

CRITICAL NOTICE

Learning to Appreciate the Gray Areas: A Critical Notice of Anil Gupta's *Conscious Experience*

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Abstract

Anil Gupta's *Conscious Experience: A Logical Inquiry* provides an impressive and novel account of rational justification based on conscious experience which is used as a foundation for a new theory of empiricism. In this critical notice, I argue that Gupta's project is fascinating, but is often hampered by a lack of sufficient philosophical justification and clarity regarding some essential features of his project, as well as a lack of engagement with relevant scientific domains that would directly bear on it, such as computational neuroscience, cognitive neuroscience, and cognitive psychology. This limits the sort of logical inquiry available to him in problematic ways.

Keywords: Consciousness; conscious experience; rationality; logical inquiry; cognitive science; neuroscience; psychology

Anil Gupta's *Conscious Experience: A Logical Inquiry*¹ is an impressively ambitious philosophical endeavor. Not content merely to provide a logical analysis of consciousness, empiricism, language, or rationality, it attempts to weave them all together and, in the process, offer up an entirely new and unique version of empiricism: reformed empiricism. Put simply, Gupta is interested in showing how our conscious experiences of the world can be used to provide rational justification for our beliefs and judgments, without assuming either that conscious experience somehow provides us with special propositional knowledge, or assuming that our experiences are entirely structured by our preexisting set of concepts and beliefs.

Unlike many traditional views of empiricism, Gupta's account argues that concepts are not derived directly from experience, nor does experience contain content of any kind. Instead, experience always works in conjunction with a preexisting set of beliefs, concepts, and judgments held by an agent (their preexisting "view" of the world) to allow for the formation of new rationally justified beliefs. Thus, the appearances manifest to us in conscious experience provide us only with a means of *transitioning* to a rational belief or judgment based on the preexisting view we have. The exact same conscious experience could thus rationally justify any number of radically different beliefs depending on the preexisting view of the agent. Conscious experience connects us to the world in a direct manner, but does not directly contribute to the content of our judgments in doing so.

To illustrate, take Thomas Kuhn's example of how the same observations have been used to justify different theories in the history of science:

During the seventeenth century, when their research was guided by one or another effluvium theory, electricians repeatedly saw chaff particles rebound from, or fall off, the electrified

¹All folio references cited for this book are to this edition: Gupta, Anil. 2019. *Conscious Experience: A Logical Inquiry*. Cambridge, MA: Harvard University Press.

bodies that had attracted them. At least that is what seventeenth-century observers said they saw, and we have no more reason to doubt their reports of perception than our own. Placed before the same apparatus, a modern observer would see electrostatic repulsion (rather than mechanical or gravitational rebounding). (1976, 138)

Kuhn concludes from this that our observations are always theory laden. In other words, he argues that our conscious experiences of the world are partially structured by our background theories, beliefs, and judgments. Gupta wants to draw a very different conclusion from these historical cases. He denies Kuhn's claim that the conscious experience itself is somehow intertwined with thought and judgment. Instead, it is merely the case that the same conscious experience can be used to transition to different rational judgments based on the differing views of the scientists. For those working in the seventeenth century, the conclusion that they are observing effluvium is indeed a rationally justified belief *given their preexisting view and the appearances consciously presented to them*. Meanwhile modern observers, when presented with the identical conscious experience, would be rationally justified in believing they are witnessing electrostatic repulsion. Conscious experience itself does not contain content—theory laden or otherwise—which lends support to one theory or the other, but it does allow a scientist to determine which judgments would be rational given a background view.

While the broad strokes of this project are fascinating and often compelling, it is in the fine details where most of my criticisms lie. I found myself often agreeing with Gupta's commitment to the idea that the rationality of a judgment is partially determined by the preexisting view of the agent, and that conscious experience can often be part of the process by which we transition from preexisting views to novel rational judgments without the aid of some sort of special propositional "given" (more on that below). But I found myself parting ways with Gupta when he attempts to flesh out the details of his story. His account of what consciousness is (i.e., something distinct from content, judgment, and representation) and the very specific role it plays in rational justification are problematic in a number of ways. It should be noted that my analysis is informed by my strong naturalist leanings; leanings which Gupta deliberately resists. I will, however, attempt to demonstrate that this resistance to naturalism limits Gupta's ability to engage in effective logical inquiry by cutting him off from the conceptual tools and resources provided by relevant scientific domains (for a different sort of worry regarding Gupta's resistance to naturalism, see also Barwich 2019).

