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Perception and Cognition: Insights from Kant and Cognitive Science

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Perception and Cognition: Insights from Kant and Cognitive Science

by

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Abstract

Perception and Cognition: Insights from Kant and Cognitive Science

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My dissertation integrates rationalist and empirical approaches into a unified account of perceptual experience and cognition. I highlight important conceptual and theoretical distinctions that are critical for accurately interpreting the contributions of rationalist thinkers and the empirical findings of cognitive science. By identifying theoretical missteps and drawing insights from them, we can attain a plausible view of ourselves as seers, thinkers, and knowers.

My project is comprised of three stages, collectively forming a narrative. I begin with a critical analysis of Immanuel Kant's views on consciousness. I identify a novel thread of Kant's use of "consciousness," which denotes the explicit knowledge of what was formerly known by the subject only implicitly. I distinguish this third notion from Kant's concepts of self-consciousness and demonstrate how this three-part distinction can enrich our understanding of his views on consciousness and human judgment.

Second, I scrutinize Patricia Kitcher's hyper-rationalist interpretation of Kant's account of human cognition. Kitcher's provocative proposal ultimately fails because she does not recognize an important distinction I highlight, and she convicts Kant of certain empirical errors. Specifically, she overestimates the requirements for cognition by

reading all of Kant's claims about the mind's activities at the personal level. In contrast, I advocate distinguishing between personal and subpersonal levels of psychological explanation. I propose an alternative reading in which he does not run headlong into the empirical evidence. Through this critique, I show that Kitcher's interpretive missteps can help us to avoid similar errors when theorizing about consciousness and our cognitive abilities.

Lastly, I turn to more recent debates and address a central issue in the metaphysics of perception. I argue that a version of epistemological disjunctivism is not inconsistent with the science of perceptual psychology. I offer a novel integrative framework to reconcile their different explanations of perception without overintellectualizing the perceiver's epistemic capacities. When we keep the personal and subpersonal levels straight, John McDowell and Tyler Burge can each describe an aspect of a perceiver's perceptual experience without issue. Taken together, I argue that their theories of perception can contribute to a synoptic understanding of human perception.

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Chapter 0: Introduction to the Dissertation

My dissertation integrates rationalist and empirical approaches into a unified account of perceptual experience and cognition. I highlight certain conceptual and theoretical distinctions heretofore overlooked that are critical for interpreting contributions from notable rationalist thinkers, like Immanuel Kant, and for interpreting empirical findings in cognitive science, such as distinguishing between the level of the *person* and the level of cognitive processing. While resisting hyper-intellectualization (i.e., ignoring sensation), I still think there is a place for contributions from a traditional rationalist standpoint. By identifying theoretical missteps and drawing lessons from them, I argue that we can attain a plausible view of ourselves as seers, thinkers, and knowers.

My project has four stages (and papers), which collectively form a narrative. I begin with a critical analysis of Immanuel Kant's views on consciousness. I expand on previous interpreters' analyses by identifying a novel thread of his use of "consciousness" that denotes the explicit knowledge that the subject attains of what was formerly only known implicitly. I argue that this notion is distinct from his two notions of self-consciousness. With these distinctions, we can appreciate something about the comprehension we have of our own minds: namely, much of what we are conscious of and rely on in thinking and judging is not *explicit to us*; rather, it takes cognitive work for us to make that knowledge comprehensible to ourselves—if we can have it at all.

Second, with that lesson in view, I scrutinize Patricia Kitcher's hyper-rationalist interpretation of Kant's views of human cognition. I argue that her provocative

interpretation overestimates the consciousness and cognitive capacities required for our cognition. Her approach ultimately fails because she does not recognize an important distinction I highlight, and she convicts Kant of certain empirical errors. Specifically, she errs by reading all of Kant's claims about the mind's activities at the personal level, whereas I advocate distinguishing between personal and subpersonal levels of psychological explanation. To fix this, I propose a new reading of Kant's rationalism on which he does not run headlong into the empirical evidence. I demonstrate that not only does Kitcher get Kant wrong, but her mistakes are instructive for other debates.

Third, I turn to more recent debates and address a central issue in the metaphysics of perception. I argue that a version of epistemological disjunctivism is not inconsistent with the science of perceptual psychology. I propose a framework in which a disjunctivist epistemological explanation can be plausibly interpreted and reconciled with a scientific explanation of a perceiver's perceptual states (without overintellectualizing her epistemic capacities). In doing so, I offer a way to resolve Tyler Burge and John McDowell's dispute over this matter. If we keep the personal and subpersonal levels of explanation straight, these theorists can each describe an aspect of a perceiver's perceptual experience without issue. I argue that, given such subtleties, McDowell and Burge's theories of perception can both valuably contribute to a synoptic understanding of human perception.

Chapter 1: Kant's Varieties of Consciousness

1. INTRODUCTION

In the *Critique of Pure Reason*, Kant maintains that a unified consciousness and its reference to a single, unitary subject are two fundamental requirements for our discursive cognition.¹ How we interpret his use of “consciousness” here will considerably influence how we understand those requirements. The challenge here is that Kant does not directly account for what consciousness is, and he often uses “consciousness” in inconsistent ways.² Nevertheless, we can gain insight into his views on this rich topic by analyzing how he uses that term to pursue other objectives. We can find some coherence among his scattered claims by identifying and analyzing a few core strands of his uses of “consciousness.”³

¹ For brevity, I will refer to the *Critique of Pure Reason* as “the First Critique” or “the Critique” henceforward. I do not reference any of Kant’s other Critiques. Quotations from Kant’s writings are drawn from the Prussian Academy edition. References to the Critique are cited with the usual A/B pagination. References to Kant’s other works are cited with that edition’s volume and page number. The English translations are my own, but I draw heavily on established translations cited in the bibliography. I use the abbreviations “*JL*” for *Jäsche Logic* and “*Log-D*” for *Dohna-Wundlacken Logic*. Lastly, I use “our” in this sentence and throughout this essay as a shorthand for human beings.

² Historical and contemporary theorists use “consciousness” in conflicting ways to denote different phenomena. The confusion generated from this poses a considerable challenge for theorizing about consciousness. Adding to this difficulty, theorists often take “consciousness” to connote many different properties (e.g., subjectivity, phenomenal quality, among others) as belonging to a single concept. Hence, as Ned Block (1995) aptly describes it, consciousness is a “mongrel concept” (p. 227).

³ It is worth noting that Kant’s uses of “consciousness” (and their corresponding notions) differ from a popular contemporary use of the same term. Philosophers of mind today often use “consciousness” to refer to phenomenal consciousness, i.e., *what it is like* to have an experience. This conception is not

The primary aim of this paper is to call attention to a special use of “consciousness” [*Bewußtsein*] in the First Critique that can sharpen our understanding of Kant’s views about consciousness.⁴ This undertaking will require a clear account of his two notions of consciousness of self: *inner sense* and *apperception*. In addition, I will demonstrate that he uses “consciousness” for a third distinct notion that I call “EK-consciousness,” which is the *explicit knowledge* of what was formerly known only implicitly by the subject.⁵ The second aim of this paper is to show that by recognizing these three notions separately, we can see and begin to appreciate certain plausible features of Kant’s view of how we think and judge.

In Section 2, I offer my interpretation of Kant’s two notions of consciousness of self that are of principal concern for many interpreters. Section 3 provides textual support to show that Kant uses “consciousness” to denote EK-consciousness. I offer two clear cases of EK-consciousness to illuminate what it is, how it can be acquired, and why it is valuable for the cognizer to attain. I establish that EK-consciousness is generated through an analytic procedure, and I distinguish this competence from the ability to apply concepts in judgment. Since Kant sometimes entangles the two in his discussions of human consciousness and cognition, it is important to clarify their relationship and their

among the notions of consciousness that interest Kant. His focus concerns those more closely aligned with what modern-day theorists would identify as psychological varieties of consciousness, such as self-consciousness or knowledge. See Chalmers (1993, pp. 24–31) and Block (2014, p. 162) for further background.

⁴ I do not claim to offer an exhaustive account of Kant’s views about consciousness. Finer distinctions could still be made.

⁵ Scholars have yet to recognize this notion of consciousness that I establish in this paper. “Explicit Knowledge Consciousness” or “EK-consciousness” is my coinage for it.

distinctive contributions to a subject's cognitive and epistemic situation. I demonstrate that we can apply concepts skillfully *without* EK-consciousness—the explicit knowledge of how we did so. It is only through an analysis that we are afforded this deeper awareness of our thinking. Hence, our ability to apply concepts alone does not entitle us to claim that knowledge. In Section 4, I argue that this third notion of consciousness cannot be explained by inner sense or apperception. In Section 5, I argue that reading the Critique with EK-consciousness carved out from Kant's two notions of consciousness of self is beneficial for interpreting his general picture of human cognition.

2. TWO TYPES OF CONSCIOUSNESS OF SELF

At least two categories of consciousness can be demarcated in Kant's picture: consciousness *of self* and consciousness *of "other things outside" oneself* (B409).⁶ Generally, scholars limit their attention to interpreting just the two notions of consciousness of self that comprise the first category: *inner sense* and *apperception*.⁷ They often minimize the importance of inner sense for Kant's theoretical philosophy and

⁶ This classification of consciousness distinguishes between self-consciousness and (mere) consciousness (i.e., intentional awareness of worldly objects, subject matters, or states of affairs). By "*other things*," Kant is referring to "things that are *distinct* from me," *qua* thinking subject (B409). He includes "my body" in this category because it is "other than" the self. This section focuses on elucidating the first category. I say more about the second category in Section 2.2.

⁷ See Kitcher (2011b) and Allison (2004) for two examples. Also, it is worth noting that Kant identifies inner sense with *empirical apperception* and often uses the two terms interchangeably (A107). For simplicity, I only use "inner sense" throughout this paper. When I use "apperception," I only refer to *transcendental* or *pure apperception*. To clarify, Kant uses "transcendental apperception" specifically when he puts it forward as a condition to explain the possibility of other *a priori* cognition. "Pure apperception" is used when Kant abstracts away from its role in explaining other *a priori* knowledge.

provide deeper analyses of apperception. Their focus on apperception is certainly not unwarranted. We must make sense of this notion to grasp “the unity of apperception” that is central to Kant’s Transcendental Deduction and the Paralogisms of Pure Reason. However, we should not let this considerable attention to apperception—as the key notion within the category of consciousness *of self*—mislead us to think this notion epitomizes Kant’s views on consciousness more generally.

In what follows, I will provide my interpretation of inner sense and apperception to elucidate Kant’s views on consciousness of self. Since the First Critique is considered the most authoritative text on Kant’s theoretical philosophy, I will establish my interpretation of these notions as they are discussed within that text. Some scholars ground their interpretations of Kant’s claims about inner sense and apperception in two less authoritative texts: *Anthropology From a Pragmatic Point of View* and his students’ notes from his logic lectures.⁸ While many discussions in those texts can illuminate some perplexing passages in the First Critique, they should not be used as the basis for understanding self-consciousness for Kant. Both texts were published much later in Kant’s career, and it is unclear when the logic lectures were delivered.⁹ The *Anthropology* was published eleven years after the Second Edition of the First Critique. It is unlikely that his views were invariable over that time; those texts may represent departures from his earlier views in the First Critique. Moreover, the context of each

⁸ See Kitcher (2011b) for her interpretation of apperception as “mental act awareness.”

⁹ G. B. Jäsche compiled the most authoritative version of the logic lectures. Kant requested that the text be prepared for publication in 1799 (*JL*, 9:3). However, it is unclear from existing records when Kant gave the lectures. See Steve Naragon’s “Kant in the Classroom” for details.

project certainly influences the meaning of the concepts discussed in each text. Ultimately, it is dubious whether Kant’s use and meaning of “inner sense” and “apperception” in his later works neatly map onto the concepts used in the First Critique.

My interpretation is considered uncontroversial by the lights of many scholars.¹⁰ Some interpreters, however, take apperception to do much more work than I argue it does here.¹¹ Given this, I use my exegesis to show that these two notions of consciousness of self cannot helpfully inform or explain another core thread of Kant’s use of “consciousness” that I present in Section 3. Let us begin by examining Kant’s conception of inner sense.

2.1 Inner Sense

In the *Transcendental Aesthetic*, Kant introduces inner sense as a faculty by which “the mind intuits itself, or its inner state” (A23). In other words, inner sense provides an awareness of the mind through the appearances constituting its inner state. Its “inner state” can be understood as the thoughts, perceptions, and experiences presented to the mind at a given time (or, strictly speaking, their appearances). While the object of inner sense—the mind, self, or soul—is represented as something undeniably actual, we are not given or directly acquainted with the self as an object itself through this faculty.

¹⁰ This interpretation is held by the analyses of Henry Allison (2004, pp. 163–167), Paul Guyer (2010, pp. 118–150), and Jill Vance Buroker (2006, pp. 118–119).

¹¹ One example is Patricia Kitcher’s (2011b) interpretation of apperception. I thoroughly critique her provocative interpretation in my paper, “Kantian Discursive Cognition and its Requirements.” Kitcher does not distinguish between Kant’s uses of “consciousness” for apperception and his uses for EK-consciousness. As a result, her account hyper-intellectualizes the consciousness and the cognitive competences required for human discursive cognition.

Rather, in inner sense, we attain an awareness of the self only as it *appears*, not *as it is in itself* (B153; B69; B55).¹²

Kant further develops his characterization of inner sense in the Transcendental Deduction (§24). He explains a paradox supposedly raised by it: to know ourselves through inner sense, we must “relate to ourselves passively” (B153). To resolve this apparent paradox, he proposes that the mind must *affect itself* by its own activity for inner sense to apprehend the contents of the mind (B67–68). More specifically, the understanding’s spontaneous, synthesizing activities (“under the designation of a transcendental synthesis of the imagination”) affect or determine inner sense (B153–54). Inner sense, then, only affords us self-awareness as we are “inwardly affected” *by ourselves*, i.e., by the thing in itself (B68; B156).¹³

Notably, some scholars incorrectly identify Kant’s notion of inner sense with contemporary or commonsense notions of introspection.¹⁴ While there is no single widely accepted characterization of its nature, “introspection” has traditionally been used to refer to an *active* capacity or process by which we become aware of our inner states.¹⁵

¹² See Ian Proops’s *The Fiery Test of Critique* for an illuminating discussion of how Kant thinks that he knows we do not inwardly observe the self as such (2021, pp. 95–97). In a sense, Kant agrees with David Hume that the self is not *given* to us in our inner appearances. However, unlike Hume, Kant cannot base this knowledge on a phenomenological report of what we find in inner sense. Since Kant’s theory of transcendental illusion suggests that *we seem* to find an absolute subject in our experience, Proops argues that he must establish that knowledge on theoretical rather than phenomenological grounds.

¹³ Exploring the complex commitments of Kant’s transcendental idealism is beyond the scope of this paper.

¹⁴ See Allison (2004, p. 277) and Proops (2021, p. 96).

¹⁵ As an illustration, Alvin Goldman points out that the term “introspection” can refer to either “a process of *inquiry*, directed at mental states” or “a process of *answering* such an inquiry” (2006, p. 246).

Introspection, so conceived, is *not* a constant and automatic awareness of our inner mental lives. The subject must activate it through a special conscious act of reflection. By contrast, Kant characterizes inner sense as a *passive* power through which we become aware of ourselves in the flow of our inner appearances (B153). Kant also says that inner sense is an awareness of what the subject “*undergoes*, insofar as he is affected by the play of his own thoughts” (Ak. 7:161). Inner sense is passive in that it must be *affected* by the understanding’s synthesizing activities. It operates whenever that condition is met; it does not depend on a subject’s conscious initiation as introspection does. Given this contrast, the faculty of inner sense should not be confused with the contemporary notion of introspection.

As a final point, Kant illuminates some other characteristic features of inner sense through his discussions of how we must distinguish this power from apperception. Their distinction largely turns on an epistemic claim about what we can know about the self. Kant maintains that the type of information we can gather and what we can know through inner sense can only be justified empirically. So, what we acquire from inner sense will always be mutable (A107). For all we know, what we are presented with through this faculty at one time may be identical to what it presents at another time. In inner sense, we are presented with appearances in time, and we have no means of identifying what is common or identical among them from one moment to the next. So, this faculty could

David Chalmers characterizes introspection similarly: “If you ask me about my mental states, it is by introspection that I determine my answer” (1996, p. 26). These examples show how introspection is often conceived as an *active* endeavor *by* the subject; it is not something the subject *merely undergoes*.

never represent the self to us *as* numerically identical. Nor could it ground any claim to the existence or the necessity of a constant, enduring self (A107). This considerable epistemic limitation of inner sense is what distinguishes it from apperception.

2.2 Apperception

Kant introduces apperception in the Transcendental Aesthetic as “the consciousness of oneself (apperception) [*Das Bewußtsein seiner selbst (Apperzeption)*],” which he says, “is the simple representation of I [*das Ich*]” (B68). In other passages of the Critique, Kant also refers to apperception as a power or an ability to be conscious of oneself, which he distinguishes from inner sense.¹⁶ So, Kant describes apperception as *both* a representation and an ability. Let us take a closer look at each use, in turn, to see how these two different but related uses refer to the same notion.

2.2.1 The ‘I’ Representation

First, Kant uses “apperception” for the simple representation, ‘I’, which expresses the awareness of oneself *as* a thinking subject (B278; A342). This ‘I’ is presupposed as a transcendental condition for all cognition because it is necessary for the *unity of consciousness* (A106). In other words, the ‘I’ serves as the *a priori* basis for the unity in the manifold of all our intuitions, concepts, and objects of experience. Kant maintains that consciousness could only have this unity if all those diverse representations could be ascribed to a single ‘I’ or a common subject (A107). Of course, it would seem *prima*

¹⁶See A117n138; B127n48; B153; A546/B574.

facie that there are many other ways that consciousness could come to have unity.¹⁷ Nonetheless, in Kant's view, the only plausible candidate for how the 'I' of apperception could accomplish this work is through the ascription of representations to a common subject.

