow deflate this condition.

## *§27. Cartesianism, Phenomenology, and the Limits of Understanding*

Certain bold realist rationalists might deny that there can be accidentally correct intuitions. This section critically examines three attempts to vindicate such denial. In subsequent sections, when we articulate and clarify the problem of intuitive knowledge, a

more basic shortcoming will become clear: such denial does not provide any understanding of the connection between intuitions and the facts intuited, without which intuitive knowledge looks mysterious.

That there could not be accidentally correct intuitions will presumably be the position of Cartesian rationalists who maintain that intuition is infallible—and, moreover, transparent to the reflective mind (Wilson 1978, §4.2)—and thus incapable of being incorrect. As we have seen, however, it is reasonable to think that at least some intuitions can be incorrect (e.g., the intuition that every predicate defines a set, the intuition that there are more whole numbers than even numbers, etc.), in which case we cannot help ourselves to this response.

A second version of bold realist rationalism holds that a correct intuition that has the phenomenology of “presenting itself as necessary” (recall §7) cannot be accidentally correct. But it is difficult to see why this would be so. Since the distinctiveness of such intuitions (so-called rational intuitions) lies in neither their contents nor their origins, but is characterized in wholly phenomenological terms, it is not clear how to eliminate the possibility that such states, too, can be accidentally correct. For example, a brain lesion might cause one to suffer a series of intuitions that present as necessary ten extremely complicated mathematical propositions. If nine of these intuitions are incorrect, then the single exception—the one intuition that just happens to be correct—may not yield knowledge.

We can imagine other cases. Conceptual misunderstandings might be responsible

for various incorrect intuitions.<sup>136</sup> Yet the error produced by such misunderstanding might be “canceled out” in a given instance by the occurrence of a fortuitous, Gettieresque convergence; a single correct rational intuition would then emerge from a family of largely incorrect ones. The correctness of that particular rational intuition, the result of a fortuitous convergence, would of course be nothing more than a lucky coincidence, and thus the belief to which it gives rise would not qualify as knowledge. Consider an example:

*Novice*

Novice is learning how to divide. He has reached the point where the simple cases (e.g., 6 divided by 2, 15 divided by 3) are fairly easy. He can also manage novel problems involving larger dividends and divisors (e.g., 176 divided by 16). So, for the most part, he “gets” it, and has a host of correct intuitions about division to show for it. However, Novice is still learning, and thus is not immune to mistakes. When he first considers the possibility of dividing a number by itself, it seems to him that the result is undefined; one just cannot divide a number by itself. Thus he has the incorrect intuition that 2 divided by 2 is undefined. But Novice is also mistaken about what happens when one divides numbers by 0. When he first reflects on the matter, it seems to him that any number  $n$  divided by 0 is  $n$ —

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<sup>136</sup> For example, Bealer (2008, §4) allows that Burge’s (1979) arthritis patient will have incorrect intuitions regarding the modal profile of arthritis due to his misunderstanding of the concept *arthritis*. This example involves what Bealer calls ‘out-and-out’ misunderstanding. The example of accidentally correct intuition given below involves what Bealer (*ibid*, §§5-6) labels ‘local’ misunderstanding.

except when  $n$  is identical to 0, in which case the result is undefined (since, again, it seems to him that one cannot divide a number by itself). Thus Novice has the correct intuition that the result of dividing 0 by 0 is undefined: when he reflects on the matter, he has the rational intuition, which presents-itself-as-necessary, that 0 divided by 0 is undefined. Subsequently, he forms the belief that 0 divided by 0 is undefined.

Novice's belief, though true, is not an instance of knowledge. For despite the fact that it is based on a rational intuition, due to his misunderstandings it is in an important sense a matter of luck that he has gotten it right.

A third version of bold realist rationalism focuses on ruling out such misunderstandings, holding that true intuitions regarding propositions that one understands cannot be accidentally correct (cf. Huemer 2005, §5.7; Sosa 2006; Ludwig 2007). However, understanding alone does not ensure non-accidental correctness. For example, I understand—in any reasonable, ordinary sense of ‘understand’—Goldbach's conjecture; but, again, if I were to have the intuition that it holds, and (we are supposing) it does, the match would be a sheer coincidence: in such a case, I could not be said to know, despite my understanding.

There are other examples. Consider an aesthete whose intuitions tend to track mere elegance and beauty. The aesthete might understand a difficult mathematical theorem  $T$  (e.g., the four color theorem) whose elegance and beauty is revealed in understanding  $T$ . Suppose the aesthete has the following intuition, prompted by the



aesthetic properties of T revealed in her understanding: T. Now suppose that T is true. Although the aesthete may truly believe T on the basis of her intuition, which in turn is enjoyed on the basis of her understanding of T—no less here than when one’s intuition is prompted by the truth of the proposition that is purportedly revealed in one’s understanding—the aesthete cannot be said to know T. In such a case, it is a sheer coincidence that her aesthetically-sensitive intuition is correct, so it does not yield knowledge.

The preceding examples indicate that, as with phenomenology, understanding cannot secure non-accidental correctness, and thus cannot serve as that which enables the satisfaction of condition (v) on intuitive knowledge, articulated in §26. We will have more to say about the limits of understanding in §29, where it will emerge that even if bold realist rationalism can somehow overcome the worries articulated in this section, its treatment of intuitive knowledge still remains inadequate or incomplete. For a simple appeal to infallibility, phenomenology, or understanding does not provide the requisite insight into the connection between intuitions and the facts intuited, without which intuitive knowledge looks mysterious. This connection or relation is the centerpiece of the problem of intuitive knowledge, to which we now turn.

### *§28. The Problem of Intuitive Knowledge*

For one to know that p via intuition, it cannot be an accident that one’s intuition that p is correct. This is condition (v). As we have seen, this condition is analogous to a condition that holds in the case of perceptual experience. In both cases, one’s mental state

must be related to the fact in question in such a way as to rule out accidentality.

What is perhaps the most forceful objection to realist rationalism concerns its apparent inability to render this relation intelligible. With successful perception, we seem to have some understanding of the relation that perceptual experiences bear to the facts perceived, namely, some type of causation. With successful intuition, we seem to lack any understanding of the relation between intuitions and the facts intuited. That is, we seem to lack an answer to the following question:

[Q] What relation could a thinker's intuition bear to an abstract fact that explains how the thinker's intuition can be non-accidentally correct, and thereby able to serve as a source of knowledge of that fact?

Let us call this *the problem of intuitive knowledge*.

Now we have articulated the problem. We will begin to explore a solution in §§31-34. In §29, we will take additional steps to locate the problem vis-à-vis worries about other epistemic sources as well as questions concerning reliability and the like. In §30, we will examine its epistemological implications—or, as I will argue, its relative lack thereof.

### *§29. Locating the Challenge*

While the problem of intuitive knowledge targets a rationalist version of realism, it is worth emphasizing that the overall explanatory challenge is far more general, and is

not answered or avoided simply by opting for a non-intuition-based epistemology of abstract facts. The challenge is not specific to intuition, but arises for any non-skeptical realist theory (as philosophers such as Benacerraf and Field have made clear). Other versions of realism—which favor conceiving, imagining, semantic competence, judgment, common sense, implicit conceptions, analytic ideas, “general rational capacities”, or some combination thereof—face analogous explanatory challenges.<sup>137</sup> Each faces the challenge of explaining how *its* preferred source can be non-accidentally correct, if realism is true: that is, how does *its* preferred source enable thinkers to be appropriately connected to abstract facts? Realists of all stripes face a problem of *realist* knowledge, of which the problem of intuitive knowledge is simply an instance.

Such a problem of realist knowledge is related to Benacerraf’s original worry about the epistemology of realism in his seminal paper “Mathematical Truth”. The more specific problem of intuitive knowledge is reminiscent of Benacerraf’s response to the specific suggestion (attributed to Gödel) that we know abstract facts via a mental state such as intuition. Although Benacerraf chose at certain points to express his concerns using a causal theory of knowledge, the core issues are independent of any such theory. (This is one of the virtues of [Q], which unlike objections stemming from a causal theory of knowledge does not rely on a controversial background theory, which might not be accepted by realist rationalists.) Recall Benacerraf’s complaint, quoted in §25, that we lack

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<sup>137</sup> See, e.g., Yablo (1993), Boghossian (1996, 2003), Audi (1999), Peacocke (2000; 2004 ch. 6; 2005), Chalmers (2002), and Williamson (2005, 2007 ch. 5), among others.

an account of...*the link* between our cognitive faculties and the objects known. ...We accept as *knowledge* only those beliefs which we can *appropriately relate* to our cognitive faculties. ...[T]he absence of a coherent account of how...intuition is *connected* to the [facts known] renders the over-all account unsatisfactory. (emphasis added)

Notice that Benacerraf does not simply ask how it is or why it should be that intuition so often gets it right, given realism. Rather, the worry is in a sense more basic: how *can* intuition *ever* get it right? The trouble, it seems, is the apparent absence of any “link”, “relation”, or “connection” between intuitions and abstracta that could explain how those intuitions can provide knowledge.

Although Benacerraf does not raise the issue of accidental correctness as such, a concern with this issue is explicit in Field’s (2006, 77 emphasis added) self-described reconstruction of Benacerraf’s worry:<sup>138</sup>

The key point, I think, is that our belief in a theory should be undermined if the theory requires that it would be *a huge coincidence* if what we believed about its subject matter were correct. ...[Realism] postulate[s entities] that are mind-independent and bear no causal or spatiotemporal relations to us, or any other kinds of *relations* to us that would *explain* why our beliefs about them tend to be correct; it seems hard to give any account...that doesn’t make the correctness of

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<sup>138</sup> The concern with accidental correctness is also explicit in Field (1989, 230-239), Tidman (1996), Kagan (2001), Linnebo (2006), Liggins (2010), and Enoch (forthcoming b).

the beliefs *a huge coincidence*.

What is needed to address “the key point” is an account that identifies a *relation* between thinkers and abstract entities that would *explain* why the correctness of our mental states is not *a huge coincidence*. This is precisely what is required to answer [Q], and thus to address the problem of intuitive knowledge as formulated above.

[Q] poses an explanatory question that is in some sense prior to the much-debated factual question of whether intuitions are in fact truth-conducive (e.g., reliable). It is also prior to the question of how intuitions could be truth-conducive, that is, how it is possible for intuitions in general to be successful more often than not—and thus “to tend to be correct”, to borrow Field’s expression in the quotation above. Similarly for the question of why it should be that intuitions tend to be correct (i.e., what facts about thinkers—such as their intelligence, attentiveness, or understanding—might enable or secure such a tendency). While the questions of why it could or should be that intuitions about abstracta are so often successful is important, such questions are in an important sense posterior to [Q]. For without an explanation of how a *given* intuition can be non-accidentally correct, as required to answer [Q], it seems impossible to explain the *general* success of states of that type (i.e., its truth-conduciveness, or reliability). In other words, we must first render intelligible how a thinker can be related in *one* case if we are to understand her being so related sufficiently or often enough to qualify as generally truth-conducive. (See Appendix I for further discussion of the explanation of the reliability of intuition.)

This highlights the importance, and legitimacy, of the demand that the realist

rationalist provide an answer to [Q]. Put dramatically: at issue is the very possibility of successful intuition and hence intuitive knowledge. Yet, it would seem that no proponent of realist rationalism has yet ventured a plausible (non-mystical, non-mysterian) answer to [Q]. For example, popular non-mystical responses to Benacerraf's original worry, including those partner-in-crime replies which appeal to the causal inertness of the propositional contents of the attitudes (see, e.g., Plantinga 1993, 113 ff.) as well as those quietist replies which simply reject a causal requirement for knowledge in favor of what Oystein Linnebo (2006) aptly calls a "boring explanation" of knowledge of abstract facts (see, e.g., Burgess and Rosen 1997) or supply no explanation whatsoever (Lewis 1986, §2.4; Katz 1998, ch. 2; cf. Pust 2004), simply do not venture an answer to [Q].

Lawrence Bonjour (1998, ch. 6) does venture an answer, namely, the *instantiation* relation: for a thinker's intuition to be successful is for the intuition (or the thinker, or the thinker's mind) to instantiate the properties it is about. But this proposal is implausible: a successful intuition about, say, the property of being a prime number is not itself a prime number (nor is the thinker, nor the thinker's mind). Sosa (2002) explores an alternative answer, namely, the *intuition-based-on-understanding* relation: for a thinker's intuition that p to be successful is for it to be based on an understanding of p. But not only does this approach fail to provide a sufficient condition for successful intuition (recall our examples of understanding-based accidentally correct intuitions in §27), but insofar as it appeals to a type of intuition relation it does not suffice to answer the original question. What is wanted is an explanation of how a given intuition could be connected to an abstract fact so as to be non-accidentally correct, and thus able to serve as a source of

knowledge of that fact. Invoking a type of intuition relation—the *intuition-based-on-understanding* relation—does not provide such an explanation. For it leaves us in the dark about how this type of intuition—how a thinker’s intuition-based-on-understanding—could be connected to an abstract fact. What relation could a thinker’s intuition-based-on-understanding bear to an abstract fact that explains how the thinker’s intuition-based-on-understanding can be non-accidentally correct, and thereby able to serve as a source of knowledge of that fact? At best, appealing to intuition-based-on-understanding simply redescribes the explanandum (it pushes the problem back, as it were); at worst, it simply concedes to the charge of brute and inexplicable facts. Either way, the original challenge to realist rationalism—the challenge’s spirit, if not also its letter—remains to be answered.

