

Consciousness: Phenomenal Consciousness, Access Consciousness, and Scientific Practice

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Abstract. The purpose of this chapter is twofold. The primary purpose is to revisit Ned Block's distinction between phenomenal consciousness and access consciousness. The secondary purpose is to examine key case studies from consciousness research in the cognitive sciences. Block has argued that what he calls phenomenal consciousness and access consciousness are completely independent phenomena, and that cognitive scientists have been unduly focused on studying the latter. As against that, I argue that there is an intimate connection between phenomenal and access consciousness: a component of the former is the categorical basis of the latter. I also argue that this vindicates scientific practice in consciousness studies, in that the study of a dispositional property is often a scientific gateway for learning about its categorical basis. Having set out this conceptual framework for understanding the relation between phenomenal and access consciousness, I then consider the presuppositions behind studies of subliminal perception, perception of habituated stimuli, and blindsight, and argue that they are in line with said framework. The overarching goal of the chapter is to contribute to the elucidation of the conceptual foundations of consciousness studies in the cognitive sciences.

Key Terms: Phenomenal consciousness, access consciousness, qualitative character, subjective character, intransitive self-consciousness, disposition, categorical basis, subliminal perception, blindsight.

1. Introduction: Consciousness and the Philosophy of Science

Analytic philosophy of mind is a relatively new branch of philosophy. Some treat it as an extension of the philosophy of language, as concerned with the relation between representation and reality. Some treat it as a chapter of metaphysics, concerned with the categories of mental existence (mental states, mental substance, mental causation, etc.). And some treat it as a chapter of the philosophy of science, namely, the chapter concerned with the philosophy of psychology and the cognitive sciences.

A classic example of the last approach is Fodor's early work on psychological explanation (Fodor 1968), the language of thought (Fodor 1975), and the modularity of mind (Fodor 1983), which has been extremely influential, in content but also in style. The *style*, or *form*, of argument was always this: cognitive science presupposes such-and-such psychological structure; therefore, (plausibly) the mind exhibits the structure in question. Thus, we were told that thought is conducted in a language-like medium, featuring syntactically structured and semantically evaluable items, because this is presupposed in "the only cognitive science we've got."

Curiously, although work in the philosophy of mind from the angle of the philosophy of science has been extremely influential in discussions of the representational and functional aspects of mental life, it has seen less influence in discussions of phenomenal aspects. What (relatively) little work on consciousness from the angle of philosophy of science has been done, it has rarely been of great influence on the mainstream discourse in an otherwise vibrant realm of consciousness research.

One rare exception is Ned Block's (1995) "On a Confusion About the Function of Consciousness," which did impress a lasting and deep mark on mainstream issues concerning philosophical theories of consciousness. In that paper, Block argues, in essence, that current scientific practice in consciousness studies has been targeting the wrong phenomenon. After distinguishing between what he calls *access consciousness* and *phenomenal consciousness*, Block considers carefully the main scientific approaches to consciousness and argues that they can only be taken to shed light on the former, not the latter.

In this chapter, I want to engage Block's argument and ultimately vindicate current scientific practice. I will argue that although phenomenal consciousness and access consciousness are logically independent, as Block indeed claims, there is still some intimate connection between the two: access consciousness is a dispositional property, and when its categorical basis is correctly identified, it is seen to be a component of phenomenal consciousness. That is, although access consciousness is separate from phenomenal consciousness, its categorical basis is not. This would vindicate current scientific practice in consciousness studies, in that it would suggest that in studying the phenomena they do, cognitive scientists are targeting an essential component of phenomenal consciousness, namely, the categorical basis of access consciousness. Once the case is made for this general meta-theoretical approach, a number of case studies from empirical work in cognitive psychology and neuroscience will be examined in its light. Hopefully, this exercise will contribute to the elucidation of the conceptual foundations of consciousness studies in the cognitive sciences.

2. The Phenomenological Structure of Phenomenal Consciousness

In this section, I will present – somewhat dogmatically – a specific conception of the phenomenological structure of phenomenal consciousness. This conception is by no means uncontroversial, but as I will argue toward the end of the section, the particular way in which it is controversial should not affect the main argument of this paper. Elsewhere, I have argued in greater detail for this conception (see mainly Kriegel 2004, but also Kriegel 2003b, Forthcoming); here I will only recapitulate on its main tenets.