We learn more about this 'I' representation in his discussion of the object of pure rational psychology in the Paralogisms of Pure Reason. Kant explains:

[W]e can lay at the basis of this science nothing but the **simple**, and by itself quite **empty, representation I**, of which we cannot even say that it is a concept, but only that it is a mere consciousness [*ein bloßes Bewußtsein*] accompanying all concepts. Now **through this I or he or it (the thing) that thinks, nothing more is represented than a transcendental subject of thoughts = x.** ... [C]onsciousness in itself is not so much a representation distinguishing a particular object, as rather a form of representation as such insofar as this representation is to be called cognition; **for only of such representation can I say that I think anything through it.** (A346/B404, my bolding)

¹⁷ In *The Unity of Consciousness*, Tim Bayne illuminates three kinds of unities that *could* structure consciousness. As Kant endorses, one form of unity is provided by the self or subject of experience. To borrow Bayne's example, I may hear a rumba playing on the stereo and see a bartender. So, these two conscious representations can be "*subject unified*" insofar as they are both *mine* (2010, pp. 9–10). Bayne also highlights two other possible bases for the unity of consciousness. Two experiences could be *representationally unified*, for I might hear the rumba as coming from behind the bartender. Alternatively, two experiences could be *phenomenally unified* by possessing a "*conjoint experiential character*" (p. 10). The fact that I hear the rumba *while* seeing the bartender makes the two experiences indispensable parts of a single conscious state (p. 11). While these alternative options are open to Kant, neither representational unity nor phenomenal unity could fundamentally be the transcendental condition that makes experience or our cognitions possible. If such unities structure experience, then they would depend on subject unity.

This passage shows us that the ‘I’ is a *simple, empty* representation that denotes the thinking subject or “the subject of the inherence of thought” (A355). Kant claims we do not know anything about this subject whatsoever, aside from its mere existence (A355).¹⁸ We are not acquainted with this subject in any spatiotemporal sense, and when we designate the subject solely through the ‘I’, we abstract from its properties entirely. So, the ‘I’ representation is *simple* because it is “empty of content,” viz. it has no manifold (A355; A381–82; B135). Nevertheless, we can cognize the transcendental subject through the thoughts that are its predicates. For the thought ‘I think’, we may cognize the transcendental subject through the predicate ‘think’. While both ‘I’ and ‘think’ are constituents of the complex representation ‘I think’, the ‘I’ contributes nothing to the content of that thought. So, the ‘I’ representation apart from ‘think’ is *empty* because it does not supply any substantive claims about the thinking subject; this intellectual representation only furnishes analytic ones about the subject as “a something as such (transcendental subject)” (A355; B407; B411).¹⁹

Despite the emptiness of the ‘I’, Kant argues we can still discover the singularity of the transcendental subject through an analysis of the ‘think’ predicate. He explains, “the *I* of apperception, and hence in all thought, is a *singular* that cannot be resolved into

¹⁸ This is a peculiar claim since Kant also says that we can know this subject exists, is singular, and is the same one among all our various representations. However, his point here is that we do not know anything about the *intrinsic* way that this subject exists.

¹⁹ Another way one might account for the emptiness of the ‘I’ is in terms of a representation that does not have any marks, i.e., any partial representations that mediate a concept’s reference to an object. The ‘I’ would bear an immediate relation to its denotation without any identification through the subject’s properties. In contemporary terms, we would interpret the ‘I’ as essentially indexical (cf. Perry, 1997; Kaplan, 1989). See Forgione (2019, p. 47) for a strong case against interpreting the ‘I’ as empty in such terms or as an indexical representation.

a plurality of subjects and therefore designates a logically simple subject—this lies already in the concept of thought and hence is an analytic proposition” (B407–8). Simply put, we can find the non-plurality of the subject in the concept of thinking. In Kant’s view, to be a thinker of a thought *is* to be a non-plural thinker of that thought, and “a thought can only be the effect of the absolute unity of the thinker” (A353). To clarify this point, let us imagine a contrasting case in which a plurality of thinkers could each be partial causes for a given thought, such as ‘I think it is raining’.²⁰ In that case, each thinker could act in unison to be a cause for each constituent representation of the thought respectively: ‘I’, ‘think’, ‘it’, ‘is’, and ‘raining’. Nevertheless, for Kant, it is an analytic truth of the concept of thought that there is a *single* thinker or total cause of that thought. Hence, there can only be one total cause for the thought, ‘I think it is raining’.

Returning to the passage above, the second thing we learn is that the ‘I’ of apperception is central to the system of all a subject’s thoughts.²¹ Since the ‘I’ is presupposed in all possible thought, it is fundamental to all thinking and is the same for all thinkers (A354–5). This fact about the ‘I’ representation raises an important question: what should make any token thought belong to any *particular* thinker? The ‘I’ represents the transcendental subject to all thinkers without empirical content. So, what should make the thought ‘I need a vacation’ *my* thought and not *yours*? In Kant’s view, there is a deep

²⁰ While Kant would not allow one to suppose this (in the Second Edition), this example is a helpful way to show a contrast with his view that the thinker of a thought does not comprise a plurality *qua* thinker.

²¹ Additional support for the idea that the ‘I’ of apperception is constitutively connected with all our thoughts can be found in the Paralogisms of Pure Reason. Kant says, “the absolute unity of apperception—the simple *I* ... to which all combination or separation that makes up thought refers—is important even by itself. Apperception is something real, and its simplicity lies in its very possibility” (B419).

connection between *belonging to* a subject and *inhering in* a subject. He maintains that any thought that is thought *through* the ‘I’ will inhere in the thinker who produced it (A350). This implies that a token thought will not inhere in more than one thinker. So, any thoughts that are thought through the same ‘I’ will belong to a common subject. Of course, there can be variation in the contents of a thinker’s thoughts and when they occur in time. For instance, I may think many diverse thoughts, such as ‘that bright red tomato is definitely ripe’, ‘ $2+2=4$ ’, or ‘lighthouses rule’. These thoughts will all have a necessary connection to the ‘I’ through which they are thought. In this way, the ‘I’ plays a unifying role for all thoughts that belong to and inhere in the particular thinker of them. Therefore, the ‘I’ of apperception is the representation of oneself as a single, common thinking subject.

2.2.2 The Faculty of Apperception

The second way Kant uses “apperception” is for a faculty that is necessary for our cognition of objects (i.e., as transcendental apperception). We can learn more about what this faculty is and how it functions by closely examining its role within the first main part of the Transcendental Deduction.²² The transcendental deduction is Kant’s transcendental proof of the objective validity of our applications of the categories. Kant uses it to

²² Kant wrote a new version of the Transcendental Deduction in the Second Edition of the Critique considering the criticisms leveled against the First Edition version. In the *Metaphysical Foundations of Natural Science*, he says certain ideas are more evident in the B-Deduction (Ak. 4:474–6). For that reason, I primarily focus on Kant’s presentation of apperception in the Second Edition. For brevity, I refer to the B-Deduction as “the Deduction” in this paper. I do not reference Kant’s other deductions in this paper.

establish that the *a priori* concepts we must use in all judging have a determinate reference to the objects that can be presented to the senses, i.e., the objects of our experience (B122).²³ He achieves this by revealing the ground of their objective validity such that they can become cognitions *for us* (Bxxvin103; B146; B137). The first part of the argument (§15–§21) aims to establish that there can be a necessary connection between the sensible and intellectual conditions for our cognition of objects.²⁴ Kant does this in three key steps.

The first step of the Deduction is Kant’s formulation of the transcendental unity of apperception (a.k.a., the transcendental unity of self-consciousness), which grounds the first main part of the proof. To spell out this important principle, Kant introduces the representation ‘I think’ as an act of spontaneity that is made possible *a priori* by the faculty of the understanding.²⁵ He gives this indispensable representation the name “pure apperception” (or “original apperception”) (B132). As a general requirement, the transcendental unity of apperception holds that it must be *possible* for the representation, ‘I think’, to accompany each of my representations *if* they are to represent anything *to me* (B132). It is important to recognize that he is not claiming that this representation *must*

²³ For my purposes, I will not get into the subtle questions of whether we must use *all* the categories in every judgment, just one or another category, or just one category from each of the four headings on the table of categories (See B106). Resolving these issues about how many categories must be involved in judging is beyond the scope of this paper.

²⁴ The second part (§22–§27) shows how the categories must apply to all objects presented by human sensibility.

²⁵ Kant is unclear about what exactly *spontaneity* is. He often describes it as the mind’s “self-activity,” i.e., the activity that occurs entirely within the mind (A51/B75; A343/B401). However, he does not spell it out in great detail. See Pippin (1987) for a more detailed analysis of this issue.

actually do so. Kant is only proposing that it must be *possible* for a representation to meet this condition to function as a representation within my cognitive system, among other representations that also satisfy this requirement. If a representation *can* represent itself to me, this principle holds that it must be possible to *make* that representation *self-conscious*, i.e., to ascribe it to myself. When I self-ascribe a representation, I effectively acknowledge ownership of it as one of *my* representations.

Kant does not require that we self-ascribe *all* conscious representations. That would be a much stronger requirement, making his picture of human thinking implausible. For instance, it would be rather strange for me to think, ‘I am thinking that it is warm today’. I often just think, ‘it is warm today’ without any self-ascription. Kant makes room for there to be two classes of representations that belong to the domain of cognition, i.e., the domain of what is *mine*:

(1) **conscious representations** that have the *potential* to be made self-conscious

(2) **self-conscious representations** that *are* ascribed as *my* representations

The first class of representations are *potentially self-conscious* representations that it is possible for the ‘I think’ to accompany.²⁶ If a subject self-ascribes a conscious representation R (by thinking ‘I think R’), she makes R a self-conscious representation. The second class of representations has been *made self-conscious*. We can think of self-conscious representations as second-order thoughts *about oneself as thought or thinking*

²⁶ Kant suggests that non-human animals are capable of objective perceptual consciousness insofar as they have intuitions (*Log-D*, 24:702); however, he clearly states that they lack the capacity for self-consciousness (A546/B574). So, animals do not have either of these two classes of representations. Still, we may attribute conscious representations that *cannot be made self-conscious* to animals.

activity. This interpretation is warranted by Kant's claim that the 'I think' (viz. pure apperception) is a judgment, which takes the form of "the representation of a representation of an object" (A341/B399; A68/B93). So, if apperception makes representations take this form, they will be higher-order representations. Correspondingly, conscious representations are first-order representations whose content will be the intentional objects perceived. With this distinction in mind, let us return to the Deduction.

The second step of the argument establishes a connection between the conditions for thinking and the conditions for representing objects given in intuition. Kant maintains that the manifold of representations that are given in intuition (prior to all thinking) would not altogether be *my* representations if they did not belong to *me*: to one self-consciousness or to the same subject in whom this manifold is found (B132). Hence, intuitions also bear a necessary reference to the 'I think'. Accordingly, Kant argues that intuitions and concepts necessarily conform to the same original and transcendental condition: they inhere in a common subject. Since they both satisfy this same condition, intuitions and concepts can stand together as unified in one consciousness, i.e., in a unified set of various representations. Since pure apperception is the same condition and act in thinking all representations, they can all be ascribed to a single thinking subject (B138). With this formulation of the transcendental unity of apperception in view, we find that transcendental apperception is the power of self-ascribing representations. It makes the synthetic unity of all our cognitions possible, viz. the connection among the mind's cognitions brought about by operations of synthesis.

As a third step, Kant argues that it is not merely because the ‘I think’ passively accompanies all my representations that I can say that these representations all belong to one *identical self*. Rather, there is a stronger requirement to validate one’s consciousness of the identity of apperception itself in all of one’s representations. Kant explains:

[T]his reference [to the subject’s identity] comes about ... **through my adding one representation to another and being conscious of their synthesis** [*und mir der Synthesis derselben bewußt bin*]. Hence only because I can combine a manifold of given representations *in one consciousness*, is it possible for me to represent *to myself the identity of the consciousness in these representations*. I.e., the *analytic* unity of apperception is possible only under the presupposition of some *synthetic* unity of apperception. (B133–34, my bolding)

Kant suggests that I can only claim that these representations all belong to me—an identical self—if I could have been the one that unified them in the first place. The fact that a manifold given in intuition is represented *as a manifold* requires us to presuppose that it must be the product of a prior synthesis (B130). What validates the reference of these representations within that manifold of intuition to a *single* subject? Kant argues that I can represent the identity of the ‘I’ or the transcendental subject in those representations only if I am the one that combined each of the representations that comprise that one consciousness. Hence, the analytic unity of apperception allows me to validate and know my numerical identity in my representations. However, Kant stresses that this is not yet *the consciousness of the synthesis*.

Kant claims that one must grasp the necessity of the “synthetic unity of the manifold of intuitions, as given *a priori*,” in order to grasp “the basis of the identity itself

of apperception, which precedes *a priori* all *my* determinate thought” (B134). In other words, the mind can only think of its identity in the diversity of its representations through apperception—or the awareness of its unifying activity via the ‘I think’—by necessarily thinking these representations in a single, unified act of thinking. Since the analytic unity of apperception gives us the form of apperception in all possible cognition (i.e., ‘I think’), it will be the form that pertains to all cognition through concepts inasmuch as the same contentless ‘I’ can accompany them in the same way in all thinking (A354). Notably, the ‘I think’ expresses the same thing as ‘*I exist as thinking*’ (B429). Since the content of pure apperception can only come from the predicate ‘think’, its content will just be the activity of thinking. Therefore, to be *conscious of the synthesis* and its identity is to be conscious of the form of thinking.

As we have seen, for Kant, both inner sense and apperception concern the self as it appears to us in one form or another.²⁷ Inner sense is the passive faculty by which we represent our inner states. Apperception, by contrast, is a much more sophisticated faculty to self-ascribe representations to form unities. By analyzing these two notions of consciousness of self in the First Critique, we gained valuable insight into this sub-category of consciousness for Kant and the role that apperception plays in his

²⁷ For Kant, the ‘I’ of apperception can be represented in two ways, just as there can be empirical and pure versions. Kant offers some clarity about this distinction in the *Anthropology*. He explains, “the ‘I’ appears to us to be double (which would be contradictory): 1) the ‘I’ as *subject* of thinking (in logic), which means pure apperception (the merely reflecting ‘I’) ... 2) the ‘I’ as *object* of perception, therefore of inner sense, which ... make an inner *experience* possible. ... The human ‘I’ is indeed twofold according to form (manner of representation), but not according to matter (content)” (Ak. 7:134n.b).

transcendental deduction. However, his views on consciousness are not restricted to self-consciousness. If they were restricted to just that sub-category, they would be severely limited. As we will see, that is not the case for Kant.

3 KANT'S THIRD NOTION OF CONSCIOUSNESS

Another distinct thread of Kant's use of "consciousness" throughout the First Critique refers to a third notion of consciousness. I call this notion "Explicit Knowledge Consciousness" or "EK-Consciousness," which refers to the explicit knowledge of what was formerly known *only* implicitly by the subject.²⁸ I will offer two instances in which Kant uses "consciousness" for this distinct notion to delineate his understanding of its features, value, and role. For brevity, I will henceforth refer to this distinct notion of consciousness as "EK-consciousness."

3.1 EK-Consciousness From Analyzing Concepts

We find Kant using "consciousness" in this third way in his introductory exposition of analytic judgments. At the outset, he characterizes analytic judgments—by contrast with synthetic judgments—as follows:

In all judgments in which the relation of a subject to the predicate is thought ... [e]ither the predicate B **belongs** to the subject A as something **(covertly) contained in** [it]; or B, though connected with concept A, lies

²⁸ For brevity, I will henceforth refer to this distinct notion of consciousness as "EK-consciousness."

quite outside it. In the first case, I call the judgment *analytic*; in the second, *synthetic*. (B10, my bolding) ²⁹

This characterization identifies a semantic distinction between the two types of judgments.³⁰ It is also made in terms of containment. To clarify, let us turn to a specific case in which Kant tacitly recognizes a third notion of consciousness with a special use of the term.

Kant's prime example of an analytic judgment is 'All bodies are extended'. When he expresses this judgment, he claims:

I do not need to go beyond the concept that I connect with 'body' to find extension is bound up with it. All I must do to find this predicate in the concept is **to dissect the concept**, i.e., **become conscious** [*bewußt werden*] **of the manifold that I always think in it**. (B11, my bolding)

So, in Kant's view, I only need to analyze the complex subject-concept 'body' to discover facts about the constituent structure of my concept. Analytic judgments, he says, "only dissect the concept, breaking it up into its component concepts which had already been thought in it (although **thought confusedly**)" (B11, my bolding). By "thought confusedly," Kant means the component concepts that belong to the subject-concept may

²⁹ Kant also characterizes the analytic-synthetic distinction in terms of "identity" (A7/B11). For my purposes, I focus on Kant's claims about analytic judgments that support and illuminate Kant's recognition of EK-consciousness. See Proops (2005) for a more detailed discussion.

³⁰ To demonstrate, consider the familiar analytic proposition, 'Bachelors are unmarried'. The predicate-concept 'unmarried' is contained in the subject-concept 'bachelor'. To be unmarried is part of the definition of 'bachelor'. Hence, this proposition and all propositions of this kind express analytic truths. By contrast, synthetic judgments will express propositions that can be true or false on another basis entirely.

not have been recognized or explicated as such. It is the dissection of the subject-concept ‘body’ that reveals the predicate-concept ‘extension’ is *covertly contained* in it.³¹ This example demonstrates that Kant takes the process of analysis to provide *consciousness* of what was—prior to analysis—confusedly thought in the concept (A6/B9). Kant’s use of “become conscious” here suggests that he maintains a third notion of consciousness as a type of knowledge.