It seems fair to say that realist rationalism is currently without a satisfactory answer to [Q]. In fact, many realist rationalists would admit that they do not even know what such an answer would look like. Our aim here will be to fill this lacuna in the realist rationalist position by developing, in programmatic fashion, a plausible answer to [Q]. But first let us explore its broader epistemological implications.

### *§30. Epistemological Implications of the Challenge*

While [Q] poses an important challenge—one that I intend to address head-on in subsequent sections—it is worth pausing to examine its epistemological significance. This section argues that there is reason to think that the challenge has, epistemologically

speaking, a more limited scope and urgency than has sometimes been suggested.<sup>139</sup>

To begin, we should note that [Q] concerns intuitive *knowledge*, not intuitive justification (nor evidence, but let us focus on justification). This is because non-accidental correctness is a necessary condition for knowledge, though it is not a necessary condition for justification: given that correctness is not required for justification, it follows that non-accidental correctness is not either. That non-accidentality is vital to knowledge but not justification can be brought out by reflecting on an envatted experiencer suffering a series of veridical visual hallucinations. Such a subject could still be justified in believing that things are the way that things visually appear to be even though it is simply a huge coincidence that many of its visual experiences are correct. Likewise, a mathematically-handicapped subject who suffers a series of veridical “mathematical hallucinations”—say, lesion-induced true intuitions about Goldbach’s conjecture and Poincaré’s conjecture, immediately followed by various wildly mistaken intuitions—could still be justified in believing that things are the way that she intuits them as being even if it turns out to be a huge coincidence that many of her intuitions are correct. Neither would have knowledge, though both might still have justification. (These intuitively correct verdicts are sustained by presentationalism, defended in Part II, though they are also compatible with a host of alternative epistemological positions.)

Now let us ask ourselves whether a failure to answer [Q] itself undermines intuitive knowledge. One’s intuition must be non-accidentally correct in order for one to

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<sup>139</sup> Recall Kitcher’s comment, quoted in §25, that “Benacerraf’s point casts doubt on the ability of [intuition] to generate knowledge.” This comment is representative. See, e.g., Linnebo (2006, §1) and the citations in note 134.



have intuitive knowledge. Must one also have an *explanation* of how one's intuition can be non-accidentally correct in order for one to have intuitive knowledge? Or, to allow for a broader perspective, we could frame the question in communal rather than individualistic terms: must one's community have such an explanation in order for one to have intuitive knowledge? I think it clear that the answer is no.

In general, it is not the case that  $x$  knows that  $p$  via some mental state  $\sigma$  only if  $x$ , or  $x$ 's community, is in a position to explain how  $\sigma$  can be non-accidentally correct. First, this hyper-internalist condition wrongly excludes a pre-scientific subject's ordinary perceptual knowledge that he has hands, among many other ordinary instances of knowledge. Second, the following situation seems perfectly coherent: there is a subject that has intuitive knowledge, though an explanation of how this could be so is lacking (perhaps because the subject, or her community, is not good at constructing such explanations). Compare chicken-sexing: a subject might have knowledge about the sex of day-old chicks, though an explanation of how this could be so—i.e., how the subject's attitudes about such matters could be non-accidentally correct, and thereby able to serve as a source of knowledge—is lacking (perhaps because the subject, or her community, is not good at constructing such explanations). Similar remarks apply for justification: after all, if knowledge via some source  $\sigma$  is possible even though an explanation of how  $\sigma$  can be non-accidentally correct is lacking, then (given that knowledge entails justification) justification via  $\sigma$  is possible even without such an explanation. If this is correct, then neither intuitive knowledge nor intuitive justification requires possession of an explanation of how intuition can be non-accidentally correct. In this way, the mere

possibility of having intuitive knowledge and intuitive justification is immune to the explanatory challenge posed by [Q]: a failure to answer [Q] does not undermine intuitive knowledge nor intuitive justification.

It is tempting to suppose, nevertheless, that a *theorist's* belief is not immune to the challenge. Thus, in the quotation in §29, Field proposes that it is not intuitive knowledge or justification per se, but rather “our *belief in [the] theory* [that] should be undermined”. Elsewhere Field has suggested, not implausibly, that to be justified in believing (and ipso facto to qualify as knowing) her theory, the realist rationalist must *lack reason to believe it impossible* to achieve the sought-after explanation.<sup>140</sup> Let us take a moment to examine the implications of this suggestion for justified theoretical belief in realist rationalism.<sup>141</sup>

Suppose, as is plausible, that there is good reason to believe it impossible to provide a wholly *causal* explanation of how intuitions can be non-accidentally correct. However, as is well known, a wholly causal explanation is not the only sort of explanation there is.<sup>142</sup> Candidate non-causal explanations include:

- a. The planetary orbits are stable because space-time is four-dimensional.

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<sup>140</sup> Field (1989, 233): “[W]e should view with suspicion any claim to know facts about a certain domain if we believe it impossible to explain the reliability of our beliefs about that domain.”

<sup>141</sup> The suggestion is not implausible; thus I am prepared to accept it, even though I am not confident that it is true. One reason for low confidence is that explanations must come to an end somewhere. Consider, also, a theorist who amasses strong evidence that the fact that a certain mental state provides justified and knowledgeable beliefs about a particular domain simply cannot be explained; the evidence indicates that it is a brute fact that this mental state functions as it does. Arguably, such a theorist would then be justified in endorsing a theory that implies that this state has epistemic value even though she lacks an explanation of its success. But again, Field’s suggested condition enjoys some plausibility, so I propose that we take a moment to consider whether realist rationalists satisfy it. I will argue that they do: realist rationalists do not yet have reason to believe it *impossible* to achieve the sought-after explanation.

<sup>142</sup> See especially Kim (1974) and Ruben (1990, ch. 7), and the citations therein.

- b. The vase is fragile because it is made of a piece of glass.
- c. Torture is wrong because it does not maximize utility.
- d. The set {Obama, Biden} exists because Obama exists and Biden exists.

Can we rule out the possibility of a similarly non-causal explanation of how intuitions can be non-accidentally correct? Neither Benacerraf nor Field (nor anyone else, to my knowledge) has attempted to show that we can. Only Field (1989, 231 emphasis in original) has even considered the possibility of a non-causal explanation, and then only in passing:

Perhaps then some sort of *non-causal* explanation of the correlation is possible? Perhaps; but it is very hard to see what this supposed non-causal explanation could be.

This passage is plausibly understood as simply a comment on the difficulty of constructing the requisite non-causal explanation: its being “very hard to see” how a certain type of explanation might proceed is not yet an argument that such an explanation is impossible. But absent such an argument, justified belief in realist rationalism looks to be immune to the explanatory challenge posed by [Q]—even accepting Field’s suggested condition on justified theoretical belief.

So the failure to answer [Q] does not lead to skepticism: it does not cast doubt on (theoretical belief in) the ability of intuition to serve as a legitimate epistemic source.

That said, there are several reasons for realist rationalists still to engage the explanatory challenge posed by [Q]. First, without an answer to [Q], our understanding of intuition and intuitive knowledge remains incomplete: in short, a complete theory of intuitive knowledge must explain how intuitions can be non-accidentally correct. Second, realist rationalists without such a theory may fall short of a certain epistemic ideal: for example, certainty, iterated knowledge (so-called KK), a special type of “philosophically defensible” knowledge, or perhaps *scientia* (cf. Descartes). If realist rationalists aspire to achieve such an ideal, it would seem that they must answer [Q]. Finally, consider the desire to understand the character and foundations of philosophical methodology, to make sense of the a priori and armchair knowledge, and more generally to answer The Guiding Question, articulated at the outset. To the extent that intuition is involved here, as rationalists maintain (and suggested at various points above), answering [Q] would substantially improve our understanding of these and other phenomena. This alone should motivate the effort to answer [Q].

This raises the question of what is required for an adequate answer to [Q]. This is an important but oft-neglected question, and I myself shall only briefly touch upon it here. Presumably, realist rationalists must provide an answer to [Q] that is *dialectically adequate*, in the sense that it must show that realist rationalism has the resources to explain how non-accidentally correct intuitions are possible. Of course, to achieve this end, it need not succeed by the challenger’s lights. Thus a dialectically adequate answer can be usefully contrasted with a *dialectically persuasive* answer, which provides grounds for a rebuttal that are rationally sufficient to convince an opponent (cf. Pryor

2004). In the present debate, in which more or less entire worldviews are at issue, it would appear that a dialectically adequate answer is the most that can be reasonably hoped or asked for. Or so I shall assume in what follows.

We will attempt a dialectically adequate answer to [Q] gradually, and somewhat indirectly, in three steps. In step one (§31), we will consider another puzzling case. In step two (§32), we will sketch an explanation of this case. In step three (§33), we will apply this style of explanation to the case of perception and, finally, to the case of intuition.

### *§31. Toward an Answer, I: A Peculiar Case of Non-causal Knowledge*

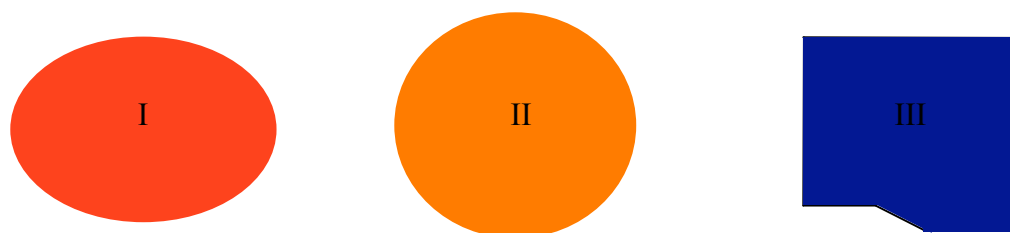
Standard examples of knowledge without causation, such as knowledge about the future, might (perhaps) be explained by citing principles of inference that somehow extend antecedent knowledge, which is itself ultimately explained by citing a causal relation to the fact known. However, some instances of knowledge without causation involve knowledge that is *not* a mere extension of, nor the product of an inference from, antecedent knowledge; consequently, such knowledge cannot be explained in the same way. This section is concerned with the problem posed by such knowledge without causation.

It will be helpful to focus on a particular case:

#### *Trip*

Trip has never before encountered the colors red, orange, or blue. Nor has he ever

encountered any elliptical, circular, or hexagonal shapes. Then, one evening, Trip has an experience with the phenomenal character of the experience had when viewing a red ellipse labeled ‘I’, an orange circle labeled ‘II’, and a blue hexagon labeled ‘III’.



As it happens, Trip is not actually viewing these things: rather, he is unwittingly the subject of a spontaneous, vivid, hallucinatory experience. On the basis of this experience, Trip—a smart, attentive chap—comes to believe the following:

[ $\alpha$ ]     The color of I resembles the color of II more than the color of III.

[ $\beta$ ]     The shape of I resembles the shape of II more than the shape of III.

What are we to say about this case? Trip’s experience presumably gives him good reason to believe [ $\alpha$ ] and [ $\beta$ ].<sup>143</sup> And this is not a Gettier case: Trip’s beliefs are true, and not just

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<sup>143</sup> Similarly for:

[ $\chi$ ]     A hexagon may have four right angles.

Regarding [ $\alpha$ ] and [ $\beta$ ], one might worry about reference-failure given that Trip is hallucinating. But although Trip fails to think about any *objects* (since I, II, and III do not exist), surely he can still think about the various *properties* of which he is aware (redness, circularity, etc.) in having this experience. So it should be agreed that Trip could come to believe some such truths about

luckily so. It would seem, then, that Trip has knowledge of  $[\alpha]$  and  $[\beta]$ .<sup>144</sup>

The lesson, if this is correct, is that one can gain knowledge about the colors and shapes, for instance,  $[\alpha]$  and  $[\beta]$ , on the basis of genuine perception *or* on the basis of hallucination. Such hallucination is successful in one respect, namely, with respect to certain resemblance relations between the colors and shapes, even though it remains unsuccessful in another—perhaps more familiar—respect, namely, with respect to the presence of objects and properties in one’s environment.

Now suppose we embrace a widely accepted realist view of colors and shapes, according to which colors and shapes are mind-independent entities that comprise mind-independent facts concerning such entities. What is then needed is an explanation of how Trip’s experience is able to provide him with knowledge of the relevant facts about colors and shapes. Here we encounter the following explanatory question:

[Q'] What relation does Trip’s hallucinatory experience bear to the relevant facts about colors and shapes that explains how that experience can serve as a source of knowledge of those facts?

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colors and shapes on the basis of his experience (cf. Johnston 2004; Hawthorne and Kovakovitch 2006, 158; Pautz 2007, 525; and Bengson et al forthcoming, esp. §§3.2-3); the controversy, if there is one, simply concerns how best to articulate them. Readers unable to find acceptable interpretations of  $[\alpha]$  and  $[\beta]$  may focus on  $[\chi]$ , which seems immune to worries about reference-failure. The central point of the argument to follow remains unaffected.