My goal in this critical notice is to provide an overview of Gupta's project in the book, and to explain why I remain unconvinced by the details of the story he tells. This I will do in four sections. In the first section, I provide a very general outline of how the book proceeds and of his general project. In section two, I outline my first major concern with Gupta's account: specifically, that insufficient detail and justification has been provided for many of his critical distinctions and definitions in the book, often resulting in a lack of clarity and a feeling that some of his distinctions are ad hoc. In section 3, I turn to my second and more serious concern: that Gupta's lack of engagement with the empirical research in cognitive science, neuroscience, and psychology significantly constrains his project. His decision to ignore the insights provided by the sciences of the mind is a costly one, as it severely limits the ways in which he conceptualizes, classifies, and theorizes about our mental lives. Domains such as computational neuroscience, cognitive psychology, and cognitive neuroscience are important not simply because they provide empirical data, or because they can "fill in" the mechanistic details of our philosophical theories, but because they bring with them entirely different conceptual resources and tools for thinking about the mind. They force us to radically reinterpret and reevaluate the sort of classifications that earlier philosophers have taken for granted, and which Gupta likewise accepts without much justification. Lastly, in section 4, I explore the implications that this has for Gupta's project and highlight how the conceptual tools provided by the cognitive sciences suggest a far messier and more complicated story regarding the relation between conscious experience, rational judgment, and empiricism than the kind Gupta presents.

1. Overview of the book

The relationship between conscious experience, the world, and our rational judgments of it is at the center of Gupta's project. As such, the first few chapters of the book are dedicated to an in-depth analysis of previous philosophical attempts to understand such relationships with a particular focus on the works of Bertrand Russell and Wilfred Sellars. Gupta's exploration of Russell and Sellars's work is done with both great reverence and care, as is his exploration of other key philosophical views developed in analytic philosophy during the twentieth century. It can often be a joy to explore these philosophical views along with Gupta as he carefully dissects the various pros and cons of each position.

Gupta argues that traditional empiricist attempts to use conscious experience as a means of providing rational support for our perceptual judgments typically involved assuming that conscious experience provides us with some sort of pure unmediated access to the conceptual structure of reality. In this camp, we have Russell's notion of direct acquaintance, and more recent theories of direct realism and naïve realism. Gupta nicely outlines what he takes to be the advantages afforded by such accounts, as well as his worries regarding them. His analysis is a rich one, full of details and insights regarding the numerous problems these accounts face, and it is worth briefly mentioning one or two of them here. Given Gupta's interest in providing an account of the nature of rational justification, he argues that these theories fail to satisfactorily account for the *rationality* of a given perceptual judgment. He argues that according to these accounts,

... the mere *existence* of an experiential representation can confer a particular rational standing (prima facie justification, knowledge, and so on) on the judgment that *P*. But how can such a wonderful thing happen? With other exercises of conceptual capacities (in, e.g., willing and thinking), we find nothing of the sort. The mere fact that one wills that *P* or thinks that *P* does not confer any such status on one's judgment that *P*. What is it about the exercise of conceptual capacities in experience that endows it with such extraordinary rational power? (81)

Put simply, why think that the propositional content supposedly embedded in conscious experience necessarily explains the *rational* status of such content? To assume that our perceptual states somehow have the power to immediately endow their contents with rational justification makes them seem almost mystical in nature. In other words, the idea that our perceptual experiences inherently contain some sort of self-justifying propositional content "ends up positing extraordinary and mysterious conceptual states," and "no plausible account of experience is available that underwrites it" (84).

On the other hand, we have philosophical views that reverse the relationship between rational judgment and experience. Instead of conscious experience providing rational support for our perceptual judgments by way of some mysterious content, it is our rational judgments that provide support for our experiences. Our experiences are always filtered through, and made meaningful by, the set of rationally interconnected beliefs that we bring to bear on them. In this camp we find Sellars, the coherentists, and the inferentialists. Here, too, Gupta outlines both the virtues and problems that he feels such views face. In this case, the coherentist strips conscious experience of its ability to affect the rational status of our beliefs and judgments undermining empiricism in the process. Worse still, it assumes that we first must *have* rational beliefs and judgments in order to explain our conscious experiences. But this, Gupta tells us, gets the order of explanation exactly backwards. As he puts it, "from the logical point of view, it is rational belief that should be explained in terms of conscious experience, not the other way around" (75).

Following his detailed historical analysis of the different attempts to connect conscious experience to both rationality and the world, the book then shifts to focus on Gupta's own account—one which he feels can incorporate the virtues of the different camps without falling prey to their weaknesses. The middle of the book focuses primarily on providing a philosophical analysis of the

phenomenological features of conscious experience and how they are used to ground rational judgments. Sharp divisions between various mental phenomena and capacities are postulated, with conscious experience itself taken to be importantly distinct from the contentful, representational, and inferential processes of the mind. This is what allows Gupta to avoid the problems that plagued the acquaintance and direct realist accounts of perception. There is no content, no prebuilt judgments about the world, that are “given” to us by pure experience. In his words:

We can (and should) reject the idea that experience yields a special set of privileged concepts that serves as the foundation for all other empirical concepts. There is no psychic mechanism, we should insist, that manufactures concepts from experiences. One may be able to “copy” an experience in imagination, but the copy produced is not a concept. (259)

Conscious experience should be sharply contrasted with the faculties of judgment, representation, and thought. But likewise, contra the coherentist, Gupta argues that the appearances which manifest themselves in our conscious experiences *do* contain a different kind of “given.” This is not a *propositional* given (where what is given in conscious experience is propositional content), but what he terms a “hypothetical given.” What is given to us by our experiences is the ability to *transition* from a set of background beliefs about the world (a “view”) to particular rational judgments about the world. Experience allows us to move from a view to a rational belief without itself smuggling in any sort of representational content or being structured by preexisting representational content. This hypothetical given is what allows Gupta to avoid the problems that plagued the coherentist and inferentialist positions.

The book then moves from talk of conscious experience to an exploration and analysis of language and concepts more generally. Here, Gupta explores how our linguistic practices, in conjunction with our background beliefs and our conscious experiences, can together produce the kind of rational judgments he is interested in accounting for. Meanwhile, the end of the book focuses more on the nature of rationality itself, with an exploration of various empirical and mathematical proofs. A final section on metaphysics and naturalism rounds out the discussion of how his project connects with larger philosophical concerns.

2. The devil in the details

The first major worry I have with Gupta’s project involves the fast and loose way that distinctions and definitions are introduced throughout the book. Gupta’s account is a complex one with all kinds of intricate moving parts: appearances, presentational complexes, phenomenological profiles, hypothetical givens, mental content, subjective identities, concepts, meanings, application connotations, experiences. Each of these moving parts is needed for his account to work. And yet the relationship between all these parts, and indeed what the parts themselves are, is often presented in a manner far less clear than it needs to be. New terminology and distinctions are introduced at a breakneck speed throughout the book, and often with insufficient details, justifications, or elaborations necessary for them to do the philosophical work he needs them to. This can, at times, make his distinctions seem ad hoc or unjustified.

For a simple illustration, take Gupta’s distinction between *experience* (the presentation of appearances to consciousness) and *intentionality* (or mental representation):

Presentation and intentionality, as I conceive them, are radically different aspects of the mind. Presentation is characterized by a certain blending; intentionality by a certain separation. Each conscious experience presents the subject with a complex of elements, but in a “blended” manner, a manner that results from the “blending” of a variety of influences. The products of this blending are manifestations of appearances. Because of the blending, the subject undergoing an experience may well lack the capacity to parse the presented complex into its elements. With thought, however, the situation is quite different. One’s thought cannot be

directed to a complex of elements (e.g. the peach's being sweet) if one lacks the capacity to articulate its constituent parts (the peach and sweetness).

Experience and thought are, thus, two radically different, indeed opposite, movements of the conscious mind. One passively blends the elements together, while the other actively separates them—or at least strives to do so. (183)

Such a claim is fascinating but is never satisfactorily explained or justified. Even worse, other than this single brief passage, the claim is simply made and then never returned to again. For such an important distinction (his very project *depends* on conscious experience having no intentional or representational content), a great deal more is needed here. What is meant by “actively separates” or “blends” is left frustratingly vague, and we are given little beyond his say-so to conclude that the two processes *must* be different. This is especially worrying given that we have good reasons to deny such claims. For instance, compositionality is often taken to be an essential feature of thought and representation and, by its very nature, involves the blending of elements together rather than actively separating them. Thoughts are blended together to form more complex thoughts. Words are blended together to form complex sentences. Simple neural representations are bound together to form far more complex ones. So what justifies this insistence that thought and representation must be the *opposite* of blending?

Or take his insistence that “one's thought cannot be directed to a complex of elements if one lacks the capacity to articulate its constituent parts.” Why should we accept this claim at face value? Examples abound in which a particular word is unknown to a reader but is given meaning when placed in the context of a sentence. We thus seem very capable of directing our thought to a complex of elements (i.e., the entire collection of words forming a sentence) even when one lacks the capacity to articulate some of its constituent parts (i.e., some of the words contained in that sentence). Of course, a great deal hangs on exactly what is meant by “constituent parts,” “capacity,” and “articulate.” (I suspect that many can understand some event as ironic even if they cannot articulate exactly what “irony” is, for example.) But this is precisely the point. Without more elaboration and clarity, we are left simply with a short passage that makes bold controversial claims with insufficient evidential and philosophical support. While some of his essential concepts and distinctions are given a great deal of care and discussion, far too many others are not. And it is with those that I often found myself taking issue. His vagueness can make it exceedingly difficult to make sense of what distinctions he is trying to make in those instances and whether we have good reason to accept them. This lack of justification for some of his key concepts leads to my second criticism.