This brand of consciousness should be understood as the explicit knowledge of what was *formerly* known *only* implicitly by the subject.³² When the subject *becomes conscious* of the manifold contained in her concept, she acquires *explicit knowledge* of what she relied on in applying the concept ‘body’ in the first place (*viz.* ‘extension’). By dissecting the concept, she makes the *implicit* knowledge she had in originally thinking the concept *explicitly known* to herself. This knowledge is *explicit* in that the subject has conscious access to the constituent structure of her concept such that she can articulate it and use it to inform further judgments.³³

We can learn more about EK-consciousness and its features by looking at Kant’s remarks about analytic judgments with greater scrutiny. He claims that analytic judgments are *elucidatory* rather than *expansive*, by which he means they do not add anything to the subject-concept (B11). The dissection resolves that concept into its

³¹ Unlike synthetic judgments, I do not need to appeal to anything outside of my concept ‘body’ to find that the predicate-concept ‘extension’ belongs to it (A8).

³² I am not using “implicit” or “explicit” here in any technical sense. These terms are used with their ordinary meaning, e.g., “She did not say so explicitly; it was implicit.”

³³ EK-consciousness is much like the contemporary notion of “access consciousness.” A representation is EK-conscious if it is consciously *available for the subject to use* in reasoning, rationally guided speech, and action. See Block (2007) and Cohen and Dennett (2011) for reference.

component representations that were originally thought in the concept. The analysis thereby exhibits the constituent structure of the analyzed concept making it explicitly known to the subject. Before the analysis, that information was not readily on hand to the subject. Hence, analytic judgments are elucidatory insofar as they allow us to gain a deeper knowledge of our concepts that we previously lacked. Thus, EK-consciousness is a revelatory and comprehensive type of knowledge.

We can better appreciate the value of dissecting our concepts by considering Kant's claims about the *discursive* nature of human cognition. Kant characterizes our understanding as "a cognition through concepts," which is "not intuitive, but discursive" (A68/B93). In Kant's view, this characteristic feature of our understanding is what distinguishes it in kind from God's divine understanding, which is an *intuitive* understanding through which representations of objects would be *directly given* or produced at once (B139; B145). Our understanding, by contrast, can only cognize the object of sensible intuition *indirectly* through concepts (A51/B75).

In Kant's view, the only way our understanding can use concepts is by making judgments through them. He elaborates:

[I]n such judging, a concept is never immediately related to an object ... Instead, the concept is directly related to some other representation of the object (whether that representation is an intuition or itself a concept). ... In every judgment, there is a concept that [comprises and thus] holds for many representations and, among them, also comprises a given representation that is referred directly to the object. (A68/B93)

To clarify, Kant maintains that intuitions are the only representations that are immediately related to objects.³⁴ Concepts, by contrast, have a mediate relation to objects by means of what he calls a characteristic “mark” of what is common to several things (A320/B376–7). A mark is a general and “partial representation” that constitutes a “ground of cognition” for a thing or the whole representation of it (*JL*, 9:58).³⁵ Concepts, for Kant, both contain marks and can be *contained in* other concepts as marks. For instance, the concept of a body may have ‘extension’, ‘impenetrability’, and ‘shape’ among its marks. Each of these marks belong to the representation of a body as partial concepts *contained in* that concept (*viz.* in its content) (*JL*, 9:95–96). Note that these are just some (and not all) of the characteristics through which I may cognize a body. For that reason, each mark serves as a *partial* ground for the whole representation. In judging

³⁴ Kant’s most notable characterization of the distinction between concepts and intuitions is in his famous *Stufenleiter* or “step-ladder” passage, which presents his taxonomy of representations. Intuitions are characterized as immediate and singular, where concepts are mediate and general. Scholars have differing views about how to understand the contrast between the immediacy of intuitions and the mediacy of concepts. Addressing that debate is beyond the scope of this paper. See Smit (2000) for a detailed overview.

³⁵ This definition is given in the *Jäsche Logic*. However, Kant’s claim that marks are general seems to conflict with some of his other claims about marks. Smit (2000) argues that Kant distinguishes between two kinds of marks: intuitive and discursive. An intuitive mark is a property contained in intuition as a part of a *particular* object’s cognition. A discursive mark is a property that is part of a concept, which can be related to *many* different things in various possible judgments (2000, p. 255). However, Kant rarely acknowledges intuitive marks (R 2286 in *Ak.* 16:299–300; *Log-D*, 24:725). More often, we find Kant discussing marks in concepts (without explicitly calling them “discursive marks”) because only the latter occur in logic (*JL*, 9:58; A320/B377). My discussion of marks in this section will primarily concern discursive marks in the analyses of concepts.

through concepts, our relation to objects can sometimes be mediated by other concepts, that is, by marks.³⁶

Since we can always *confusedly think* a concept, dissecting them to become EK-conscious of their structures can be valuable. Kant says, “a large part—perhaps the largest—of our reason’s business consists in dissecting what concepts of objects we already have” (B9). Our faculty of reason engages in this analytic procedure with respect to a limiting condition: the principle of contradiction. All our judgments must meet this logical criterion to be *about* anything at all: they must not contradict themselves (B190/A151). This principle helps determine whether certain marks can be contained in the same concept of a given judgment. In Kant’s view, the truth of our analytic judgments could not be cognizable without reference to this essential principle. So, a plausible explanation for our reason’s interest and frequent use of this analytic procedure is that it ensures our concepts contain representations that *can* refer to objects. If we did not dissect our concepts, it is unclear how we might otherwise determine what our concepts comprise.

Now that we have a clearer picture of the role of the analytic procedure, it is critical to distinguish it from other rational competences. Specifically, analysis is a distinct competence from concept application in judgments. As I will demonstrate, the two differ insofar as the first competence always involves *conscious, deliberate* exercises of reason. Concept application, by contrast, can be *automatic* in a way that does not

³⁶ Notably, Kant claims, “all our *concepts* are marks, accordingly, and all *thought* is nothing other than a representing through marks” (*JL*, 9:58).

require the subject's conscious attention or effort when she is practiced and skilled in applying concepts in judgments. We can appreciate this point from the rational subject's viewpoint.

Suppose I apply the concept 'body' to some object. In doing so, I might not know what I am relying on when I classify *that* object as a body. We often think rapidly like this without explicitly knowing the ground of our judgments.³⁷ Generally, this signifies a subject's competence with a given concept. For comparison, consider a subject who is still acquiring a concept. She may slowly apply it during the training process because she may stop to check for errors; this effort, of course, is critical for concept mastery. Once a subject has learned how to apply the concept correctly in various contexts, she will be skilled in applying it quickly and generally. With enough successful applications, the explicit knowledge of the ground for a concept's application that is relied on in the training process can be consolidated and stored in memory. When a subject has acquired a concept and can competently apply it, it is no longer necessary to have that knowledge explicitly present before her mind.

So, it is not unusual for us to make judgments without *explicitly* knowing how or why we apply a concept to a given object.³⁸ In general, we merely have implicit

³⁷ Daniel Kahneman's two-mode distinction offers a helpful way to think about this. He would describe it as an instance of "fast thinking": a fast and automatic mode of thinking (2011, p. 21). In contrast, we can engage in "slow thinking": a consciously effortful, deliberate, and calculated way of thinking. The latter mode is advantageous for learning a new concept as it requires greater scrutiny to avoid errors.

³⁸ Aside from everyday cases of ordinary experience in which we find this claim quite natural, there are also empirically interesting cases that demonstrate this phenomenon. For instance, David Eagleman (2011) describes the process of chicken sexing: sorting male and female chicks as soon as possible.

knowledge of what we are doing and do not need anything more. Nevertheless, I *can* become EK-conscious that the mark ‘extended’ is what I relied on in applying the concept ‘body’ to that object. If I analyze my concept into its constituent marks, I can uncover a partial ground of my cognition by finding the mark ‘extended’ in it. Before doing so, I was not explicitly aware of this mark or its role in my judgment. As a result, I can give the *exposition* of ‘body’—as an extended substance—to myself.³⁹

Kant offers a helpful example in the *Anthropology* that supports my interpretation of how he thinks we often apply concepts in this way. He explains, “When I am conscious [*bewußt*] of seeing a human being far from me in a meadow, even though I am not conscious of seeing his eyes, nose, mouth, etc., I properly *conclude* only that this thing is a human being” (Ak. 7:135). When I make this perceptual judgment, I apply my concept of a human being to the object before me. I can do so successfully without *explicitly* knowing what I am relying on in applying that concept. In doing so, I only *implicitly* know that it has certain marks by which I cognize it.

“Chicken sexers,” as they are so-called, can know whether a chick is male or female without explicitly knowing what they are relying on in making their classification judgments. They make these judgments with remarkable accuracy and can teach this skill to others without articulating what they are doing, relying on, or how they know the difference.

³⁹ It is worth mentioning that Kant prefers to use “exposition” over “definition” for what we obtain from analyses of concepts. He maintains that only mathematics employs definitions, properly speaking, for mathematical concepts that are brought about synthetically (A729/B757). By “exposition,” Kant means a “clear (even if not comprehensive) representation of what belongs to a concept; such exposition is *metaphysical* if it contains what exhibits the concept as *given a priori*” (B38). Expositions allow for a degree of presumptive certainty. They also allow one to be cautious about how comprehensive one’s concept might be since the completeness of a dissection cannot be apodeictically certain.

Now, there is a second point to Kant's example here. He introduces it to explain how we can know that we have representations in our mind and still not be conscious of them. For this purpose, he distinguishes between two types of representations: *clear* and *obscure*. A clear representation is one that the subject is conscious of, and an obscure representation is one that, Kant says, "[I] can still be *indirectly* conscious of having ... even if [I] am not directly conscious of it" (Ak. 7:135).⁴⁰ He also distinguishes between *distinct* and *indistinct* representations. A representation ("of thought or intuition") is distinct, he says, "when their clarity also extends to the partial representations that make up a whole together with their connection" (Ak. 7:135). By contrast, when a subject is conscious of a whole representation but not the manifold contained in it, the representation is indistinct (*JL*, 9:34). To better understand these distinctions, let us return to Kant's example.

When I first see the object in the distance, I clearly perceive a human. In perceiving it, however, I am *not* conscious of the constituent parts of the human (e.g., her head, arm, legs, and so on). Those partial representations are obscure to me. So, I can see the human clearly but *indistinctly*. It is only *after* I see the human that I can analyze what I saw. Then, I can find that I was relying on certain marks in making that perceptual

⁴⁰ Kant offers a helpful characterization of this distinction in the First Critique: "A clear representation is [...] one in which the consciousness suffices for *being conscious of the distinction* between this representation and others" (B415n273). We can read Kant here as saying that I implicitly know my concept applies to the human before me, *not* livestock. My implicit knowledge of this difference underlies my concept application. Accordingly, a representation's clarity to a subject is a qualitative indicator that she possesses conceptual capacities. Kant also makes the distinction consistently and helpfully in the *Jäsche Logic* (Ak. 9:33-36).

judgment. Through this analysis and inferential reasoning, I can *indirectly* come to know that certain representations are in my mind, even if I am not directly conscious of them.

Kant maintains that we *can* make a whole representation distinct through analysis. When I analyze the concept in my perceptual judgment, I can become EK-conscious of each partial representation that comprises it. In this way, I learn to distinguish each partial representation that was previously obscure to me. This analytic procedure renders the whole representation distinct. The goal of an analysis is to make one's cognition more distinct and comprehensible to oneself. So, there is a limit to its use. Kant warns that the "analysis must not go so far that in the end the object itself disappears" (*JL*, 9:64). If we analyze a representation *beyond* the degree to which we comprehend the object, we have extended reason beyond what is sufficient for its purpose (*JL*, 9:65). When I achieve that objective, the analysis is complete; I can provide an exposition of it.

In Kant's view, it is only through analytic judgments that I can "spell out and make understandable to myself [*mir selbst verständlich gemacht werde*] the concept that I already have" (A8).⁴¹ Kant identifies the analytic procedure as a further use of reason to make one's concepts comprehensible to oneself. It allows us to improve the objective content of our cognition in general.⁴² Since the grade of one's objective content will vary

⁴¹ Kant's use of "*verständlich*" can also be translated equivalently with "comprehensible" or "intelligible."

⁴² Kant outlines the degrees for "the objective content of our cognition in general" in ascending order: (1) *to represent* something, (2) *to perceive*, (3) *to be acquainted* with something such that one can compare sameness and difference, (4) *to cognize* something (which animals cannot do), (5) *to understand* something *by means of concepts*, (6) *to cognize* something through reason or *to have insight*, and (7) *to comprehend* (*JL*, 9:64-65).

with one's degree of analysis, the EK-consciousness achieved can vary in its strength and usefulness in reasoning for the subject.

When we have made our concepts comprehensible to ourselves through a dissection procedure, Kant claims that it “yields *a priori* cognition in a safe and useful way” (B10). Kant explains that our reason uses this pretense to expand our cognition synthetically, adding additional marks such as ‘heaviness’ to our concept ‘body’ (A8; B10; B12). By becoming EK-conscious of what is in our concept via analysis, there is a strong foundation upon which reason can then expand that concept securely by looking back to experience. In this way, the EK-consciousness I obtain can inform other judgments I make.

3.2 EK-Consciousness of Adducing Intuition

We can learn more about EK-consciousness in a second case within the First Critique. In the First Edition of the Transcendental Deduction, Kant uses this same thread of “consciousness” in discussing the threefold synthesis that necessarily occurs in all cognition. This threefold synthesis is based on spontaneity; each of the three syntheses directs us to the subjective sources of cognition that make the understanding itself possible (i.e., as a cognitive power that refers to objects) (A97). Specifically, we find that consciousness plays a role in the third synthesis, or what Kant calls the “synthesis of recognition in the concept” (A103).

In an example, Kant uses our thought of a mathematical concept of a triangle to demonstrate how we could have such cognition of it *as* an abstract, ideal object. He says,

“Thus when we think of a triangle as an object, we do so by **being conscious** [*bewußt sind*] of the assembly of three straight lines according to a rule whereby such an intuition can always be exhibited” (A105, my bolding). Through learning to construct a triangle in intuition, we consciously reflect on the rule for doing so, and we thereby raise to consciousness the components, i.e., the conceptual marks, of the concept of a triangle. The schema of a triangle is the rule whereby my imagination can construct a triangle in intuition in a general way that can hold for all triangles (e.g., isosceles, equilateral, and the rest) (A141). I thereby construct the triangle as it *appears* in intuition.

By analyzing the synthesis of this mathematical concept, I uncover the conditions that make this representation possible. In doing so, I can attain EK-consciousness of the preconditions for giving myself the triangle in intuition, and I thereby raise to consciousness that I did so based on following a rule. The fact that I am doing so is only implicitly conscious to me since I have become skilled in rule-following through repeated exercises. Through this procedure, I also find that I was relying on *a priori* intuition. As a result, I have made the triangle that I cognize understandable to myself and learned something about how I recognize it.⁴³

4. EK-CONSCIOUSNESS IS DISTINCT FROM INNER SENSE AND APPERCEPTION

As shown above, Kant uses “consciousness” in a distinctive way for a notion of consciousness as the explicit knowledge of what was formerly known only implicitly by

⁴³ Pauline Kleingeld’s interpretation of Kant’s idea that reason has “interests” and “needs” can partially support my interpretation. She explains that reason “needs to present itself to itself in the process of gaining clarity about its own workings” (1998, p. 97).

the subject. This rich notion of EK-consciousness cannot be explained by supposing that Kant is referring to inner sense or apperception. Neither form of consciousness of self can be a sufficient condition for EK-consciousness, and they cannot account for why EK-consciousness arises. Let us address each type of consciousness of self in turn.

First, recall that inner sense is a passive capacity to become aware of ourselves in the flow of our inner appearances. What we are conscious of in inner sense can only be justified empirically. In contrast, the truth of the explicit knowledge attained in EK-consciousness can be *a priori* justified. Hence, inner sense cannot be a sufficient condition for EK-consciousness. Moreover, EK-consciousness is generally achieved through an *active* dissection procedure, i.e., a use of reason. Since inner sense is a *passive* way of attaining awareness of ourselves as we are affected by ourselves (i.e., the thing in itself), this faculty cannot explain why EK-consciousness arises.

Second, apperception is the power of self-ascribing representations, which makes the synthetic unity of all our cognitions possible. Since apperception does not require the explicit knowledge of *how* one is self-ascribing representations to comprise unities, apperception is not sufficient for EK-consciousness. Moreover, apperception cannot substantially explain why EK-consciousness arises because bringing representations together is an entirely different competence from acquiring explicit knowledge of *how* you did so.

Since inner sense and apperception cannot explain EK-consciousness, it should be considered a distinct notion of consciousness altogether. While the consciousness of self in either form may not *explain* EK-consciousness, all three varieties of consciousness can

still arise in human cognition in complementary ways. For an individual to become EK-conscious of what she was relying on in applying a concept or adducing an intuition, there must have been a single thinker that performed the analysis to obtain that explicit knowledge. So, the transcendental unity of apperception that comprises the unity of the ‘I’ or a single subject is a precondition for obtaining EK-consciousness. Nonetheless, these notions of consciousness inform our understanding of the two fundamental conditions for discursive cognition that Kant recognizes in the Critique: a unified consciousness and a unitary thinker.

5. CONCLUSION

There are many benefits to distinguishing separate threads for Kant’s various and often inconsistent claims about consciousness. It allows us to see the relationship between Kant’s ideas about consciousness of the self and this third notion that pertains to making known explicitly what was formerly only implicitly known by the subject. More importantly, by recognizing EK-consciousness as a distinct notion, we can interpret Kant’s requirements for our cognition of objects without overstating them. By keeping Kant’s thread of claims about EK-consciousness *separate from* his threads about apperception and inner sense, we can avoid running all his various claims about “consciousness” together when interpreting those requirements. Ultimately, this allows Kant’s view of human cognition to gain traction as a plausible account of how we think and judge.