<sup>144</sup> Johnston (2004) argues that such knowledge is *de re* and thus implies an act-object account of the nature of hallucinatory experience. Pautz (2007) responds that the possibility of *de re* knowledge via hallucination can be accommodated by an act-content account of experience (cf. Byrne 2003). We shall not take a stand on the putative *de re* character of such knowledge, or its implications for our understanding of the nature of hallucinatory experience. Rather, our concern will be the explanatory question [Q'] articulated below, which to my knowledge remains unanswered.

Answering this question can be regarded as *the problem of hallucinatory knowledge*.

Let us be clear about why the problem of hallucinatory knowledge is a *problem*. Recall that Trip is hallucinating: there need not be anything with, or any instances of, those colors and shapes causing his experience. (Compare: a hallucinatory experience as of there being a pink rat present does not require that one's experience be caused by anything with, or any instances of, these items, viz., the property of being pink or the property of being a rat.) So, it is possible that Trip's experience does not stand in any causal relation to the relevant colors and shapes.

One might protest that such a situation is impossible. But it is not clear what could justify this impossibility claim. It cannot be said that it is *obvious* that the case of Trip is impossible; if anything, the case seems clearly to be possible.<sup>145</sup> Nor can it be ruled out on the grounds that it violates some tenet of naturalism or physicalism. It does not. As naturalist-physicalist Tye (2000, 64) observes, it is possible that,

given the right causal proximal stimulations, a brain that grows in a vat—a brain that is never properly embodied—has perceptual experiences of features to which it bears no causal connections.

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<sup>145</sup> Here it is worth reminding ourselves of the difficulty of arguing for a negative existential, especially one with modal strength. It may also be worth noting that empirical research concerning the dreams of congenitally blind individuals seems to indicate that visualization of colors is possible without prior successful perception of anything with, or any instances of, those colors (see, e.g., Goldstein 2009, 893).



This is how it is with Trip: he is enjoying a perceptual experience of features to which his experience bears no causal connections. The upshot is that the relation that Trip's experience stands in to the facts about the relevant colors and shapes cannot be causation.

To be sure, although Trip's experience does not stand in a causal relation to the relevant colors and shapes, there may still be some proximal cause (e.g., neural stimulations), and thus some causal explanation, of Trip's experience. In addition, Trip's experience may stand in a causal relation to his belief. Neither of these observations is in dispute. The point is simply that it is possible that the colors and shapes (or facts about colors and shapes) do not cause Trip's experience, so causation cannot be the relation that his experience bears to the colors and shapes that explains how his experience can serve as a source of knowledge about those colors and shapes. Herein lies the problem. Given the absence of a causal relation between Trip's experience and that which it is of or about, what is needed is a *non-causal relation* that explains how Trip's experience can serve as a source of knowledge. What could this relation be?<sup>146</sup>

Let me offer a preview of what is to come. In §32, I will suggest that we need the notion of a mental state that is not causally, but is rather *constitutively*, related to that which it is about to make sense of how Trip's experience is able to serve as a source of knowledge about the colors and shapes. In short, the thought will be this: Trip's experience is *constitutively* tied to the colors and shapes, and that is why it can serve as a

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<sup>146</sup> It might be suggested that although the colors and shapes do not *cause* Trip's experience, they are nevertheless *instantiated* by his experience. But this is not so: Trip's experience is neither colored nor shaped. A more plausible suggestion is that the colors and shapes *constitute* his experience. I will eventually suggest that the constitution relation may indeed provide the key to answering [Q].

source of knowledge about them. In §33, after discussing the role of constitution in a naïve realist theory of perceptual knowledge, we will explore how this thought might help with intuitive knowledge as well.

### *§32. Toward an Answer, II: Constitution and Constitutive Explanation*

In the absence of a causal relation between a mental state and that which it is about, what is needed is a non-causal relation that explains how that state can serve as a source of knowledge. Obviously, not just any relation will provide such an explanation. This section identifies a non-causal relation—namely, constitution—that underwrites an important type of non-causal explanation—namely, constitutive explanation—and articulates how this relation might enable an answer to the kinds of explanatory question that we have been considering.

#### *§32.1 Constitution*

It is useful to begin with a plausible constraint on explanation in general: namely, the explanandum must bear an asymmetric dependence relation to (i.e., asymmetrically depend on) the explanans. The exact asymmetric dependence relation, as well as the modal force of the dependence (nomological, metaphysical, etc.), may differ in different cases. In causal explanations, the relation will be one of asymmetric *causal* dependence. In non-causal explanations, such as (a) – (d) from §30 (repeated below), the relation will be one of asymmetric *non-causal* dependence:

- a. The planetary orbits are stable because space-time is four-dimensional.
- b. The vase is fragile because it is made of a piece of glass.
- c. Torture is wrong because it does not maximize utility.
- d. The set {Obama, Biden} exists because Obama exists and Biden exists.

Let us take a moment to reflect on the explanation in (b), which invokes the traditional metaphysical notion of constitution (constitutive dependence). There are two main questions to ask. First, what is constitution? Second, how does it yield explanation? We will consider each of these questions in turn.

The notion of constitution has applications in a wide variety of areas. As Mark Johnston (2005, 636) observes,

Constitution...is a topic-neutral relation of vast generality, applying wherever the notion of complexity gets a foothold.

Consider some potentially familiar—even if not uncontroversial—examples of constitution:

- e. The vase is constituted by the piece of glass.
- f. {Obama, Biden} is constituted by Obama and Biden.<sup>147</sup>

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<sup>147</sup> Here is Currie (1982, 69 emphasis added) summarizing Frege: “Sets are *constituted* by their members, while classes are not.”

- g. The event of Derek running is constituted by Derek, the property of running, and a time (on a Kimian theory of events).<sup>148</sup>
- h. The speech act of assertion is constituted by the norm *assert only what you know* (on a Williamsonian view of assertion).<sup>149</sup>

While there are many differences between them, all of (e) – (h) can be understood as illustrating in one way or another the non-causal, constitutive dependence of one entity—the *constituted* entity—upon another entity—the *constituting* entity.

This is no place to try to engage skepticism regarding constitution, material or otherwise. Nor is it the place to attempt a comprehensive account of this rich and intricate phenomenon.<sup>150</sup> Nevertheless, it is natural to inquire further into the character of this relation. Constitution, as I will understand it, is distinct from mereological (part-whole) composition, containment, supervenience, and identity. Take, for example, (e): the vase is constituted by the piece of glass. But the piece of glass is not one of the vase’s *parts*: it is not a part that the vase has. Nor does the vase *contain* the piece of glass. Likewise, the vase cannot be said to (merely) *supervene on*—modally covary with—the piece of glass. Nor are the vase and piece of glass *identical*. Rather, the vase *constitutively depends on* the piece of glass.

Such dependence is irreflexive: the vase is constituted by the piece of glass; but

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<sup>148</sup> See Kim (1973).

<sup>149</sup> Williamson (2000, 238 emphasis added): “[T]he speech act [of assertion], like a game and unlike the act of jumping, is *constituted* by rules.”

<sup>150</sup> Several of the main positions in the contemporary debate regarding the metaphysics of material constitution are examined in the papers in Rea (1997).

the vase is not constituted by itself. And it is asymmetric: the vase is constituted by the piece of glass; but the piece of glass is not constituted by the vase. However, it is not causal: the vase is constituted by the piece of glass; but the vase is not caused by the piece of glass.

Constitutive dependence is not strictly logical (merely “formal”), but ontological.<sup>151</sup> In general, as I shall understand it, to specify the constitution of *a* is to say *what it is*, or *part of what it is*, for *a* to exist. For example:

- e'. *What it is* for the vase to exist is for there to be an object that is thus-and-so; and the piece of glass is thus-and-so.
- f'. *What it is* for the set {Obama, Biden} to exist is for Obama to exist and Biden to exist.
- g'. *What it is* for the event of Derek running to exist is for Derek to instantiate the property of running at a particular time.
- h'. *What it is* for an assertion to exist is for there to be a speech act and a norm (namely, the norm *assert only what you know*), and for the norm to govern the speech act.

In each case, the constituted entity stands in a *non-causal, irreflexive, asymmetric ontological dependence relation* to the constituting entity. This relation is constitution.

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<sup>151</sup> See, e.g., Koslicki (2004, 340).

### §32.2 Constitutive Explanation

I will not attempt an armchair analysis of constitution. Once again, here as elsewhere, the absence of a set of necessary and sufficient conditions for a given philosophically interesting concept, property, or relation need not threaten its theoretical utility. In particular, the constitution relation may play an important theoretical role in a certain type of non-causal explanation. Recall (b), which explains the fragility of the vase in terms of the fragility of the piece of glass of which the vase is constituted:

- b.      The vase is fragile because it is constituted by a piece of glass.

Here we find what I will call a *constitutive explanation* of the fragility of the vase.

It is natural to ask: What is the mechanism underwriting such explanation? Notice that, in (b), the property (being fragile) possessed by the subject in the explanandum (the vase) is one and the same as the relevant property (being fragile) possessed by the subject in the explanans (the piece of glass). Call this *property-inheritance*: the vase simply *inherits* the property of being fragile from the piece of glass, of which it is constituted. It is this that appears to make (b) a successful constitutive explanation.

Property-inheritance looks to be a special case of a more general phenomenon, which I will call *property-ensurance*:

#### *Property-ensurance*

$a$ 's having  $F$  **ensures**  $b$ 's having  $G$  iff<sub>def</sub>  $a$  constitutes  $b$  &  $\Box ((a \text{ is } F \ \& \ a$

constitutes  $b \supset b$  is  $G$ )<sup>152</sup>

Inheritance occurs when  $F = G$ . But ensurance does not require inheritance. Perhaps the simplest example of ensurance without inheritance occurs when  $F$  is the property of constituting  $b$  and  $G$  is the property of being constituted by  $a$ ; since  $F$  then ensures  $G$  even though  $F$  and  $G$  are distinct, the result is ensurance without inheritance. (It should be clear why inheritance is the wrong model for such a case: given the irreflexivity of constitution, it is impossible for  $a$  to be  $G$  and it is impossible for  $b$  to be  $F$ . Yet it is clear that  $b$  could not fail to be  $G$  given that  $a$  is  $F$ : thus,  $a$ 's being  $F$  guarantees  $b$ 's being  $G$ . This guarantee is property-ensurance.)

Ensurance is non-trivial: it holds only in certain cases. To illustrate, let  $F$  be the property of being fragile and  $G$  be the property of being priceless. Since a piece of glass might have  $F$  and constitute a vase that lacks  $G$ , the piece of glass's having  $F$  does not ensure the vase's having  $G$ —even if, as it happens, the vase does have  $G$ . In short: the piece of glass's fragility does not ensure the vase's pricelessness.

The notion of ensurance is important insofar as it may underwrite a model of constitutive explanation. The hypothesis is this:

### *Hypothesis*

When  $a$ 's having  $F$  ensures  $b$ 's having  $G$ , it may in some cases be possible to explain the fact that  $b$  is  $G$  by citing its constitution:  $b$  is  $G$  because it is

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<sup>152</sup>  $G$  can be restricted, e.g., to “non-trifling” properties, where  $\varphi$  is a non-trifling property iff it is not the case that everything necessarily has  $\varphi$  (cf. the property of being such that  $2 + 2 = 4$ ).

constituted by *a* (which is *F*).

This is only a hypothesis; but it seems plausible.<sup>153</sup> For instance, if the vase is constituted by the piece of glass, then we can explain the fragility of the vase by citing a certain fact about its constitution:

[VASE] The vase is fragile because it is *constituted* by a piece of glass (which is fragile).

The fragility of the piece of glass *ensures* the fragility of the vase. This enables the fragility of the piece of glass to *explain* the fragility of the vase. Happily, the correct verdict is predicted by our hypothesis.

Contrast: as we saw above, the fragility of the piece of glass does *not* ensure the pricelessness of the vase. So the fragility of the piece of glass does *not* explain the pricelessness of the vase. This is, I assume, the correct verdict—one that is correctly predicted by our hypothesis.

Another example of constitutive explanation employs the constitution claim in (h), repeated below:<sup>154</sup>

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<sup>153</sup> The clause ‘in some cases’ is included because restrictions may apply. Of course, even if this particular hypothesis is not in the end fully adequate, the core idea—namely, that it is sometimes possible to explain why an entity has a certain property by citing its constitution, as illustrated by various examples in the text—remains plausible. It is this core idea that informs the discussion that follows.

<sup>154</sup> Readers skeptical of (h) are free to substitute another example; options include (f) – (k).



- h. The speech act of assertion is constituted by the norm *assert only what you know*.

This constitution claim might be used to explain the inappropriateness of a false assertion. Why are false assertions inappropriate? An explanation might be:

[ASSERTION] A false assertion is inappropriate because it is a speech act constituted by the norm *assert only what you know* (which is satisfied only under certain conditions).<sup>155</sup>

The norm *assert only what you know* has the property (*F*) of being satisfied only under certain conditions, e.g., when the assertion is true. This *ensures* that assertion, which is a speech act constituted by this norm, has the property (*G*) of being inappropriate when false. This enables the satisfaction conditions of the norm to *explain* the inappropriateness of a false assertion. Once more, the correct verdict is predicted by our hypothesis.