3. What neuroscience and cognitive science have to offer

The other major worry I have with Gupta's project is his lack of engagement with contemporary cognitive science, neuroscience, and psychology. In his defence, this is very much a deliberate decision on Gupta's part, as he is interested in a logical inquiry of consciousness that will allow him to develop his project independent of what one might want to say about neuroscience, or even naturalism and physicalism more generally. But the fact that the book doesn't engage with research from these scientific domains is to its detriment. This is not because the questions it explores are entirely empirical or because they can be adequately solved by those scientific domains, but because those domains provide different and powerful *conceptual* resources for thinking about the nature of phenomena like conscious experience, phenomenology, mental content, rationality, and thought. By limiting himself to the very particular ways in which certain twentieth-century analytic philosophers have approached such phenomena, he immediately limits the sorts of logical inquiry available to him.

In order for Gupta's project to work, there must be a sharp divide between *conscious experience* and things like *mental content*, *judgment*, and *meaning*. If our experiences contained content about

the world and are used to provide rational support for a perceptual judgment, then we either fall into the direct acquaintance trap (in which the content of our conscious experience is due to some mystical propositional “given”) or the coherentist trap (where the content of our conscious experience is entirely imposed on it by our preexisting collection of rationally connected beliefs and, thus, cannot itself provide rational support for those beliefs). To avoid the two horns of this dilemma, experience itself must have no content. It only acts as a means of *transitioning* from a view to a rational belief.

So what then is conscious experience? For Gupta, conscious experience is a complex combination of *appearances*. Appearances are intended to be, roughly speaking, the subjective way in which something appears to an observer. More specifically, appearances *manifest* themselves to a person’s consciousness based on how that person is situated in the world. When staring at a piece of paper in a particular light and from a particular angle, a particular appearance will be manifested to the observer. To change the angle at which we look at the paper, the lighting we see it in, or even the distance we stand from it will change its appearance. Appearances are often characterized by Gupta as something like pure phenomenology. He says, for example, “the phenomenology of an experience is constituted not by the qualities and relationships presented in the experience, but by the appearances manifested in it” (161).

However, in order to deny that experiences have mental content, there must be some clear demarcation between what sort of mental events count as *contentful* and what sort don’t. Gupta often gives the impression that by “mental content” he means something akin to a robust full-blooded doxastic state. Anything less than this is not sufficient to count as genuine mental content.² Indeed, there is a long philosophical tradition of thinking of mental content in this way. But one of the major insights brought to us by domains such as computational neuroscience, cognitive neuroscience, and cognitive psychology is that mental content, judgments, representations, and phenomenology may not be all or nothing affairs.

Let us suppose that forming a mental representation of a cup in your mind counts as an instance of a contentful mental state. What about the edge-detecting neurons that encode information about the individual lines that make up your mental representation of that cup? Do *they* contain “content” about edges? These neurons do not merely respond to edges in our visual field but can encode information regarding those edges and then transmit this information downstream. This information can then be integrated with information provided from other neurons which encode information about different spatial and extensional characteristics, binding together to form the mental representation which, in turn, can be bound with other complex representations to form thoughts, sentences, etc. (e.g., Eliasmith and Anderson 2003; Eliasmith 2013). Are these individual neurons *making judgments* about the way the world is (“that’s an edge over there!”)? Do they

²For instance, he tells us that in order for something to count as genuine mental content, it must be “the sort of thing that can be assessed for truth and falsity or for accuracy or inaccuracy” (196n12). It is interesting to note that this claim seems to be oddly in conflict with other claims he makes later on in chapter 8. There, he discusses an example in which a particular name, “Leena,” may fail to denote, but may still be meaningful to a given linguistic community:

“Leena,” though it lacks a denotation, was (and remains) a meaningful symbol in the community’s discourse; it expresses a concept, albeit a defective one. If meaningfulness is understood as possession of meaning, then meaning is not denotation; for lack of denotation does not imply lack of meaning. Meaningful use of a term depends only partly, and sometimes not at all, on denotation. It depends also on view and experience, and these can render uses of a term meaningful even when the term denotes nothing. (252)

But, of course, individual terms, names, and concepts are not the sorts of things that can be assessed for truth and falsity, or for accuracy or inaccuracy (the sentence “That is Leena over there” may be true or false, accurate or inaccurate, but the mere name “Leena” is itself neither true nor false, accurate nor inaccurate, regardless of whether it denotes). And so under his previous definition of content, “Leena” *cannot* be a contentful symbol. Is there an important difference to be drawn between “contentful” and “meaningful”? If so, no such distinction is ever discussed. We are left merely to guess. And yet such a distinction would seem to have huge implications for his project.

represent? Certainly, the content being processed by an edge-detecting neuron falls well short of a full-blooded *concept* like “cup,” but it would be equally as inappropriate to dismiss it as containing nothing resembling content at all. What we are left with is something less than what many philosophers have been comfortable calling “content,” but still importantly content-like in many essential ways (since they are essential representational components of the sorts of things that are uncontroversially considered “content”). We are left in a gray area of *almost* contents, or *not quite* contents, or *nascent embryonic* contents. They are a kind of *quasi-pseudo-semi*-contents (hereafter: contents_{q-p-s}).