Looking at the blue sky on a sunny summer day, I have a distinctive conscious experience of it. This experience has many properties, but the one property we find scientifically mystifying is its *phenomenal character*: there is something it is like for me to have or undergo this experience (Nagel 1974). More specifically, there is a bluish way it is like for me to have my sky experience. The specific phenomenal character of my conscious experience is given by this bluish way it is like for me to have it.

As Levine (2001) has suggested, there is a distinction to be made between two aspects, or components, of this “bluish way it is like for me.” On the one hand, there is

the *bluish* aspect. On the other hand, there is the *for-me* aspect. Let us call the former (the bluishness) *qualitative character* and the latter (the for-me-ness) *subjective character*. Here is how Levine (2001: 6-7) puts it:

There are two important dimensions to my having [a] reddish experience. First, ...there is something it's like for me to have this experience. Not only is it a matter of some state (my experience) having some feature (being reddish) but, being an experience, its being reddish is "for me," a way it's like *for me*... Let's call this the *subjectivity* of conscious experience. The second important *dimension* of experience that requires explanation is qualitative character itself. Subjectivity is the phenomenon of there being *something* it's like for me to see the red diskette case. Qualitative character concerns the "*what*" it's like for me: reddish or greenish, painful and pleasurable, and the like.

We may construe phenomenal character as the compresence of qualitative character and subjective character.¹

To say that my experience has a bluish qualitative character is to attribute to my experience the property of exhibiting a certain specific sensuous quality. It is not to say that the property in question is irreducible, or intrinsic, or inexplicable. It is merely to assert the *existence* of that property.

To say that my experience has a subjective character is to say that I am somehow *aware* of my experience. Conscious experiences are not sub-personal states, which somehow take place *in* us and which we "host" in an impersonal sort of way, without being aware of them. Mental states we are completely unaware of are unconscious states. So when I have my conscious experience of the sky, I must be aware of having it. In this sense, my experience does not just take place *in me*, it is also *for me*. Again, by asserting the existence of the property of subjective character, I do not mean to imply that it is irreducible. (Indeed, Elsewhere I defend a reductive account of subjective character (Kriegel 2003a, Forthcoming).)

The notion that something like subjective character is indeed a crucial component of phenomenal character would be readily resisted by many. It is surely not uncontroversial. Let me therefore say a little more about how I conceive of subjective character, and finally why its postulation will not distort my discussion of Block's argument in '*Confusion*'.

Subjective character is a property conscious states have in virtue of the subject's awareness of them. This sort of awareness we have of our concurrent conscious experiences is clearly a somewhat elusive phenomenon. After all, normally we are not focused on our ongoing experiences, but rather on the world experienced therethrough (if you will). When I look at the sky, I am focused on the sky, not on my experience of it. And yet I am not altogether unaware of my experience. If I were completely unaware of my experience, it would not be a *conscious* experience.²

This raises the challenge of how to account for the elusive awareness we have of our ongoing experiences. One way of doing that is in terms of what I have called elsewhere (Kriegel 2003b, 2004) *intransitive self-consciousness*, which is to be distinguished from *transitive self-consciousness*. To see the distinction, consider the following two reports:

- (1) I am self-conscious of my sky experience.
- (2) I am self-consciously experiencing the sky.

In the first report, self-consciousness appears as a verb, which takes the experience as an *object*. In the second report, self-consciousness appears as an adverb, which merely *modifies* the experience term. The former reports the occurrence of a second-order state that makes me focused on my experience. The latter reports the occurrence of a first-order state that makes me focused rather on the sky, and makes a comment on the *way* I am having this first-order state. The comment it makes is that I have the experience in a self-conscious sort of way.

But how are we to understand this self-conscious sort of way I am focused on the sky? My suggestion – developed, again, elsewhere (Kriegel 2004, Forthcoming) – is that we construe this in terms of a distinction between *focal* and *peripheral* self-consciousness or self-awareness. The distinction between focal and peripheral awareness is widely applied to *perceptual* awareness. Thus, I can say that I am now focally visually aware of the laptop before me and peripherally visually aware of an ashtray on the corner of my desk. Likewise, when I listen to a piano concerto I am focally auditorily aware of the piano and peripherally auditorily aware of the cellos.³ My claim is that the same

distinction extends to second-order awareness and/or self-awareness: I can be focally aware of my experience of the piano concerto, as when I explicitly and deliberately introspect my ongoing auditory experience, or I can be merely peripherally aware of my experience of the concerto, as when I am focused on the pianist's interpretation of the piece but am nonetheless aware in that elusive and unimposing way of undergoing the experience. For further and more detailed exposition of this approach to the subjective character, or for-me-ness, of conscious experience, I refer the reader to Kriegel 2004.

