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The Argument from Consciousness Revisited

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More than two decades ago, Richard Swinburne and Robert Adams put forth an argument for theism that they aptly labeled the *argument from consciousness*.¹ A thumbnail sketch of the argument goes like this: There are facts involving correlations between brain states and conscious states of persons for which rational inquiry demands a satisfying explanation. There are but two broad forms such a possible explanation may take: the correlations can be explained either through more basic scientific laws or by the intentions and actions of a powerful personal agent. Since the correlations' facts cannot be given an adequate scientific explanation, the best explanation is that they are the result of the work of a purposeful agent.

Our aim in what follows is twofold. First, we consider sophisticated recent attempts in the philosophy of mind to defend a robustly physicalist account of the phenomenal character of experience, accounts that, if successful, would undercut the core premise of the argument from consciousness (AC). We will try to show, however, that these accounts fail. We then consider the version of AC advanced by Swinburne and Adams. We contend that their versions are defective, since they overlook a naturalistic form of explanation that is available even on a robustly dualistic view of conscious states. However, we go on to show that the argument may more plausibly be recast by treating the very form of explanation of conscious states we outline as a further datum in the currently popular fine-tuning version of the design argument. We do not attempt to determine whether the fine-tuning argument is ultimately successful.

¹ Swinburne (1979, 2004) and Adam (1987). Their arguments develop a line of thought presented in cruder fashion by John Locke in the fourth book of *An Essay Concerning Human Understanding* (1690).

I. DIRECT PHENOMENAL AWARENESS

The fact that there are strong correlations between underlying neuro-physical states of the brain and conscious mental states is not in serious doubt. Philosophers of mind commonly divide the latter into two broad classes, intentional states and phenomenal states. The former has commonly been equated with propositional attitude states (beliefs, desires, and so forth), while the latter has been thought to consist of the “raw feels” of experience—the qualitative way things look, sound, taste, and so on. Although we seriously question this bifurcation of mental states into these two distinct kinds, for our present purposes we may safely focus solely on the feature of phenomenal character.² Although the present state of neuroscience does not yield precise hypotheses, it is highly plausible that certain neuro-physiological types directly correlate with certain phenomenal types. So we may suppose that brain state R correlates with a phenomenally reddish look, brain state B correlates with awareness of phenomenal blue; T correlates with tangy orange sensations, P with a certain piercing auditory quality, and so on. While these cartoonish schema certainly oversimplify how mind-brain correlations actually work, and the way in which brain states and phenomenal states map onto each other, we can assume something like this for the sake of simplicity and concreteness.

Physical-phenomenal correlations of this kind can count as evidence for design only given an assumption that phenomenal properties are *ontologically distinct* from their physical-functional correlates. Unless the most basic phenomenal properties are ontologically novel features of the world, fundamental features over and above the features characterized by physical theory, the argument that the correlations constitute a credible design-type fact to be included among other design evidence will be open to a straightforward refutation. Identity is the most satisfying explanation of the correlations that is imaginable, and hence one that cannot be improved in theological terms.

Thus the proponent of the argument from consciousness needs to make plausible that phenomenal qualities themselves are ontologically primitive. Swinburne and Adams devote little space to this question, and the discussion they do carry on is dated. In particular, there are two prominent materialist accounts of phenomenal qualities in recent philosophy of mind, unanticipated by Swinburne and Adams, that we will consider here.

First, some contemporary thinkers insist that the connection between certain physical and phenomenal properties is one of identity, despite the

² For a recent challenge to the now-orthodox bifurcation, see Horgan and Tienson (2002) and Kimble (2006).

fact that we cannot grasp the connection a priori. They point out that we may conceive of a single property in more than one way, corresponding to different modes of epistemic access to it. In the case of physical/phenomenal features, we have two wholly distinct sets of concepts corresponding to the modes of scientific theoretical identification and introspective awareness. These thinkers then argue that, due to the peculiar nature of our *phenomenal concepts*, the fact that we cannot discern the physical-phenomenal identity via a priori reflection is unsurprising, and it does not follow that the properties we variously conceive of are ontologically distinct.³ We shall call this strategy *type physicalism*.

Second, a very different strategy for identifying phenomenal qualities with physical properties has developed in recent years, motivated by a view of phenomenal experience called *representationalism*. Representationalism is the general term for a family of related positions, but the core idea among physicalist versions of the theory is that phenomenal qualities are to be identified with certain externally constituted representational properties of experience, rather than with internal states (physical-functional or primitively mental) of the experiencing subject.⁴ Phenomenal character is identical to an experiential state's intentional content which, depending on the particular view, consists of entities such as external properties, propositions, or states of affairs. On plausible physicalist assumptions, such content involves structured physical properties or dispositions, such as (for colors) the disposition of a surface to reflect a certain percentage of light from the visible spectrum. Thus, on representationalism, the look of the redness of the rose to a subject is none other than the external physical property of redness. We will call physicalistically acceptable representational properties *p-representational* properties. Since phenomenal qualities are extra-mental features, there is no primitive mind-body correlation to be explained.⁵

Given the growing popularity of these a posteriori physicalist accounts of the phenomenal character of experience, a defender of the argument from

³ See Loar (1997), McLaughlin (2001), Papineau (2002), and Balog (unpublished ms.).

⁴ See Dretske (1995) and Tye (2000).

⁵ Higher order varieties of representationalism typically do not attempt a reductive account of phenomenal character. Higher order theories (e.g., Rosenthal's "higher order thought," Papineau's "higher order perception," and Lycan's internal monitoring theories) purport to explain the awareness *relation*, why a subject is consciously aware of qualia in some cases but not in others. Such theories attempt to explain the nature of phenomenal character itself only insofar as they combine the higher order component with some other theory (e.g. first order representationalism, functionalism, etc.). We do not discuss higher order theories separately here.

consciousness must make the case that all such strategies are untenable. We will now undertake that task.

The case for the ontological distinctness of phenomenal qualities from any physical-functional properties is broadly introspective. When I look at a luscious mandarin orange in bright sunlight and bite into it, at the same time focusing my attention on the qualitative way I experience it, I become *phenomenally aware* of an orange-ish quality presented to me in a sensate visual way—a smooth and uniform, simple feature impressing itself upon and occupying a region of my visual field. In addition, I am aware of a sweet tangy sensation on my tongue, which is, once again, a fairly simple and uniform taste quality. These contents of my awareness are “transparent” to me in the sense that I have unmediated access to what it is like to experience those qualities. And I recognize certain facts about those qualities that bear on the a posteriori identity thesis. To an approximation, let us say that a property is non-structural if and only if its instantiation does not even partly consist in the instantiation of a plurality of more basic properties by either the entity itself or its parts.⁶ Now, my phenomenal visual field may be highly complicated, consisting of differently sized, shaped, and colored objects arrayed in a certain manner. But I can focus on sufficiently small subregions of the field that feature nonstructural or simple properties, such as a determinate (phenomenal) shade of blue. Quite generally, it seems that the contents of phenomenal awareness ultimately decompose into such simple, non-structural features, all of which are themselves objects of awareness.

Our simple argument from direct awareness goes like this: phenomenal awareness reveals an intrinsic simplicity in the elements comprising the qualitative character of my experience. However, the physical-functional (or p-representational) properties with which that character is supposed to be identified do not possess this intrinsic simplicity. Type-physicalists identify phenomenal character with complex neuro-scientific properties, while representationalists claim that phenomenal qualities are externally constituted low-level physical properties. Both candidates are heterogeneous structural features. Hence, the immediate contents of my phenomenal awareness, the phenomenal character and qualities of which I am directly aware, are not identical to underlying physical-functional (or p-representational) properties.

Moreover, in my phenomenal awareness of the orange-ish look of the mandarin orange, there must be some explanation for the fact that the phenomenal property I directly grasp is not presented to me either as a neuro-physical state of some sort, or as a surface reflectance or some other underlying physical

⁶ Cf. O'Connor (2000: 110).

property, as a physical color would be in its own nature. The advocate of ontologically primitive qualia has at his disposal a ready explanation for this. Phenomenal properties are to be identified with neither internal physical-functional states of the brain nor extra-mental p-representational properties. By appealing to the notion of immediate awareness or *acquaintance*, the qualia theorist can make the case that the qualities one has direct access to are intrinsic, non-structural features of experience. This explanation provides adequate grounds for our immediate awareness of phenomenal character and best accounts for its intrinsic simplicity vis-à-vis the objects and content of that awareness.