We can tell a very similar story regarding inferences. Whether a particular sound is interpreted as a word is partially determined by sounds that came before and after it. Your brain will often interpret a sound *as* a word depending on the other auditory cues it receives. Does the brain *infer* that the sound heard must be a word based on the fact that the other auditory cues it receives are also thought to be words? Certainly “inference” may be too strong a term here. And so we are left with something potentially inference-like in some very primitive but essential ways. Neither a full-blooded inference, but not nothing either. More importantly, the difference between these contents_{q-p-s} or inferences_{q-p-s} and full-blooded CONTENTS or INFERENCES, may ultimately be a difference of *degree* and not a difference of *kind*. There may be no clear demarcation to make between the two—no point where the quasi-pseudo-semi ends and the full-blooded begins.

As a field, computational neuroscience deals in exactly this gray area of quasi-pseudo-semi-contents, representations_{q-p-s}, meanings_{q-p-s}, judgments_{q-p-s}, experiences_{q-p-s}, and inferences_{q-p-s}. Yet Gupta does not, and this is precisely where his account becomes problematic. Can we pull apart things like “presentational complexes,” “appearances,” “judgments,” “denotations,” and “inferential roles” from one another in a clear-cut way? Gupta’s project requires that such clean demarcations exist and can be located. But modern cognitive science provides an entirely new set of conceptual tools for thinking about such things, and forces us to consider positions in the logical space of possibilities that Gupta does not acknowledge.

To illustrate, consider that Gupta wants to draw a sharp divide between *appearances* and *representational content*. Gupta nicely lays out the potential worries and problems that have plagued historical attempts to collapse appearances entirely into representational content, as well as attempts to collapse representational content entirely into appearances. From this, he concludes that we need to keep the two entirely separate and distinct from one another. But this simply does not follow. Take, as an analogy, the nature versus nurture debate in psychology. Certainly, one might argue that attempts to collapse all biological influences on behaviour into mere environmental influences would be foolish, as would attempts to collapse all environmental influences into biological ones. Yet, it would be a mistake to conclude from such a failure that we therefore must assume that nature and nurture are entirely distinct influences, completely divorced and separate from one another. On the contrary, modern biology and epigenetics tells us that biological factors and environmental factors *cannot* and *do not* influence behaviour abstracted away from each other (e.g., Strohman 2000). For a particular biological influence on behaviour to *be* a biological influence on behaviour, it must interact with the environment in very particular ways and under particular conditions. Otherwise, the influences do not manifest at all. Likewise, for some particular environmental input to influence the behavior of a system, that system must be constructed in very particular ways to allow complex interaction between biology and environment. In other words, the very distinction between nature and nurture is itself the problem. We do not simply collapse one set of influences into the other so much as realize that the two sets of influences were never entirely distinct from one another to begin with. The relationship between the different influences is far richer, more complex, and interdependent than initially thought. Nature and nurture bleed into one another and blur together. The distinctions between things like conscious experience, intentionality, phenomenology, and judgment may similarly blur together in exactly this manner. We do not collapse one into another so much as understand the nuanced and complex ways in which all of these things may be interdefined and inextricably linked with one another at the quasi-pseudo-semi

level. Gupta simply does not consider such an option, remaining staunchly entrenched in traditional philosophical outlooks that have conceptualized and characterized these things in very particular, and often very rigid, ways. It is here that the conceptual resources of domains such as computational and cognitive neuroscience may prove helpful, even essential, to the project on offer.

To further elaborate, consider the distinction between denotational and inferentialist accounts of meaning. Gupta argues that while some cases of meaning may be determined by the inferential role that the linguistic term plays, other cases of meaning may well be based on denotation:

Wittgenstein's and Sellar's rejection of Russell's notion of acquaintance is reasonable, as also is their rejection of the Russellian (and Tractarian) identification of meaning with denotation. Still, why deny denotation all role in meaning? Why deny that some linguistic items sometimes bear a denotation relation to some elements of the world and, furthermore, that this relationship can be important for understanding some uses of language? (227)

Moreover, he suggests that there may be many different ways in which words gain their meaning (of which denotation, and inferential role, are only some):

Even though I allow that some terms may denote world items. I do not impose it as a requirement on meaningfulness that at least some terms do so. The presence of primitive denoting terms is not a prerequisite for meaningfulness. I recognize that there is a variety of language-world relations, beyond "denotation" and "true of," that is useful in understanding the functioning of language and thought. (238–39)

But the problem with this way of characterizing things is that it assumes that there is a collection of entirely distinct language-world relations and that different situations result in different language-world relations. But just as the solution to the nature versus nurture debate isn't to conclude that *sometimes it's only nature* and other times *it's only nurture*, so too it might be a mistake to assume that each of these language-world relations must be entirely distinct and simply used in different contexts. Instead, it might be the case that "denotation," "true of," "inferential role," and others are all bound together in complicated and inextricable ways. In different contexts, the ways in which these various elements interact to link language to the world will be different, but all may involve a complex interaction of these elements to varying degrees.³ This fact would complicate Gupta's project in rather extreme ways. In the section to follow, I illustrate how this might happen.