### §32.3 Explaining Trip's knowledge via hallucination

Constitutive explanation may place us in a position to address the problem of hallucinatory knowledge. Suppose that

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<sup>155</sup> This is basically Williamson's explanation (2000, 249 ff.); he suggests that it is a significant virtue of (h) that it enables such an explanation. However, Williamson himself does not attempt to identify the mechanism underwriting such explanation.

- i. Trip's hallucinatory experience is constituted by the colors and shapes.

That is, part of *what it is* for Trip's hallucinatory experience to exist is for those very colors and shapes, replete with certain resemblance relations that hold between them, to exist. This constitution claim might be used to explain the ability of Trip's hallucinatory experience to serve as a source of knowledge about those colors and shapes. The explanation would proceed as follows:

[HALLUCINATION] Trip's hallucinatory experience is non-accidentally correct with respect to the resemblance relations between the relevant colors and shapes, and thereby able to serve as a source of knowledge about those colors and shapes, because it is partly *constituted* by those colors and shapes (which stand in certain resemblance relations).

The colors and shapes have the property (*F*) of standing in certain resemblance relations. This *ensures* that Trip's hallucinatory experience, which is constituted by those colors and shapes, has the property (*G*) of being not merely accidentally correct with respect to the resemblance relations between those colors and shapes, and thereby able to serve as a source of knowledge about them. In other words, Trip's hallucinatory experience has a certain constitution: it is constituted by particular colors and shapes—part of what it is for this mental state to exist is for those colors and shapes, replete with certain resemblance

relations that hold between them, to exist. Accordingly, this mental state will have a certain property, namely, the property of being non-accidentally correct with respect to the indicated resemblance relations, and thereby able to provide knowledge about the colors and shapes.

To the extent that it is constituted by the relevant colors and shapes, Trip's hallucinatory experience could not fail to be able to serve as a source of knowledge about those colors and shapes. Accordingly, [HALLUCINATION] provides an explanation of how the experience is *able* (or otherwise poised) to serve as a source of knowledge about the relevant colors and shapes. Of course, having such an experience does not, in and of itself, *entail* that one has the knowledge that one is able to have. Whether the experience actually yields such knowledge in a particular case will often depend on other factors, such as whether the subject goes on to form the indicated belief, whether the subject has defeaters for that belief, and so on. Because there are these other conditions for knowledge, Trip could still fail to come to know  $[\alpha]$  and  $[\beta]$  despite having an experience constituted by the relevant colors and shapes. This poses no difficulty for the present approach. It simply indicates that what is needed is an explanation of the *ability* of Trip's experience to provide such knowledge, even when it does not in fact do so (because the other conditions on knowledge are not met). This explanation is provided by the constitutive explanation in [HALLUCINATION].

One reason to think that [HALLUCINATION] is a successful constitutive explanation is that it seems to pinpoint what makes it the case that Trip is able to know what he does. Here it is useful to contrast the case of Trip with the following example:

*Lucky*

Lucky receives an anonymous email with the following text: “After viewing the three colored shapes in the attached document, determine whether the color of I more closely resembles the color of II or the color of III, and whether the shape of I more closely resembles the shape of II or the shape of III.” Lucky attempts to open the attached document but is unable to do so: every time he tries, an error message appears. The attached document, which he fails to open, includes a red ellipse (labeled ‘I’), an orange circle (labeled ‘II’), and a blue hexagon (labeled ‘III’). Although Lucky is unable to open the document, and thus cannot view the colored shapes in question, he decides to go ahead and guess the answers: he settles on  $[\alpha]$  and  $[\beta]$ .

Lucky’s guess is correct, but only accidentally so; hence, Lucky does not know  $[\alpha]$  and  $[\beta]$ . Consider the following explanation of Lucky’s lack of knowledge:

[GUESS] Lucky’s guess is accidentally correct with respect to the resemblance relations between the relevant colors and shapes, and is thus unable to serve as a source of knowledge about those colors and shapes, because it is *not* constituted by those colors and shapes.

Lucky’s guess is not constituted by the relevant colors and shapes: that is, it is not the

case that part of *what it is* for that mental state (guess) to exist is for those colors and shapes, replete with certain resemblance relations that hold between them, to exist. Accordingly, that mental state does not have the property of being non-accidentally correct with respect to the indicated resemblance relations, and thereby able to provide knowledge about the relevant colors and shapes—the desired result. Constitution may thus serve as the relation that (constitutively) explains the difference between Trip’s experience, which is able to provide *knowledge* about the colors and shapes, and Lucky’s guess, which is at most able to provide an *opinion* about them.

Now, I have not argued for the constitution claim in (i).<sup>156</sup> Nor have I argued for the ensurance claim that would, if the hypothesis articulated in §32.2 is true, underwrite the constitutive explanation in [HALLUCINATION]. Rather, the intention has been to identify a style of explanation that has the resources to explain how Trip’s hallucinatory experience is able to serve as a source of knowledge. By taking seriously the notions of constitution and constitutive explanation, we may be able to answer the question posed by [Q'] and provide a solution to the problem of hallucinatory knowledge.<sup>157</sup>

### §33. *Toward an Answer, III: Perceptual and Intuitive Knowledge*

The notions of constitution and constitutive explanation may have significant

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<sup>156</sup> However, see Hawthorne and Kovakovitch (2006, 178 emphasis added), who suggest that it is part of naïve commonsense that red is “a *constituent* of experience when one hallucinates a red tie.” Cf. Tye (2009b, 82-83).

<sup>157</sup> Peacocke (2009, 731) has observed the independent plausibility of the idea that sometimes “the explanation of why a cognitive state is a means of acquiring knowledge has to mention the constitutive nature of that state.” The explanatory framework developed in §32.2 and applied to the case of Trip may be regarded as helping to uncover the legitimacy to this idea.

implications for epistemology beyond accounting for the possibility of knowledge about colors and shapes via hallucination. In this section we will consider two further applications. The first concerns ordinary perceptual knowledge of empirical facts. The second is our original problem case: intuitive knowledge of abstract facts.

### *§33.1 Explaining perceptual knowledge of empirical facts*

The following question confronts us once we accept a realist view of the empirical world, according to which what are known through perception are facts about mind-independent concrete entities (hereafter ‘empirical facts’):

[Q"] What relation does a perceiver’s perceptual experience bear to an empirical fact that explains how the perceptual experience is non-accidentally correct, and thereby able to serve as a source of knowledge of that fact?

Answering this question is the *problem of perceptual knowledge*. Such a problem has perplexed most of the figures in the canon, including but not limited to Plato (in, e.g., *Theaetetus*), Aristotle (in, e.g., *De Anima*), Aquinas (in, e.g., *Sententia super De anima*), Descartes (in, e.g., *The Optics*), Locke (in, e.g., *An Essay Concerning Human Understanding*), Hume (in, e.g., *A Treatise of Human Nature*), Reid (in, e.g., *Essays on the Intellectual Powers of Man*), Kant (in, e.g., *Critique of Pure Reason*),<sup>158</sup> Russell (in,

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<sup>158</sup> Kant deserves a special note: after all, he thought that such a question could not be answered non-dogmatically, and thus we had to reject realism and accept transcendental idealism. Earlier and later idealists, such as Berkeley (in, e.g., *Three Dialogues Between Hylas and Philonous*) and

e.g., *Our Knowledge of the External World*), Moore (in, e.g., “The Refutation of Idealism”), and so on to the present day.

There have arisen a variety of theses about perception that aim to “bridge the chasm” between the mental states of subjects and the external world. One of these invites us to go naïve—*naïve*, not vulgar—by embracing what I will call *naïve realism about perception*:

#### *Naïve Realism about Perception*

Those mind-independent items that are successfully perceived partly constitute one’s perception.

On this increasingly popular view, successful perceptual experiences (successful perceptions) are intentional states partly constituted by the mind-independent items (individuals, properties, events, facts, etc.) that they are about.<sup>159</sup> Here is naïve realist Martin (2004, 273 emphasis added):

Some of the objects of perception—the concrete individuals, their properties, the events these partake in—are *constituents* of the experience. No experience like

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Bradley (in, e.g., *Appearance and Reality*), also denied that perception provides knowledge of mind-independent empirical facts. For many idealists, the object of perception depends on the mind of a perceiver. The realist view that we are about to pursue turns this idealist thesis on its head. The naturalness of such a reversal was observed by Samuel Alexander, who suggested in his 1919 anti-idealist lecture “On the Basis of Realism” that “so far are objects from being dependent on mind that we must say, if we speak of dependence at all, that *it is mind which is dependent on objects*” (quoted in Marion 2000a, 302 emphasis added).

<sup>159</sup> In addition to those quoted in the text immediately below, see also McDowell (1982), Putnam (1994, 1999), Campbell (2002), Martin (2002, 2006), and Hellie (2007).

this...could have occurred had no appropriate candidate for awareness existed.

In a similar vein, Paul Snowdon (2005, 136-137) writes:

The experience in a perceptual case reaches out to and involves the perceived external objects, not so with the experience in other cases.

Compare Johnston (2004, 229):

Seeing goes all the way out to the objects seen, the things with which it acquaints the subject.

This perspective need not be seen as a recent invention of contemporary analytic philosophy of perception. Reflecting on the theories of perception offered by philosophers of previous generations, the early twentieth century Russian thinker Nikolai Lossky (1919, 95) wrote in his treatise on knowledge:

Perception of the external world may be said to contain...subjective processes[,] processes in the external world within the body[,] and thirdly, processes in the external world outside the body. ...According to naïve realism it consists—entirely, perhaps—of the processes of the third category.<sup>160</sup>

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<sup>160</sup> Such a naïve realist view appears to have been endorsed by the Oxonian Cook Wilson (1926,



Its history aside, according to naïve realism about perception, when you successfully perceive the fact that there is a red apple present, that very fact partly constitutes the mental state you're in. You're *seeing* the *fact* itself.<sup>161</sup> A successful perceptual experience (e.g., seeing) thus has a chunk of the world as a constituent: present in the experience is the reality perceived.<sup>162</sup>

Of course, accidentally correct and non-accidentally correct perceptual experiences may be subjectively indistinguishable: in some cases, they cannot be told apart from the inside. But it does not follow that successfully perceiving is the same exact state as its unsuccessful counterpart. They are not: after all, I may see while my lesioned (or envatted) phenomenal duplicate does not. According to naïve realists about perception, the difference is this: the presence of *this kind of state* (demonstrating a non-accidentally correct perceptual experience as if p) constitutively depends on the fact that

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70): "what we apprehend...is included in the apprehension as a part of the activity or reality of apprehending." Wilson's influence on subsequent philosophy of perception is recorded in Marion's (2000a, 2000b) guided tour of Oxford realism. Price (1932, ch. 2) is a classic discussion of one version of naïve realism about perception. Also relevant is Heidegger's (1926/1962, 89) polemic against the view that perceiving is essentially a subjective affair: "When Dasein directs itself towards something and grasps it, it does not somehow first get out of an inner sphere in which it has been proximally encapsulated... [T]he perceiving of what is known is not a process of returning with one's booty to the 'cabinet' of consciousness after one has gone out and grasped it..."

<sup>161</sup> It is an open question whether such fact-perception can always be forced into the mold of "seeing-that". Suppose I see Derek running; that is, I have a successful perceptual experience as if this is so. I thus see—am perceptually aware—of a certain fact, namely, the one consisting of Derek's running. Do I thereby *see that* Derek is running? One might say: perhaps not, if I am not aware (or do not subsequently believe) that it is *Derek*, rather than (say) a very tall person, who is running. Cf. Williamson (2000, 38).

<sup>162</sup> Naïve realism about perception implies that what it is to be a successful perception is not determined exclusively by its nonrelational features, but also by certain of its relational features. This is to resist what Baker (2000, 44) describes as "the long-standing prejudice that what [a given entity] really is—in itself, in its nature—is determined exclusively by its nonrelational properties."

p; not so for unsuccessful perceptual experience. In other words, part of *what it is* for a successful perceiver's perceptual awareness of the fact that p to exist is for it to be a fact that p; but it is not the case that part of *what it is* for a veridical hallucinator's lesion-induced mental state to exist is for it to be a fact that p. So, although the successful state (perceptual awareness) and unsuccessful state (mere perceptual experience) may be subjectively indistinguishable, they are distinct kinds of state, for they are differently constituted.<sup>163</sup>

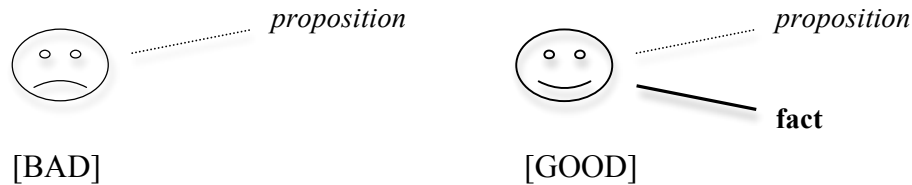
It may be helpful to view this as a kind of “disjunctivism”: when one has a perceptual experience as if p, one *either* has an unsuccessful perceptual experience as if p *or* one has a successful perceptual experience as if p. As Jonathan Dancy (1995) has observed, this disjunction need not be viewed as an *analysis* of perceptual experience; nor must its proponent deny that successful and unsuccessful perceptual experience share some “common factor”. For instance, it may be that in both a successful and an unsuccessful perceptual experience as if p, *x* stands in the *merely perceptually experiencing* relation to the *proposition* that p (see [BAD] below);<sup>164</sup> in a successful

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<sup>163</sup> Compare the view that part of what it is to know that p is to stand in a relation to a fact (we know *facts*), whereas this is not so for mere belief (we believe *propositions*); see Vendler (1967), Harman (2003), and especially Moffett (2003). Also relevant is the Wilson-Prichard-McDowell-Williamson view that knowledge is not identical to a type of belief: “To know is not merely to believe while various other conditions are met; it is to be in *a new kind of state*, a factive one” (Williamson 2000, 47 emphasis added; cf. Wilson 1926, 100, Prichard 1909, 245, and McDowell 1982). On this view, knowing and merely believing are differently constituted. This may provide a useful model for the present approach.