Now we can deploy this argument from direct access in the task of effectively debunking recent attempts to defend the a posteriori identity thesis. It is important to notice that the argument we advance here does not make the assumption that every distinct concept expresses a distinct and genuine property, nor does it make use of dubious premises concerning the relationship between conceivability and possibility. Hence it is to be sharply distinguished from other widely known and discussed arguments for property dualism.⁷

One physicalist response to our argument contends that what appears to be a phenomenal/physical property distinction is in reality merely a distinctness between modes of presentation of the selfsame property. However, the problem just resurfaces as a question about the nature of the relevant modes of presentation. Suppose that physical blueness is a certain surface reflectance property B, and that what I am phenomenally aware of—the particular visual qualitative character that is presented to my awareness—is a mode of presentation of B.⁸ As the direct object of my awareness, this mode of presentation M is a feature or property of either B itself or one of my representations of B, and thus M stands in need of some acceptable physicalistic explanation or reduction so as to avoid an undesirable “dualism” of properties.

Materialists must deny that awareness of phenomenal properties and content involves any distinct mode of presentation of the referent property or content. But how can there be a *phenomenal presenting* of a property or content to the subject's awareness unless there is also some mode of presentation

⁷ Key statements and discussions of arguments for property dualism are found in Smart (1959), Jackson (1982), Kripke (1980), Chalmers (1996), White (2010), Loar (1997), Block and Stalnaker (1999), and Gertler (2002).

⁸ For purposes of illustration, our examples of both external world properties and internal neuro-physical properties are used somewhat interchangeably, as the points we make apply equally to both p-representational properties and type-physicalism.

involved? The answer, for the a posteriori physicalist, is that the referent property or property-involving content presents itself directly to awareness; the phenomenal property is revealed directly as it is in itself, and the subject grasps this property via the exercise of an appropriate *phenomenal concept*. It is the peculiar nature of these phenomenal concepts that accounts for why we don't grasp phenomenal qualities as physical-functional properties. There are various ways this idea has been elaborated.

Theories of phenomenal concepts fall neatly into two broad classes: causal-recognitional accounts and self-referential or quotational accounts. On the first type of account, phenomenal concepts are a special kind of recognitional concept that pick out phenomenal qualities directly by demonstrating or naming them, without relying on theoretical or background information. Loar, McLaughlin, and Tye each hold this sort of view.⁹ Loar's and McLaughlin's proposals are virtually identical, while Tye's view differs from theirs crucially on the issue of the nature of the content of phenomenal concepts. Loar and McLaughlin hold that the referents of phenomenal concepts are internal neuro-biological properties, whereas Tye holds that their referents are externally individuated representational contents.

The self-referential or quotational account is similar to the first type of view except that the phenomenal qualities attended to in experience serve as constituents of the very phenomenal concepts that pick them out, thus conferring upon them a self-referring function. The basic idea is that there is a subset of neural states that are constitutive of phenomenal states (or serve as the core realizers of such states), and a given phenomenal state may get embedded in a more complex representation by a sort of mental "quotation" process which incorporates the original state as a constituent. The representation in turn takes on a sort of reflexive indexical function of referring to the very neural (phenomenal) state which in large measure constitutes the representation itself. The representation is a phenomenal concept. Block, Balog, and Papineau all propose versions of this type of account. While the details of these individual accounts differ in various places, they are all of one accord in their implicit answer to the problem of intrinsic simplicity.¹⁰

In rough outline, here is how the story goes as concerns our access to and awareness of phenomenal properties. The subject of an experience, in

⁹ Loar (1997); McLaughlin (2001 and 2003); Tye (2003).

¹⁰ The only authors who explicitly address the issue are McLaughlin and Tye, although some of what others (e.g. Loar 1997; Block 2006) have to say in the context of addressing the problem of the explanatory gap have a bearing on the issue at hand. We will focus on McLaughlin's and Tye's accounts, as well as their related comments.

exercising an appropriate phenomenal concept during an act of introspective awareness, directly grasps the phenomenal property *as it is in itself*. Type-physicalists such as McLaughlin speak of phenomenal qualities as constituting their own modes of presentation for the subject, thus revealing themselves to the subject's awareness as they are in and of themselves—yet not by grasping those properties via any essential or non-essential aspects of them. Phenomenal concepts lack any descriptive content whatsoever, functioning much like non-descriptive name concepts or type-demonstrative concepts, and hence do not reveal anything about the essential nature of phenomenal properties.¹¹

Other theorists write as if they deny any mode of presentation at all. Tye, for example, in discussing his view on color, says “Indeed, on my view, colors are not presented to us in sensory experience under any mode of presentation at all. Our awareness is direct.”¹² This is true of first-order phenomenal awareness as well as introspective awareness of phenomenal content. With respect to the latter, Tye claims that introspecting a perceptual state involves exercising one or more phenomenal concepts that pick out the represented content directly and refer via the direct causal connection they have with their referents.¹³ In agreement with McLaughlin, he holds that these concepts have no associated reference-fixers and contain no descriptive content at all. Rather, “the referent is presented without the assistance of associated features distinct from the referent which the thinker a priori associates with it. There is no separate guise that the referent takes in the thinker's thoughts.”¹⁴ A subject knows that she is in a visual state “as of” seeing blue just by attending to how things look to her, not by attending to something else connected with it. What the phenomenal concept directly picks out is the complex representational content, the key constituent of which is a surface reflectance-involving state of affairs. The subject is phenomenally aware of the state of affairs that has a surface reflectance *b* as a component.

Despite some differences over how they use terminology, Tye and McLaughlin are in basic agreement on the issue of modes of presentation of

¹¹ McLaughlin (2001: 324–6), (2003: 148).

¹² Tye (2002).

¹³ “In first approximation, a phenomenal concept *C* refers to a phenomenal quality *Q* via *C*'s being the concept that is exercised in an introspective act of awareness by person *P* if, and only if, under normal conditions of introspection, *Q* is tokened in *P*'s current experience and because *Q* is tokened” (Tye 2003).

¹⁴ Tye (2003). The examples he uses in this section primarily concern the application of phenomenal concepts to pain, but he explicitly intends his account to generalize to all phenomenal states.

phenomenal properties. When Tye says that a phenomenal property is not presented under any mode of presentation, he means that there is no aspect or property separate from the referent itself that serves to anchor or ground application of the relevant phenomenal concept. Since he apparently accepts the fact that the referent property is “phenomenally presented” to the subject (e.g., there is a bluish look or feel in my visual field), the phenomenal concept picks out the property directly and as it really is, under no other guise. This seems to be equivalent to McLaughlin’s claim that phenomenal qualities serve as their own modes of presentation.¹⁵ Of course, as noted previously, the *objects* of phenomenal awareness are radically different on the two views. McLaughlin holds that phenomenal character is constituted by certain neuro-scientific properties of the brain, whereas Tye holds that qualitative character consists of a complex representational state, a crucial component of which are certain low-level physical (surface) properties in the extra-mental environment.