4. Appearances and judgments_{q-p-s}

Gupta's project requires that strong and clear divisions be drawn between things like conscious experience and judgments. But when we let in the possibility of a far more complex story, one in which there are only shades of gray instead of black-and-white distinctions, then some of the key moves he wishes to make become less plausible. To illustrate, one essential feature of Gupta's project is that what is manifest to consciousness are *appearances*. These appearances have no content and involve no judgment. His account notes the following essential features of appearances (213):

- (v) Appearances can be grouped in families (e.g. visual appearances and touch appearances) and in various classes (e.g. color and shape appearances).

³The brain is massively interconnected, with shared neural circuits being used and repurposed for carrying out a host of complex kinds of cognitive tasks under different conditions (e.g., Hohwy 2007; Dehaene and Cohen 2007; Anderson, 2007, 2008, 2010; Patterson and Plaut, 2009; Churchland and Churchland 2013; Heyes 2018). The fact that the brain is a huge collection of interconnected information processing systems means that there simply might not be the sort of clear and rigid demarcations that Gupta insists there must be.

- (vi) Appearances stand in various relations of comparative similarity to one another. A color appearance may be more similar to another color appearance than to a third one with respect to, say, lightness but not with respect to hue.
- (vii) Appearances may be complex, structured items. When one looks at a yellow bird, the bird manifests a complex appearance that is constituted of, among others, some color appearances and some shape appearances. If appearance a is constituent of appearance a^* , then necessarily whenever a^* is manifested so also is a .

The central point is that appearances can be compared *along different subjective dimensions*. To further illustrate, consider the following example presented by Gupta. Imagine you are presented with three different objects: two spheres of exactly the same size but different colours (one blue, the other yellow), and a cube with the same colour as one of the spheres. He notes the following when comparing these objects:

The presentation of the three objects to your consciousness are not subjectively identical; the appearances the object manifest to you are all different. Nevertheless, the presentations of the two spheres are subjectively identical along certain dimensions—the shape and size dimensions, as we might put it. Also, the presentation of the second sphere and the cube are also subjectively identical along a certain different dimension—the color dimension, as we might put it. The example shows that there are fine-grained notions of subjective identity—subjective-identity-relative-to-dimensions-D and correlated fine-grained notions of appearance. (158)

But let's take a moment to understand how such comparisons are possible. First, why does the colour of the cube and one of the spheres appear subjectively identical? There are many examples in which the same colour, in the same lighting conditions, from the same angle, and at the same distance will appear different based upon the context in which it is embedded. As a classic example, consider the visual illusion in Figure 1.

In the left-hand image, the colour appearance of square A is subjectively different from the colour appearance of square B (i.e., their appearances differ along the subjective dimension of colour). But in the right-hand image, the appearance of square A and B are identical along the colour dimension. Yet, square A and B are in fact the same shade of gray in both images. So what's going on here?

It turns out that your brain is making all sorts of “best guesses” regarding what colour you're looking at based on how the squares are situated in the checkerboard pattern that they are embedded in, the lighting cast over the board, and the shadow being cast by the cylinder among other things. Based on this, we can “fool” your brain by artificially manipulating these features to influence how the brain will

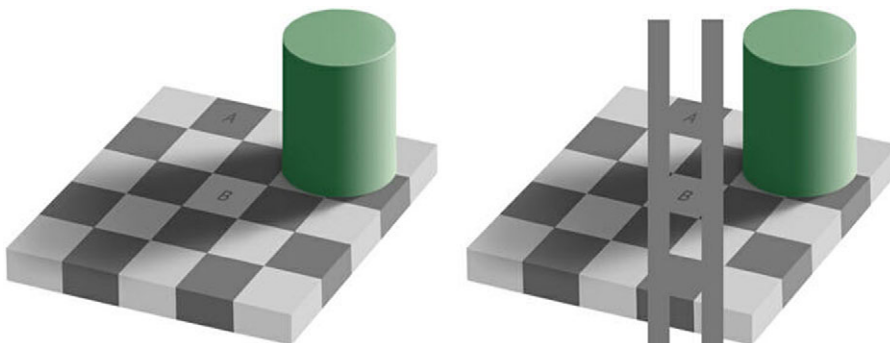


Figure 1. Edward H. Adelson's Checker-Shadow Illusion (Thomson and Macpherson 2017)