As noted above, the very existence of this sort of elusive awareness, or for-me-ness, can be readily called into question. I cannot within the confines of the present paper present the full case for the psychological reality of subjective character (but see Kriegel 2004). However, this should not matter overmuch to the discussion below. As we will see in the next section, Block admits the existence of what he calls "me-iness," which we would be pardoned to consider fundamentally the same as the "for-me-ness" discussed above. Block is perfectly happy, then, to allow for the fact that phenomenal experiences have a mine-ness built into them, a sort of immediate, built-in, and perhaps pre-conceptual self-ascription. His argument is therefore supposed to go through despite the existence of something like subjective character or for-me-ness. The argument does not depend on there not being such a thing in the phenomenology of conscious experience. Indeed, *how* the argument goes through despite that fact is something Block discusses explicitly. Let us turn now to consider Block's argument.

3. Phenomenal Consciousness, Access Consciousness, and Subjective Character

According to Block (1995), cognitive scientists who work on consciousness are wrong to study the phenomena they do, because these phenomena can only shed light on a something that is inessential to phenomenal consciousness.

Block distinguishes two notions of consciousness: phenomenal consciousness and access consciousness.⁴ Phenomenal consciousness is defined in terms of what it is like for the subject to have the conscious experiences she does. It is what generates the "explanatory gap" (Levine 1983) or the "hard problem" (Chalmers 1995), and is thus what we are truly struggling to understand. Thus, Block (1995: 382; italics original)

writes: “I mentioned the explanatory gap partly by way of pointing to P-consciousness [i.e., phenomenal consciousness]: *that’s* the entity to which the mentioned explanatory gap applies.”⁵ Access consciousness, by contrast, is defined in broadly functionalist terms: a mental state is access-conscious just in case “it is poised for free use in reasoning and for direct ‘rational’ control of action and speech” (Block 1995: 382).

It appears that the distinction itself is sound, at least as a *conceptual* distinction. A mental state is phenomenally conscious just in case there is something it is like for its subject to have it. There are no obvious conceptual ties between that and poise for free use in reasoning and action control. But Block’s claim is that these are not only two separate *concepts*, but also two separate *properties*, and that current scientific research into consciousness focuses on the property of access consciousness *at the expense of* the property of phenomenal consciousness. He writes (Ibid.; italics original):

...it is not easy to see how current approaches to P-consciousness [i.e., phenomenal consciousness] *could* yield an account of it. Indeed, what passes for research programs on consciousness just is a combination of cognitive psychology and explorations of neurophysiological syndromes that contain no theoretical perspective on what P-consciousness actually is.

According to Block, current scientific research can only shed light on access consciousness, but access consciousness is not the source of the mystery of consciousness. So current scientific theories of consciousness do not contribute toward the demystification of consciousness. Only theories that would target phenomenal consciousness might possibly do that. We may call this the *access thesis*: Current scientific research focuses on access consciousness *instead of* phenomenal consciousness.

The overall argument of Block’s paper is thus the following: 1) There is a difference between phenomenal consciousness and access consciousness; 2) Cognitive-scientific studies have targeted access consciousness; therefore, 3) Cognitive-scientific studies have failed to target phenomenal consciousness.

Some philosophers have argued that phenomenal and access consciousness are in reality not entirely separate properties, but rather entertain certain conceptual, internal, or otherwise non-contingent relations (see, e.g., Dennett 1995, Clark 2000). This is not the

line I would like to take here, although it has certain similarities which will come out momentarily. The line I will pursue is that there is a conceptual or internal connection between phenomenal consciousness and the *categorical basis* of access consciousness. In other words, I will argue against the inference from the premises to the conclusion in Block's overall argument. This is different from the common tack, of arguing against Premise 1.

The first thing to note about access consciousness is that it is a *dispositional property*. Nothing has to actually happen with a mental state or event for it to qualify as access-conscious: the state or event need not be actually accessed; it only needs to be *accessible*. That is, in order to become access-conscious, a mental state need not be *actually* used in the control of reasoning and action; it need only be *poised for* use in such control.