II. AN INCONCLUSIVE ARGUMENT AGAINST A POSTERIORI PHYSICALIST ACCOUNTS OF DIRECT PHENOMENAL AWARENESS

The account of direct access to phenomenal properties that we have offered encompasses claims that stand in tension with the key identity claim made by proponents of a posteriori physicalism. Although we might try to make explicit this tension by formulating these claims in terms of phenomenal concepts, the problem is independent of theories of phenomenal concepts, in that it arises for anyone who accepts a form of “direct access” akin to what we have been calling phenomenal awareness—regardless of whether or not such awareness is mediated by the exercise of phenomenal concepts. The following locutions, which we will use somewhat interchangeably, are intended to capture the sense of “direct access” to phenomenal qualities that physicalists such as McLaughlin and Tye allow that we have. They are also intended to be broad enough to permit a form of direct phenomenal access that does not require concept deployment. (If non-conceptual awareness of

¹⁵ Block (2006) also seems to understand these ways of articulating the issue to come down to the same thing. He claims that his theory “involves a notion of a phenomenal concept that has some affinities with the ‘directness’ story in which there is no metaphysical mode of presentation at all. The doctrine that the metaphysical mode of presentation is the same as the referent says there is no metaphysical mode of presentation over and above the referent.”

phenomenal qualities seems inconceivable to you, then no harm will be done by reading the following locutions as claims about our grasp of phenomenal properties via the exercise of phenomenal concepts.) When we say that a subject *S* *directly accesses* a phenomenal property *Q* in undergoing a perceptual experience, we mean roughly the following: *S* is phenomenally aware (“*q-aware*,” as distinct from “*p[perceptually]-aware*”) of *Q*; or, *S* phenomenally grasps *Q* in an unmediated way; or, *Q* is directly revealed or presented to *S* in an act of phenomenal or introspective awareness. The form of awareness in question might be first-order or higher-order, whereby *S* directly grasps phenomenal quality *Q* and conceives it by deploying a phenomenal concept *C* in an act of introspection.

Now, the following claims made by a posteriori physicalist theories of phenomenal access appear to be in tension:

- i. *S directly accesses Q as it truly is in itself.* *Q* is revealed to us as it really is, leaving no room for illusion. For example, we are not *q-aware* of phenomenal blue under any distinct mode of presentation or manifestation of it; rather, phenomenal blue is presented to our awareness as it is in itself—meaning that the property (or referent of the appropriate phenomenal concept) itself serves as its own mode of presentation.
- ii. *Q is a physical-functional property.* The object of *q-awareness* (*Q*) is an underlying physical property—either a neuro-scientific property within the agent or a micro-physical surface property in the external world. The nature or essence of phenomenal blue consists of either a complex neural state of the visual cortex (type-physicalism) or a particular surface-reflectance disposition of an external-facing surface (representationalism).
- iii. *S does not directly access Q as a physical-functional property.* We are not *q-aware* of phenomenal qualities as physical-functional properties of any sort; they are not presented to awareness as physical-functional properties.

Claims (i) and (iii) seem jointly to preclude claim (ii): if phenomenal qualities are revealed to us in experience *as they really are*, and if we are not aware of them *as* underlying physical-functional properties, then how can they be identical with such properties? Alternately, if we directly access phenomenal properties as they truly are, and if they are just identical to certain low-level physical-functional properties, then it seems that we should be phenomenally aware of their underlying physical-functional nature.

Thus, there appears to be a straightforward argument against physicalism about phenomenal character. Indeed, this reasoning parallels a similar argument against a posteriori type-physicalism offered by Horgan and Tienson

(2001). In circumstances in which a subject S is occurrently aware of a phenomenal quality Q while undergoing a perceptual experience, the argument claims the following:

1. When S is phenomenally aware (Q-aware) of phenomenal quality Q, S is aware of Q as it truly is in itself.
2. When S is q-aware of Q, S is not aware of Q as a physical-functional property.
3. If S is aware of Q as it is in itself and S is not aware of Q as a physical-functional property, then Q is not a physical-functional property.
4. Conclusion: Q is not a physical-functional property.¹⁶

Is this apparently straightforward argument against physicalism in fact sound? No; there is a flaw in the argument that occurs at step (3). The conditional expressed by (3) is false. It simply does not follow that if S is aware of Q as it is in itself and S is not aware of Q as a physical-functional property, then S is aware of Q as a *non*-physical-functional property. And this intermediate step is required if the conditional expressed by (3) is to have any plausibility. From the fact that S does not directly access Q as an F, it does not follow that S directly accesses Q as a non-F. In general there is a distinction to be drawn between “*not* being aware of *a* as a B” on the one hand and “being aware of *a* as a *non*-B” on the other. A child’s not being aware that the figure she is looking at is an octagon does not entail that she is aware of the figure as a non-octagon. And her awareness may nevertheless be considered a kind of direct awareness of the figure as it is in itself. (A similar point can be made about awareness of certain phenomenal qualities. I may not be aware of a bluish look in my visual field as a property *of my experience*, but that does not mean that I am aware of the bluish look as being a property *of something other than my experience*.) In his response to Horgan and Tienson, McLaughlin appeals to a similar distinction, claiming that in order for E to be revealed as an F, the subject must bring E under the concept of F.¹⁷ He points out that we do not grasp phenomenal qualities *as* physical-functional properties for the simple reason that in grasping the relevant quality via some phenomenal concept C, we do not bring that quality under any physical functional concept. But it does not thereby follow that the phenomenal quality is *otherwise than* a physical-functional property.

¹⁶ Horgan and Tienson (2001: 311). Although they couch their argument in the language of phenomenal concepts and conceivability, the essence of the argument could be preserved using the “awareness” locutions we have adopted.

¹⁷ McLaughlin (2003: 147).

In accordance with (ii) above, physicalists maintain that Q is a physical-functional property. Moreover, implicit in (ii) is the idea that the nature or essence of Q is *exclusively* physical-functional. Denying this would be tantamount to conceding that phenomenal properties have dual (or multiple) essences, one of which is non-physical-functional, and this in turn would undercut physicalism in favor of a kind of dual-aspect theory. Thus, physicalists such as Tye and McLaughlin maintain that the essence of phenomenal properties is wholly physical-functional.

Tye and McLaughlin have successfully dodged Horgan and Tienson's argument. Whether their response to it undermines our original argument from direct awareness is something we consider in due course. Let us first observe that we still seek a constructive answer to the following question: given that we directly access a phenomenal quality Q as it really is in itself, and given that the nature of Q is exclusively physical-functional, then why *don't* we directly access Q as a physical-functional property? If the direct access we are talking about involves conceptualization of Q, then on one level the answer is that we simply don't access Q via the exercise of a physical-functional concept. But if Q's very physical-functional nature is directly revealed to our awareness, then why doesn't our immediate grasp of Q involve, at least in part, the exercise of an appropriate kind of physical-functional concept to pick it out?

Tye and McLaughlin's answer is to deny the antecedent in the foregoing question: the *essence* of a phenomenal property is *not* revealed to our awareness, and hence we do not directly access that essence.¹⁸ We directly grasp the phenomenal property as it is in itself—the property presents itself as it really is—but this does not mean that we directly access its nature or essence (even in part). And the fact that we don't directly access phenomenal properties *as* physical-functional properties implies that we don't access their nature(s), since they are exclusively physical-functional. Thus, in addition to (i)–(iii), physicalists of the Tye-McLaughlin stripe also hold:

- iv. S does not directly access Q's nature or essence.

The way McLaughlin and Tye resolve the apparent tension in our initial claims (i)–(iii) listed above is by offering a further elaboration on the relationship between (i) and (iii), which involves the additional claim (iv). (iv) qualifies (i) and helps explain why (iii) is true. The fact that we don't directly

¹⁸ Tye (2002, 2003); McLaughlin (2001: 324).

grasp the essential nature of phenomenal properties explains why we don't conceive of them physical-functionally. We may think of (iv) as a denial of the *Doctrine of Revelation*:¹⁹

Revelation (R): The intrinsic nature of a phenomenal property Q is at least partly revealed to us in our *q*-awareness of the property.

The remaining task for the a posteriori physicalist is to offer a plausible story that explains or clarifies the consistency between (i) and (iv):

- i. S directly accesses Q as it truly is in itself.
- iv. S does not directly access Q's nature or essence.

In summary, here is what Tye and McLaughlin say on the matter. Our unmediated grasp of phenomenal properties is attained by exercising non-physical-functional concepts that refer directly to those properties. We are directly aware of Q as it is in itself *because* our phenomenal grasp of Q involves no distinct mode of presentation of Q, but a direct demonstration of Q itself. That is, the phenomenal concept by means of which we access Q demonstrates and presents Q directly. So in presenting itself directly to our awareness, Q serves as its own mode of presentation. This is the needed clarification of (i). At the same time, our direct grasp of Q is not by means of some description or mode of presentation of Q that captures or is an aspect of it, or part of its essence, a description or mode that would allow a conceptualization of it as such and such. Our access to Q does not involve fixing reference via some associated description of Q, since the phenomenal concept that affords a direct grasp or access of Q contains no descriptive content. The phenomenal concept functions as a naming device or type-demonstrative, and hence does not conceptually reveal anything about the essential nature of Q. So we are not phenomenally aware of Q as a physical-functional property, since we do not access Q via a physical-functional concept containing the appropriate description. This provides the required explanation for (iv). Thus according to Tye and McLaughlin, we can be directly aware of phenomenal properties as they truly are in themselves, without illusion, and yet without grasping their natures. This explanation renders mutually consistent the central claims (i)–(iv) put forth in their account of direct access to phenomenal character and content.