Chapter 2: Kantian Discursive Cognition and Its Requirements

1. INTRODUCTION

Human cognition enables us to theorize about the world scientifically, achieve mathematical knowledge, and make sense of the world that we consciously perceive. A central project of Kant's *Critique of Pure Reason* is to explain how our understanding, by its very nature, enables us to achieve cognition like this.⁴⁴ However, Kant is unclear about how he understands what that cognition is like. In this chapter, I aim to illuminate the central notion of cognition—and its requirements—for Kant's project in the First Critique. As a foil for my reading, I critically evaluate Patricia Kitcher's hyper-rationalist interpretation of human cognition and the type of consciousness she thinks is required to achieve it.⁴⁵ I offer a more charitable reading of Kant's theory of cognition that can be instructive for how we theorize about human cognition and consciousness.

This chapter proceeds as follows. In Section 2, I precisely characterize the notion of human cognition at the heart of Kant's First Critique, i.e., human “discursive

⁴⁴ For brevity, I will refer to the *Critique of Pure Reason* as “the First Critique” or “The Critique” henceforward. I do not reference any of Kant's other Critiques. Quotations from Kant's writings are drawn from the Prussian Academy edition. References to the Critique are cited with the usual A/B pagination. References to Kant's other works are cited by that edition's volume and page number. The English translations are my own, but I draw heavily on established translations cited in the bibliography. I use the abbreviation “*JL*,” for *Jäsche Logic*.

⁴⁵ I will primarily focus my attention on Kitcher's paper “The Unity of Kant's Active Thinker” (2011a), which presents her interpretation of apperception and its necessity for “RE cognition.” She maintains the same interpretation in her books *Kant's Transcendental Psychology* (1990) and *Kant's Thinker* (2011b). I will only use these texts to clarify her arguments in Kitcher (2011a).

cognition.”⁴⁶ Additionally, I clarify how Kitcher’s alternative reading overstates the role of reason in delineating the cognition at issue and show that the textual evidence she cites for her hyper-rationalized conception of our cognition cannot substantiate it. Section 3 details my second criticism of her interpretation, specifically addressing the type of consciousness she claims is necessary for rational cognition. Through an analysis of Kant’s counting example, I demonstrate that her characterization of apperception as “mental act awareness” is directly undermined by Kant’s own claims. I suggest a different account of the function of apperception and the different types of consciousness involved in human cognition that better captures Kant’s apparent meaning. Section 4 presents my third and final criticism of Kitcher’s reading. Specifically, recent empirical studies on “subitizing” undermine Kitcher’s account of the counting example. By attributing her interpretation to Kant, he will be making an empirical error. By comparison, I offer a more charitable alternative to her reading, which does not require us to attribute such mistakes to him. In Section 5, I argue that the three objections I raise in Sections 2–4 demonstrate collectively that Kitcher’s interpretation is unsatisfactory and establish a solid basis to reject it. Still, we can learn from her missteps to avoid making similar mistakes when characterizing our cognitive abilities and understanding ourselves as rational thinkers.

⁴⁶ I use the term “discursive cognition” for the central notion of cognition in Kant’s First Critique. Kant often uses “cognition” without qualification and relies on the context of his discussion to fix its meaning. I will use “discursive cognition” throughout this paper. My choice of terminology here is not controversial; Kant occasionally uses “discursive cognition” in the Critique (cf. A68/B93, B170, B312, A717/B745, and A734/B762). I sometimes use the term interchangeably with “human cognition” or “our cognition,” as Kant does, to minimize repetition.

2. THE CENTRAL NOTION OF COGNITION IN KANT'S FIRST CRITIQUE

Kant's main project in the First Critique is to explain how synthetic *a priori* theoretical cognition is possible in traditional metaphysics (B19–20). Simply put, we have theoretical knowledge from mathematics and the natural sciences, and his interest is in explaining the conditions under which such knowledge is possible. To understand how our minds can acquire such knowledge, Kant analyzes the mind's faculties, powers, and features that could enable it to do so. What we gain from this investigation is Kant's account of the conditions for *cognition* [*Erkenntnis*], viz. the way our minds relate to objects.⁴⁷ In what follows, I will articulate the best way to understand the kind of cognition at issue.

2.1 My Analysis of Discursive Cognition

The explanandum of Kant's First Critique is "human discursive cognition." That notion is also central to his Transcendental Deduction. To illuminate the nature and character of this type of cognition, we need to explain two parts of the term: "cognition" and "discursive." There are two central threads of Kant's uses of "cognition" in the Critique that refer to two distinct notions: cognition in a *broad* sense and cognition in a *narrow* sense. Let us quickly examine each one to identify the relevant notion, setting aside the extraneous one.

⁴⁷ To clarify, Kant distinguishes "cognition" [*Erkenntnis*] from "knowledge" [*Wissen*]. As you will see in Section 2.1 next, cognition is weaker than knowledge in certain respects. For instance, narrow cognition can be false (e.g., in cases with empirical propositions), while knowledge must be true (cf. Bxxx and A822/B850).

Kant uses “cognition” *broadly* for any conscious objective perception (A320/B376).⁴⁸ He distinguishes two kinds: “Cognition is either *intuition* or *concept*. An intuition refers directly to the object and is singular; a concept refers to the object indirectly, by means of a characteristic that may be common to several things” (A320/B376).⁴⁹ From this, we learn that intuitions and concepts are both classified as cognitions.⁵⁰ In the broad sense, cognition is a representation whose function is to refer to an object or connect with the world. Simply put, cognition is *about* a subject matter. Cognition can be *about* a subject matter, even if it does not refer to anything objectively real. For example, I can think *about* ghosts, but ghosts are not real—there is no referent in the world to which that cognition refers.⁵¹ For this reason, this broad conception of cognition is not central to Kant’s project in the Critique.

⁴⁸ Kant uses “cognition” this way throughout the First Critique (cf. B21, B83, B376, B737, and B869). We can see this most clearly in the *Stufenleiter* passage, where he characterizes perception as any “representation with consciousness [*perceptio*]” and identifies two types: subjective perception is *sensation*, and “an objective perception is *cognition* [*cognitio*]” (A320/B376). An example of a sensation is a pain or tickle—a conscious impression of the senses only available to the subject who feels it (A374). I will provide examples to illuminate what cognition is in the main body of the text.

⁴⁹ As a side note, Kant’s view of concepts as mental representations is widely shared by contemporary philosophers of mind and cognitive science (e.g., Carey, 2009; Pinker, 2007). However, there is considerable disagreement about what those mental representations are like. One popular understanding of concepts, which differs from Kant’s, is that they are *language-like*. Jerry Fodor (1987), for instance, delineates concepts as *word-like* mental representations in “the language of thought.” Some philosophers maintain the view that the possession of natural language is a necessary condition for concept possession (e.g., Davidson, 1975; Brandom, 1994). While Kant’s ideas may seem to comport with this (*viz.* he thinks humans have concepts and language, whereas animals do not), this focus on language was not central to his thinking at that time.

⁵⁰ See Chapter 1, Section 3.1, for my characterization and thorough discussion of the distinction between intuitions and concepts.

⁵¹ Notably, cognition can be true or false. If a cognition does not agree with the object (or subject matter) it refers to, it is a false cognition (B83).

By contrast, Kant uses “cognition” in a *narrower* sense for objective perceptions with determinate reference to real objects (B137; B146).⁵² This more robust notion of cognition distinctively requires contributions from *both* our faculties of sensibility and understanding: an intuition *and* a concept, respectively.⁵³ Kant clarifies that “[narrow] cognition involves two components: first, the concept (the category), through which an object as such is thought; and second, the intuition, through which the object is given” (B146).⁵⁴ Recall that only intuitions refer to objects directly. The intuition serves as *proof* that the cognition has objective validity, i.e., that the cognition refers to something objectively real and it has in that object “its signification and meaning” (A155/B194; Bxxviii103).⁵⁵ Given its determinate reference to objective reality, narrow cognition is a better candidate—than broad cognition—for being the primary focus of Kant’s project. Accordingly, we can understand human discursive cognition, in part, as Kant uses the term in this *narrow* sense.

⁵² Kant’s notion of ‘real’ is broader than the notion of ‘the world’ (B347/A291). It includes more than just the objects we encounter in experience. For example, numbers are *real* because they have a subject matter that is part of the world and is really possible.

⁵³ Kant explains that “human cognition has two stems, viz. *sensibility* and *understanding*” (A15/B29). These two faculties are distinguished by their specific functional contributions to our cognition of objects: “Through sensibility, objects are *given* to us; through understanding, they are *thought*” (A15/B29).

⁵⁴ Kant presents this characterization of cognition in the context of distinguishing between *cognizing* and *thinking* an object. *Cognizing* an object requires both a concept and a corresponding intuition. Without a corresponding intuition, we can *think* by means of the concept, but the thought would lack an object. Hence, intuition is necessary for an object to be given.

⁵⁵ A *proof* is understood as a demonstration that yields apodeictic certainty, i.e., it is demonstrably true rather than just hypothetically true or a matter of subjective conviction. The proof demonstrates the cognition agrees with an object or subject matter that it is really possible (i.e., it is not just logically possible) (Bxxviii103). Moreover, Kant does not require the subject to give a proof to have narrow cognition; rather, any subject with narrow cognition *could* give a proof.

Moreover, Kant is clear that the cognition of interest in the Critique is *discursive*, but he does not provide a detailed account of its nature (cf. A68/B93; A131/B170; B283). Even so, we can understand its nature and character, as he conceives it, by examining how he uses “discursive” in his positive characterization of the understanding as a cognitive power in that text. He explains, “human understanding, is a cognition through concepts; it is not intuitive, but *discursive*” (A68/B93). Considering this, the term “discursive” seems to distinguish the “peculiar” way our understanding operates (Ak. 5:406). To shed light on this, Kant compares the only two types of understanding he recognizes: a *discursive* understanding and an *intuitive* understanding. He illuminates our discursive understanding (and cognition) only by contrast with an intuitive one. The only apt comparison to make here is with a being to whom we can attribute a faculty of understanding in the first place.⁵⁶ So, Kant compares our *discursive* understanding and God’s *intuitive* understanding. Through God’s divine understanding, representations of objects would be *directly* given or produced at once (B139; B145). Our understanding, on the other hand, is different.

Our discursive understanding can only cognize the object of sensible intuition *indirectly* via concepts (A51/B75). Unlike intuitions that have a singular and direct relation to objects, concepts have a general and a mediated relation to objects through

⁵⁶ Notice a consequence: Kant cannot illuminate the discursive nature of our understanding by comparing it with whatever faculties non-human animals have. As I will demonstrate in Section 2.2 of this chapter, Kant does not attempt to characterize our cognition by comparing and contrasting the minds or cognitive abilities of humans and non-human animals. It is not an apt comparison.

what Kant calls a characteristic “mark” (A320/B376–377).⁵⁷ A mark is a “partial representation” of what is common to many things (*JL*, 9:58).⁵⁸ It constitutes a ground of cognition for the whole representation. For instance, ‘blue’ is a mark for my concept of ‘color’. ‘Blue’ is a “partial representation” (or “partial concept”) that is *contained in* my whole concept ‘color’ (*JL*, 9:58). In other words, ‘blue’ is part of the content of my concept ‘color’. Of course, ‘blue’ is also a representation that is common to many things, such as bluebonnets, butterflies, and glacier ice. As the ground of cognition, my concept ‘blue’ *contains under* itself all those things from which it has been abstracted; all of those things comprise the extension of the concept.

Not only does Kant use “discursive” to characterize human understanding, but he also uses it to describe concepts, thoughts, judgments, (narrow) cognition, and more in the First Critique.⁵⁹ By applying the term to various things, this suggests that “discursive” marks a general type of structure that is shared by these representations, functions, and abilities.⁶⁰ What is characteristically discursive about them is that they have certain

⁵⁷ This is Kant’s most notable presentation of the distinction between concepts and intuitions, and it is in the *Stufenleiter* passage. There is some disagreement among scholars over the import of the *immediacy* of intuition. For a thorough treatment of the debate, see Houston Smit’s “Kant on Marks and the Immediacy of Intuition.”

⁵⁸ To review this material, please refer to Chapter 1, Section 3.1, where I provide a more detailed discussion of Kant’s theory of marks.

⁵⁹ To see this, Kant qualifies the following with the term “discursive” in the Critique: concepts (A25), “discursive cognition” (B170; A717/B745), “the discursive form of thought” (B283), “discursive (logical) distinctness” (Axviii), “discursive principles” (A733/B761), “reason’s discursive use according to concepts” (A719/B747), and “acroamatic (discursive) proofs” (A735/B763).

⁶⁰ Discursive representations can be partly characterized by contrast with intuitive representations. Intuitive representations also have a general type of representational structure, marked by characteristic features of particularity and immediacy. Some examples include intuitions and symbolic

features: they are mediate and general as they abstract from particulars (A68/B93). Kant's theory of marks is instructive for spelling this out further. Specifically, Kant claims, "All our *concepts* are marks, accordingly, and all *thought* is nothing other than a representing through marks" (*JL*, 9:58). Basically, Kant is saying that all concepts are marks by virtue of their form: they are "general" or "universal" insofar as they are representations of what is common to several things. To say that we *think* by means of concepts is to say that we think by means of marks.

Moreover, what is characteristically discursive about these representations and functions is that they share a general form allowing for *compositionality* among them. Consider Kant's definition of a concept. He says, "A concept is [...] a universal representation, or a representation of what is common to several objects, hence a representation *insofar as it can be contained in various ones*" (*JL*, 9:91). Recall that concepts bear a part-whole relation to other concepts. They are compositional in that a concept contains other concepts (or marks), a thought is composed of concepts, a judgment is composed of concepts, and so on.

By comparison, it is important to note that concepts do not bear a part-whole relation to intuitions.⁶¹ Intuitions are not proper *parts* of concepts. Ultimately, this is a

representations, and there may be others that Kant recognizes (Ak. 5:351). It is beyond the scope of this paper to give a complete account of the different types of intuitive representations that Kant recognizes.

⁶¹ There is an ongoing debate among scholars and Kant-inspired philosophers about how we should understand the relationship between concepts and intuitions. This distinction is of central interest to how we should interpret the contributions from the mind's higher faculties (i.e., understanding and reason) to the subject's sensory apprehension of the external world. See Strawson (1959), Sellars

structural or formal difference between them. Even so, Kant maintains that intuitions can be brought under concepts, and doing so makes our intuitions understandable. It is only when concepts and intuitions are united that human discursive cognition or *genuine cognition* of objects can arise (B76/A52).

With my interpretation of human discursive cognition established, let us now turn our attention to Kitcher's alternative view. A significant point of disagreement between our accounts is Kitcher's strong emphasis on the faculty of reason's contribution to distinguishing human cognition. However, I have not found sufficient evidence to support this claim in Kant's writing. By examining both interpretations, we can pinpoint any misconceptions and arrive at a more precise understanding of Kant's theory of cognition.

2.2 Kitcher's "RE Cognition"

Kitcher (2011b) argues that the cognition that is central to the First Critique is "rational empirical cognition" or "RE cognition" (p. 121). She introduces and attributes this neologism to Kant because she thinks it "captures more fully the sort of cognition whose source is the 'higher faculties,' viz., **cognition where the subject knows the reason**" (p. 121, my bolding).⁶² Different labels aside, Kitcher and I agree that the

(1968), and McDowell (1994a) for more recent discussions about how the relationship between concepts and intuitions bears on questions about the relation between the mind and reality.

⁶² Kitcher acknowledges that Kant never uses this terminology. While I think "RE cognition" is slightly misleading, none of my critique will rest on her choice of locution. My textual dispute with Kitcher comes down to whether there is a notion of cognition in Kant's Critique that corresponds to what she calls RE cognition.

cognition at issue is characteristically discursive or conceptual in its structure since it is rooted in the understanding. The main issue with Kitcher's interpretation is her claim that this cognition is distinctively *rational*, by which she means it is one in which *the subject must know the reason* for her mental acts, such as applying a concept. As I will demonstrate, Kitcher's characterization of RE cognition cannot be found in Kant's work.⁶³

Kitcher bases her interpretation of RE cognition on dubious grounds. She relies heavily on the concluding remarks of Kant's (1762) pre-critical essay, *The False Subtlety of the Four Syllogistic Figures*. By his own admission, it was completed in only "a few hours," which suggests it is likely to contain a blunder or two (Ak. 2:57). Moreover, that essay was published long before the two editions of Kant's First Critique were published (viz. 1781 and 1787). Given the significant evolution of his ideas during that extended period of time, that essay is not a reliable or authoritative source to appropriately construe Kant's ideas in his First Critique. Nevertheless, she argues that this essay is where we can find Kant unambiguously characterizing his central notion of our cognition.

Kitcher's argument (2011a) can be broken down into four key claims, which are:

- (i) Kant distinguishes rational human cognition from so-called "animal" cognition in his objection to Meier's attribution of distinct concepts to animals.⁶⁴

⁶³ While I have not conducted an exhaustive study of Kant's entire oeuvre to disprove the existence of RE cognition, I demonstrate that Kitcher's textual evidence fails to support it. So, the onus is on Kitcher to provide more evidence to show that it can be found there.

⁶⁴ Given Kant's standards for what constitutes a rational being or a *person*, his claims about the capacities of rational human cognizers do not refer to human infants—who have not fully realized their cognitive capacities. Moreover, the example that Kitcher refers to is one in which Kant discusses an ox's cognitive abilities. I take it that when questions about animal cognition arise, Kant and his

- (ii) “Animals can differentiate things from one another—in the sense that they can behave differently with respect to them. But that does not imply that they have any understanding of how they differentiate the objects” (p. 61).
- (iii) Humans, however, can “recognize characteristic marks as such and so have (distinct) concepts” (p. 62).
- (iv) In order to recognize a characteristic mark as such, one must be able to think about one’s own representations (and animals cannot do that) (p. 62).

From these points, she concludes:

Kant’s view of rational cognition is that in applying concepts, rational animals **know the basis or ground** for the application—hence they must be aware of their own representations, because those are the grounds of the application. By contrast, animals differentiate things only ‘blindly,’ without any idea of the basis of their differential behaviour. (p. 62, my bolding)

After assessing her argument, I have identified three primary concerns with it, including her account of rational cognition.