construct the mental image. Put another way, the appearance is determined by all kinds of “judgments,” or if you prefer: judgments_{q-p-s}, being made by low-level visual processing mechanisms in your brain. This includes judgments_{q-p-s} about where the boundaries of each square are, where the cylinder is on the checkerboard, what the boundary of the cylinder is, how the shadow is being cast by the cylinder, which parts of the checkerboard are in shadow and which are not, etc. The brain does not *know* what is out there and so must make all kinds of judgments_{q-p-s} about what it thinks is most likely out there given the limited stimuli it receives (for more, see Eliasmith 2005). All these judgments_{q-p-s} are then used to construct a representation that has the *appearance* of square A and square B being different on the left, but not the right.

Here then is the point: the different subjective dimensions along which we compare various appearances may be inextricably interwoven with, and constituted in large part by, the collection of judgments_{q-p-s} being made by various neural mechanisms of the brain (and the content_{q-p-s} they provide). These judgments_{q-p-s} and contents_{q-p-s} regarding edge detection, lighting, spatial orientation and more, may be the very thing that allows appearances to be complex and to have various different subjective dimensions. Or put another way, appearances may be constitutively intertwined with judgments_{q-p-s} and content_{q-p-s}, and it is *precisely this intertwining* that constitutes the complex array of different subjective dimensions that appearances have, and that we are then able to compare.

In response, Gupta might protest that I’ve confused his project of logical inquiry for one of naturalistic explanation. Neuroscience and cognitive science are concerned primarily with the *naturalist* project of explaining how the brain works within the confines of naturalism and physicalism. But he is not interested in such a project. He is interested in the project of *logical inquiry*—one which can account for how conscious experience provides rational support for our empirical beliefs and judgments independent of what a naturalistic story might say:

The account of conscious experience I shall offer is meant to serve the logical inquiry, not the naturalist one. [. . .] My sole concern is to find an account of conscious experience that helps make sense of empirical reasoning and of reasonableness of view. It is plain that conscious experience plays some role here. What is this role? And what is it about conscious experience that enables it to play this role? These are the questions that will concern me, not the question of the naturalist standing of conscious experience. (3)

But this sort of response would be to miss the point of my argument. I’m not suggesting that we ought to accept the conceptual frameworks proposed by the cognitive sciences *because they fit within a naturalist framework*. I’m arguing instead that these frameworks may provide a better conceptual foundation for a logical inquiry into how things like consciousness, rational judgment, and empiricism relate than the one that Gupta chooses to presuppose.

To assume that the value of the cognitive sciences stems exclusively from their ability to provide a naturalistic account of the physical mechanisms of the brain is to underestimate, and to do a disservice to, the important philosophical, conceptual, and logical contributions that those domains provide. The cognitive sciences provide us with new conceptual resources for thinking about the relationship between various mental states, capacities, and processes. Using these as our conceptual starting point for a logical inquiry into how consciousness contributes to rational judgment is no less justified than using those Gupta starts with. On the contrary, they may be far better equipped to deal with the complexities and obstacles that Gupta’s project faces. His lack of engagement with the sciences of the mind is problematic because it means that he simply does not consider various options that those domains conceptually open up to him, and this, in turn, limits the sorts of logical inquiry that is available to him. The fact that the conceptual tools provided by the cognitive sciences were developed as part of a naturalist project is not the issue, the effectiveness of those tools in understanding the nature and relation of rational judgment and consciousness is.

Gupta’s overly rigid conceptualization of judgments and appearances is what leads him to quickly dismiss the idea of a gray area where these things may intermingle:

It is true that experience is not a simple effect of the actions of the world on the mind. It is a product of complex operations, operations that may well be influenced by beliefs and other mental states. This general fact has no tendency to show, however, that presentation depends on concepts or judgment. To establish the dependence, some specific ideas must be brought into play about the role of concepts and judgments in experience.

(ii) The specific idea on which the objection builds—namely, that concepts and judgments play a role in the synthesis of the manifold of sensations—is open to different interpretations, for the term “sensation” is highly ambiguous. Two readings of “sensation” are especially relevant here. On one reading, “sensation” means particular outputs of sense organs, and these outputs may be (e.g.) patterns of neural firing. Now, it is likely that no experience is possible without some bringing together, some synthesis, of these outputs. So we can plausibly say that some kind of synthesis of sensations underlies experience. The character of this synthesis is obscure, however, and that it occurs provides no grounds for thinking that concepts and judgments play any role in it. Hence, on the current reading of “sensation,” we have no reason to think that the presentation of an object in experience depends on concepts or judgments. (180)

Gupta tells us that the character of the synthesis that underlies sensations is obscure, and thus provides no evidence for thinking concepts and judgments play a role in it. But its obscurity may stem from the fact that he simply refuses to engage with the very scientific disciplines that are explicitly dedicated to making this process *less* obscure and which can provide the conceptual tools needed to do so.