¹⁹ The term “revelation” originally comes from Mark Johnston (1992), who used it to refer to the thesis that the natures of external color properties are revealed to us in our visual perception of color.

III. THE CONTENT OF PHENOMENAL CONCEPTS

We contend that the Tye-McLaughlin position on phenomenal access and awareness is unstable, in that their position when pressed will either give way to primitivism concerning phenomenal properties, in accordance with the thesis of intrinsic simplicity, or lead to a denial of the phenomenological data as we encounter it in experience. In the end, respecting the phenomenological evidence requires embracing a limited-revelation thesis, and this picture fits best with a primitivist view of the nature of qualitative character.

Let's consider (i). If we press for greater clarity on issue of what it means for S to directly access Q "truly as it is in itself," Tye and McLaughlin claim that Q presents itself as it is, as its own mode of presentation. On the face of it, this claim appears to be affirming a *genuine presentation* of Q to S's phenomenal awareness; and since Tye and McLaughlin are phenomenal realists, they take the phenomenology of experience rather seriously. If a phenomenal quality is visually presented to me (e.g., if I directly access it through the visual modality by application of a phenomenal concept appropriate to that modality), then the quality is presented to me in a certain way, or as something. That "certain way" or "as something" is the way it looks to me. True, the mode of presentation just is the referent property itself, but it is nevertheless a substantive presentation of that property. Consider, for example, the experience of staring at the sparkling bluish appearance of the Pacific Ocean on a bright afternoon. As one attends to the bluish character of one's visual field, one's phenomenal grasp of the bluish quality constitutes a particular way things seem to one, and that way *is* the direct presenting of the phenomenal property itself, i.e. its constituting its own mode of presentation. This much is clearly present to one in the experience, and once we have come this far, we can go a step further. The presentation of the phenomenal quality is something one has a substantive and determinate grasp of, gleaned from the visual phenomenology itself. This substantive grasp reveals primitive, non-structural features as the immediate contents of one's *q*-awareness. At least that is the way things clearly *seem* to be, phenomenally speaking. The bluish look of the ocean is intrinsically simple in the following sense: what one directly accesses (what presents itself to one's awareness) seems to be a smooth, uniform, homogeneous quality, one that is not further dissectible into parts or discernible patterns, as far as the actual phenomenology goes. We have a substantive and determinate conception or grasp of its simple, non-structural qualitative nature. We claim that this feature of *intrinsic simplicity* thoroughly pervades the phenomenology of

perceptual experience in all of the basic sense modalities. This important aspect of the phenomenal character of experience we can call the *Intrinsic Simplicity condition* (IS):

Intrinsic Simplicity (IS): Phenomenal character and content is constituted (at least in part) by intrinsic, non-structural features directly accessed in phenomenal awareness.

IS holds for phenomenal qualities grasped via any of the standard sense modalities. The sweet, tangy taste of a mandarin orange when you bite into it phenomenally presents itself as a simple, uniform gustatory sensation of a particular kind; a vocal note sung by a choir has a distinctive auditory quality that can be described as a smooth, homogeneous, intrinsic feel impinging on one's awareness. Examples of such intrinsic, qualitative sensations readily come to mind for the other sense modalities as well.

If what we have said so far is on the right track, then in phenomenal and introspective awareness it looks like we do have a positive, substantive grasp of the objects of that awareness, phenomenal properties. Perceptual phenomenology reveals an awareness of primitive, non-structural features, in accordance with IS. This in turn implies that we have a substantive grasp of *the way a phenomenal property really is*, which means a grasp of (at least some aspect of) its real nature or essence. Let's call this claim *minimal* or *partial descriptivism*. (We insert the "at least some aspect" qualifier in order not to preclude a metaphysical picture on which phenomenal states have dual aspects, primitively phenomenal and physical.)

In introspecting a phenomenal property, either we grasp the property by applying concepts that involve some descriptive content, or we grasp the property via a phenomenal concept, which involves no descriptive content whatsoever. Tye and McLaughlin deny that phenomenal concepts carry any descriptive content or that their application involves conceptualization of the relevant phenomenal quality "as such and such." Phenomenal concepts in their view are purely recognitional, and so their exercise does not involve the application of other concepts that would allow the subject to conceive of the quality or fix reference to the quality via a description (including any physical-functional description). But Tye and McLaughlin further assume that any recognitional-phenomenal concept, since it is not descriptive *in that way*, thus contains no substantive content at all. Here it seems that Tye and McLaughlin present us with a forced choice between two extreme claims: a phenomenal concept either grasps the property it refers to via a *full* descriptive content that characterizes the property in question or else it grasps the phenomenal property in no substantive way at all. We claim that this amounts to a false dichotomy, because there is a third possibility—there

are recognitional-phenomenal concepts whose exercise does not involve the use of other concepts but which are nonetheless substantive in that they ground the application of further concepts which do partially and accurately characterize what the phenomenal property is like.

Thus we contend the phenomenological data suggest that the nature of the content of immediate phenomenal experience lies in between these two implausible extremes—that we possess a robust and determinate grasp of phenomenal qualities (which amounts to more than mere naming or demonstration) but at the same time one that falls short of a full description or conceptualization. We do not directly conceive of or access phenomenal properties as instances of full-fledged, determinate property types of one sort or another (micro-physical, neuro-scientific, or otherwise). Nevertheless, we directly grasp them in a substantive way that allows us to form rudimentary concepts which truly characterize those properties, and these concepts can be seen on reflection to be incompatible with their being identified with the sorts of highly structured physical properties or relational functional properties recognized by physics and neuroscience.

To elaborate: the phenomenology of perceptual experience is not completely neutral concerning the nature of the properties that we access in phenomenal awareness. The nature of phenomenal experience/the content of phenomenal concepts reveal both the presence of certain features and the absence of other features, which suggests that phenomenal character is not to be identified with underlying physical properties. In the examples considered above, we identified phenomenal color, taste, and sound qualities, all of which exhibit the positive feature of intrinsic simplicity as described in *IS*. For each of these qualities, we have a robust and determinate conception and grasp of their simple, non-structural qualitative essences.²⁰ While it is certainly true that we do not conceive of these qualities via any physical-functional description which serves to fix reference, we nonetheless directly grasp them in such a way that reveals a substantive albeit *minimally descriptive* content grounded in the nature of the phenomenology itself, and which

²⁰ The fact that many observers are not cognitively sophisticated enough to have concepts such as “simple” and “non-structural” is irrelevant to our argument. What is relevant is that so cognizing it would be an appropriate and correct judgment which is directly grounded in the character of the phenomenology. Certainly, one may grasp the “bluish” essence or character of a phenomenal quality while not recognizing it as either simple or non-structural. But in a more sophisticated exercise of one’s introspective abilities, one can go on to probe further as to what kind of feature the intrinsic bluishness is. And arguably, it can be discerned as a smooth, homogeneous, non-structural feature. In our awareness of the “feels” of experience, the way things seem *is* the way things are, because there is no appearance/reality distinction defined over such features.

we apply conceptually in introspectively characterizing those features present to our awareness, or how the property is revealed to us. This minimally descriptive content includes the intrinsic simplicity of the particular phenomenal qualities that we experience.