<sup>164</sup> My use of the term ‘mere’ should not be taken to entail that unsuccessful perceptual experience does not justify in the same way as successful perceptual experience. While one might deny that mere perceptual experience and perceptual awareness justify equally (cf. McDowell 1982), it is plausible—and in my presentationalist view (recall Part II), correct—that mere experience and perceptual awareness provide equal *prima facie* justification for corresponding beliefs.

perceptual experience as if  $p$ ,  $x$  also stands in the **perceptual awareness** relation to the **fact** that  $p$  (see [GOOD] below).



Viewed another way, successful perceptual experience and unsuccessful perceptual experience may be regarded as determinates of the same common determinable, that is, as two distinct sub-types of the type perceptual experience. (Hereafter, ‘perceptual experience’ will be reserved for this common determinable.)

Suppose that naïve realism about perception is true, and successful perceptual experiences are constituted by the facts perceived:

- j. A successful perceptual experience as if  $p$  is constituted by the fact that  $p$ .

This constitution claim might be used to explain how perceptual experience can be non-accidentally correct, and thereby able to serve as a source of knowledge of empirical facts. The explanation would proceed as follows:

[PERCEPTION] A perceiver’s perceptual experience as if  $p$  is non-accidentally correct with respect to  $p$ , and thereby able to serve as a source of knowledge that

p, because it is partly *constituted* by the fact that p (which is how the world is).

The fact that p has the property (*F*) of being the way the world is. This *ensures* that a successful perceptual experience as if p, which is constituted by the fact that p, has the property (*G*) of being not merely accidentally correct with respect to p, and thereby able to serve as a source of knowledge that p. In other words, a successful perceptual experience as if p has a certain constitution: it is constituted by the fact that p—part of what it is for this mental state to exist is for it to be a fact that p. Accordingly, this mental state has a certain property, namely, the property of being non-accidentally correct with respect to p. Consequently, it is able to serve as a source of knowledge of the fact that p.

[PERCEPTION] is like [HALLUCINATION] in that it provides an explanation of how the target mental state is *able* (or otherwise poised) to serve as a source of knowledge, even if it does not *entail* the presence of such knowledge. A useful illustration is provided by Goldman's (1976) original fake barn case: one is looking at a real barn, but there are a number of nearby (though unperceived) fake barns. It might be said, plausibly, that in such a case one does not know the fact that there is a barn here, despite one's perceptual encounter with this fact. This case often elicits mixed responses: on one hand, something has gone right (a successful perceptual encounter has occurred); on the other hand, something has gone wrong (knowledge is lacking). It is a virtue of a naïve realist approach that it can make sense of these responses. The naïve realist can say that, in such a case, one enjoys a perceptual experience that is constituted by the fact that there is a barn here. Consequently, one's perceptual experience is *able* to serve as a

source of knowledge—even though the existence of nearby (though unperceived) fakes has the result that in this particular case there is a defeater for one's belief that there is a barn here, and thus one does not *in fact* know that there is a barn here. So the naïve realist can allow that, on one hand, something has gone right, namely, one is in a state constituted by the fact, and thus one is able to know that there is a barn here; on the other hand, something has gone wrong, for the existence of nearby (though unperceived) fakes acts as a defeater that implies that one does not in fact know that there is a barn here. Cases like this indicate that what is needed is an explanation of the *ability* of a given perceptual experience to provide knowledge, even when it does not *in the end* do so (because other conditions on knowledge are not met). Such an explanation is provided by naïve realism, which introduces the constitutive explanation in [PERCEPTION].

One reason to think that [PERCEPTION] is a successful constitutive explanation is that it seems to pinpoint what makes it the case that one who successfully perceives the fact that p is able to know that p. To see this, recall a veridical hallucinator who forms a true perceptual belief about the external world on the basis of a lesion-induced accidentally correct perceptual experience. How are we to explain the subsequent *lack* of perceptual knowledge? The naïve realist about perception may offer the following explanation:

[LUCKY-PE] A veridical hallucination as if p is accidentally correct with respect to p, and thus unable to serve as a source of knowledge that p, because it is *not* constituted by the fact that p.

A veridical hallucination as if *p* is not constituted by the fact that *p*: that is, it is not the case that part of *what it is* for that mental state to exist is for it to be a fact that *p*. Accordingly, that mental state does not have the property of being non-accidentally correct with respect to *p*, and therefore is not able to provide knowledge of the fact that *p*—the desired result. Constitution may thus serve as the relation that (constitutively) explains the difference between those perceptual experiences which can, and those which cannot, provide perceptual knowledge of empirical facts.

Now, I have not argued for the constitution claim in (j).<sup>165</sup> Nor have I argued for the ensurance claim that would, if the hypothesis articulated in §32.2 is true, underwrite the constitutive explanation in [PERCEPTION]. Those are important projects, both of which we would need to undertake in order to secure the anti-skeptical result that we have perceptual knowledge. But there is another project, which is the explanatory one of articulating a framework that would allow us to explain perceptual knowledge of empirical facts, *if any such knowledge there be*. This is the present project. The intention has been to outline, and then illustratively apply, a style of explanation that has the resources necessary to render intelligible how a perceptual experience could be related to a mind-independent empirical fact so as to serve as a source of knowledge of that fact. In this way, by taking seriously the notions of constitution and constitutive explanation, we may be able to answer the question posed by [Q"] and provide a solution to the problem of perceptual knowledge.

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<sup>165</sup> Much of the growing literature on naïve realism centers on the plausibility of the constitution claim in (j). See the citations above.

### *§33.2 Explaining intuitive knowledge of abstract facts*

Let us turn now to our original problem case: intuitive knowledge of abstract facts. Recall our original explanatory question:

[Q] What relation does a thinker's intuition bear to an abstract fact that explains how the intuition can be non-accidentally correct, and thereby able to serve as a source of knowledge of that fact?

I want to suggest that an answer to [Q] might be achieved using the notions of constitution and constitutive explanation.

Naïve realism about successful perception entails that some mental states are partly constituted by the mind-independent items that they are about. Consider the following application of this general idea to the case of intuition:

#### *Naïve Realism about Intuition*

Those mind-independent items that are successfully intuited partly constitute one's intuition.

On this view, when you successfully intuit the fact that identity is transitive, that very fact partly constitutes the mental state you're in. You're *grasping* the *fact* itself. A successful intuition thus has a chunk of the world as a constituent: present in the intuition is the

reality intuited.

One motivation for naïve realism about perception is that in successful perception, we seem to enjoy an “openness to the world”: through perception, we seem to directly grasp facts about the empirical realm—for instance, that there is a red apple present.<sup>166</sup> In perception, this fact is made manifest, just by looking. In successful intuition, we seem to enjoy a similar sort of “openness to the world”: through intuition, we seem to directly grasp facts about the intellectual realm—for instance, that identity is transitive. In intuition, this fact is made manifest, just by thinking. In both cases, our mental state does not “fall short” of the world, for it is partly constituted by the fact grasped (i.e., part of *what it is* to for that state to exist is for it to be a fact that... ). Hence its success.

As in the case of perception, accidentally correct and non-accidentally correct intuitions may be subjectively indistinguishable: in some cases, they cannot be told apart from the inside.<sup>167</sup> But it does not follow that successfully intuiting is the same exact state as its unsuccessful counterpart. According to naïve realism about intuition, they are not. For instance, recalling *Ramanujan’s Intuition* (from §2 above), suppose that Ramanujan (a mathematical genius) and John (a mathematical pedestrian) both have the intuition that 1729 is the smallest number expressible as the sum of two positive cubes in two different ways: Ramanujan has this intuition because he is a brilliant mathematician, whereas John has it because he has a brain lesion. Ramanujan grasps this fact while John—a veridical intellectual hallucinator—does not. According to naïve realists about intuition, the

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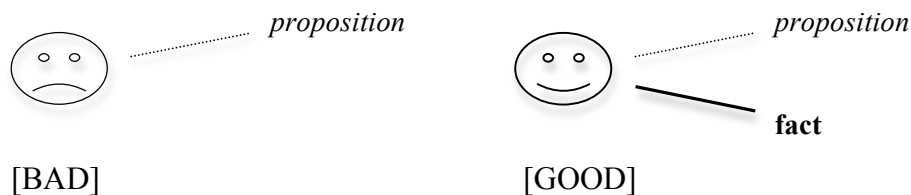
<sup>166</sup> Cf. McDowell (1982), Putnam (1994, 452-454), Martin (2002, 2006), Crane (2006, 134), and Hellie (2007).

<sup>167</sup> Naïve realism thus departs from Cartesian rationalism in disclaiming, not only the infallibility of intuition, but also the transparency of successful intuition to the reflective mind.



difference is this: the presence of *this kind of state* (demonstrating Ramanujan’s non-accidentally correct intuition that p) constitutively depends on the fact that p; not so for (John’s) unsuccessful intuition. In other words, part of *what it is* for a successful intuiter’s intuitive awareness of the fact that p to exist is for it to be a fact that p; but it is not the case that part of *what it is* for a veridical intellectual hallucinator’s lesion-induced mental state to exist is for it to be a fact that p. So, although the successful state (intuitive awareness) and unsuccessful state (mere intuition) may be subjectively indistinguishable, they are distinct kinds of state, for they are differently constituted.

This may be viewed as a kind of “disjunctivism”: when one has the intuition that p, one *either* has an unsuccessful intuition that p *or* one has a successful intuition that p. This disjunction need not be viewed as an *analysis* of intuition; nor must its proponent deny that successful and unsuccessful intuition share some “common factor”. For instance, it may be that in both a successful and an unsuccessful intuition that p, x stands in the *merely intuiting* relation to the *proposition* that p (see [BAD] below); in a successful intuition that p, x also stands in the **intuitive awareness** relation to the **fact** that p (see [GOOD] below).



Viewed another way, successful intuition and unsuccessful intuition may be regarded as

determinates of the same common determinable, that is, as two distinct sub-types of the type intuition. (Hereafter, ‘intuition’ will be reserved for this common determinable.)

Suppose that naïve realism about intuition is true, and successful intuitions are constituted by the abstract facts intuited.<sup>168</sup>

- k. A successful intuition that *p* is constituted by the abstract fact that *p*.

This constitution claim might be used to explain the ability of intuition to serve as a source of knowledge of abstract facts. The explanation would proceed as follows:

[INTUITION] A thinker’s intuition that *p* is non-accidentally correct with respect to *p*, and thereby able to serve as a source of knowledge that *p*, because it is partly constituted by the fact that *p* (which is how the world is).

The fact that *p* has the property (*F*) of being the way the world is. This *ensures* that a successful intuition that *p*, which is constituted by the fact that *p*, has the property (*G*) of being not merely accidentally correct with respect to *p*, and thereby able to serve as a source of knowledge that *p*. In other words, a successful intuition that *p* is a mental state with a certain constitution: it is constituted by the fact that *p*—part of what it is for this mental state to exist is for it to be a fact that *p*. Accordingly, this mental state has a certain property, namely, the property of being non-accidentally correct with respect to *p*.

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<sup>168</sup> We will consider the worry that mental states cannot be constituted by abstracta in the next section.

Consequently, it is able to serve as a source of knowledge of the fact that p.<sup>169</sup>

One reason to think that [INTUITION] is a successful constitutive explanation is that it seems to pinpoint what makes it the case that one who successfully intuits the fact that p is able (or otherwise poised) to know that p. To see this, consider a veridical intellectual hallucinator who forms a true intuitive belief on the basis of a lesion-induced accidentally correct intuition (e.g., the lucky intuition that Goldbach's conjecture holds or that 1729 is the smallest number expressible as the sum of two positive cubes in two different ways). How are we to explain the subsequent *lack* of intuitive knowledge? The naïve realist about intuition may offer the following explanation:

[LUCKY-I] A veridical intellectual hallucination that p is accidentally correct with respect to p, and thus unable to serve as a source of knowledge that p, because it is *not* constituted by the fact that p.

A veridical intellectual hallucination as if p is not constituted by the fact that p: that is, it is not the case that part of *what it is* for that mental state to exist is for it to be a fact that p. Accordingly, that mental state does not have the property of being non-accidentally correct with respect to p, and thereby able to provide knowledge of the fact that p—the desired result. Constitution may thus serve as the relation that (constitutively) explains the difference between those intuitions which can, and those which cannot, provide

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<sup>169</sup> [INTUITION] is like [HALLUCINATION] and [PERCEPTION] in that it explains how its target is *able* to serve as a source of knowledge, even if it does not *entail* the presence of such knowledge. Recall discussion of this issue in §32.3 and §33.1.

intuitive knowledge of abstract facts.