First, Kitcher misconstrues the purpose and outcome of Kant’s critique of Meier in her claim (i).⁶⁵ The purpose of raising the objection is to highlight some notable

interpreters are referring to higher non-human mammals, such as dolphins, whales, chimpanzees, and the like, who demonstrate differential behavior.

⁶⁵ For reference, Kitcher uses the following passage as a basis for her premises (i) and (ii): “[Meier’s] argument runs like this: an ox’s representation of its stall includes the clear representation of its characteristic mark of having a door; therefore, the ox has a distinct concept of its stall. It is easy to prevent the confusion here. The distinctness of a concept does not consist in the fact that that which is a characteristic mark of the thing is clearly represented, but rather in the fact that it is recognized [*erkannt*] as a characteristic of the thing. [...] only the being who forms the judgment: *this door belongs to this stable* has a distinct concept of the building, and that is certainly beyond the powers of animals. I would go still further and say: it is one thing *to differentiate* things from each other, and quite another thing *to recognize* [*erkennen*] the difference between them” (Ak. 2:59–60).

features of his own theory; he does that by describing Meier's attribution error and explaining how it could have been avoided. Specifically, Meier misattributes concepts to animals, and that is a mistake because the capacity to judge is a prerequisite for having concepts. Kant explains that if an animal does not demonstrate a capacity for judging, then it cannot possess concepts at all (distinct or otherwise) (Ak. 2:59).⁶⁶ If Meier had appreciated this feature of Kant's view, he could have avoided making that attribution error.

Kant's critique of Meier is *not* intended to characterize rational human cognition by distinguishing it from animal cognition, as Kitcher claims. That is not his objective, and Kant does not suggest we can do so. Kant recognizes that there are epistemic limits to our theorizing about animal minds.⁶⁷ In the First Critique, he makes the modest point that, based on *what we can claim to know* empirically, we find no basis in animal and inanimate nature for thinking that their cognitive abilities are other than sensibly conditioned (A546/B574). In other words, we can learn about the cognitive capacities of animals (and other things) only based on what we can observe in their behavior. On that basis, we can attribute a faculty of sensibility to animals, but we do not have an adequate basis for attributing an understanding to them. Considering this theoretical constraint,

⁶⁶ Chapter 1, Section 3.1 provides a more extensive examination of how Kant differentiates between distinct, indistinct, clear, and obscure representations. In this section, I provide a brief overview of distinct representations while presenting the second main issue with Kitcher's argument.

⁶⁷ Kant is consistent in his claims about the epistemic limits of our theorizing about animal minds. However, there is an ongoing debate among interpreters about Kant's views about what kind of cognitive capacities and awareness animals can achieve. Kant has scattered and inconsistent claims about this throughout his works. See McLear (2011) for a helpful reconciliation of some of Kant's other claims about animal consciousness.

Kant does not characterize what our cognition is like by contrast with whatever animals can achieve. If we have no basis for thinking they have a power of cognition, it is not clear what we could claim about our cognitive abilities by examining what animals apparently lack. Any attempt to positively characterize human cognition on that limited basis would be suspect. So, Kitcher errs by proposing that Kant distinguishes between human cognition and animal cognition in his essay.

Second, Kitcher also reads too much into Kant's claim that an ox cannot have a "distinct concept" of its stall. Since concepts are only realized in judgments, Kant is just saying that the ox lacks concepts altogether. The *distinctness* of the concept is irrelevant to his point. So, the only valid comparison that can be made between rational human cognition and so-called "animal cognition" is that animals seem to lack the capacity for judgment, rather than, as Kitcher proposes because we have distinct concepts.

Nevertheless, Kitcher focuses on distinct concepts as representative of rational cognition. To have a distinct concept, Kant says, one must clearly recognize a characteristic mark *as* a characteristic mark of a thing (Ak. 2:58). So, for instance, my concept of 'body' is distinct if I clearly see 'extension' *as* a ground for it. In premises (ii) and (iii), Kitcher maintains that if I have a distinct concept like this and apply it in judgment, then (unlike animals), I must have some understanding of *how* I differentiate objects in my application. However, Kant does not set the bar that high for having concepts, making judgments, or cognizing through concepts. Throughout the First Critique, Kant frequently asserts that we have concepts, but he does not specify that they

are or must be distinct.⁶⁸ The fact that we *can* have distinct concepts does not mean we generally do. Without textual evidence from a more authoritative text, Kitcher cannot conclude that ‘distinct concepts’ are part of what characterizes rational cognition for Kant. After all, Kant only says that human understanding is a “cognition through concepts,” *not* a cognition through *distinct* concepts (A68/B93).

Third, premise (iv) is a misconception of Kant’s view. She thinks he is claiming that having distinct concepts requires one to be able to think about one’s own representations (and animals cannot do that). However, Kant is making the more general claim that what makes *judging* possible is “the faculty of making one’s own representations the objects of one’s thought,” and it is one that can only belong to rational beings (Ak. 2:60).⁶⁹ In other words, the ability to judge requires a certain kind of awareness of our representations, and that is required in judging with all kinds of concepts—not just distinct ones. In fact, Kant thinks that we can have judgments with

⁶⁸ For further evidence, see Kant’s distinction between analytic and synthetic judgments involving concepts (A6/B10–A10/B14). Also, in the *Analytic of Principles*, he claims that general logic concerns “concepts, judgments, and inferences, precisely in accordance with the functions and order of those mental powers—the mental powers comprised under the broad sense of an understanding as such” (A130–131/B169). Notice that he is not discussing “distinct concepts” in any of these places.

⁶⁹ To avoid confusion, I have only included a shortened quote from the pre-critical essay. Kant explicitly calls this faculty “the faculty of inner sense” in this pre-critical essay (Ak. 2:60). As I noted earlier in this section, it is important to keep in mind that Kant’s ideas evolved over time. This pre-critical conception of inner sense differs from how Kant uses the term in the *Critique*, which I explained in detail in Chapter 1, Section 2.1. Kitcher suggests that Kant actually meant *apperception* instead of inner sense in this essay. Her recognition of this discrepancy should be noted. Since apperception is critical for cognition, any changes in Kant’s description of it could indicate a shift in his understanding of cognition too. Therefore, Kitcher’s interpretation is established on shaky grounds, which should make us hesitant about accepting it.

indistinct concepts, i.e., concepts in which no manifold is to be found.⁷⁰ So, he is *not* saying that there must be an awareness *of the ground* in the act of judging in order for one to have the ability to judge at all. However, Kitcher's interpretation cannot account for that.

As I demonstrated in Chapter 1, Section 3.1, Kant thinks we *can* obtain knowledge of the ground of our judgments through an analytic procedure with our concepts. In Kant's view, it is *only* through a procedure of analysis or dissection of our concepts that we can render a concept distinct (*JL*, 9:35). The ability to do so is a higher-level competence that is achieved through the use of reason. It is important to recognize that this analytic procedure is a distinct ability from that of applying concepts in judgments; we do not get distinct concepts or knowledge of their grounds for free. *If* we have a distinct concept, we only have it because the concept has been refined through a function of reason that is *separate from* the concept's application in a judgment. The latter function is a function of the understanding. Kitcher's account fails to differentiate between these two functions, making it challenging for her to provide an accurate depiction of Kant's theory of cognition. As a result, Kitcher's concept of rational cognition, or RE cognition, fails to explicate Kant's core notion of cognition in the Critique.

In sum, Kitcher and I offer different interpretations of the notion of cognition at issue in the Critique. She puts considerable emphasis on the role of reason in

⁷⁰ Kant maintains that some of our representations will be indistinct merely because they are *simple* (*JL*, 9:35). To clarify, simple representations are not distinct because there are no partial representations to be discovered in them.

characterizing it, but the textual evidence she provides from his pre-critical essay fails to support it. We also have differing views about how to conceive of the consciousness required for our cognition. We can better grasp what Kitcher takes the requirements for “rational cognition” by examining her interpretation of Kant’s counting example.

3. THE COUNTING EXAMPLE

Before delving into Kant’s counting example, let me provide a brief overview of the differences in our interpretations of the requirements for our cognition.

According to Kitcher, Kant requires one type of consciousness *of self* to achieve rational cognition: apperception. She interprets apperception as “mental act awareness,” that is, the awareness that subjects have of the cognitive acts they perform, such as judging, inferring, seeing, and the like (2011a, p. 57). She holds the strong view that it is the self-consciousness of the activity itself *and* of the product of that activity.

As I read Kant, apperception is required for human discursive cognition; it is the capacity to self-ascribe representations to form unities. Recall that Kant does not require that we *actually* self-ascribe all the mind’s representations to have cognition of objects; rather, the crucial point is that I *can* self-ascribe a representation if it is represented to me. This qualification permits a differentiation between (i) conscious representations with the *potential* to be made self-conscious and (ii) self-conscious representations that *are* self-ascribed with the ‘I think’ as *my* representations. I defend the weaker position, in comparison with Kitcher, that synthetic operations of the mind are *potentially self-conscious*, and making it self-conscious is just to be self-conscious of the product.

Considering this, our dispute boils down to different views of the function of apperception and whether his view differentiates between self-consciousness and consciousness. With that in mind, let us critically examine these two ways of reading Kant through an analysis of his counting example.

Kant provides his counting example in his presentation of the third synthesis, i.e., the synthesis of recognition in the concept, in the First Edition of the Transcendental Deduction. He presents it as follows:

Without the consciousness [*Bewußtsein*] that what we are thinking is the same as what we thought a moment before, all reproduction in the series of representations would be futile. [...] If, in counting, I were to forget that the units now hovering before my mind were added up by me little by little, then I would not cognize the amount's being produced through this successive addition of one [unit] to another; nor, therefore, would I cognize the number. For this number's concept consists solely in the consciousness [*Bewußtsein*] of this unity of synthesis.

[...] For this one consciousness is what unites in one representation what is manifold, intuited little by little, and then also reproduced. **Oftentimes this consciousness may be only faint so that we do not [notice it] in the act itself**, i.e., do not connect it directly with the representation's production, **but [notice it] only in the act's effect.**⁷¹ Despite these differences, a consciousness must always be encountered, even if it lacks

⁷¹ For ease of reading the long passage above, I will include Kant's original quote here for reference:

[Dieses Bewußtsein kann oft nur schwach sein, so daß wir es nur in der Wirkung, nicht aber in dem aktus selbst, d. i. unmittelbar mit der Erzeugung der Vorstellung verknüpfen: aber unerachtet dieser Unterschiede muß doch immer ein Bewußtsein angetroffen werden, wenn ihm gleich die hervorstechende Klarheit mangelt, und ohne dasselbe sind Begriffe, und mit ihnen Erkenntnis von Gegenständen ganz unmöglich.]

striking clarity; without this consciousness, concepts, and along with them, cognition of objects are quite impossible. (A103–104, my bolding)

The purpose of this passage is to provide a helpful introduction to the Deduction of the Pure Concepts of Understanding. Kant recognizes that the Deduction offers a deep and novel way of thinking about the bases of our cognition. He intends for this prelude to prepare his reader to grasp and, hopefully, acquire complete insight into the Deduction (A98).⁷² Considering this, Kant describes a commonplace example of counting in such detail *only* to spell out some necessary features of his theory to ensure its completeness. He does not mean to suggest that our counting is *this* laborious and complicated. However, Kitcher’s reading of the passage above overlooks that critical context.

As we examine her interpretation, be sure to pay attention to the weight that Kitcher places on her idea that self-consciousness of our mental acts is necessary for our cognition. As I will demonstrate, not only does her interpretation directly conflict with Kant’s own claims in the quoted passage, but her general account also over-intellectualizes the simple, elementary cognitive skill of counting.

3.1 Kitcher’s Reading of the Counting Example

Kitcher proposes, “On Kant’s telling, counting is more complicated than one might think” (2011b, p. 128). She claims that, in this passage, Kant sets out two requirements for a subject “to have rational cognition—to know the basis of his judgment

⁷² Kant says this in his “Preliminary Notice” (A98). This paragraph is the preface to four passages that serve as preliminaries for the Deduction (A98–114). I take it that Kant is using them to spell out some of the necessary details of his view apart from the Deduction to avoid muddying his argument.

‘four’, for example” (2011a, p. 63). The first requirement is that the counter must be self-conscious of applying what she calls “the counting rule” to the units (p. 63). This is the consciousness of the counter’s partial representations, ‘1’, ‘2’, and so on, that are the partial grounds of the counter’s whole representation, ‘4’.⁷³ Kitcher claims that this rule involves “many skills,” including the consciousness of one’s performance (to catch possible errors), the consciousness of where one is in the process, and the consciousness of designating the first stroke symbol (real or imagined) as ‘1’, and so on (2011b, p. 128).

The second requirement is that the counter must recognize his judgment ‘four’ as the result of his applying the counting rule to his sensory evidence (2011a, p. 63). To do this, she says the counter must be *self-conscious* of his act of judging on the basis of evidence—namely, his evidence is that he applied the counting rule to sensory data (p. 64). Although Kant does not say this, Kitcher thinks it is clear what his rationale for this requirement must be.⁷⁴ She explains, “**If cognizers were not [self-]conscious of these acts, then they would not know the basis of their judgments, and so would fail to be**

⁷³ Kitcher does not distinguish between self-consciousness and consciousness in her interpretation of Kant. When she uses “consciousness” and “conscious,” we should read her as saying “self-consciousness” and “self-conscious.” If she used those terms instead, it would be even more apparent how provocative her view is.

⁷⁴ Similarly, in *Kant’s Thinker*, Kitcher attempts to explain Kant’s claim that it is “absolutely necessary that in my cognition all consciousness belongs to one consciousness (that of myself)” (A117n138). She explicitly acknowledges that “Kant does not explain why this is so” in that passage (2011b, p. 123). This is worth noting because Kant is making the very same point here. Nevertheless, Kitcher fails to recognize that he does not provide an explanation for why the cognizer must be aware of the synthesis. She says, “it should be clear why he thinks these acts must be conscious” (2011a, p. 63). However, this is not obvious from the text. To accept Kitcher’s interpretation of RE cognition, we would have to take her bold assumption at face value since she does not provide explicit textual evidence from Kant to support it.

(**rational**) cognizers” (p. 63, my bolding). Kitcher concludes that it is *this* “apperceptive consciousness,” or the self-consciousness of our mental acts, that is required for rational cognition (p. 72).

3.2 A Critique of Kitcher’s Reading

With her reading in view, there are two significant points of contention that I will raise in my critique of Kitcher’s reading. For one, there are clear differences between her interpretation and Kant’s expressed views in the passage. This demonstrates a second point of departure in her interpretation of his views in the Critique. Following that, I will highlight a critical theoretical distinction that Kitcher overlooks. I use it to elucidate how implausible her account is, which gives us grounds to reject it as she fails to interpret Kant’s claims charitably.

First, Kitcher’s insistence on “mental act awareness” stands in direct opposition to Kant’s apparent assertion to the contrary in this passage. Kant explicitly says that when we are conscious of the unity of synthesis, “Often this consciousness may be only faint so that we **do not [notice it] in the act itself**” (A103–104, my bolding). Kant’s apparent meaning in this quote undermines Kitcher’s bold assertion that we must have consciousness *in the act itself*. Given Kant’s explicit statement to the contrary, Kitcher’s account cannot be sustained because it overstates the consciousness required.

She attempts to work around this problem by presenting a new gloss of that part of the passage. She suggests that thinkers “**do not need to pay much attention** to individual steps, adding up the stroke symbols little by little in accord with the counting

rule” (2011a, p. 63, my bolding). However, this qualification is incompatible with her account of the counting rule, as she says it requires many consciousness-dependent skills for its application (e.g., the consciousness of individuating each stroke as a mark ‘1’, and so on). In an attempt to address this issue, she proposes that the rational subject must be “**at least implicitly**” conscious of one’s synthetic acts (2011a, p. 68, my bolding). While her attempt to resolve the problem this way is a step in the right direction, she does not (and cannot) sustain this modification in her account.

Since Kitcher only recognizes apperception and inner sense, she would owe us an account of how (and why) we should ever be *implicitly* or *explicitly* conscious of our mental acts.⁷⁵ Moreover, in her view, the “rational subject” is *partially created* by being self-conscious of the sensory representations as the states and acts of a single cognizer. That commitment prevents her from maintaining that the subject is only *implicitly* conscious of adding the four particular stroke marks in a series. If the subject’s consciousness of those marks is to establish the “epistemic” or “rational” relations among them that she claims that they do, then she would need to say that the subject is *explicitly* conscious of them in one’s mental acts of synthesis (2011a, p. 72). Kitcher overlooks this complication, so she cannot adequately explain Kant’s claim that we are *not* conscious of our mental acts. In other words, this textual evidence from Kant undermines Kitcher’s idea that we have consciousness in the mental act itself.

⁷⁵ By comparison, I make an implicit-explicit distinction by appealing to a separate notion of consciousness apart from apperception.

The second issue with Kitcher's reading is that she commits Kant to the implausible view that *all* the activities, operations, representations, and sensory data that are involved in counting are explained by and attributable to *the counter*. One way to understand the source of her error is that she overlooks the importance of using the "personal-subpersonal distinction" to differentiate Kant's claims about mental capacities and phenomena at different levels of psychological description or explanation.⁷⁶ In other words, she disregards the fact that there are *many* different ways of explaining and talking about the various mental phenomena and capacities of a human being and those of the mind's subsystems. The distinction helps to classify two kinds of psychological explanation (or description) as follows: a *personal* level explanation describes the fundamental capacities, mental states, and phenomena of an individual, whereas a *subpersonal* level explanation describes those that do not involve the individual, considered *as such*, in the explanation.⁷⁷

Since she does not recognize this distinction, Kitcher reads all Kant's claims at one level of psychological explanation: the personal level. This error leads her to attribute *all* the different types of representations and abilities involved in counting to the *counter*. However, Kant clearly describes specific processes, capacities, and representations

⁷⁶ Daniel Dennett (1969) introduced and coined the "personal-subpersonal distinction," which differentiates between two kinds of psychological explanation. He characterized the distinction as follows: *personal* explanations concern "people and their sensations and activities," whereas *subpersonal* explanations concern the "level of brains and events in the nervous system" (p. 93).