The problem is that the property investigated in the cognitive sciences under the heading of consciousness studies is clearly *not* a dispositional property. When a mental state becomes conscious, there is something very real and categorical that happens to it and to the subject's relation to it. This suggests that Block is quite right to distinguish the *property* of phenomenal consciousness from the *property* of access consciousness. But it also suggests that there is something wrong in taking access consciousness to be the object of scientific investigation in consciousness studies.

Plausibly, dispositional properties are normally surrounded by two kinds of closely related non-dispositional property. There are, first, what may be called *manifestational* properties: the properties of manifesting the dispositions in question. Thus, mental states are often not only *poised for* use in reasoning and action control, but actually *are* so used. They then instantiate the manifestational property corresponding to access consciousness.

More interestingly, dispositional properties are often taken to require, as a rule, *categorical bases*. A categorical basis is a non-dispositional, occurrent property that accounts for and grounds certain dispositions. When a wine glass is fragile, its fragility cannot be a brute and inexplicable property. The fact that the glass is fragile is not an irreducible, *sui generis* fact. On the contrary, it must be possible to explain *why* the wine glass is fragile in terms of the physico-chemical properties of the glass it is made of. The

glass is fragile – it is disposed to break under relatively lax conditions – *because*, or *in virtue of*, its physico-chemical constitution. Its particular constitution is thus the *reason for* its fragility – the *reason why* it is fragile. In this sense, the glass’ physico-chemical constitution is the categorical basis of the glass’ fragility.

Some philosophers have argued that all properties are at bottom dispositional (e.g., Shoemaker 1979), a bundle of causal propensities and nothing more. If so, dispositional properties do not in fact require any categorical, non-dispositional bases. A full discussion of this view of properties – a sort of functionalism about everything – and of the problems attending it will take us too far afield. Perhaps it suffice that we recite here Russell’s clever condemnation of this view as providing us nothing more than “a causal skeleton of the world.” In this paper, I will assume that this “pure disposition view” is incorrect, and that dispositional properties do require categorical bases, that is, non-dispositional properties whose instantiation *explains why* the dispositional ones are instantiated.⁶

This applies, of course, to access consciousness. When a mental state is access-conscious, it must also have a categorical property *in virtue of which* it is access-conscious. There must be an explanation *why* the state is poised the way it is for free use by the subject, an explanation appealing to non-dispositional properties that *account for* the state’s disposition to be freely used in that way.

What could this property be? A natural suggestion is that it is subjective character. The reason why the state is poised for the subject’s free use in reasoning and action control is that the subject becomes *aware*, in that elusive and peripheral manner discussed in the previous section, of the state. Once the subject is aware of having her state, if ever so peripherally and dimly, she can freely make use of it in reasoning and action control. Thus the state’s free usage to those ends can be *explained* in terms of its for-me-ness or subjective character. It appears that the subject’s awareness of her conscious state is the *reason why* the state is poised for use in reasoning and action control – the *reason for* the state’s poise for such use. It is *because* (or *in virtue of* the fact that) I am aware of my bluish experience of the sky that the experience is poised to be freely used in my reasoning about the consistently nice weather and in guiding my vacation plans. That is to say, the categorical basis of access consciousness seems to be subjective character, the

subject's special, peripheral awareness of her conscious state. This awareness is what *explains*, in non-dispositional terms, a conscious state's disposition to be freely used in reasoning and action control.

In other words, what explains the subject's ability to use conscious information freely is the fact that she is aware of that information. If she was not aware of it, so that the information was merely sub-personal, she would not be in a position to use it so freely.

It might be objected that categorical bases are to be found at the scientific, "micro" level, whereas subjective character is a property at the commonsensical, "macro" level. But the supposition that a categorical basis *must* be a micro property is misguided. Consider explosiveness: the property of being disposed to explode. It has a very clear categorical basis at the macro level – the property of containing gun powder. To be sure, it has *also* a micro-level categorical property, namely, its containing potassium nitrate. And that is because gun powder is effective in the way it is due to the chemical nature of potassium nitrate. But it does not follow from the fact that something is explosive in virtue of containing potassium nitrate that it is not also explosive in virtue of containing gun powder (in the same sense of "in virtue," the categorical-basis sense). Although the citation of potassium nitrate accounts for the explosiveness in a deeper and fuller way, the citation of gun powder accounts for it as well.⁷

My contention, then, is that the subjective character of conscious experience is the *categorical basis* of its access consciousness. Now, as I claimed in the previous section, the subjective character of a conscious experience is a component – indeed an essential component – of its phenomenal character. Happily trivially, for-me-ness is a component of what-it-is-like-for-me-ness.