In being phenomenally and introspectively aware of their qualitative nature, we also may take notice of what is excluded, that is, we notice what is conspicuously absent from the phenomenology of the experience. The phenomenology lacks any trace of the heterogeneous structure or discontinuity characteristic of any candidate physical states. Take the case of the auditory experience of the musical note. If what we directly (auditorily) grasp is (as Tye contends) an external acoustic wave pattern, then the immediate object of our *q*-awareness is (roughly) a low-level physical state consisting of a pattern of vibrations of clusters of air molecules (states of compression and rarefaction) generating a complex waveform comprised of waves with varying wavelength, frequency, pressure, and intensity. But this messy, inhomogeneous, highly composite structure—which is indeed what our experience *represents*—comes to be completely glossed over in the phenomenal character or feel of the experience itself. Similar things can be said of a bluish visual experience of the ocean. If the phenomenal quality we have direct access to is in truth a wavelength reflectance disposition or profile involving water's absorption of longer wavelengths of light and its reflectance (off a watery surface) of shortwave light energy, then, contrary to what the visual phenomenology suggests, the object we phenomenally grasp is a sharply discontinuous, partite-structured relational property. In both cases, however, the phenomenal feel of our experience strongly points to directly grasped, simple, homogeneous, non-structural features that, in an ordered array, are the immediate objects and content of our awareness.²¹

The argument remains essentially the same in response to others, such as McLaughlin, who allege that the objects of *q*-awareness are internal neuroscientific properties.²² Returning to the example of the musical note, acoustical information from the waveform is processed by the cochlea and the auditory pathways and structures of the nervous system. This is an event involving a highly structured concatenation of electro-chemical impulses and exchanges taking place among billions of neurons in the auditory

²¹ Note again that we are not denying the eminently plausible claim that phenomenal qualities *represent* such candidate physical properties in the external world and that these facts constitute our being *perceptually* aware of such external objects and their properties. Our point is that they cannot be the immediate objects of *phenomenal* awareness. There is no appearance/reality distinction defined over the immediate objects and contents of *q*-awareness.

²² Lockwood (1993: 274) makes a similar point.

cortex, along with highly complex chemical activity taking place across cell membranes and synaptic connections. Yet this auditory experience has a simple phenomenal structure, given in the musical note itself. At the phenomenal level, the event lacks any remotely recognizable isomorphic structure corresponding to the neuro-physical (let alone micro-physical) complexity. The felt sound quality itself wholly lacks any of the grainy, particulate, discontinuous spatial-temporal structure or composition of its alleged neuro-physiological and ultimately micro-physical correlates.

The point is not simply that one's access to phenomenal qualities glosses over a micro-physical structure which is somehow hidden from one's awareness, but rather that the substantive, positive grasp one does have of them rules out the possibility that the *immediate objects* of one's phenomenal awareness have such structure at all. If one wants to claim that our immediate access to phenomenal properties "smooths out" their structure to the point of completely masking their underlying nature, while at the same time granting that the phenomenological data do present us with seemingly primitive non-structural properties, then it looks like we are back again to the problem of phenomenal modes of presentation, since there is no appearance/reality distinction defined over the immediate objects of phenomenal awareness. We grasp phenomenal qualities as they really are, and we grasp them as simple, non-structural properties in the way previously described. The phenomenology of perceptual experience exhibits the positive feature of intrinsic simplicity and wholly lacks the structure and particularity that belongs to physical-functional states. The presence and absence of these features strongly argues in favor of distinguishing phenomenal character from the underlying physical-functional properties described by physics and neuroscience.

To rebut the point we are making, it is not sufficient to claim, as Tye and McLaughlin repeatedly do, that the reason we fail to directly access the underlying physical structure of phenomenal qualities is that phenomenal concepts are not physical-functional concepts, and hence we don't conceive of phenomenal qualities in that way.²³ It is more or less a truism to say *that*.

²³ It is important to be clear about what is and what is not in dispute here. As proponents of non-conceptual content, Tye and McLaughlin deny that the very act of grasping a phenomenal property is concept-involving. But Tye and McLaughlin go beyond this rather innocuous claim by further denying that in grasping a phenomenal property (introspectively) via a phenomenal concept, we grasp it in a way that truly captures any part of its nature. The only concepts or judgments licensed by the phenomenal concept would be judgments that do not (non-trivially) characterize the nature of the phenomenal quality itself. (Certain trivial or relational claims about its essence could be allowed, such as "this experience is not bluish like that one," or "this experience is identical to itself.") Hence Tye and McLaughlin deny minimal or partial descriptivism.

Tye and McLaughlin claim that in order to be (introspectively) aware of something *as* an F, you must bring it under the concept of an F. That is, they endorse something like the following principle:

Introspection-as (IA): For subjects S, and objects or properties Q and F, if Q is revealed (in introspection) *as an F* to S, then S brings Q under the concept of F.

If phenomenal properties are revealed to us in introspection as physical-functional properties (and if we grasp them as such), then we must conceive of them via physical-functional concepts. But since, on the phenomenal concept view, we don't grasp them via physical-functional concepts, it should come as no surprise to discover that phenomenal qualities are not revealed as physical-functional properties. Now, we don't doubt that introspective awareness of and attention to phenomenal qualities requires the deployment of appropriate concepts. Certainly, when you introspect your experience of the ocean and attend to the bluish quality in your visual field, you form and apply an appropriate phenomenal concept that affords you a direct and substantive grasp of the blueness you are attending to. In so doing, you need not, and indeed do not, directly grasp the blueness *as* a physical-functional property. Nor do you directly grasp it *as a non-physical-functional* property. Instead, you form and apply certain corollary, rudimentary concepts to the property that are directly grounded in what it's like for you to experience it, immediately "read off," as it were, from the very content of the phenomenal concept itself. And that content derives from how the phenomenal quality is directly revealed to your awareness, i.e. as its own mode of presentation. So when you grasp phenomenal blue under a phenomenal concept B, then even though B is neither physical-functional nor *non-physical-functional*, still B is not neutral regarding the nature of the phenomenal property in question. On the basis of B, you can go on to correctly apply concepts such as "is non-structural," "is a uniform quality," and so on. That is because B itself, and the phenomenal blueness you directly grasp, has a substantive content that licenses correct application of those corollary concepts. This explanation of direct access is consistent with *IA*; that is, a non-reductivist or primitivist can grant that Q's being revealed to S as a non-structural feature requires that S exercise the concept "being a non-structural feature" in grasping it. On this view, we can introspectively grasp the nature of phenomenal qualities in part, and the remaining issue is the question of whether or not that nature is consistent with the property being a physical-functional one.

What we have been arguing is that, with regard to the issue of whether or not our special form of access to phenomenal properties is compatible with their being physical-functional properties, it is not strictly relevant that we

lack direct awareness of a phenomenal quality's alleged physical-functional structure under some physical-functional conceptualization; rather what matters is that the qualitative content we are positively and robustly aware of gives us a rudimentary grasp of it, which rules out any physical-functional structure as being a component of the quality we access. If the relevant physical-functional properties to be identified with phenomenal qualities are inherently structural and complex, as most theorists think they must be, then the qualities revealed to us in phenomenal and introspective awareness cannot be physical-functional features.

IV. THE ARGUMENT AGAINST A POSTERIORI PHYSICALIST ACCOUNTS OF DIRECT PHENOMENAL AWARENESS VINDICATED

The purpose of the foregoing has been to sketch a plausible position midway between the extremes of demanding a full descriptive content for phenomenal properties or settling for no substantive content at all. We find the story told here to be an attractive one, cohering well with the phenomenology of perceptual experience. In fact, as we argue in this section, if we press for further clarity on (iv), insisting that we don't directly grasp the nature of phenomenal qualities, then in the end we will be forced to deny the phenomenological data. Recall that physicalists such as Tye and McLaughlin allege that:

iv. S does not directly access Q's nature or essence.

The *nature* of phenomenal properties is not in any way revealed to us in phenomenal or introspective awareness. The phenomenal concepts we exercise in grasping phenomenal qualities have no descriptive content whatsoever, not even minimally descriptive or substantive content in the way outlined in the previous section. The *way phenomenal qualities essentially are* is not revealed to us, otherwise this would lead to affirming their intrinsic simplicity. Since they are not revealed to our awareness via any descriptive or substantive mode of presentation, the only thing it can mean to say that phenomenal qualities "are revealed as they really are" and that they "serve as their own modes of presentation" is that they are grasped by direct reference and demonstration. Tye and McLaughlin allude to this function of phenomenal concepts in several places.²⁴ Phenomenal concepts "do not conceptually

²⁴ McLaughlin (2001: 324). See also Tye (2003).

reveal anything about the essential nature of phenomenal properties; they simply name or demonstrate them.” So the bluish look of the ocean, how it phenomenally looks to you—call this phenomenal quality *b*—does not reveal anything of its nature, but is nevertheless revealed directly by your naming or demonstrating *b*, which itself is a physical-functional property. *b* is not presented to you *in* any way or *as* anything, including either a structural or non-structural property.