⁷⁷ I describe personal and subpersonal explanations in terms of distinct "levels" because we can classify many other species of explanation within those two general classes. Using different levels also helps to specify the organization of various mental phenomena and competences of a human being and its subsystems.

involved in memory, which can only belong to the subpersonal level, e.g., the empirical manifold that has been apprehended in intuition, the association of representations, and the reproduction in the series of representations. In particular, the unconscious activity through which the synthesis of reproduction occurs is located in the functions of the cognitive system: those are *not* states, capacities, or representations of the individual.

This error leads Kitcher to read all of Kant's claims about these representations and cognitive processes as if they were *all consciously accessible* to the counter—as if *she* is the one self-consciously engaged in them. However, the operations Kant describes are carried out by functions of the mind, *not* by the counter. So, many (if not all) of the consciousness-dependent skills and activities that Kitcher attributes and requires of the counter are better explained if we read them at the subpersonal level.

3.3 My Reading of the Counting Example

I offer an alternative reading of Kant's counting example that avoids Kitcher's interpretive missteps. As I read him, Kant offers this everyday example of an elementary cognitive task to identify certain mental operations and processes involved in counting, which explains my cognition that there *are* six items before me. In order to address this, Kant alternates between explanations at the personal and subpersonal levels.

Suppose that I am presented with some number of objects and tasked with counting them. I can arrive at a judgment that there are, say, 'six' items. The conscious representation presented to me, e.g., 'there are six items,' is a *potentially self-conscious* representation. Since it is presented *to me*, I can self-ascribe it through apperception to

make it self-conscious: 'I think there are six items.' Here, Kant provides a personal level explanation for *my* counting activity by citing a sequence of *my* activities and capacities, e.g., *I* perceive the items and judge that there are six items. He shifts from the personal level to the subpersonal level to account for how I can achieve this cognition of the total number. At the subpersonal level, Kant theorizes about what mental operations and processes might account for my ability to sum up the items. However, the explanations and descriptions of mental phenomena and capacities at this level are ones in which *I*, *qua* counter, am not featured.

Moreover, from my perspective as the counter, the synthetic operations that my mind performs are below my conscious notice. I can *implicitly* know that the representation of the synthesis (i.e., the product and not the activity itself) that I have comprises a combination of sensible intuitions. However, *I* do not have conscious access to the sensible intuitions that comprise the manifold in the series of combinations. Without access to them, *I* cannot use them. In other words, they will not feature in personal level explanations of *my* abilities and representations. So, these representations do not feature in personal level explanations of what I do when I am counting, judging, and so forth. These representations are part of certain mental operations of synthesis, which are correctly explained at the subpersonal level. If we interpret Kant as transitioning between the two levels, it can help us to make sense of his assertions more effectively and avoid confusion about the various mental phenomena he describes, which belong to different levels of psychological explanation.

Counting relies on several mental abilities: representing each unit, successively adding one unit to another, and accessing the previously represented units stored in memory. When I judge that there are ‘six’ items, it is because the necessary reproduction of the manifold of these components is represented as a manifold (A106). In other words, the manifold of each of the components that were combined is represented *as* a synthetic unity in one consciousness. If I have this representation of them as unified in one consciousness, I recognize that what is represented to me is only possible if there had been a series of successive acts in my mind beforehand that allowed me to judge ‘six.’

It is worth emphasizing that Kant does not require that I, the counter, *explicitly know* what I am relying on when I make this judgment. However, unlike Kitcher, my interpretation of Kant’s views can make sense of this. As I argued in Chapter 1, Kant identifies a separate notion of consciousness that is distinct from his two notions of self-consciousness (i.e., apperception and inner sense). I call this third notion “explicit-knowledge consciousness” or “EK-consciousness,” which is the explicit knowledge of what was *formerly* known *only* implicitly by the subject.⁷⁸ By analyzing my cognition, I can make sense of what cognitive abilities must have been exercised to add up the constituents that I recognize in the concept that make my cognition possible. In other words, I can gain “[EK-]consciousness of this unity of synthesis” that comprises my concept ‘six’ by engaging in this analytic procedure (A103). The analysis enables me to make my concept and its application understandable to myself such that I *can* come to *explicitly* know or be EK-conscious of the basis for my judgment. However, it is

⁷⁸ As I noted in **Chapter 1**, scholars have yet to recognize this notion of consciousness, including Kitcher.

important to note that exercising this analytic procedure is something *over and above* a simple act of counting. So, the EK-consciousness we gain here may seem more highfalutin than it really is. Given that it is much more work than we would ever do in ordinary counting, we can and should understand it as something separate from what we typically do when we count.

From the analysis of our two readings, it should be clear that Kitcher's picture attributes to Kant a particularly striking view of what is required to be a "(rational) cognizer" and the substantial self-consciousness required to do ordinary tasks like counting. Her provocative interpretation overstates the extent of our conscious awareness *in making* ordinary judgments and cognizing objects by requiring that we be self-conscious of our mental acts and their products. As a result, her interpretation makes an ordinary cognitive competence of counting into a *cognitively demanding* accomplishment. In doing so, she attributes an implausible view of how we ordinarily think and judge to Kant.⁷⁹ Since a viable alternative reading is available that does not share these shortcomings, it is important to emphasize that these issues are specific to Kitcher's interpretation rather than indicative of any problems with Kant's theory itself. To definitively refute Kitcher's reading of the counting example, let us briefly examine some noteworthy empirical findings that contradict it.

⁷⁹ In another paper, Kitcher claims, "We go about our lives aware of what we are doing, including being aware of acquiring information needed for our project from various sources and then using that information [to make judgments]" (2012, p. 12). While she acknowledges that some everyday cases of "day-dreaming" or "distracted driving" in which our attention drifts "sometimes" occur, she claims that "for most people such lapses are not common" (p. 12).

4. SUBITIZING UNDERMINES KITCHER'S ACCOUNT

Contemporary empirical studies on “subitizing” undermine Kitcher’s account of the counting example. This gives us a third reason to reject her interpretation. With more than 100 years of research, contemporary psychologists have shown that human cognition has a numeric limit of four elements that we can *subitize*.⁸⁰ Subitizing is the ability to rapidly, effortlessly, and accurately make judgments enumerating the exact number of a small collection of perceptual objects. This is done instantly *without* counting—if the total number of items is four or fewer.⁸¹ In subitizing experiments, subjects are exposed to a flash of represented items, and they report having a feeling of *immediate* awareness of the exact quantity of items displayed that they connect to a number word in their subitizing judgment.

Notably, subitizing and counting are two distinct computational processes.⁸² Subitizing is helpful in cases involving a small number of items. When we are presented

⁸⁰ The average limit for subitizing among adults is four items (or less); of course, individual differences can exist in the subitizing range. Moreover, adults and infants differ in their arithmetical abilities. For instance, Wynn (1992) has shown that preverbal 5-month-old infants can recognize when items are added or removed from a small set of items; some have taken these results to suggest that these infants are subitizing within a range of three objects.

⁸¹ There is disagreement among psychologists about the nature and origin of the subitizing phenomenon. Gallistel and Gelman (1991) suggest that when we subitize, we always count the elements one by one, even if we are not aware of doing so. Dehaene (1997) offers an alternative model of subitizing in which attending to the individual objects is not required, but “during subitizing, all objects in the visual field are processed simultaneously and without requiring attention” (p. 69). For more findings and different hypotheses of the nature and origin of subitizing, see Kaufman et al., 1949; Cowan, 2001; Trick & Pylyshyn, 1994; Atkinson et al., 1976.

⁸² Many have suggested that subitizing is more fundamental than counting. For instance, Le Corre et al. (2006) suggest that the ability to subitize small numbers precedes and supports the development of the counting ability.

with more than four items, our enumeration gets slower, more error-prone, and involves counting. In such cases, counting is the only way to determine the exact cardinality of large sets.

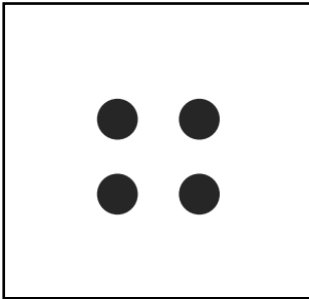


Figure 1: Subitizing a Four-Dot Pattern

To demonstrate with a straightforward example, consider Figure 1. When I look at the collection of dots that are visually represented, I instantly see that there are *four* dots.⁸³ When I make my subitizing judgment *four*, I do so without awareness of the ground of my judgment. I cannot articulate the basis or the reason why I judge *four*.

We can also suppose that for some reason—perhaps due to drowsiness or some external pressure to get the number right—I want to be cautious to ensure the accuracy of my subitizing judgment. In that case, I *can* check my judgment for accuracy and uncover the ground of my judgment through a separate procedure of analysis. To demonstrate to myself that my subitizing judgment is accurate, I could count each of the four dots one at a time until I ran out of dots. In this more meticulous (and tedious) counting procedure, I will judge that there are *four* dots with the awareness of the ground of the judgment. The ground of my judgment is the one-to-one correspondence between each of the natural

⁸³ I provide this as one of many possible arrangements of four dots that demonstrate the subitizing effect. I recognize that the round dot pattern depicted in Figure 1 is a common representation shared by the face of a traditional die and a domino tile that displays four spots. The subitizing effect may be amplified by the familiar structure of the dots. There is some evidence that the arrangement (canonical or random) of the dots can make some difference in the strength of the effect on sets with more than four objects (Krajcsi et al., 2013).

numbers (1, 2, 3, 4) and each of the four dots presented. Here, I will have exhibited a stable, one-to-one correspondence to myself.

However, engaging in additional counting procedures after subitizing is generally unnecessary and uncommon, especially for small quantities. When we subitize, we instantly and reliably see that there are *four*. We can be confident in our subitizing judgment without *explicitly knowing* the ground in such cases. In fact, some psychologists argue that subitizing is more accurate than counting (e.g., Carper, 1942). This demonstrates that we generally do not need to attain EK-consciousness about our judgments when we already have a solid basis for concluding we got things right. With that in mind, let us return to our discussion of Kitcher's account of the counting example.

As an interpretation of Kant, Kitcher saddles him with a view that *prima facie* suggests that "subitizing" is impossible. She insists that rational subjects like us *must* be aware of the ground in making judgments to be truly rational thinkers. Even when we are presented with a small number of items that we can subitize (viz. four or less), she insists that we must count each item individually, setting up a one-to-one correspondence between each number and each item, to *know* the ground of our judgment *four*. The empirical studies I cited earlier suggest that this is not a correct picture of how we perceptually apprehend and identify numerosity in a small group of items. So, if Kitcher insists that we must always know the ground for our judgments, attributing her interpretation to Kant would mean he is making an empirical mistake.

When interpreting historical figures like Kant, our goal should always be to read his claims sympathetically: we should try to understand his position in the best possible

light, attempting to resolve apparent inconsistencies or ambiguous claims with respect to his overall view. My interpretation does better than Kitcher's in that regard. I also offer a more charitable reading of Kant's counting example. Since he is not insisting that we must be aware of the grounds for our judgments in making them, we are not obligated to read him as running headlong into the empirical evidence.⁸⁴ While Kant may not have been thinking about the phenomenon of subitizing when he wrote the First Critique, it is a nice feature of his account that it gets the correct result empirically.

5. CONCLUSION

In sum, I offered a thorough critique of Kitcher's interpretation in three core criticisms as a foil for my reading of Kant. First, I have shown that her interpretation of RE cognition does not map onto anything Kant is committed to in his First Critique. She draws on a dubious resource and misconstrues his claims about so-called 'animal cognition' as a point of contrast to characterize rational human cognition. Ultimately, this leads Kitcher to overstate the contributions of our faculty of reason in her characterization of human cognition. Second, I demonstrated that Kitcher presents us with a *hyper-intellectualized* picture of the consciousness that we can have of our mental acts and capacities in her account of its requirements for human cognition.⁸⁵ A critical interpretive issue arises here: Kant explicitly claims that we are not conscious of the

⁸⁴ As further support for reading Kant this way, Kant even suggests that when working with larger numbers, we will notice ourselves engaged in counting (A78/B104).

⁸⁵ Many contemporary philosophers, especially Burge (2003), warn against hyper-intellectualization in epistemology.

mental acts involved in counting, which directly undermines Kitcher's claim. In addition, she arrives at her provocative interpretation by reading all of Kant's claims about the various mental operations and representations in the counting example at the personal level: misattributing them all to the counter. This results in an implausible view of what we achieve in an elementary case of counting. Third, empirical findings on subitizing undermine her account of the mental act awareness that she insists we have in ordinary cases of counting a small number of items.

My comprehensive critique of her interpretation yields two overarching lessons. Firstly, when we describe the unique aspects of human cognition, we must be careful not to overemphasize the contributions of certain higher cognitive powers like the faculty of reason, as Kitcher does. Additionally, we must be careful about *how* we account for reason's contributions to our cognition, thought processes, and abilities. Kant acknowledges that there are epistemic limitations to theorizing about the cognitive capacities of non-human animals based solely on observations of their behavior. A lesson that we can draw from this is that we cannot accurately characterize human cognition and our rational capacities based on what non-human animals *seem to lack*. Otherwise, we risk making inaccurate claims about their natures based only on the assumptions we make about non-rational animal minds. Instead, we must develop an independent account of reason and its role in our cognition. This will enable us to overcome any erroneous assumptions and biases that may lead us to think of ourselves as more sophisticated than we are and those that may lead us to overlook any possibility of shared characteristics

among human and animal capacities.⁸⁶ After all, empirical research on animal cognition suggests that many of the capacities and behaviors that we think require higher-level competences that we conceive of as being unique to humans (e.g., social learning, self-recognition, and so forth) may in fact, be had by non-human animals.⁸⁷

Second, in order to account for human cognition and the consciousness it entails, it is important to distinguish between the different kinds of mental phenomena and capacities that we can explain and talk about concerning the mind, cognitive system, brain, or otherwise. I advocate using the personal and subpersonal levels of psychological explanation and description both for interpreting historical thinkers' claims, like Kant, but also more broadly when we theorize about the mind and consciousness. This includes distinguishing between conscious and self-conscious representations that we have access to as perceivers and thinkers, and those unconscious ones that we can only theorize about as existing in the mind.⁸⁸ Without making this distinction clear, we run the risk of making implausible claims about what *we* can plausibly know based on our conscious experience.

⁸⁶ By recognizing their similarities, I am not suggesting that we downplay the differences between human and non-human animal minds, which may be a difference in *kind* rather than *degree*. See Penn, Holyoak, and Povinelli (2009) for a helpful overview of the debate among scientists concerning the issue of animal intelligence.

⁸⁷ For a few examples from animal cognition research, see Danchin et al. (2018) on social learning in fruit flies, Kohda et al. (2019) on mirror self-recognition in fish, and Hare, Call, and Tomasello (2000) on social problem-solving in chimpanzees. It is beyond the scope of this paper to address the many challenges involved in interpreting the empirical findings of animal cognition research, e.g., scientists' biases when studying animals, anthropomorphism, experimenter effects, and more general issues of research reliability and publication bias.

⁸⁸ In Kant's view, the vast majority of mental representations in the human mind are unconscious. His most precise statement of this can be found in his *Anthropology*, where he says, "**The field of sensuous intuitions and sensations of which we are not conscious**, even though we can undoubtedly

conclude that we have them; that is, *obscure* representations in the human being (and thus also in animals), **is immense**. Clear representations, on the other hand, contain only infinitely few points of this field which lie open to consciousness; so that as it were **only a few places on the vast map of our mind are illuminated**" (Ak. 7:135, my bolding).

Chapter 3: Toward an Integrated Theory of Perception

1. INTRODUCTION

Theorists can debate an issue for years without recognizing that the core issue dividing them need not divide them at all. A notable example is Tyler Burge and John McDowell's recent dispute over whether the science of perceptual psychology *rules out* a theory of the nature of perceptual states that they call "disjunctivism."⁸⁹ Since well-established scientific knowledge bears on the nature and individuation of perceptual states, Burge insists that disjunctivism should be rejected in favor of his theory, "perceptual anti-individualism." In opposition, McDowell argues that his "epistemological disjunctivism" can be sustained without inconsistency with the science.⁹⁰ However, their heated debate is ultimately left unresolved, deepening a seemingly insurmountable rift between their two externalist theories of perception.

My aim in this paper is primarily to address a central issue in the metaphysics of perception. I argue that a version of epistemological disjunctivism is not inconsistent with the science of perceptual psychology. In doing so, I reconcile Burge and McDowell's seemingly intractable dispute by clarifying where they are in mutual disagreement rather

⁸⁹ For their exchange, see Burge (2005), Burge (2011), McDowell (2010), and McDowell (2013).

⁹⁰ For the sake of brevity, I will refer to McDowell's epistemological disjunctivism as "disjunctivism" hereafter. In this paper, I will exclusively focus on McDowell's epistemological disjunctivism, setting aside his disjunctivism about singular thought. It's important to note that McDowell conceived and presented his epistemological disjunctivism independently and long before his disjunctivism about singular thought. Therefore, we should avoid conflating the two and evaluate his epistemological disjunctivism based on its own merits.

than where they merely seem to be. I demonstrate that their two central theories are not in conflict at all. Where they both found reasons to discredit one another's theories, it turns out that they are really much closer than they originally thought. The second aim of this paper is to show that we *can* and *should* embrace both of their theories in a synoptic view of perception. By embracing contributions from Burge and McDowell, we acquire greater resources to enrich our comprehensive understanding of perception.