If this is indeed the case, and a component of phenomenal consciousness is the categorical basis of access consciousness, then this can be taken to vindicate current scientific practice. The claim would be that, in conducting the studies they do, scientists are probably not targeting what Block identified as access consciousness, but rather the categorical basis of access consciousness. Since the categorical basis of access consciousness is a component of phenomenal consciousness, by targeting the categorical

basis of access consciousness scientists are ultimately pursuing the study of phenomenal consciousness.

It is quite common in the history of science that scientists labor around a dispositional property by way of trying to learn about its categorical basis. Thus, for centuries geneticists have been studying hereditary properties, which are dispositional, by way of trying to reach an understanding of their categorical basis, which we have only recently identified as DNA. A good example is the so-called Huntington Disease, an inherited neurological degenerative disorder characterized by loss of striatal neurons. Research into Huntington Disease has led to the discovery in 1993 that a mutation of the CAG gene – a mutation in which the triplet repeats at least 42 times (as opposed to between 11 and 34 times in the normal case) – is what causes the disease (See Huntington’s Disease Collaborative Research Group 1993). In this case, what drove the study of the disposition to suffer from Huntington Disease is a practical interest in identifying what causes the disposition’s manifestation. But what motivates the study is beside the point. The important fact is that the study resulted in learning more and more about the properties of the disposition’s categorical basis, until the particular gene responsible for it could be singled out.

Research into access consciousness can be seen in a similar light. By looking at what causes this disposition’s manifestation (the manifestation being the actual use of a state in reasoning and action control), more and more can be learned about the properties of the disposition’s categorical basis, namely, subjective character.⁸

One advantage of this view on the relation between access and phenomenal consciousness – that far from being completely independent of each other, the latter (or a component thereof) is the categorical basis of the former – is that it accounts for the functional role of phenomenal consciousness. Indeed, it accounts for there *being* a functional role to phenomenal consciousness.

A problem with Block’s distinction is that any function we may wish to attribute to phenomenal consciousness would be more appropriately attributed to access consciousness, leaving phenomenal consciousness devoid of any functional significance it can properly call its own (Chalmers 1997). The source of this unhappy consequence is the picture of phenomenal and access consciousness as two separate properties sitting

side by side at the same theoretical level. But if, as I have argued, phenomenal consciousness (or part of it) is the categorical basis of access consciousness, then the latter can be readily construed as the functional role *of* phenomenal consciousness. That is, phenomenal consciousness is the *occupant* of a functional role, part of the specification of which is given by access consciousness (namely, the part concerned with the poise for free use in reasoning and action control). Here, the relation between phenomenal and access consciousness is construed as the relation of an occupant to its role: phenomenal consciousness *occupies*, or *plays*, access consciousness (if you will). Thus once we construe phenomenal consciousness as the categorical basis of access consciousness, and access consciousness as the functional role of phenomenal consciousness, we can again attribute certain functions to phenomenal consciousness: the functions are construed as *part of* access consciousness and as *performed by* phenomenal consciousness. This appears to avoid potential conceptual confusions caused by fully divorcing phenomenal from access consciousness.

It is, of course, open to someone like Block to claim that phenomenal consciousness is in fact devoid of any functional significance (as Velmans 1992 has done) or has very limited functional significance (as Libet 1985 suggests). But I take it that such epiphenomenalism, hard or soft, is a *liability* on a theory of phenomenal consciousness, one better avoided when possible.

A big part of Block's argument for the full divorce between phenomenal and access consciousness is his claim that there are possible circumstances in which one can occur in the absence of the other. In particular, access consciousness could occur in the absence of phenomenal consciousness in what Block calls super-blindsight, and the converse may occur in certain cases of perception of habituated stimuli.

These particular cases will be examined in some detail in the next section. But it is worth noting that, in general, the relationship between a disposition and its categorical basis is not *supposed* to hold with metaphysical necessity.