As before, I have not argued for the constitution claim in (k). Nor have I argued for the ensurance claim that would, if the hypothesis articulated in §32.2 is true, underwrite the constitutive explanation in [INTUITION]. Those are important projects, both of which we would need to undertake in order to secure the anti-skeptical result that we have intuitive knowledge. But there is another project, which is the explanatory one of articulating a framework that would allow us to explain intuitive knowledge of abstracta, *if any such knowledge there be*. This is the present project. The intention has been to outline, and then illustratively apply, a style of explanation that has the resources necessary to render intelligible how an intuition could be related to a mind-independent abstract fact so as to serve as a source of knowledge of that fact. In this way, by taking seriously the notions of constitution and constitutive explanation, we may be able to answer the question posed by [Q] and provide a solution to the problem of intuitive knowledge.

#### *§34. Summary: Naïve Realist Rationalism*

The problem of intuitive knowledge got going through a comparison with perception. I have suggested that it may also be addressed through a comparison with perception.

There is a question about how each of intuition and perceptual experience are able to serve as sources of knowledge, for being veridical (correct, true) is not enough in either case. What is needed is to be appropriately related to the facts, to the way the world

is—only this can ensure the non-accidental correctness of the intuition or perceptual experience. Enter naïve realism, which says that certain mental states are constituted by mind-independent facts—that is, they stand in a non-causal, irreflexive, asymmetric ontological dependence relation to the way the world is. Stated in terms reminiscent of Socrates’ famous conversation with Euthyphro: we have certain mental states *because the world is the way that it is*, rather than the world being the way it is because we have those mental states. Given that they are constitutively related to the facts, these mental states are not merely accidentally correct. They may be logically independent of the facts; but they are not metaphysically independent of them: on the contrary, that there is such a fact is part of *what it is* for such a mental state to exist. So, when enjoying such a state there is a sense in which we have the world in mind. Of course, enjoying such a state is not alone sufficient for knowledge of that fact (e.g., one may not go on to form the corresponding belief, there may still be defeaters, etc.). Nevertheless, such a state is non-accidentally correct, and thereby *able* to serve as a source of knowledge of that fact.

To be clear, the proposal is not that we (circularly or vacuously) explain the success of successful states in terms of their success. Rather, the explanation proceeds in terms of constitution. The explanandum is a certain mental state’s being non-accidentally correct, and thereby able to serve as a source of knowledge. The explanans is that mental state’s constitution, namely, its being constituted by the fact it is about. In short, supposing that (i) a mental state with the content that *p* is constituted by the fact that *p* (as allowed by naïve realism), (ii) the fact that *p* has the property of being how the world is, and (iii) the fact’s having this property ensures that the mental state it constitutes has the

property of being non-accidentally correct with respect to *p*, and thereby able to serve a source of knowledge that *p*, then (given the hypothesis articulated in §32.2) we have all that is needed to explain how that mental state—whether perceptual experience or intuition—with the content that *p* can be non-accidentally correct with respect to *p*, and thereby able to serve as a source of knowledge that *p*.

One might have thought that causation must play a central role in a philosophical account of how mental states can be non-accidentally correct, and thereby able to serve as sources of knowledge. But that thought is called into question, not simply by the phenomenon of so-called deviant causation (which seems to imply that mere causation is not explanatory of non-accidental correctness), but more directly by the case of Trip. An approach that accommodates this case is made possible by focusing, as naïve realists do, on the constitution of certain mental states. The proposal is a constitutive, rather than causal, explanation of why certain mental states are non-accidentally correct, and thereby able to serve as sources of knowledge—if, of course, they do. In the case of perceptual experience, a naïve realist approach tells us that *if* we have perceptual knowledge of empirical facts (facts about mind-independent concrete entities), then such facts constitute our perceptual experiences. In the case of intuition, a naïve realist approach tells us that *if* we have intuitive knowledge of abstract facts (facts about mind-independent abstract entities), then such facts constitute our intuitions. This suggests that perception and intuition are, in an important respect, on the same footing. At the same time, it introduces a novel way of understanding how we can know certain facts by thinking, thus pointing the way towards not only a solution to [Q], the problem of

intuitive knowledge, but also an answer to The Guiding Question.

### §35. *Questions and Replies*

The proposal sketched above is programmatic in a number of ways. This section considers several questions that invite clarification and further development of the overall explanatory strategy.

#### §35.1 *Can non-abstracta be constituted by abstracta?*

It might be thought that whereas non-abstracta, such as mental states of subjects, might be constituted by other non-abstracta, such as empirical facts, non-abstracta cannot be constituted by abstracta, as naïve realism about intuition requires. For (the thought goes) this would require an unacceptable style of metaphysical “comingling”.

In response, recall that the reason that non-abstracta cannot be *caused* by abstracta is that this follows from the fact that abstracta are nonspatiotemporal entities that are causally inert. It does not similarly follow from this that non-abstracta cannot be *constituted* by abstracta. Additional (and in all likelihood controversial) assumptions about, e.g., abstracta, mental states, and the constitution relation would be needed to establish such a result—assumptions that the naïve realist about intuition presumably need not share. In short, there is no obvious “structural” problem in the idea that non-abstracta can be constituted by abstracta.

Nor is there a lack of precedent for this idea. To see this, first note that abstracta, though causally inert, are not in general constitutionally inert. Here are some cases in

which abstracta may be (and have been) said to be constituted by other abstracta:

- l. The set of whole numbers between one and ten is an abstract entity constituted by its abstract members, e.g., the number three.
- m. Fregean propositions are abstract entities constituted by abstract entities, namely, Fregean senses.

Next consider some cases in which abstracta may be (and have been) said to be constituted by non-abstracta:

- n. The set {Obama, Biden} is an abstract entity constituted by its non-abstract members, namely, Obama and Biden.
- o. Russellian propositions are abstract entities partly constituted by concrete entities, namely, material objects.
- p. Lewisian properties are abstract entities constituted by concrete entities, namely, Lewisian possibilia.
- q. Aristotelian universals are abstract entities constituted by concrete entities.

Finally, we turn to a few cases in which non-abstracta may be (and have been) said to be constituted by abstracta:



- r. The event of Derek running is constituted by Derek, *the property of running*, and a time.
- s. The thick particular which is the red apple is constituted by the apple and *the universal redness*.

Example (r) involves events, which on a Kimian view can be understood as concrete entities partly constituted by abstracta, namely, properties. Example (s) summarizes Armstrong's view of states of affairs, according to which they are concrete entities partly constituted by abstracta, namely, universals.<sup>170</sup> As a third example, a bundle theorist who accepts a certain type of trope theory might say:

- t. Individuals are concrete items constituted by a bundle of abstract particulars.

To the extent that naïve realism about intuition requires a similar style of metaphysical “comingling”, it can be seen as merely exploiting a possibility already exploited in, and recognizable from, other areas of philosophy.

### §35.2 *Is the absence of causation problematic?*

It might be thought that there is something problematic about maintaining that an entity can constitute a subject's mental state in the absence of a causal relation between that entity and the subject's mental state. Isn't the absence of causation problematic?

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<sup>170</sup> Armstrong (1997, 126 emphasis added): “States of affairs [have] as *constituents* both particulars and universals.” Armstrong refers to states of affairs as ‘thick particulars’.

There are at least two things to say in response to this question. First, if the worry is simply that causation-less constitution is problematic, it is worth bearing in mind that constitution is typically causation-less. Recall, for example, that the vase is *constituted* by the piece of glass, although the vase is not *caused* by—does not stand in a causal relation to—the piece of glass. Second, if the worry is that causation-less constitution of a *mental state* is problematic it is worth returning to the case of Trip. There is no causal relation between the colors and shapes and Trip’s hallucinatory experience. Despite this, as we have seen, we may conceive of Trip’s experience as constituted by those colors and shapes.

The case of Trip suggests that there is no in principle obstacle to causation-less mental constitution. If this is denied, it is important to articulate the reason for this denial so that its plausibility and alleged compulsoriness can be assessed.<sup>171</sup> It may be true that some philosophers harbor independent commitments that prevent them from embracing the type of non-causal approach outlined above. But, absent an argument that such commitments are in no way optional, it is open to a proponent of this type of explanation to blame (and consequently reject) those independent commitments, rather than the explanation. I submit that this door has not been closed. At present, it remains fully rational to think that the absence of causation does not pose an in principle obstacle to the idea that successful intuitions may be partly constituted by the facts intuited, even though there is no causal relation between those facts and one’s intuitions.

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<sup>171</sup> Hopefully it will be agreed that the putative constraints or rules governing attempts to answer [Q] and similar explanatory questions, such as [Q], must be rendered transparent. In this connection, note that if the answer to the problem of hallucinatory knowledge offered in §32.3 is deemed to violate these rules, an alternative answer that obeys them would then be needed.

§35.3 *In virtue of what does the fact constitute the intuition?*

There is a more general worry concerning the idea that successful intuitions are partly constituted by, though not caused by, the abstract facts that they are about. This worry focuses on the question of what grounds or *makes it the case* that an abstract fact partly constitutes a successful intuition, if and when it does. Let I be a successful intuition of a subject *x* that is partly constituted by an abstract fact F. The worry may then be stated as follows:

1. A causal relation between I and F does not make it the case that I is partly constituted by F.
2. The spatial arrangement of I and F, together with certain further facts (e.g., facts regarding historical properties of that spatial arrangement),<sup>172</sup> does not make it the case that I is partly constituted by F.
3. If neither (i) a causal relation between some entity E and another entity E\* nor (ii) the spatial arrangement of E and E\*, together with certain further facts, makes it the case that E is partly constituted by E\*, then nothing makes it the case that E is partly constituted by E\*.
4. If there is nothing that makes it the case that a given entity E is partly constituted by some other entity E\*, then E is not partly constituted by E\*.
5. Therefore, I is not partly constituted by F—in which case naïve realism

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<sup>172</sup> Cf. Baker's (2000, 39 ff.) appeal to facts regarding "favorable circumstances".

about successful intuition is false.

The reasoning behind (1) is straightforward: given the causal inertness of abstracta, there cannot be a causal relation between I and F and, a fortiori, there cannot be a causal relation that makes it the case that I is partly constituted by F. (This might be regarded as the kernel of truth in the objection discussed in §35.2.) Similar reasoning is behind (2): given that abstracta lack spatial location, there cannot be a spatial arrangement between I and F such that this spatial arrangement, together with certain further facts, makes it the case that I is partly constituted by F. (This might be regarded as the kernel of truth in the objection discussed in §35.1.)

One might respond to this worry by arguing that causal relations and spatial arrangements do not exhaust the range of candidates: something else might make it the case that one entity partly constitutes another entity. This response might be motivated by contemplating some of the examples discussed in §35.1, namely, (l) – (t), in which one entity partly constitutes another entity, even though there are neither causal relations nor spatial arrangements that could make it the case that this is so. Such examples imply that premise (3) or premise (4) is false, thus suggesting that the worry is based on a false presupposition. Call this ‘Response 1’.

It is worth taking a moment to explore a second response, ‘Response 2’, which focuses on the potential relevance of the notion of *essence* (nature, definition) to discussion of the ground of constitution. Can we rule out the possibility that, at least in some cases, what makes it the case that a given entity is constituted by what it is is

simply that what it is, essentially (by nature, by definition), to be the entity in question just is to be an entity so constituted? In such cases, we could say that what makes it the case that the entity is so constituted is simply that *it is part of the essence of that entity to be so constituted*. In such cases, it is the *essence* of the entity at issue that would make it the case that the entity is constituted by what it is. So, (3) would be false.<sup>173</sup>

It is worth pausing to consider whether there might be any such cases. Once again, return to (l) – (t). What makes it the case that a given set—say, the set {Obama, Biden}—is constituted by its members—in this case, Obama and Biden? What makes it the case that the Fregean proposition that Hesperus is identical to Phosphorus is constituted by the senses *Hesperus*, *identity*, and *Phosphorus*? What makes it the case that the event of Derek running is partly constituted by Derek? Arguably, the answer in each of these cases is simply that what it is, essentially (by nature, by definition), to be the particular entity in question just is to be an entity so constituted.

So, for example, it is part of the essence of the set {Obama, Biden} to be constituted by Obama and Biden; it is part of the essence of the Fregean proposition that Hesperus is identical to Phosphorus that it is constituted by the senses *Hesperus*, *identity*, and *Phosphorus*; it is part of the essence of the event of Derek running that it is constituted by Derek. In each of these cases, the relevant entity E's constitution by the entity E\* that constitutes it is part of the essence of E (i.e., it is part of E's nature or definition that it is constituted by E\*). There is nothing further that makes it the case that

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<sup>173</sup> This response might be construed, or modified, so that it challenges premise (4). The idea would then be that in certain cases, there is *nothing* that makes it the case that a given entity is constituted by what it is, for it is simply part of the essence of that entity to be so constituted.