Likewise, while it might be true that the presentation of appearances in experience does not depend on *full-blooded* concepts and judgments, it might very well depend on concepts_{q-p-s} and judgments_{q-p-s}. And these may not be different *in kind* from full-blooded concepts and judgments, only in degree. The fact that Gupta does not consider the possibility of this gray area leads him to assume that there must be clear-cut distinctions and boundaries out there to be found. And yet this may reflect the limitations of his logical inquiry more than it does any sort of insight about the relation of conscious experience to judgment. The tools of modern cognitive science provide a means of exploring the complexity of exactly these issues; Gupta just chooses not to employ them.

But what of *rationality*? Gupta’s central aim in the book is to provide an empirical grounding and justification for rational judgments. The alternative account I am suggesting seems to make such a project substantially more difficult. What do we say about the rational status of a judgment when we choose to wander through this gray area of *quasi*-judgments, *pseudo*-inferences, and *semi*-contents? Is rationality itself something that loses its full bloodedness under this account only to be replaced with something quasi-pseudo-semi in nature? Is there only **RATIONALITY**, or can there be varying degrees of rationality_{q-p-s}? I want to suggest that the latter may well be the case.

Part of Gupta’s criticism of both acquaintance models and coherence models of conscious experience is that neither seems to give an adequate account of the rational justification of a belief or judgment. Under one account, the process by which judgments gain their rational status is almost mystical; on the other, rationality must be *presupposed* in order for conscious experience to provide any role in learning about the world (and thus cannot be *grounded in* such experiences). Neither are satisfactory. How can the account I’m suggesting fare any better? Part of the problem is that both horns of the dilemma are rooted in particular ways of conceptualizing rationality, judgment, and experience. If the accounts proposed by modern neuroscience, psychology, and cognitive science are taken seriously, then all of these things may need to be reconceived. In the gray area of the quasi-pseudo-semis, the relationship between judgment, world, experience, and rationality are far more interdependent and interrelated. Contra the acquaintance model, there is no special propositional “given” that we get from conscious experience because conscious experience is not a wholly distinct kind of process with its own unique nature and special content. Conversely, coherentism does not simply *impose* all meaning on conscious experience by starting with full-blooded rational beliefs,

since this too assumes a hard divide between conscious experience and rational beliefs. But if these are not as wholly distinct or full blooded as we take them to be, then neither option is appropriate.

None of this makes the general project of understanding rationality impossible or suggests that it is not a worthwhile project. It merely changes the way in which we must go about this project. There is a story to be told about rationality, empiricism, and the relationship between mind and world. But the way that story is told might look nothing like the kind that would allow Gupta to help himself to the concepts and distinctions he insists upon. Learning to walk in the gray area can be daunting, but it may be our best place to look for answers.

5. Conclusion

Gupta's project is fascinating, and there are many features of his story that I find very compelling. But it requires drawing very particular hard and fast demarcations that only seem plausible when strictly employing the conceptual tools and resources from twentieth-century analytic philosophy, and not when we supplement these conceptual tools and resources with those of modern neuroscience, psychology, and cognitive science. His decision not to engage with this literature is somewhat puzzling. These scientific domains provide compelling reasons for questioning whether there are any clear or hard-edged distinctions to be found when it comes to things like: conscious and unconscious (e.g., Wilkes 1984; Churchland 1988), denotational and inferential (e.g., Blouw and Eliasmith 2018), or judgment and experience (Barwich 2017). Instead, these may all exist in a gray area where things become less full blooded or robust and more quasi-pseudo-semi in nature, where they become less distinct from one another and more intertwined and interconnected. In this gray area, the details of the story that Gupta wishes to tell become less plausible. His story requires clear demarcations where none may be found.

Like any great piece of philosophical work, *Conscious Experience: A Logical Inquiry* is contentious, thought provoking, and challenging. This is what makes philosophical works worth reading. The challenges that I have presented in this critical notice are not intended to tear down Gupta's project, but to hopefully provide a way forward for further work. It is precisely to the gray areas of neuroscience, psychology, and cognitive science that Gupta needs to go next. Can the account he provides be made to fit with the results of those domains in a straightforward way? Those who champion Gupta's cause have a great deal of space to explore here, either by showing how his account can be made to fit with those domains or by showing how those domains need to be supplemented with Gupta's philosophical analysis. Similarly, those who find Gupta's account unpersuasive should likewise venture into the gray areas, since it is there where they may find their best weapon against him. Either way, there is a clear way forward for both those who support and those reject the project on offer here.

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