Consider the fragility of the wine glass. The wine glass is fragile in that it is disposed to break in relatively undemanding circumstances. But this is so not only due to the physico-chemical constitution of the glass, but also in part due to the actual force of gravity on Earth. If gravity was a thousand times weaker, the wine glass would be a

thousand times less likely to break in any given circumstance, and so would be a thousand times less fragile, if you will. That is, the glass would not *be* fragile – in that its disposition to break would be very limited. Yet the physico-chemical constitution that is the disposition’s categorical basis in the actual world would remain the same. Likewise, in a possible world in which the laws of psychology are radically different from those of the actual world, mental states with subjective character may well not display the disposition to be freely used in reasoning and action control. That is, where the laws of nature are sufficiently different, the categorical basis of access consciousness could certainly occur in the absence of access consciousness. (At the same time, we must maintain a nomologically necessary relation between categorical bases and the dispositions for which they are bases. Thus, the relevant microphysical structure brings about fragility in all possible worlds in which the same laws of nature hold. This is necessary to license scientific inference from dispositions (and their manifestations) to the underlying categorical properties.)

Conversely, some objects are fragile that have a physico-chemical constitution very different from the wine glass’. A vase of completely different constitution can be equally fragile. Thus similar dispositions can have dissimilar categorical bases. Moreover, the functional role occupied by the categorical basis is, like other functional roles, multiply realizable: it allows different occupants to play the exact same role. In similar fashion, access consciousness could readily occur in the absence of its actual categorical basis – if some other categorical properties served as its basis.

So in summary, the fact that there are metaphysically possible circumstances in which phenomenal and access consciousness occur in the absence of one another does not tell against the thesis that a component of the former is the categorical basis of the latter. There is thus an intimate conceptual connection between the two even if it is not a metaphysically necessary connection.

Block may present another objection to the view defended here, namely, that subjective character, or for-me-ness, is more appropriately considered an element of self-consciousness, not phenomenal consciousness. Self-consciousness, Block writes, involves “the possession of the concept of the self and the ability to use this concept in thinking about oneself.” (Block 1995: 389) This, again, is a more cognitive and less

phenomenal notion, so self-consciousness should be distinguished from phenomenal consciousness, as Block (1995: 389-390) indeed does. According to this objection, then, although subjective character is commonly to be found in phenomenally conscious states, it is not a constituent, but rather a contaminant, of phenomenal consciousness.

In the previous section, I drew a distinction between transitive and intransitive self-consciousness – between being self-conscious *of* an experience and self-consciously experiencing. While I acquiesce in the need to distinguish phenomenal consciousness from *transitive* self-consciousness, I have argued at length elsewhere (mainly Kriegel 2004) that no consciousness can occur in the absence of *intransitive* self-consciousness. It is impossible to experience something consciously without experiencing it self-consciously. This is, as I admitted at the opening of the last section, not an uncontroversial claim. But as I also underlined, it should not affect the argument of the present paper, because Block himself accepts that there is an element of what he calls “me-ishness” in phenomenally conscious experiences. So the *existence* of this phenomenon, and even its typical *presence* in phenomenally conscious states, is not something Block wishes to deny. What Block does wish to deny is that the this somehow vindicates the scientific community’s focus on it.

In other words, Block would deny my claim that this me-ishness, of for-me-ness, is the categorical basis of access consciousness. More specifically, he explicitly denies that the existence of such me-ishness somehow vindicates scientific practice. He writes (Block 1995: 390):

P-conscious [i.e., phenomenally conscious] states often seem to have a “me-ishness” about them, the phenomenal content often represents the state as a state of me. But this fact does not at all suggest that we can reduce P-consciousness to self-consciousness, since such “me-ishness” is the same in states whose P-conscious content is different. For example, the experience as of red is the same as the experience as of green in self-orientation, but the two states are different in phenomenal feel.

Assuming (plausibly) that Block’s notion of me-ishness is more or less the same as my notion of subjective character, or for-me-ness, we may interpret his objection as follows. A bluish experience of the sky and a whitish experience of a wall have different

phenomenal characters: the one is bluish while the other is whitish. Yet the for-me-ness involved in both experiences is the same. That is, the qualitative character of conscious experiences varies independently of their subjective character. In fact, it may well be that the subjective character of conscious states is a standing feature of them that is always the same – even though conscious states vary widely with respect to their phenomenal character. Therefore, research into consciousness that focused entirely on subjective character, to the exclusion of qualitative character, would miss out on the central component of phenomenal consciousness, the component that accounts for phenomenal differences among different conscious states.