There are a variety of ways to think of demonstrative reference. One type of view posits two distinct states: a state C consisting of the exercise of a phenomenal concept, along with a distinct phenomenal quality or state Q that C names or demonstrates. Another view involves what we might call *self*-demonstration, whereby an instance of Q comprises the very phenomenal concept C whose deployment functions as a reflexive device, referring directly to itself. The former kind of demonstration is the sort of view Tye and McLaughlin have in mind, while the latter kind is what Block, Balog, and Papineau have in mind on their “quotational” accounts of phenomenal concepts. Each of these views can be combined with one of two broad notions of direct reference. The first is a kind of reference or demonstration that serves to reveal substantive content and information about the nature of what is demonstrated. On a theory which holds that subjects are literally *acquainted with* phenomenal properties, substantive demonstration of Q via the exercise of C is grounded in the intimate ontological and epistemic relation that obtains between the subject and the phenomenal content of her awareness. On the other notion of direct reference, demonstration does not function to reveal information about the nature of a given phenomenal property, but merely acts as a pointer or indexical for the property referred to. In this case, the demonstrating or naming function is most likely implemented through some sort of distinctive causal-functional role. The particular role of a phenomenal concept state C that directly designates or demonstrates Q will have a content along the lines of “caused by Q” or “this/that state Q.” But since C contains no substantive information about Q (i.e., the subject does not access anything about the nature of Q via her exercise of C), “Q” acts as a mere label for whatever state C (rigidly) designates or demonstrates.

Given their insistence on (iv), it is clearly this latter notion of direct reference and demonstration that is in play for Tye and McLaughlin. But if that is what direct reference (and ultimately direct phenomenal access) comes down to, then their view cannot explain the phenomenally rich access we have to the qualitative character of experience. And as a result, the view of phenomenal access under consideration has no principled means of accounting for categorical differences in phenomenal character and content. Suppose

I look at two large colored squares painted on a wall, a blue square above a red square. (Suppose also that my color experiences are correlated in the normal way with different underlying physical properties.) I first introspectively attend to the blueness of the blue square, and then to the redness of the red square, and in doing so, I exercise phenomenal concepts that directly demonstrate the phenomenal qualities I grasp. (Call the properties B and R, and the phenomenal concepts that designate them B* and R*, respectively.) My introspective awareness of the two squares clearly seems to afford me a qualitatively different grasp of their respective colors, as my two visual experiences differ in a categorical way with respect to their phenomenal character; in one case I am phenomenally aware of B, in the other case of R. Here is the problem: when I introspectively attend to the color qualities of the squares, if there is no minimally descriptive or substantive content that I grasp via my exercise of B* and R*—no determinate conception or grasp that reflects the way the phenomenal color properties actually are, but only demonstration—then how am I to account for the qualitative differences in the way the squares look to me, that is, the differences between B and R? The differences in the way the squares look to me appear to be categorical, qualitative differences in the nature of the phenomenal properties presented. But if demonstration or naming affords no positive, determinate grasp of the way the qualities B and R are in themselves, then there exists no explanatory ground for the substantive difference in phenomenal content I notice when I deploy B* and R*.²⁵

One might attempt to dispute the above point by claiming that judgments of phenomenal difference can be reliably triggered in other ways, e.g. by the appropriate physical-functional states underlying or realizing B* and R*. There is some experimental evidence indicating that, say, accurate visual discriminations need not be grounded in phenomenal discriminations.²⁶ Discriminating the blue square from the red square need not involve grasping

²⁵ It won't work to locate the phenomenal differences in the distinct conceptual roles of B* and R*, for the original tension among (i)–(iii) re-emerges as a problem about how phenomenal character can be plausibly identified with these functional roles. I am directly and immediately aware of the qualitative character of my experience in a rudimentary yet substantive way that precludes its being merely a functional property of the sort suggested here. Moreover, conceptual roles seem by themselves *phenomenally blank* and therefore cannot constitutively ground the intrinsic, qualitative character of experience. B* and R* have distinct conceptual roles, to be sure, but the differences in qualitative character are either grounded in the differences in intrinsic natures of the properties that are their realizers (quotational account) or else grounded in the differences in natures of the properties they designate (recognitional account).

²⁶ See for example, the work of Milner and Goodale (1995).

any categorical differences in the essences of phenomenal blue and phenomenal red. Yet our judgments about, say, color patches typically *do* seem to be grounded in this way, by noticing categorical phenomenal differences. That is, at least, often the way things phenomenally seem to us (and our argument has been broadly introspective from the start). And that observation is compatible with evidence that shows such judgments need not be, or are not always, so triggered. Materialist accounts of phenomenal concepts, like that of Tye and McLaughlin, imply that such judgments are never grounded in categorical phenomenal differences.

On the recognitional-demonstrative accounts of Tye and McLaughlin, and given their insistence on (iv), from the standpoint of the subject and the phenomenal concept being deployed, it does not matter whether it is B or some other property R that is the one being demonstrated; a phenomenal concept's having the form "this state R" instead of "this state B," is a semantic distinction that makes no phenomenal difference in my grasp of the two properties. For it is a mere formal difference in label or naming, one that does not reflect any difference in the substantive content or nature of B and R. Intuitively, the difference between exercising a phenomenal concept that designates or demonstrates B and one that designates R is a difference in the natures of the particular phenomenal qualities demonstrated by the concepts or tokened in the concepts. That is, what marks the difference in my phenomenal grasp of B and R is the way those qualities are intrinsically, in their essence. Unfortunately, this explanation is unavailable to Tye and McLaughlin and other proponents of materialist accounts of phenomenal concepts who endorse (iv).²⁷ Hence we conclude that this type of account lacks the resources altogether to explain the manifest qualitative differences that exist between the what-it's-like or phenomenal feel that accompanies one's grasping type-distinct phenomenal properties. Pushing the implications of (iv) leads to implausible denial of the phenomenological evidence by failing to acknowledge the intrinsic simplicity of phenomenal character. It allows only a watered-down sense in which phenomenal properties "directly present" themselves, a very attenuated understanding of (i); and this in turn seems to imply that the character of phenomenal awareness is deeply illusory, contrary to the avowals of physicalists who aim to provide a phenomenally realistic account.

²⁷ The problem described in this section equally confronts (materialist) "quotational" or self-referential accounts of phenomenal concepts that endorse (iv). While the functional mechanism involves self-reference or self-demonstration, this mechanism does not confer information about the nature of the properties in question; it simply functions as a sort of indexical of the form "this state I am in now (B)."

In applying a recognitional-demonstrative account of phenomenal concepts to the problem of direct awareness, physicalists such as Tye and McLaughlin carve out a finely nuanced position that affirms and walks a thin line between the following two claims:

- i. S directly accesses Q as it truly is in itself.
- iv. S does not directly access Q's nature or essence.

The natures of the properties we are directly aware of are completely hidden from our awareness, not presented to us in any way at all. We have argued that physicalists cannot plausibly hold both (i) and (iv) together. (i) does justice to the phenomenal data only insofar as it allows a limited revelation thesis (R) and hence excludes (iv). Drawing out the implications of (iv) leads to an implausible denial of the phenomenological evidence and has the consequence that much of the content of phenomenal experience is illusory.

On the other hand, a *primitivist* theory of phenomenal character—one that proposes ontologically simple phenomenal qualities as the immediate objects of awareness, along with an ontologically primitive acquaintance relation to ground our access to these qualities—effectively dispels the tension that arises for physicalist theories. This is because primitivism rejects a tenet that proves to be the needless source of the tension, namely:

- ii. Q is a physical-functional property.