In Section 2, I examine Burge's "incompatibility" charge and show that it does not threaten McDowell's disjunctivism. While Burge is right to reject the "no common kind" characterization of disjunctivism, his objection does not apply to a more precise characterization of McDowell's theory. Since Burge's objection misses its target, McDowell's disjunctivism can still be true. In Section 3, I argue that McDowell's construction of a two-framework model demonstrates that his disjunctivism is not offered to compete with the science's classifications or Burge's perceptual anti-individualism. In Section 4, I argue that their reasons for discrediting one another's theories largely stem from their radically different starting points. I isolate two points of genuine disagreement between them and offer a way to resolve their dispute. Despite their methodological differences, I propose a way that their two central theories could hang together in an integrated account of perception. In Section 5, I close with a brief defense of my integrated approach against potential objections.

2. BURGE'S "INCOMPATIBILITY" OBJECTION

The debate between Burge and McDowell centers on their two different accounts of the nature and individuation of an individual's perceptual states in three types of cases: (i) a case of veridical perception, (ii) a perceptually indiscernible ordinary illusion, and (iii) a perceptually indiscernible hallucination.⁹¹ Suppose I am looking at a daffodil before me under normal circumstances. My experience of the daffodil can appear consciously and sensorily indiscernible to me in both veridical and non-veridical cases. Now and then, we misperceive the world around us even when it *looks* to us as though we see things clearly. I may see the daffodil as yellow when the object does not have that property; this can result from a perceptual illusion, the distance an object is from the perceiver, or some other ordinary circumstance about my perceptual situation. This peculiar fact about our perceptual experience is something that scientists and epistemologists share an interest in explaining—albeit with different methods and resources.

In Burge's view, the science of perceptual psychology plays a *decisive* role in fundamentally explaining and correctly classifying the individual's perceptions and misperceptions as they belong to the *same* psychological kind. To clarify, perceptual psychology studies how the perceptual system estimates or acquires information about the distal environment based on the proximal sensory stimulations it receives (cf. Burge,

⁹¹ This is the standard tripartite classification of perception that philosophers consider when theorizing about its nature. However, Burge (2011) introduces a fourth case of a "perceptually indiscernible perception of a different object" (p. 43). Since none of my arguments hang on whether this case is included, I will focus on the standard three cases.

2010; Rescorla, 2015). On the other hand, disjunctivists hold that an individual's perceptual states *differ* in some relevant kind.⁹² Since the disjunctivist classification is *incompatible* with the science of perceptual psychology, Burge reasons that we should reject disjunctivism as an erroneous theory. To see this, let us start with Burge's argument for their incompatibility.

2.1 Disjunctivism's Incompatibility with Perceptual Psychology

Burge's central charge against disjunctivism is that it is *incompatible* with the science of perceptual psychology.⁹³ More precisely, Burge argues that disjunctivism's basic thesis and commitments are at odds with a principle that is central to perceptual psychology's classifications and explanations of the three cases. Burge calls this principle the "Proximality Principle." It states:

On any given occasion, given the total antecedent psychological state of the individual and system, the total proximal input together with internal input into the system suffices to produce a given type of perceptual state, assuming no malfunction or interference. (2005, p. 22)

Under normal conditions, this principle holds that the formation of perceptual state types *solely* depends on three factors: the registration of proximal stimulation, the individual's

⁹² This is a general claim about all versions of disjunctivism—not just McDowell's. McDowell's disjunctivism, more specifically, holds that the cases will differ in an *epistemologically* salient kind. I will return to this in greater detail in Section 2.2.

⁹³ Burge intends for this objection to apply to all known versions of disjunctivism. For my purposes, I will concentrate on his critiques that specifically target McDowell's theory, which can be found in Burge (2005, pp. 43-50) and Burge (2011).

antecedent psychological conditions, and the relevant laws for forming perceptual states. Hence, it does *not* depend on the actual distal objects of perception in the environment.

Accordingly, perceptual psychology classifies the individual's perceptions and misperceptions in the three cases as belonging to a *common kind* because the cases start from *the same* registration of proximal stimulation. In those cases, we assume that the antecedent psychological states and formation principles are held constant, and the proximal causes are indiscriminable. While the science can differentiate between the cases in occurrence-based ways, viz., based on the presence or absence of a distal object, Burge (2011) insists that the science's principles focus on a "common factor" that is specific to the three cases: the "ability-general" kind.⁹⁴ The stability of this ability-general kind in each of its instances allows it to provide a basis for the science to classify and explain the three cases.

Burge's central charge against McDowell's disjunctivism is that it is committed to denying a *common kind* of perceptual state that science recognizes. Let us call this Burge's "no common kind" characterization of disjunctivism. As we have seen, the common kind that the science identifies is not just *any* common kind. Burge (2011) clarifies that it is *explanatorily relevant* and *fundamental* to explaining the individual's perceptual states and is *specific to* the three cases (p. 47). In other words, the perceptual states' explanation must be based on a *particular* psychological kind. This is one that,

⁹⁴ Burge (2011) distinguishes between two elements in the representational content of perceptual states: (i) general or "ability-general" and (ii) singular or "occurrence-based" elements. The "ability-general" factor is neutral about whether an object is perceived or not, whereas the "occurrence-based" element marks singular, token-individuated aspects of each occurrence (p. 52).

Burge says, has “representational content shared by all and only the representational contents of instances of [the three cases]” (p. 46).

We will find that McDowell’s disjunctivism—as Burge characterizes it—directly contradicts the science’s classification. Recall that it is an empirical fact that perception of the distal environment can be fallible. Our perceptual abilities are finite and limited; we are only human, after all. Considering this, Burge (2005) argues that “The Proximity Principle, together with this empirical fact, entails that the same type of perceptual state can be veridical or non-veridical” (p. 27). Since McDowell’s disjunctivism holds that the relevant kind-based explanations distinguish between veridical and non-veridical perceptual states, disjunctivism does conflict with the science’s classification.

Following this point, Burge stresses that disjunctivism entails that differences in distal objects in each of the three cases *determine* differences in perceptual state kinds. And McDowell certainly does seem committed to this. For McDowell (2013), the *successful* case of perception is the kind of state that it is because there is some environmental reality that is “perceptually present” to the individual in that case (p. 262). So, the environmental objects (or lack of objects) involved in perception make a difference in how those experiences are type-identified. So, McDowell’s disjunctivism does not accord with the science’s Proximity Principle.

Since McDowell’s disjunctivism conflicts with the science in these ways, one *could* see his theory as challenging or competing with well-established scientific knowledge. For this reason, Burge (2005) concludes on methodological grounds that we should reject disjunctivism. He elaborates:

[Disjunctivism] is empirically untenable. It is incompatible with a massive amount of empirical evidence central to the scientific study of perception. In fact, disjunctivism is incompatible with the methodology of the science, a methodology that is empirically well supported. (p. 41)

In other words, McDowell's disjunctivism and its classifications are not empirically supported by the science's methods, principles, and standards. If the Proximity Principle is "basic in nearly all scientific study of perception," then Burge has shown that there is no support for disjunctivism's "no common kind" classification to be found there (p. 27).⁹⁵

As a matter of sound methodology, Burge thinks it is imperative for philosophical theories of perception to be informed by the current science. This methodological point is worth appreciating. It is prudent for philosophers of perception to be informed about the valuable contributions that scientific research offers to our understanding of this phenomenon. To appreciate this, imagine if a telescope had been available to Aristotle in his day. Do you think he would have disregarded it or what others may have gleaned about the cosmos from it? Of course, he never had that opportunity. We now know that this powerful tool would have radically transformed his understanding of the universe and our place in it. Unlike Aristotle, philosophers of perception have some incredible tools and findings from science that are *now* revolutionizing what we know about our perceptions and misperceptions. So, any philosopher who would disregard the science of perception's findings would undoubtedly miss out on a wealth of valuable empirical knowledge that could not be acquired by any other means. That much should be

⁹⁵ It is beyond the scope of this paper to address whether Burge is, in fact, right about that.

uncontroversial. For now, let us set matters of methodology aside for a final word on Burge's incompatibility charge.

At this point, it should be clear that Burge has excellent reasons to reject the "no common kind" characterization of McDowell's theory. He identifies a genuine conflict in holding that there is a common kind that the science identifies *together with* disjunctivism's apparent denial of *that* common kind. If the Proximality Principle is a true account of perceptual states, McDowell's disjunctivist account is strictly false. With that point and Burge's methodological criticism in mind, there does not seem to be anything redeeming about his disjunctivism. If McDowell offers disjunctivism to *challenge* or supplant the science's classification, then Burge is right that we should reject it in favor of well-established scientific knowledge. However, upon closer examination of McDowell's theory, we will find some critical flaws with Burge's characterization of it.

2.2 A Defense of McDowell's Disjunctivism

Burge's unfortunate "no common kind" characterization of McDowell's disjunctivism is only a synthetic version of the theory. In both of his replies to Burge, McDowell insists that the view Burge criticizes is not present in his work. Instead, let us consider a more precise way to understand McDowell's theory—one that Burge does not address.

McDowell offers disjunctivism as an alternative to the *highest common factor* (HCF) conception of perceptual experience—the concept of experience that recognizes

something shared between genuine perceptions and experientially indistinguishable hallucinations.⁹⁶ He rejects the HCF conception because it leads us to the idea that the ultimate basis for our perceptual beliefs about the external world lies in *mere* appearances, which can (at best) justify the perceiver's claim about how things *seem*. In other words, philosophical models that appeal to the HCF conception cannot yield anything clearly recognizable as perceptual knowledge.⁹⁷ The main point of McDowell's disjunctivism is to offer an alternative conception of perceptual experience on which successful and unsuccessful perceptual experiences can be indiscriminable, but that does *not* imply a match in their epistemic significance (2013, p. 260). A better characterization of McDowell's disjunctivism is in terms of a denial of a common *epistemic* kind.

McDowell grounds his claims about what specific kinds the three cases share or not in his disjunctive conception of experience. When we conceive of experience in that way, he argues that the appearances presented to the subject will include a specification of how things appear to them *and* a determination of which kind of case it belongs to (McDowell, 2010). In other words, his disjunctivism holds that an experience can *either* make it manifest to the subject that things are, in fact, as they appear (i.e., 'good' cases) *or* the appearance that things are that way is a mere appearance (i.e., 'bad' cases). Hence, there are two distinct *epistemic* kinds that a perceptual experience could belong to—a successful case or an unsuccessful case of perception. So, his disjunctivism is not

⁹⁶ Arguments from illusion traditionally support this notion of experience.

⁹⁷ McDowell (1983) primarily directs this critique at sense data theories of perception.

committed to the denial of just *any* commonalities among the cases. Rather, the theory *only* denies a match in their epistemic significance.

If, like Burge, we take McDowell's claims about common and uncommon kinds outside their proper context, his denial of *a* common kind will seem problematic. To clarify, the science of perceptual psychology works with a conception of experience that is metaphysically an HCF view. Even if McDowell rejects the HCF conception of experience *itself*, that does not mean that he denies the existence of any kinds that can be identified based on that particular conception of experience. In other words, disjunctivism's denial of a common *epistemic* kind (based on the disjunctive conception of experience) *does not entail* a commitment to the denial of the common kind that the science identifies (conceived with an HCF conception of experience). So, his disjunctivism need not deny the common kind that the science identifies. Thus, Burge's rejection of McDowell's disjunctivism on that basis is not justified.

Since Burge levels his objection against the "no common kind" characterization of McDowell's theory, the objection *only* gives us ground to reject *that* characterization of it. If we consider Burge's criticism against this more precise presentation of McDowell's disjunctivism, it is not obvious *how* Burge's objection could apply to it.⁹⁸

⁹⁸ See Goldhaber (2019) for a similar discussion of how Burge mischaracterizes disjunctivism in general—not just McDowell's theory. However, Goldhaber and I draw different conclusions from Burge and McDowell's debate. Goldhaber concludes that it is tenuous whether the sciences rule out *any* plausible disjunctivism given the diversity of approaches and extent of disagreement among perception scientists in general. In my view, disagreement in science is commonplace, and the debate over the constructivist and ecological approaches has not been a serious matter of controversy among researchers in decades. The science's current practice takes an information-processing, computational

That would require us to evaluate whether disjunctivism's denial of a common *epistemic* kind is *incompatible* with the ability-general common kind identified by the science. When we reframe the objection in this way, what disjunctivism denies does not directly *contradict* the science's classification. The initial conflict that Burge presented—where disjunctivism and the science make *competing* claims—dissolves. Hence, McDowell's disjunctivism properly characterized can still be a true theory of perception.

3. McDOWELL'S "NO INCONSISTENCY" DEFENSE

The considerations in Section 2 show that Burge's incompatibility objection misfires insofar as he levels it against a mischaracterization of McDowell's disjunctivism. Since Burge does not undermine or seriously question the truth of disjunctivism, McDowell (2013) focuses on showing how disjunctivism can have a fundamental classification of experiences that differs from the science's classification *without inconsistency*. More precisely, he argues that disjunctivism can provide a *supplementary* classification of the individual's perceptual states in the three cases (p. 274). McDowell's constructive efforts suggest that these two theorists may actually agree more than they initially thought: they both share an interest in upholding the science's classifications and explanations. While Burge certainly doubts this, a closer look at McDowell's two-framework model will help to show McDowell's commitment to that proposal.

approach to the study of perception; the dominance of this approach is sufficient to demonstrate a general consensus.

3.1 McDowell's Two-Framework Model

To start with, McDowell rejects Burge's presumption that the science provides the *only* fundamental level of kind classification. He insists that if we are limited to theorizing about perception in that way, a crucial aspect of perception will be left out: the epistemic significance of experience that is essential to characterizing 'good' cases (2013, p. 262). To explain that distinct aspect of experience, we need disjunctivism. So, in his view, that requires us to conceive of epistemology as a *distinct* inquiry from science.

Since epistemology and science have different explanatory purposes, McDowell reasons that they can each have their own fundamental levels of explanation. The science can individuate the three cases *together* at the science's fundamental level of kind classification, "just as Burge insists" (2013, p. 262). And disjunctivism can provide an *additional* classification on which the three cases are individuated *differently* at the fundamental level of epistemology. Since these two classifications are not made at the same level, they cannot contradict each other.

Notably, then, McDowell thinks that his model allows for both of their explanations to be sustained. Another way to appreciate his point is to consider the many different inquiries that can co-exist within a university. The musicologist's inquiry concerning the aesthetic qualities of a musical performance is distinct from the psychologist's inquiry into how the ear and brain work together to interpret a given

complex array of acoustic information. They can both offer true explanations—albeit from different departments—as appropriate for their different explanatory purposes.⁹⁹

McDowell sees science and epistemology as explaining two *different aspects* of the *same* subject matter: ordinary perception by individuals. McDowell elaborates:

The science enables explanations of an aspect of the representational character of perceptual states. There is no inconsistency with the science in claiming that there is another aspect that falls **outside the science's purview**: the aspect that pertains to the epistemic significance of the states. (2013, p. 274, my bolding)

To support this, he argues that while notions of warrant do not play a role in science, they *are* relevant to epistemology (p. 274). Accordingly, he believes that science and epistemology can each fulfill distinct explanatory purposes.

All of this shows that disjunctivism and science can classify and explain the perceiver's states *without inconsistency*. In other words, there is no *logical* inconsistency in holding both classifications at once, viz., the truth of one classification does not preclude the truth of the other. The relation that McDowell identifies and defends here is fairly weak, which makes it easier to maintain. Even so, it should also be noted that McDowell's argumentative strategy here is not unique. Philosophers and scientists have

⁹⁹ Universities, of course, are organized into different departments by fields of study for various practical benefits. Inquiries are more challenging to individuate. For instance, interdisciplinary inquiry may be an inquiry all its own, or it may constitute a merging of distinct disciplines' inquiries and explanatory purposes. However, by McDowell's lights, epistemology is not an interdisciplinary type of inquiry. It must be conceived apart from the sciences. So, as we will see, McDowell's conception of epistemology turns out to be very different from Burge's conception of it. I will expand on this genuine point of disagreement between McDowell and Burge in greater detail in Section 4.1.

offered similar arguments in the debate over the relation between science and religion.¹⁰⁰ For instance, many religious notions like an omnipotent God do not figure in modern science. So, one could argue that science's claims about the universe do not preclude religious-based claims—positing the existence of God—also being true of the universe. This comparison is worth noting because the success or failure of this argumentative strategy for one debate may well have implications for the other. For present purposes, I will set that issue aside.

McDowell's construction of this two-framework model is notable because it signals an important point of agreement with Burge. They both share an interest in upholding the science's explanations—albeit in different ways. It also shows that McDowell clearly does not offer his disjunctivism to *compete* with or to *replace* the science's classifications. If that were his aim, there would be no reason or benefit to developing a two-framework model. (After all, by introducing two frameworks, McDowell thereby creates the burden of characterizing and relating them.) So, Burge and McDowell are not really in disagreement about that. However, McDowell's characterization of the science's explanations and achievements is not uncontroversial.

¹⁰⁰ For two notable examples, see Feynman (1999) and Gould (1999). I raise this point only to highlight a comparable argumentative strategy in the philosophy of science that has been used for a similar purpose. In fact, McDowell's proposed model is similar to Stephen Jay Gould's "Non-Overlapping Magisteria" (NOMA) view. For Gould, the evolutionary sciences and religion deal with fundamentally distinct aspects of human experience and, these disciplines can co-exist when they each stay within their own domain.

3.2 Two Characterizations of the Science of Perception

With his two-framework model, McDowell offers an interpretation of how the science's explanations work. However, his characterization generates further conflict with Burge as it directly contradicts the characterization offered by Burge's perceptual anti-individualism. In this way, McDowell seems to call the legitimacy of Burge's theory into question. Let us look at the two characterizations of the science for comparison.

By McDowell's lights, the science constructs perceptual systems to provide *enabling* explanations of the individual's perceptual states.¹⁰¹ Such explanations *make* the intelligibility of the individual's conscious perceptual states *possible*. While McDowell does not deny that the science works with causal explanations, he is explicit that the science does not offer *constitutive* explanations of individuals' perceptual states. In his view, individuals' perceptual states require conceptual explanations of their content, and the science is not in the business of offering explanations of that kind (2013, p. 275).