There are two rejoinders to this objection one could explore. The one I will *not* consider is that subjective character does vary, in some subtle and hardly noticeable way, in phenomenally different experiences. (This may well be Levine's own view.) The rejoinder I will pursue may appear initially more surprising: that from the fact that subjective character remains unvaried across phenomenal experiences it would not follow that to focus on it would be to miss out on something essential to phenomenal consciousness. That is, it is a fallacy to infer that since a component of phenomenal consciousness is the same in phenomenally different experiences, the study of that component is insufficient for the understanding of phenomenal consciousness.

To see why this is so, consider the possibility that a conscious state's qualitative character is what makes it have the *specific* phenomenal character it has, but its having subjective character is what makes it have phenomenal character *at all*. That is, qualitative character is what makes a conscious state the conscious state it is (rather than a different conscious state), but it is its subjective character that makes it a conscious state *at all* (rather than a non-conscious state). Thus, the bluishness of my experience determines *what* it is like for me to have my experience, but it is its for-me-ness that guarantees that there is *anything* it is like for me to have it.

This possibility is fully consistent with the notion that subjective character remains the same in all phenomenally conscious states, while qualitative character varies in phenomenally different states.

Interestingly, this sort of view is exactly the one defended by Levine. He writes (2001: 7-8; italics original):

There are two important dimensions to my having [a] reddish experience. First, ...there is something it's like for me to have this experience. Not only is it a matter of some state (my experience) having some feature (being reddish) but, being an experience, its being reddish is "for me," a way it's like *for me*... Let's call this the *subjectivity* [or subjective character] of conscious experience... The second important dimension of experience that requires explanation is qualitative character itself. Subjectivity is the phenomenon of there being *something* it's like for me to see the red diskette case. Qualitative character concerns the "*what*" it's like for me: reddish or greenish, painful and pleasurable, and the like.

So the view in question is not only consistent with Block's observation, but has its able defenders.

There are several ways the view could be couched in more technical or theoretical terms. Thus, we may appeal to a distinction between *determinates* and *determinables*, and say that qualitative character is a determinate of phenomenal consciousness where subjective character is the determinable. Or we may draw a distinction between *existence conditions* and *identity conditions*, and claim that while qualitative character determines the identity condition of a phenomenal experience, subjective character is what determines its existence condition. Whatever the jargon, the substantial claim is that subjective character ensures that there is *something* it is like for the subject to have her conscious experiences, whereas qualitative character determines which particular *way* it is like for her to have her experience.

Now, the "hard problem" of consciousness is not so much the problem of why some phenomenally conscious experiences differ phenomenally the way they do, as the problem of why some mental states are phenomenally conscious *in the first place*. To bridge the "explanatory gap," we must come to an understanding not of how come phenomenal consciousness varies the way it does, but of how come there *is* such a thing as phenomenal consciousness *at all*. So in order to solve the hard problem, or bridge the explanatory gap, cognitive scientists ought to target the determinable, or the existence condition, of phenomenal consciousness. They must target what makes a mental state phenomenally conscious *in the first place*, not what makes it the specific phenomenal experience it is. If that is subjective character, then scientists are fully justified in

focusing on subjective character. Therefore it is fallacious to infer that subjective character cannot be the proper focus of scientific research into phenomenal consciousness if it remains unvaried across phenomenally different experiences.

4. Case Studies from the Cognitive Sciences

In this section, I will examine a couple of case studies from consciousness research in the cognitive sciences and analyze them in the light of the framework set forth in the last section regarding the interrelations among phenomenal consciousness, access consciousness, and subjective character.

The cognitive sciences are several in number, but they fall, crudely, into two main groups: the branches that study the psychological level and the branches that study the neurophysiological level. In sub-sections 4.1 and 4.2, I will examine key phenomena studied in each under the heading of consciousness studies, and argue that the study of such phenomena cannot be taken to shed light on the nature of qualitative character, but only on the nature of subjective character, or intransitive self-consciousness. This is, in fact, a dual claim. The negative claim is:

(NC) In studying what they do, cognitive scientists are *not* targeting the phenomenon of qualitative character.

And the positive claim is:

(PC) In studying what they do, cognitive scientists *are* targeting the phenomenon of subjective character (intransitive self-consciousness).