The phenomenal feel of sensory awareness presents us with ontologically simple, non-structural qualities with a determinate intrinsic character. These are “non-physical-functional” in the sense that they cannot be characterized in terms of or reduced to basic, underlying physical properties countenanced by a mature physics. A theory is needed that incorporates this feature of the intrinsic simplicity of phenomenal character (*IS*). Primitivism effectively integrates central claims about the nature of phenomenal access—e.g., that we grasp phenomenal properties as they really are, and that we have a substantive conception of their character, albeit one that amounts to much less than a sophisticated theoretical description. Primitivism holds that in phenomenal and introspective awareness we come to access phenomenal properties as they truly are, under no distinct modes of presentation, and via a substantive (and perhaps minimally descriptive) partial grasp of their natures. On this view, to say that a phenomenal property is presented to a subject *as it genuinely is* means that the nature of the property, at least in part, is revealed through an intimate acquaintance the subject has with one or more of its instances, in a way that rules out widespread illusion with respect to the way things seem phenomenally to the subject. Such a

view accords well with what we find phenomenal experience to be like, with the manner in which the qualitative character of experience is immediately present to our awareness. There seems to be no other plausible explanation for what phenomenal character *is*, if it is not the essence of whatever it is that is revealed to us in *q*-awareness.

Returning to our argument from direct awareness, we discover that the very feature of intrinsic simplicity provides a basis for a direct argument for primitivism about phenomenal character. We can construct this argument by modifying the earlier failed argument of section II:

1. S directly accesses Q as it truly is in itself.
2. S directly accesses Q as a primitive, non-structural property.
3. If S directly accesses Q as it is in itself and S directly accesses Q as a property of type F, then Q is a property of type F.
4. Therefore, Q is a primitive, non-structural property.

The controversial premise—the one that will be contested by Tye, McLaughlin, and other like-minded physicalists—is (2). The basis of (2), as we have tried to argue, is simply what is given in perceptual phenomenology: we have an unmediated awareness of phenomenal character, an awareness that does not admit of an appearance/reality distinction with respect to the way things are phenomenally, and the content of that awareness is presented to us as various unanalyzable, non-structural features having a determinate qualitative character. As such, they are ontologically distinct from the neuro-physical-functional states of the brain. The result is a robust dualism of properties for which we seek an explanation.

V. THE DUALIST ARGUMENT FROM CONSCIOUSNESS RECAST AS A FINE TUNING ARGUMENT

To this point, we have been concerned to establish the central assumption underlying the argument from consciousness: the thesis that unfolding conscious experience involves systematic correlations of non-identical neuro-physical and phenomenal states. Let us call this premise the *Dual Property Correlation Thesis* (DPC). We have examined the most sophisticated recent materialist challenge to DPC and argued that it fails. We now turn to consider the argument from conscious experience as a whole.

Swinburne (2004) and Adams (1987) both argue that there can be no—or, more cautiously, that it is very unlikely there can be a—systematic scientific or natural connection between physical properties and experiential qualities

that would explain why they are correlated in the patterns that they are. Since an explanation of some sort is required, and the prospect for a naturalistic explanation is not in the offing, a theistic design-style explanation is the most plausible remaining option.

Note that, as stated, DPC is hardly an appropriate candidate for scientific explanation. Just restricting our attention to human experiencers, there are a huge variety of actual and possible phenomenal states, on the one hand, and neuronal state configurations in relevant portions of the brain, on the other. Present science knows a great deal about neurons, the basic elements of neuro-physiological architecture, and some of the mechanisms of communication between them. Much is still unknown about the relevant structure-types that subserve psychological operations, but no one doubts that a systematic theory is there to be had. One persuaded of the ontological irreducibility of phenomenal qualities will naturally suppose that a mature scientific classification of them would similarly discern fundamental properties and relations and specify a corresponding combinatorial algorithm. With such a classification scheme in hand, one could then hope to identify general laws of neural-phenomenal co-variation that are much simpler than brute enumeration of the billions of one-one correlates.

Swinburne dismisses the possibility of any such simplifying account on the grounds that phenomenal qualities are not quantifiable, which is a central characteristic of scientific laws.²⁸ However, as we have just suggested, it is plausible that qualia exhibit geometrical relations and admit variations of degree (in similarity and difference), intensity, extent (of a visual field), and so on.²⁹ Their essentially private nature may preclude exactitude in measurement, as a practical matter, but the argument from consciousness concerns the in-principle availability of a scientific explanation of correlations, not the practical feasibility of doing so.

Adams allows that qualia may admit such quantifiable descriptions, but believes that two insuperable obstacles to a scientific account of consciousness remain. First, the occasional flirtation with panpsychism aside, it is not plausible that any kind of phenomenal properties correlate with anything other than highly structured neural states, or at least states that bear relevant functional similarities to neural states. An hypothesized law, then, would at most chart relations between basic phenomenal qualities and certain physically complex kinds, rather than similarly basic physical kinds. As Adams sees it, such a law would merely *describe* rather than explain an important fact needing explanation, viz., that phenomenal qualities are correlated with

²⁸ Swinburne (2004: 204).

²⁹ Cf. Chalmers (1996: 224–5).

specifically neural states, and not with other physical states, whether simple or complex.³⁰ The second obstacle to a scientific explanation of conscious experience he expresses thus:

... even if we had, from a purely phenomenal point of view, a single uniquely valid spectrum for each sensory modality, we would still face the mind-boggling problem of finding a mathematical relationship between the qualia of the different modalities. And without such a relationship, our law of nature will not explain why certain brain states produce phenomenal qualia such as red, yellow, and blue, and others produce qualia such as sweet, sour, and salty.³¹

We believe that Adams is correct that these two considerations preclude a certain *type* of explanation, a type of explanation that we are accustomed to seeing science pursue and often achieve, but we deny that they preclude any form of explanation whatsoever. The form of explanation that non-panpsychist qualia realism precludes is a reductive and maximally unified explanation. Our most general science, comprised of the branches of fundamental physics, has achieved great success toward the goal of a highly unified science of the elementary causal factors structuring the universe. It is an open empirical question whether a *maximally* unified theory—a single, simple equation governing a single physical constituent—might be possible for the behavior of at least relatively disorganized and isolated physical systems. Suppose a theory of this sort is not attainable. We take it that this fact alone would not cry out for a further and inevitably purposive style of explanation. If at bottom there were, say, two fundamental particles whose interactions were described by a couple of equations, then we should say that these facts provide the deepest explanations of the universe's dynamics. These facts are not themselves explainable, but even that needn't, if we are causal realists, be taken to indicate a kind of *brutely* contingent behavior. We may say that the equations encode the dispositional profiles of the particle types, profiles that are essential (de re, not merely de dicto) to those particles. Of course, it will be scientifically unexplained why the universe is ultimately constituted by these sorts of particles, rather than some other sorts, or none at all. But this fact is not germane to the present discussion, as Adams and Swinburne do not intend the argument from consciousness to be just a restricted version of the cosmological argument from contingency, à la Leibniz.³²

Admitting primitive phenomenal qualities that causally interact with certain kinds of structured physical states is also to give up the aspiration for

³⁰ Adams (1987: 255).

³¹ Ibid. (257).

³² One of us has addressed this question elsewhere. See O'Connor (2008).

maximal theoretical unification. It means that there are properties that are *emergent* in a robustly ontological sense, with correspondingly irreducible laws that chart their patterns of instantiation and their contributions to the dynamical evolution of physical systems. But emergence needn't be understood as an objectionably brute affair of primitive properties occurring without any causal antecedents. If we are causal realists, we shall say that fundamental properties have two distinct types of causal dispositions: the familiar "locally determinative" dispositions that are manifested in even small-scale systems (such as the disposition of negatively charged particles to repel one another, absent countervailing forces) and a disposition in the right kind of organized system to contribute to the generation of an emergent property. That fundamental physical properties confer such emergent dispositions is a surprising "hidden" fact from the standpoint of one who studies the behavior of fundamental particles in the context of isolated, small-scale systems, as particle physicists do. But it is really no more mysterious than whatever turns out to be the most fundamental *locally* determinative dispositions of matter. Both kinds of dispositions are discovered empirically by successful application of theories that posit them. Neither are transparently "intelligible" to human inquirers in the way Leibniz and Spinoza imagined.³³ If we ask why negatively charged particles are disposed to repel each other, there will be the true, even if not reductively illuminating, answer: the disposition to such interactions is the nature of the property of negative charge.³⁴ Likewise, if we ask why neural state N1 gives rise to an experience of phenomenal blue, rather than phenomenal yellow, there will be a true answer involving a fundamental disposition of the fundamental constituent properties of N1 toward just such an effect in just such a context, a disposition that is essential to them.