E is constituted by E\*: that is just what it is to be E, namely, to be an entity constituted by E\*. In short, *it is part of the essence of E to be constituted by E\**.<sup>174</sup>

The naive realist rationalist might similarly hold that it is part of the essence of a successful intuition—say, the successful intuition that identity is transitive—that it be partly constituted by the corresponding fact—in this case, the fact that identity is transitive. More generally, a given successful intuition I’s constitution by a given fact F is part of the essence of I (i.e., it is part of I’s nature or definition that it is constituted by F). There is nothing further that makes it the case that I is partly constituted by F: *it is part of the essence of I to be constituted by F*.

Is this response—Response 2—defensible? The central idea is that, in certain cases, including the case of successful intuition, what makes it the case that a given entity is constituted by what it is is simply that it is part of the essence of that entity to be so constituted. Presumably there are also cases of constitution in which this is not so: in such cases, what makes it the case that the entity in question is constituted by what it is is something *else*, for example, a certain causal relation or spatial arrangement. The possibility of the latter type of case need not call into doubt the possibility of the former type of case. In fact, the difference between them would seem amenable to a simple explanation. Whereas in the former type of case, articulating the constitution of the entity in question identifies the essence of that entity, in the latter type of case, articulating the

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<sup>174</sup> Observations by Fine (1994) may imply that it might be of the essence of E that it is partly constituted by E\*, though it is *not* of the essence of E\* that it partly constitutes E. (I have in mind Fine’s example involving the membership of Socrates in the singleton {Socrates}.) While Fine’s (1994, 1995, 2000) theory of essence may provide a congenial framework within which to formulate the present points, and thus to develop what I am calling Response 2, an alternative theory of essence (nature, definition) may serve equally well.

constitution of the entity in question does *not* yet identify the essence of that entity (hence the need to appeal to something else).

To illustrate, recall our earlier example of a vase (call it ‘V’) constituted by a piece of glass (call it ‘G’). Even if we accept the doctrine of the necessity of origins—the doctrine that, roughly, it is a necessary truth that a given entity has the origin that it does (Kripke 1980, Lecture III)—we can still acknowledge that at some point (perhaps after its origination) V could be, or could have been, made of any one of a number of different materials (e.g., a piece of glass-and-glue; a piece of plastic-and-glass-and-glue; a piece of plastic-and-glue; etc.), and thus V’s constitution by *G in particular* is not essential to V. That is, while it may be part of V’s essence to be constituted by *some* piece of material, namely, a piece of material *that is thus and so*, it is not part of the essence of V that it is constituted by *G*. To the extent that articulating the constitution of V fails to identify its essence, there remains something *further* to be said about what makes it the case that V is constituted by G. There is, as it were, a gap between V and G that remains to be filled by what *else*—something other than the essence of V—makes it the case that V is constituted by G. (Perhaps here the gap is to be filled by an answer along these lines: what makes it the case that V is constituted by G is that what it is for V to exist is just for there to be *some* entity that has such-and-such spatial properties and such-and-such historical properties, *and G has precisely those spatial and historical properties*—that is, G is a piece of material that is thus and so.)

By contrast, since articulating the constitution of the set {Obama, Biden} identifies its essence (it is part of the essence of this set that it is constituted by Obama

and Biden), there is nothing further to be said about—no gap to be filled by—what makes it the case that the set {Obama, Biden} is constituted by Obama and Biden. Likewise for Fregean propositions, events, and successful intuitions. It is part of the essence of a successful intuition I that it is partly constituted by the corresponding fact F. Since articulating the constitution of I identifies its essence, there is nothing further to be said about, and no gap to be filled by, what *else*—other than the essence of I—makes it the case that I is partly constituted by F.

These remarks are not meant to be conclusive; far from it, they simply gesture at one way of approaching the issue of the ground of constitution. To the extent that this approach can be shown to be plausible, it allows a second response—Response 2—to supplement the first response—Response 1—to the general question of what makes it the case that a fact constitutes an intuition.

#### §35.4 *How does a thinker come to have a successful intuition?*

A fourth question focuses not on what makes it the case that a thinker's successful intuition is constituted by an abstract fact, but rather on how a thinker comes to enjoy successful intuition. How can a thinker *come to be in* such a state?<sup>175</sup>

The natural response to this broadly etiological question is that we contemplate, consider, and reflect, and that such reflection—perhaps when accompanied by the

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<sup>175</sup> The difference between this question and [Q] might be viewed as related to the difference between a question concerning the explanation of something's being and a question concerning the explanation of something's coming into being. Viewed this way, the preceding discussion has focused on the former type of explanation. Thanks to John Basl and Mike Titlebaum for discussion on the issues in this section.



appropriate intelligence, attentiveness, understanding, etc. (recall also the “techniques” listed in §24)—puts us in a position to successfully intuit, that is, to be in a state that is constituted by an abstract fact. Here we can compare reflecting with looking. We engage in acts of searching, scanning, and looking, and such looking—perhaps when accompanied by the appropriate lighting, attentiveness, familiarity, etc.—puts us in a position to successfully see, that is, to be in a state that is constituted by an empirical fact.

However, such a comparison might be taken to highlight or reinstate the original worry. For whereas we can understand how looking enables one to come to be in a state of successful seeing by noting the presence of a causal relation between the looker and that at which she looks, we cannot understand how reflecting enables one to come to be in a state of successful intuiting by noting the presence of any causal relation between the reflector and that upon which she reflects. For there is no such causal relation. How, then, do we come to be in a state of successful intuition?

One type of response employs a divide-and-conquer strategy. The aim would be to answer the “how-do-we-come-to-be-in” question in two phases:

*Phase one:* Specify what it is for a mental state to be a state of successful intuition.

*Phase two:* Specify how it is that we come to be in such a mental state.

The answer at phase one is naive realism about intuition: the successful intuition that *p* is a mental state that is partly constituted by the fact that *p*. That is just what it is to be that

mental state (perhaps essentially so, in which case there need not be a distinct answer to the separate question of what makes it the case that the state is so constituted; recall §35.3). Such an answer identifies a particular mental state: a very special mental state, no doubt, but a mental state for all that. Phase two then says how we come to be in that mental state by applying the correct theory of the metaphysics of mind, whether it be functionalism, the identity theory, or some other view, to the case at hand. To illustrate, if functionalism is true, then the answer will be that one comes to be in that mental state by being in a first-order state that plays a certain functional role, namely, the (“wide”) functional role in terms of which successful intuition is functionally defined.

This functionalist answer can be seen as inviting the further question of how a thinker comes to be in the indicated first-order state (viz., the first-order state that plays that functional role). To the extent that this further question goes unanswered, the divide-and-conquer strategy outlined above might be seen as ignoring rather than addressing the apparent asymmetry that inspired the original question. Again, because there is a causal relation between a perceiver and the empirical fact perceived, we can understand how a perceiver could come to be in a mental state that is constituted by the empirical fact—or, rather, a first-order state that plays the functional role in terms of which such a mental state is functionally defined—namely, by standing in a causal relation to that fact. But absent a causal relation between a thinker and the abstract fact intuited, how could a thinker come to be in a mental state that is constituted by the abstract fact—or, rather, a first-order state that plays the functional role in terms of which such a mental state is functionally defined?

Before pursuing an answer to this further question—this how-do-we-come-to-be-in question—it will be useful to take a moment to once again return to the case of Trip. Worries resembling those that we are presently struggling to address also arise when trying to understand Trip’s hallucinatory experience, which enables him to know  $[\alpha]$  and  $[\beta]$  absent a causal relation between his mental state and the relevant facts about colors and shapes. How did Trip come to be in that state? If we apply the divide-and-conquer strategy described above, the answer at phase one is that his experience is a mental state that is partly constituted by the relevant facts about colors and shapes. Phase two then applies the correct theory of the metaphysics of mind: for example, Trip came to be in that mental state by being in a first-order state that plays a certain functional role, namely, the functional role in terms of which such hallucinatory experience is functionally defined. This, then, invites the further question of how Trip came to be in the indicated first-order state (viz., the first-order state that plays that functional role).

Notice that while a causal answer to  $[Q']$ —which concerns the explanation of Trip’s hallucinatory knowledge regarding the relevant colors and shapes, absent causation—is off-limits, it is not obvious that a causal answer to the broadly etiological question of how-Trip-comes-to-be-in-that-state is similarly off-limits. As we saw in §31, there may be *some* causal story to be told, at least at the level of proximal causes, even when there is no causal relation between one’s mental state and that which it is about. In the case of Trip, this means that although his first-order state does not stand in a causal relation to the relevant colors and shapes, and there is no causal explanation of *how his hallucinatory experience can provide knowledge* about those colors and shapes, there

may still be some proximal cause (e.g., neural stimulations), and thus some causal explanation, of *how he came to be in* that first-order state.

If such an answer is available in the case of Trip, it may also be available in the case of intuition: although a thinker's first-order state does not stand in a causal relation to abstract facts, and there is no causal explanation of *how a thinker's intuition can provide knowledge* of those facts, there may still be some proximal cause (e.g., neural stimulations), and thus some causal explanation, of *how she came to be in* that first-order state. If this is so, then the divide-and-conquer strategy may in the end make possible a satisfying answer to the how-do-we-come-to-be-in question.

It is also worth exploring alternative answers. One such answer is that, in the intellectual case, it is constitution “all the way down”, as it were. From this perspective, the natural response in terms of reflection (consideration, contemplation) sketched above is the correct answer, and we should not be impressed by the asymmetry objection, which cites the presence of causation in the case of looking but the absence of causation in the case of reflecting. It may well be that the demand for symmetry has already been defeated or overcome by the possibility of constitution and non-causal, constitutive explanation. If this is correct, then the phenomenon can be understood roughly as follows: successful intuition is a mental state constituted by an abstract fact; a thinker comes to be in such a state through prior reflection (contemplation, consideration); in those cases where one comes to be in a state of successful intuition through reflection, then one's prior mental state—one's reflection—is likewise constituted by the abstract fact in question.

There may be yet other ways of answering the how-do-we-come-to-be-in

question. The divide-and-conquer strategy and constitution-all-the-way-down hypothesis suggest two ways of understanding how a thinker comes to be in a state of successful intuition.<sup>176</sup> Naïve realism about successful intuition itself is neutral between these—and other—approaches.

§35.5 *How are we to evaluate claims to intuitive knowledge?*

A fifth worry is that naïve realism about intuition offers no insight into how we are to assess claims to intuitive knowledge, in which case we are no better off than we were before it entered the scene, that is, when we were troubled by the idea that intuition might serve as a source of knowledge of abstract facts.

It is important to once again emphasize that the present approach does not attempt to *convince* the opponent of realist rationalism, who is seriously troubled by claims to intuitive knowledge; as stated in §30, the aim is dialectical adequacy, not dialectical persuasiveness. Nor does the foregoing discussion purport to show that intuition is *in fact* a source of knowledge of abstracta, that is, that there *is* intuitive knowledge of abstract facts. Perhaps what disturbs is the expectation of a defense or vindication of this claim, maybe together with instructions for spotting or securing intuitional success.<sup>177</sup> But, as stated at the outset, such is not our project here. The goal of the present discussion is

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<sup>176</sup> Further exploration is needed. Study of this issue may also benefit from examination of the role of causation in, and the implications of hallucinatory knowledge as well as the phenomenon of deviant causation for, our understanding of success (non-accidental correctness). From the perspective of naïve realism, causation alone does not secure success, even in the perceptual case: what is needed is constitution. See Appendix II for relevant discussion.

<sup>177</sup> The specific issue of how we might detect and correct intuitional errors, and thereby increase the likelihood of success, was discussed in Part II.

simply to address the explanatory question: *if* there is such knowledge, how could this be? I have sketched an answer to this question using the notions of constitution and constitutive explanation.

It is also important to bear in mind that the present approach does not seek to counter the epistemic skeptic who wonders about the character of the warrant a thinker might have for taking herself, in good intellectual conscience, to satisfy condition (v), and thus for laying claim to knowledge via intuition (cf. Wright 2004b). In general, we might ask, what non-question-begging grounds could a thinker have for taking herself to be in a state that is constituted by the relevant fact? This (second-order) skeptical question is no less pressing, nor less difficult, here than in the case of perception. It is natural to respond in both cases that a knower need not be in a position to defend her status as a knower through a sound argument that uses only premises which do not beg the question against the skeptic. Perhaps this is so; perhaps not. Fortunately, for our purposes, it suffices to note that the skeptic poses a distinct challenge—a wholly skeptical challenge, not an explanatory challenge—that is not specific to intuition (nor to realist rationalism) and, in any case, requires a separate treatment.

Naïve realism about intuition employs a style of non-causal, constitutive explanation that seeks to address the question of how an intuition could be connected to a mind-independent abstract fact. While it may be true that this approach does not deliver a recipe for assessing claims to intuitive knowledge, it may still provide some insight into how intuition might serve as a source of knowledge of abstracta.

### *§36. How Intuition Works*

We have seen that the problem of intuitive knowledge bears important similarities to the problem of hallucinatory knowledge. A working hypothesis is that a solution to the latter problem opens to the door to a satisfactory resolution of the former problem. I have sketched how one might develop this hypothesis, suggesting that the way forward in both cases—and in the philosophy of perception—plausibly lies, not in causation, but in the notions of constitution and constitutive explanation.