In Burge's view, empirical psychology explains what is *constitutively* involved in an individual's perception. Of his perceptual anti-individualism, he says:

The theory does not just explain a mechanism of perception or a set of enabling conditions for perception. The theory does not confine itself to providing an account of a causal chain of non-perceptual processes that precede or lie in the background of an individual's perceiving—and then stop there. (2005, p. 21)

¹⁰¹ McDowell's characterization of the science's explanations comes from McDowell (1994b). In that paper, McDowell sketches a view of the conceptual apparatus of the science of perception in response to the cognitive theory of consciousness that Dan Dennett (1978) proposes.

Rather, his theory holds that the nature of a perceptual state type *is what it is* only because of a pattern of normal environmental causes. Hence, Burge's perceptual anti-individualism offers *constitutive* explanations—given psychological and environmental conditions—for perception by individuals.

However, there is an easy way to resolve this conflict between them. According to McDowell, defending disjunctivism does *not* depend on his holding any particular characterization of the science. He explains, “the credentials of disjunctivism do not turn on my being right about this. [...] [It] is a side issue where disjunctivism is concerned” (2013, p. 275). In fact, he explicitly says that his characterization of the science's achievements in McDowell (1994b) and McDowell (2010) *may not* be acceptable (2013, p. 272). This admission that he can be wrong about what kind of explanations the science provides clearly indicates that McDowell is not married to any particular conception of it. Moreover, it shows that he is not offering the characterization that he does in a serious effort to undermine Burge's perceptual anti-individualism. So, Burge's theory can still be true.

4. RECONCILIATION AND INTEGRATION

In Sections 2 and 3, I argued that Burge and McDowell's debate about whether the science of perceptual psychology *rules out* disjunctivism is largely based on a misunderstanding. In demonstrating this, I have shown that Burge's perceptual anti-individualism and McDowell's disjunctivism are not really in conflict. Recall, Burge does not give us reasons to reject McDowell's disjunctivism since he levels his

incompatibility objection against a mischaracterization of it. Likewise, McDowell does not give us reason to reject Burge's perceptual anti-individualism. He only proposes his interpretation of the science to show that his theory can bear *some* relation to it, but he does not insist on being right about his characterization of the science. So, McDowell does not threaten the legitimacy of Burge's perceptual anti-individualism. In this way, both of their theories can still be true. Identifying this fact is a critical first step toward reconciliation.

4.1 The Heart of Their Debate

Now, if they just misunderstood one another, aren't these two giants in the field of perception just talking past one another? Indeed, it might seem that way. They find themselves in opposition to one another because they have very different philosophical starting points and methodologies for theorizing. However, there are two substantial points at which they are in mutual disagreement. As we will see, one of those issues is not up to them to solve, while the other is within our reach to clear up.

Burge comes from a philosophical starting point of taking science seriously, and he uses it to inform his perceptual anti-individualism. As his theory provides a framework for the science of perceptual psychology, Burge engages with it to do justice to the science's achievements, which tell us about the conditions under which perception can be *what it is* for perceivers. His theory is broad in its scope: it explains perception as an objective empirical representation, which he claims is an evolutionarily primitive capacity in *all kinds of animals*—humans, human infants, and non-human animals

(Burge, 2010). Moreover, Burge maintains that, as a matter of good methodology, it is imperative for philosophical theories of perception to be informed by the science and to include in their accounts the most fundamental level of explanation that the science provides (2011, p. 44). Since McDowell's theory is uninformed by the science and relies on armchair methods, Burge does not see any grounds for sustaining his theoretical claims about perception. As Burge and many other critics have pointed out, solely relying on armchair methods may lead to unsatisfactory and over-intellectualized views of perception when one's imagination is left unchecked.¹⁰² So, from Burge's perspective, we have principled methodological grounds to reject philosophical theories like McDowell's that do not accord with well-established scientific knowledge.

McDowell's starting point is very different from Burge's. Recall that he offers his disjunctivism to respond to deep skeptical worries that arise from theories that appeal to the HCF conception of experience as an evidential basis for perceptual knowledge. McDowell sees Burge's theory as an HCF view because the science works with an HCF conception of the perceiver's experiences in classifying the three cases. So, in McDowell's view, Burge's picture cannot make sense of how a perceptual state could justify a perceptual belief in the 'good' case. It would leave us with mere causal relations and "exculpations," where we wanted "justifications" for our perceptual beliefs

¹⁰² Armchair philosophy, or philosophy that is done in an *a priori* way, has been scrutinized for its use of subjective methods. This traditional approach is often criticized for relying on intuitions, which do not provide evidence for philosophical theories (cf. Cummins, 1998; Stich, 1988). It is critiqued for using conceptual analysis, which cannot yield the results that philosophers seek, given that there are differences in concepts across cultures and individuals. Some propose that this philosophical program should be abandoned altogether in favor of theorizing in ways that are continuous with the sciences.

(McDowell, 1994a, p. 46). While Burge does conceive of the metaphysics of experience in much the same way as the HCF conception, it is critical to note that Burge does not use it in the epistemologically problematic ways that McDowell identifies. Rather, Burge (2003) supplements his perceptual anti-individualism with his epistemological theory of “perceptual entitlement” to make his claims about matters of epistemic warrant.

When we appreciate all of that, it is not surprising that their debate is left unresolved. Burge and McDowell mistakenly take their theories to be at odds because they have different explanatory projects, starting points, and methodologies. Burge offers a scientific understanding of perception and tells us certain empirically specific things about how it functions. McDowell thinks that we cannot account for perception in that way because it leaves out a crucial aspect of perception: the epistemic significance of experience that is essential to characterizing ‘good’ cases. This tells us that their theories are not really in conflict because they seek to explain different things about perception. So, as it turns out, the reasons they find to discredit one another’s theories have more to do with their wider philosophical commitments than perceptual anti-individualism or disjunctivism alone.

However, there are two genuine points of disagreement underlying their dispute. First, their debate brings out an unresolved issue in epistemology: how we should conceive of epistemology. More precisely, it raises the question of whether epistemology should or must be conceived as a separate explanatory inquiry from science or not. Hence, it is an open question whether epistemology and science can or should be conceived in some integrated fashion. Ultimately, this issue ignites their debate about

whether a one-framework model with science at the fundamental level or a two-framework model with science and epistemology occupying their own distinct fundamental levels are genuine options. Like Goldhaber, I see this as a much larger issue for philosophy to settle. It is not an issue that Burge and McDowell can or should be the ones to settle. Hence, this point of disagreement is not the place to make any real traction in settling their differences or resolving their debate.

There is a second point of disagreement, which can be settled. Specifically, Burge and McDowell are at odds about how to conceive the science's explanations, contributions, and role in theorizing about perception. Since scientific considerations are the driving force behind Burge's opposition to disjunctivism in the first place, *this* is the core issue that must be addressed to resolve their dispute.¹⁰³ Ultimately, this will require a clear view of how their scientific and epistemological explanations of perception can hang together.

4.2 Reconciling the Debate

Burge and McDowell both claim that the science explains the *states of perceivers* with their two different models. However, in various places, McDowell seems to characterize the science as *only* capable of explaining states of subpersonal perceptual

¹⁰³ In many ways, Goldhaber and I come to many points of agreement in our analyses of this debate. We agree about the first issue. However, I disagree with Goldhaber's contention that Burge's epistemological concerns are driving his opposition to McDowell. This is especially clear in Burge (2011), where he goes to great lengths to defend his conception of the science. In addition, Goldhaber does not recognize the second point of disagreement that I identify here as a central point of their dispute.

systems (2010, p. 249). For this reason, Burge concludes that McDowell cannot legitimately hold his disjunctivism *together with* his claim that the science explains states of perceivers.

A critical source of confusion here is that, unlike Burge, McDowell maintains that the states of perceivers are distinct from states of perceptual systems because it matters *who* or *what* is in the perceptual state in question (2013, p. 273). Those states that we ordinarily describe as a perceiver's conscious experiences or thoughts, i.e., "personal level" phenomena, are bound up with a notion of conceptual content that belongs with the capacities exercised in self-conscious thinking. Epistemology, as McDowell conceives it, can offer conceptual and constitutive explanations of those states. The sciences, by contrast, cannot (1994a, p. 55). He maintains that "it is a recipe for trouble if we blur the distinction" between the "respectable theoretical role" that non-conceptual content plays in cognitive psychology's explanations of subpersonal phenomena and a notion of conceptual content that is explained at the personal level (1994a, p. 55).

Moreover, McDowell proposes some further limits to how the science can explain a perceiver's perceptual states. Following Ludwig Wittgenstein and Gilbert Ryle, McDowell recognizes that there are certain limits to the concepts that we use at the personal level, which do not allow us to explain personal level states with anything but those personal level concepts. The mechanical explanations of the science are of the wrong kind for that explanatory purpose. In this way, McDowell sees the personal level states of perceivers as *autonomous* from "subpersonal level" phenomena, viz. perceptual

systems. In effect, McDowell seems to isolate the perceiver's perceptual states at the personal level outside the explanatory reach of science.

However, McDowell takes care to distinguish between what the science *directly* explains from what it *indirectly* explains. It appears as though McDowell is saying that the science *only* explains states of perceptual systems; however, that is not the case. For McDowell, what the science *directly* explains (in mechanical terms) are the states that are the outputs of processing within the perceiver's perceptual systems, i.e., "subpersonal level" phenomena. Furthermore, science attempts to make the perceiver's states intelligible by constructing perceptual systems in a subpersonal account of what makes those personal level phenomena possible. Such *indirect* explanations of the perceiver's states suffice to show that McDowell's two-framework model does, in fact, offer some explanation of them.

Even so, McDowell faces a substantial explanatory burden by sustaining this general picture of the science's explanations within his two-framework model. This is a burden that he overlooks in delivering it. McDowell thinks that even if science does not *directly* explain personal level phenomena, he can say that there is a *correspondence* relation between what the science explains directly at the subpersonal level of perceptual systems and the enabling explanations it offers of states of perceivers at the personal level. However, McDowell merely stipulates that this relation holds between them. He does not situate or ground it. So, there is a genuine explanatory gap in this picture that is left open. The crucial point here is that it is not clear how McDowell could justify his claim that there is a correspondence between them.

In light of this difficulty, the best solution here is to separate McDowell's disjunctivism from his wider view and commitments about the perceptual content of individuals' perceptual states. His views about perceptual content motivated him to make unattractive claims about how the science's explanations work in the first place. For this reason, we *can* accept the truth of disjunctivism on its own merits without accepting McDowell's characterization of the science. After all, we have an attractive alternative. Burge's perceptual anti-individualism is well-informed by the practices of the current science. Moreover, Burge's picture does not leave us with an explanatory gap between states of perceivers and states of perceptual systems because the science treats them as one and the same. For Burge, the science does not privilege or isolate the personal level phenomena of perceivers from the subpersonal level phenomena because the latter is *always* explanatorily relevant to the former.

Accordingly, we can resolve their disagreement about how to characterize the science—as it concerns states of perceivers. McDowell does not offer a plausible overall picture with his two-framework model. However, we can accept his disjunctivism while rejecting his characterization of the science without loss. Burge offers an excellent alternative with his well-informed characterization of it. After all, that is the purpose of his perceptual anti-individualism. So, as it turns out, they can both be right about what is most important to them: disjunctivism can be true and perceptual anti-individualism can be true.

4.3 Integrating Disjunctivism and Perceptual Anti-Individualism

Since their two central theories can be true and are not really in conflict, we need not decide between them. We can embrace *both* of their theories. They each make unique contributions to a more comprehensive understanding of perception. Hence, we should embrace these two theories as they can form part of an overall account of perception. This integration would allow us to benefit from both of their valuable contributions to that greater enterprise.

Burge offers a causal story of *what it is* to be in certain perceptual states under certain psychological and environmental conditions for a wide range of creatures, including humans, infants, and non-human animals. This constitutive explanation tells us how things *seem* to the perceiver, which depends on the individual and her perceptual system's bearing certain relations to the natural environment. The science's account of the subpersonal phenomena of perceptual systems plays an important explanatory role in accounting for personal level phenomena. This constitutive account of how things appear to the perceiver can be an explanation of just what McDowell calls "appearances."¹⁰⁴ In other words, the science explains how perceptual systems play a critical role in specifying how things in the environment appear to the individual that things are a certain way. The science's explanations do that without specifying a determination of whether it is a 'good' case or a 'bad' case. In this way, the science can offer some new resources to improve McDowell's account of appearances in 'bad' cases and how they occur. He

¹⁰⁴ McDowell (2010) characterizes an "appearance" as "a state of a subject that consists in her having it appear to her that things are a certain way" (p. 244).

could allow the science's account of subpersonal phenomena to be relevant to explaining why it appears to the perceiver that she is in the 'good' case when she is not. McDowell's account of 'bad' cases needed to be improved. McDowell can embrace that even if it means accepting that what the science *constitutively* explains is appearances.

Hence, Burge's constitutive account of an individual's perceptual states helps to make plausible how perceptions and misperceptions could have something in common. McDowell wants to agree with Burge about this, but his general picture lacks the proper resources to account for it. By embracing Burge's constitutive scientific account, McDowell can allow for some shared subject matter among the cases at the personal level. Hence, this is a crucial area of overlap.

Moreover, McDowell's disjunctivism can offer an account of an epistemologically significant feature of perceptual experience that only rational human perceivers achieve. His disjunctivism, then, will only account for a subset of the perceivers accounted for by Burge's theory. However, that is not an issue for integrating them at all. McDowell (2011) has already acknowledged that fact about his disjunctivism; he says that the notion of warrant central to his disjunctivism could be seen as a mere species of a wider genus (p. 21).

5. CONCLUSION

Now, there may be many reasons that one might be skeptical about unifying McDowell's disjunctivism and Burge's perceptual anti-individualism. On the one hand, one might worry that unifying the two theories in this way comes at too high a cost for

McDowell. Even if we save disjunctivism in the sense that I have said it is extractable from his wider view, that will forego too much. You might think that disjunctivism requires sustaining McDowell's idea that individuals' perceptual states must have nothing other than conceptual content to play an evidentiary role in perceptual knowledge.

We can sustain that element of McDowell's disjunctivism without concluding that conceptual content is the *only* content the perceiver's perceptual state has. In other words, McDowell can sustain what is essential to his disjunctivism: it can constitutively explain an aspect of the perceiver's states, and the theory attributes conceptual content to them. However, the trade-off that he must accept is that the conceptual content is not exhaustive; that is not all there is to the perceiver's perceptual states at the personal level. We have simply made room for the science to provide a constitutive explanation of an aspect of the individual's appearances and for the science to attribute some content to her states in a non-instrumental way. The content that the science attributes to the perceiver's states need not play any significant *epistemic* role (in McDowell's sense) for the perceiver. Ultimately, this is a worthwhile trade-off for McDowell.

On the other hand, from Burge's perspective, one could also object to this forced marriage because Burge strictly opposes McDowell's notion of an indefeasible warrant as it over-intellectualizes perceptual knowledge. Hence, it is not something that we should try to save at all. In response, I would argue that this objection fails to appreciate that there is something of value to McDowell's disjunctivism that we *can* recognize. There is something commonsensical about disjunctivism. Accepting this does not require us to say that we never have reason to doubt ourselves; we can be modest, recognize our likelihood

for error given certain limits, and still recognize that we are getting the world right when we do much of the time.¹⁰⁵

However, challenging this point is just another way to reinforce Burge's methodological concern about the use of armchair methods. I share his concerns about their untethered and unrestricted use in philosophical theorizing. In general, Burge has the right methodological approach for theorizing about perception; we should anchor our theories to well-established scientific resources whenever they are available. Even so, we should be mindful of the benefits *and* the potential costs of using the current science to constrain philosophical theorizing. It may come at a high cost. Not all armchair philosophy results in mere flights of fancy; some armchair theorists make great efforts to keep their theorizing tied down to Earth.¹⁰⁶ We do not want to be overly restrictive in what qualifies as a viable theory solely based on methodology because we may rule out many valid philosophical projects worth pursuing. Even so, this objection does not give us any reason *not* to integrate the two theories. It only reinforces a methodological concern that is central to Burge's broader philosophical commitments.

¹⁰⁵ This may be more palatable if we characterize why we have the epistemic warrant that we do in the 'good' case a bit differently. Perhaps it may have more to do with a combination of factors, including the context of one's perceptual situation, repeated exposures to certain objects in our environment, knowledge about the limits of one's particular perceptual system (e.g., near-sightedness), a long history of perceptual experiences that we learn from, and the like. Taking this all together could allow one to justify to oneself—explicitly or not—that one's perception is successful when it is. Of course, we need not do this at every moment of our day. The world will often tell us when we err in one way or another.

¹⁰⁶ Cf. Williamson (2019). As a staunch defender of armchair philosophy, Williamson argues that this approach constitutes a variety of armchair science like mathematics or economics. For that reason, the discipline should not abandon it.

After considering some natural objections that Burge or McDowell could raise, let me address a final one. Why combine these two particular philosophers' theories at all? To clarify, my purpose in this paper is not to propose a provocative forced marriage between two prominent theorists for its own sake. There was a genuine dispute to reconcile and common ground between them. Still, one might contend that my integration goes too far. Instead, perhaps it would suffice to conclude that both theories can be true and leave it at that. Concerns along these lines are natural, but they largely stem from presupposing that there is some legitimate basis for dividing their two theories. However, this is to insist that their different approaches *essentially* divide them in irreconcilable ways. After a careful assessment of their debate, I find two externalist theories of perception that can both be true, that share common ground, and that both make valuable contributions to our understanding of perception. So, one should no longer insist on isolating their theories on opposite ends of the theoretical landscape.

There may be other ways that Burge's perceptual anti-individualism and McDowell's disjunctivism could hang together. There may be other theories that helpfully contribute to a broader understanding of perception as well. Indeed, philosophy is at its best when it can bring together valuable contributions from a variety of sources. It is beyond the scope of this paper to consider other contenders. However, the reconciliation of Burge and McDowell should inspire confidence that other complementary contributions still lie on the horizon.

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