Do the foregoing considerations indicate that the argument from consciousness is altogether worthless? In our view, such a negative verdict would be too hasty. There *is* an explanandum suited to design-style hypotheses in the neighborhood, it's just that Swinburne and Adams haven't characterized it properly. We have suggested that the phenomenal realist may reasonably suppose the existence of basic, general laws connecting neural-state types and families of phenomenal-state types (corresponding more or less directly

³³ See Robert Adams's discussion of Leibniz's claim that an "effect is conceived through its cause" (1994: 152ff.).

³⁴ We needn't here enter into the dispute between pure dispositionalists, who hold that properties just are clusters of dispositions, and others who hold that dispositions are one aspect of properties alongside another, a certain qualitativity that is distinct for each distinct property.

to distinct sensory modalities). Such laws will encode in part facts about specific emergent dispositions of fundamental physical particulars. Here is where we see the potential for design-style reasoning. It seems plausible that there are a variety of ways things might have been with respect to the fundamental constituents of the world. We do not have in mind the Humean claim that the very particulars there are might have interacted in fundamentally different ways. We mean, rather, that there might have been ever so many different sorts of entities having different sorts of basic dispositions from the ones that are manifested in our world. And in particular, it seems a priori rather unlikely that fundamental physical entities should have emergent dispositions toward phenomenal qualities. (That this is a plausible claim is suggested by the fact that many rash but otherwise reasonable philosophers judge the emergentist view to be an utterly implausible hypothesis about our own world, and some are tempted to declare it outright impossible.) Yet, given theism, it seems more to be expected, since we may reasonably suppose the conditional probability of there being agents capable of the kind of experiential life that we enjoy on the hypothesis of theism to be at least not very low, since it is reasonable to think that one of the goods a purposive world designer would wish to see in its creation are creatures of just that sort.³⁵

Taken this way, the facts underlying DPC are plausibly suited to contribute to the evidence base for the modern *fine-tuning argument* for design.³⁶ This argument is rooted in a vast range of information from cosmology and fundamental physics, appearing since the mid-1970s. Physicists have documented dozens of fundamental respects in which our universe, according to

³⁵ An anonymous referee objects as follows: even if we grant that the probability that there are conscious agents given theism is relatively high, there is no reason to think that conscious experience has to include primitive, non-structured phenomenal properties. So, there is no reason to think that the probability that there would be primitive, non-structured phenomenal properties given theism is significant. We make two comments in reply: (1) Granted, we have not argued above that the account of conscious experience we give is *necessarily* true of any phenomena properly termed “conscious experience.” But it seems to us plausible to think that it is necessarily true, if true at all, given that our concept of conscious experience is closely tied to general features of our own experience. It seems even more plausible that conscious experience of this sort, assuming it isn’t the only sort, is especially valuable, and so something that a divine being would choose to instantiate. (2) But we needn’t in any case commit ourselves to either of these claims. For the conditional probability that is at issue doesn’t primarily concern the likelihood of there being primitive vs. structured higher-level properties. Rather, it is that, given that conscious properties in our world are primitive, the likelihood that such properties would arise from the lower-level structured neuro-physical base properties—i.e. that such psycho-physical correlations would hold—is higher on theism than the denial of theism.

³⁶ Several of the paragraphs to follow are adapted from O’Connor (2008).

present theory, is exquisitely “fine-tuned” for the eventual appearance of biological (and so intelligent and sentient biological) life. What is meant by the neutral term “fine-tuned” is that there are apparently contingent features of the universe, involving such things as ratios of basic particles or forces or the specific value of very large numerical constants in dynamical laws, such that had any one of them differed appreciably, the universe would not have evolved in a way consistent with the appearance of biological life. The details have been documented in several places.³⁷

It is currently estimated that there are more than thirty examples of fine-tuned features of the universe, many of which appear to be independent of the others. Current physics, of course, is rife with speculation about structures more fundamental than those that current theory treats as basic. Informed opinion appears to be that some of the seemingly arbitrary constants will be explainable in more fundamental terms, but it is quite unlikely that all will be. It is noteworthy that some current speculative models which promise to explain away some fine-tuned features introduce others (as is the case with both chaotic inflationary theory, which has received significant empirical support, and the at present purely speculative string theory, which contemplates a great simplification of the basic ontology of physics).³⁸ We will here presume that this opinion is justified.

What, then, are we to make of all this? According to the defender of the fine-tuning argument, we should infer that our universe is fine-tuned because it was created by an intelligent, powerful designer, who created the right elements in just the right initial conditions as to allow for the eventual emergence of intelligent and sentient life. It is not improbable, and perhaps is more probable than not, that such a being would desire a universe containing some form of intelligent life. The alternative hypothesis is that the one universe there happens to be exists as a brutally contingent fact. But this is overwhelmingly *improbable*. Think of all the variations on the above constants as specifying a space of possibility. Those possibilities that are life-sustaining occupy an incredibly tiny portion of this space. That the one realized possibility happens to fall into this tiny, yet highly significant portion calls out for explanation. Assuming that the existence of such an intelligent designer is not as improbable a priori (prior to the consideration of fine tuning) as the existence of the universe itself on the chance hypothesis, the most plausible explanation is in terms of intelligent design.

³⁷ Brandon Carter (1974) first called attention to this data. For a comprehensive treatment, see J. D. Barrow and F. J. Tipler (1986).

³⁸ Robin Collins develops this point in “The Many-Worlds Hypothesis as an Explanation of Cosmic Fine-Tuning: An Alternative to Design?,” currently unpublished.

A version of the argument may be expressed in the formal apparatus of Bayesian confirmation theory as follows.³⁹ Let:

- L = a universe's basic parameters must be finely tuned for intelligent life to exist in it.
- E = Our universe permits intelligent life.
- D = There is a supernatural universe designer.

Where "P(A/B)" is to be read as "the probability of A, given that B is true," the argument's proponent contends that:

- P(E/L & ~D) is *very* low.
- P(E/L & D) is significant.
- P(D/L) is significantly greater than P(E/L & ~D).

That is, what we observe (E) is much more likely on the assumption that there is a supernatural designer (D) (given that L is in fact true) than on the denial of that assumption. Bayes's theorem tells us that this should lead us to upgrade the probability we assign to D (and correspondingly downgrade the probability of ~D) proportionate to the strength of the last two conditional probabilities and the weakness of the first. When a bit of evidence is highly unexpected on one theory but not so unexpected on another, the second is to be judged more likely, provided its prior probability is not so low as to swamp the significance of these conditional probability differences.

Now, we will not here try to assess the overall cogency of this argument, which has been the subject of a growing body of literature.⁴⁰ We simply suggest that the argument from consciousness is best developed as adding to the data of fine-tuning. Given the role that comparative probability judgments play in the fine-tuning argument, it is doubtful that the a priori probability of the causal properties of the universe's fundamental constituents being such as to ground physical-phenomenal correlations is sufficiently low *in itself* to significantly bolster the case for a designer. Yet, if our argument in sections III–IV above are sound, the data that consciousness provides are distinctive elements of that case insofar as they are not subject to being explained away through future development of more comprehensive physical theories. Hence, the Dual Property Correlation Thesis is best

³⁹ Here we closely follow Neil Manson's presentation in the introduction to Manson (2002: 7).

⁴⁰ In addition to the essays in Manson (2002), see Colyvan, Garfield, and Priest (2005), Collins (2005), and Pruss (2005). Finally, one of us assesses the argument in O'Connor (2008: chs. 4–5).

taken as one important and comparatively secure ingredient in an overall cumulative case for theistic design.

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