The guiding idea is that we need the notion of a mental state that is not causally, but rather is constitutively, related to the facts. This notion has a variety of applications: it can be used to explain hallucinatory knowledge, perceptual knowledge, and intuitive knowledge. Specifically, it allows us make sense of how Trip's hallucinatory experience is able to serve as a source of knowledge about the colors and shapes it is of or about. A naïve realist may make use of this notion in the philosophy of perception to make sense of how successful perception puts us in touch with a realm of mind-independent empirical facts. The notion may be put to similar use in the philosophy of intuition to make sense of how successful intuition puts us in touch with a realm of mind-independent abstract facts—and thus, for the realist rationalist, to render intelligible the possibility of knowledge via intuition.

Such an approach offers a picture of how intuition works, in outline, that aims to responsibly engage an important explanatory challenge. The goal throughout has been largely programmatic: to trace the contours of a constitution-based metaphysics of intuitive knowledge that makes good on realist rationalism's commitment to the possible

satisfaction of condition (v)—the requirement that a thinker’s intuition be non-accidentally correct. This approach has several virtues:

1. *Generality*: it uncovers a uniform, as opposed to piecemeal, epistemology that simultaneously answers [Q] about intuition, [Q'] about hallucination, and [Q''] about perception.
2. *Sobriety*: it does not invoke mystical powers, magical forces, or unearned metaphors.
3. *Theoretical conservativeness*: it employs extant “tools” (e.g., the notion of constitution and the phenomenon of non-causal explanation), drawing upon resources familiar from other areas of philosophy (e.g., philosophy of perception, theory of explanation, metaphysics).
4. *Independent motivation*: it requires no special pleading—in fact, it already seems to be called for by the case of Trip.
5. *Non-skeptical*: while it does not alone vindicate any claims to knowledge (i.e., it is not by itself *anti-skeptical*), it makes room for knowledge in just those places where it seems correct to allow it.

Naïve realist rationalism thus offers a framework that may help to explain—and, in turn, enable us to better understand—how we can know things just by thinking about them.



## **Appendix I: Explaining the Reliability of Perception and Intuition**

Part I focused on answering questions such as: What is intuition? How is intuition related to other mental states? Part II advanced answers to questions such as: Under what conditions does intuition serve as a legitimate epistemic source (e.g., a source of evidence or justification)? Why does intuition have this epistemic status while various other mental states do not? Is intuition's epistemic status called into question by recent empirical studies? The discussion in Part III (specifically, §§31-34) was centered on answering the following question about the possibility of intuitive knowledge of abstracta:

[Q] What relation could a thinker's intuition bear to an abstract fact that explains how the thinker's intuition can be non-accidentally correct, and thereby able to serve as a source of knowledge of that fact?

This question, which was addressed using the notion of a mental state that is constituted by a fact, can be distinguished from various other questions, such as:

[Q<sub>GROUND</sub>] What makes it the case that a successful intuition that p is constituted by the fact that p?

[Q<sub>ETIOLOGY</sub>] How does a thinker come to be in a state of successful intuition?

[Q<sub>EVALUATE</sub>] How are we to evaluate claims to intuitive knowledge?

[Q<sub>ERROR</sub>] How can a thinker detect and correct intuitional errors?

We can also distinguish [Q] from several questions concerning the truth-conduciveness or reliability of intuitions; for example:

[Q<sub>RELIABILITY</sub><sup>1</sup>] *Are thinker's intuitions non-accidentally correct, and thereby able to serve as sources of knowledge, sufficiently more often than not?*

[Q<sub>RELIABILITY</sub><sup>2</sup>] *How is it that a thinker's intuitions are or can be non-accidentally correct, and thereby able to serve as sources of knowledge, sufficiently more often than not?*

[Q<sub>RELIABILITY</sub><sup>3</sup>] *Why should it be that intuitions are or can be non-accidentally correct, and thereby able to serve as sources of knowledge, sufficiently more often than not?*

The issues raised by [Q<sub>GROUND</sub>], [Q<sub>ETIOLOGY</sub>], [Q<sub>EVALAUTE</sub>], and [Q<sub>ERROR</sub>] were discussed in §35.3, §35.4, §35.5, and §24, respectively.<sup>178</sup> The relations between [Q] and questions concerning the reliability of intuition were briefly considered in §29, where it was noted

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<sup>178</sup> There are still other questions. For instance, §30 considered the questions of whether the problem of intuitive knowledge is unique or whether a failure to answer [Q] casts doubt on (theoretical belief in) the ability of intuition to serve as a legitimate epistemic source.

that [Q] is in some sense prior to questions concerning the explanation of reliability. To appreciate the sense in which this is so, it may be instructive to actually attempt to construct an answer to one question of the latter type, that is, to give one type of explanation of the reliability of intuition. I will focus on the issues raised by [Q<sub>RELIABILITY</sub><sup>2</sup>].

Consider, first, how we explain the reliability of competent perceivers' perceptual experiences, expressed in the following principle:

[RELIABLE] If competent perceivers have a perceptual experience as if p, then p  
(for most propositions p regarding standard middle-sized dry goods).

Presumably an explanation may take the following form:

[EXPLANATION] (1) When a perceiver has a successful perceptual experience as if p, she has a mental state that bears relation **R** to the fact that p. (2) For the most part, competent perceivers' perceptual experiences bear **R** to the facts.

What is needed is to supply a value for **R**. This together with a vindication of the semi-empirical, anti-skeptical (2) would yield the desired explanation of the reliability of competent perceivers' perceptual experiences.

Similarly in the case of intuition. Consider the following principle about the reliability of mathematicians' mathematical intuitions:

[RELIABLE\*] If mathematicians have the intuition that  $p$ , then  $p$  (for most propositions  $p$  regarding standard areas of mathematics).

As before, presumably an explanation may take the following form:

[EXPLANATION\*] (1') When a mathematician has a successful intuition that  $p$ , she has a mental state that bears  $\mathbf{R}'$  to the fact that  $p$ . (2') For the most part, mathematicians' intuitions bear  $\mathbf{R}'$  to the facts.

What is needed, as in the case of perceptual experience, is to supply a value for  $\mathbf{R}'$ . This together with a vindication of the semi-empirical, anti-skeptical (2') would yield the desired explanation of the reliability of mathematicians' mathematical intuitions.

Question: *What relation could  $\mathbf{R}'$  be?* Answering this question is tantamount to answering [Q]: it is to solve—or requires solving—the problem of intuitive knowledge. In this way, [Q] is prior to questions regarding the reliability of intuition.

The naïve realist approach articulated in Part III (especially §§33-34) supplies a uniform value for  $\mathbf{R}$  and  $\mathbf{R}'$ , namely, the *is partly constituted by* relation. As emphasized above, this approach is programmatic. Nevertheless, it points the way towards an answer to [Q] and in so doing may also allow us to give one type of explanation of the reliability of intuition.

## Appendix II: Causal vs. Explanatory Theories of Perception and Intuition

Many philosophers have been impressed by a causal theory of perception, according to which there is always, as a matter of necessity, a causal relation between a perceived item and a successful perception. The non-causal explanation of perceptual knowledge offered in §33.1 is compatible with a causal theory of perception so understood. At the same time, a causal theory of perception is also not required in order for that explanation to succeed. While I cannot do full justice to the issues that this observation raises here, I think it is worth taking a moment to explore the issue a bit further. I will suggest that (i) a causal theory of perception is not immune to criticism, (ii) a more liberal explanatory theory of perception may be preferable, and (iii) an analogous explanatory theory of intuition then becomes available—in which case the perceptual analogy can be sustained even here, where it has been thought to be most vulnerable to attack.

Let us begin by briefly reflecting on the claim that causation is a necessary condition for successful perception (i.e., necessarily,  $x$  perceives an item only if  $x$ 's perceptual experience is caused by that item). This condition would imply that the absence of causation entails the absence of perception, i.e., *total blindness*. But that might seem too much. Consider the Humean hypothesis that there is no causation, rather than mere constant conjunction or the holding of various counterfactuals; this hypothesis is not obviously inconsistent with our still seeing (cf. Johnston 2004, 171-172). There is also the apparent possibility, however strange and remote, of a Superman-like being who can see through walls and other such objects (cf. Dretske 1969, 50 ff.; Johnston 2004, 172). While such vision is not ordinary, it is not clear what could rule out its possibility. (Here I

assume, as is plausible, that *extra*-ordinary perceptual achievements by an *extra*-ordinary being would still qualify as perceptual achievements, despite their extraordinariness.) We might also consider the possibility of other types of non-ordinary perceptual achievement: for example, perfectly coherent works of science fiction and fantasy regularly describe powerful wizards who perceive faraway (causally isolated) events through non-ordinary means. Two more examples that are relevant to this discussion are the possibility of a disembodied perceiver, whether a ghost, angel, soul, or god (cf. Kim 1977; Yablo 1990; Bealer 1994), and the related but distinct possibility of so-called mystical or religious perception (cf. Alston 1991).

One might be unimpressed by the above examples because of their seeming unreality. But, first, even if such cases are not actual, their possibility alone would imply that it is not the case that there is always, as a matter of necessity, a causal relation between a perceived item and a successful perception. Second, such cases are no more fantastical than many of the examples floated in, say, the philosophy of causation, where scenarios involving wizards who cast eccentric (action-at-a-distance) magical spells are regarded as satisfactory counterexamples to otherwise plausible theories. Third, the charge of unreality may not succeed in undermining the Humean hypothesis, which alone suffices to cast doubt on a robust causal requirement.<sup>179</sup>

There may be a further reason, independent of the above counterexamples, to view such a requirement as misplaced. We saw above that causal relations do not exhaust

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<sup>179</sup> It is worth noting that physicalism is also not an obstacle. In fact, many of the examples mentioned in the text are consistent with physicalism, as well as functionalist or computationalist theses in the philosophy of mind. Physicalism alone cannot motivate a strict causal requirement on successful perception.

the range of possible explanatory relations (recall (a) – (d) in §30). Given this, one might wonder: why should we privilege a narrow causal requirement over a broader, but perhaps equally effective, *explanation* requirement? Such a question is inspired by the following remark in Paul Grice’s seminal paper “The Causal Theory of Perception” (1961):

If we are to deal sympathetically with the CTP [causal theory of perception] we must not restrict the Causal Theorist to the verb ‘cause’; we must allow him to make use of...such expressions as ‘accounts for’, ‘explains’, ‘is part of the explanation of’, ‘is partly responsible for’...

These remarks suggest that the causal requirement should be broadened to include explanatory relations that might otherwise be excluded by an overly narrow focus on causation.<sup>180</sup> From this perspective, what matters for successful perception is explanation, not specifically causation. Call this *the Gricean insight*.

The Gricean insight motivates examination of an alternative to a strict causal theory of perception. I will call this alternative the *Explanatory Theory of Perception* [ETP]. Focusing on successful fact-perception, the theory can be stated as follows:

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<sup>180</sup> Strawson (1979) similarly suggests that the crux is “The idea of the presence of the thing accounting for, or being responsible for, our perceptual awareness...” One hypothesis is that Grice and Strawson did not intend ‘cause’ to be restricted to *efficient* cause, as it usually is today. Perhaps they would allow as a cause any relation picked out by ‘because’ in genuine explanation. The idea that the key to an adequate understanding of perception lies in the notion of explanation, not causation, is also emphasized by Kim (1977).

*The Explanatory Theory of Perception*

$x$  successfully perceives the fact that  $p$  iff

- i.  $x$  has a perceptual experience as if  $p$ , and
- ii.  $x$ 's experience is explained by the fact that  $p$ .

[ETP] respects the Gricean insight. In addition, it is motivated by the standard arguments for a strict causal theory (mirrors, veridical hallucination, etc.). To the extent that those arguments provide no reason to prefer a causal theory of perception over [ETP], it is natural to wonder what is left to motivate acceptance of a causal theory.

[ETP] also sits happily with the naïve realist treatment of successful perception in §33.1. That discussion suggests that condition (ii) might be satisfied by a constitutive explanation of  $x$ 's perceptual experience in terms of the fact that  $p$ . The fact that  $p$  would then explain  $x$ 's perceptual experience that  $p$  just when  $x$ 's perceptual experience is constituted by the fact that  $p$ .<sup>181</sup>

In addressing a putative disanalogy between successful perception and successful intuition, we have considered a plausible alternative to the causal theory of perception, namely, [ETP]. Consider the analogue of this approach in the case of intuition; call it *The Explanatory Theory of Intuition* [ETI]:

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<sup>181</sup> That there is no deviant constitution might suggest that this approach may have the welcome result of rendering the so-called problem of deviance tractable. I will not pursue this suggestion here.



*The Explanatory Theory of Intuition*

$x$  successfully intuits the fact that  $p$  iff

- i.  $x$  has an intuition that  $p$ , and
- ii.  $x$ 's intuition is explained by the fact that  $p$ .

[ETI] is continuous with the naïve realist treatment of successful intuition in §33.2. That discussion suggests that condition (ii) might be satisfied by a constitutive explanation of  $x$ 's intuition in terms of the fact that  $p$ . The fact that  $p$  would then explain  $x$ 's intuition that  $p$  just when  $x$ 's intuition is constituted by the fact that  $p$ .

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## **VITA**

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