If so, it is presumably the latter phenomenon that cognitive scientists have in mind when they set out to study consciousness.

In a sense, then, what I will argue for is in line with Block's view on current scientific research: Block is right that cognitive scientists do not focus on qualitative character or the component of phenomenal consciousness that accounts for phenomenal

differences among different conscious experiences. But in light of the argument of the previous section, I will not take this to constitute a critique of scientific practice, but rather an elucidation of its conceptual foundations.

4.1. Subliminal and Habituated Perception

At the *psychological* level, under the heading of consciousness research scientists focus on comparing conscious and unconscious execution of the same cognitive functions. In this way, they hope to isolate the singular contribution of consciousness to the execution of different cognitive functions, thereby treating consciousness as a scientific variable. This methodology has been articulated and expounded chiefly by Bernard Baars, who calls it *contrastive phenomenology* (see Baars 1994). But it is practiced, more implicitly, by many others.

Among the phenomena Baars suggests cognitive scientists focus on are the contrasts between conscious and unconscious perception, imagery, attention, memory, and problem-solving. One paradigmatic phenomenon for contrastive phenomenology is *subliminal perception* (see Dixon 1971 for the *locus classicus*). In subliminal perception, a perceptual system in some modality executes the function of feature discrimination, but does so unconsciously. This function is often executed consciously, however, so by comparing and contrasting subliminal (unconscious) discrimination and conscious discrimination of the same feature, cognitive science can investigate the singular contribution of consciousness to feature discrimination.

Phenomena of subliminal visual perception have been studied for over a century now, with Sidis (1898) and Dunlap (1900) conducting the first regimented experiments. Still one of the most interesting findings in research on subliminal vision is Dunlap's discovery that subliminally perceived stimuli can have an immediate effect on conscious perceptual experience (Dunlap 1900: 436). Thus, Dunlap succeeded in reproducing a conscious Müller-Lyer effect using angular lines that were only subliminally perceived. Subjects who were presented with two lines of equal length accompanied by masked angular lines that could not themselves be consciously perceived reported that one of the

lines appeared longer than the other (see Merikle and Daneman 2000 and Merikle et al. 2001 for recent discussion).

A similar phenomenon in the same category is the *perception of habituated stimuli*, such as the auditory perception of the noise produced by the refrigerator pump.⁹ When we get habituated to the humming of the refrigerator, our perception of it stops being conscious. At least this is what cognitive scientists assume when they compare it to conscious auditory perception of the refrigerator pump in an attempt to learn about the singular contribution of consciousness to the execution of auditory perception.

Our task here is not to comment on the plausibility of this methodological approach, but to expose its more theoretical presuppositions. That is, we must consider whether the contrast between conscious perception and, say, subliminal or habituated perception of the same stimulus is a contrast between a qualitative perception and non-qualitative perception or a contrast between an intransitively self-conscious perception and a perception that is *not* intransitively self-conscious. When a subject *x* has a normal conscious perception of the sky, both of the following are true:

- (3) *x* perceives the sky qualitatively.
- (4) *x* perceives the sky self-consciously.

The question we are confronted with is which one of the two becomes false when *x*'s perception is not conscious. More precisely, we must ask which of the two can be *established* to be false with a decent degree of scientific evidence. We would then be in a position to conclude that the contrast between conscious and unconscious perception is supposed to isolate the property of perception denoted in *that* kind of report.

In the cases of subliminal and habituated perception, we must therefore assume that the following report cases of non-conscious perception:

- (5) *x* has a subliminal visual perception of a blue patch.
- (6) *x* has a habituated auditory perception of a refrigerator pump.

And consider whether what x 's subliminal and habituated perceptions lack is qualitative character or subjective character (intransitive self-consciousness).

Consider first qualitative character. If qualitative character is what x 's perceptions reported in (5) and (6) lack, then the following should be false:

(7) x perceives the blue patch bluishly.

(8) x perceives the refrigerator pump hummingly.

Where “bluishly” and “hummingly” are supposed to be special cases of “qualitatively”: the cases where the relevant qualitative character is ‘bluish’ or ‘humming’.

Are (7) and (8) clearly false, in a way that can be established with a scientifically acceptable degree of evidence? My own intuition is that they may not be false at all. It may very well be that x 's perceptions here are in fact bluish and humming, but x is simply completely unaware of their being so.

This is particularly plausible with respect to habituated perception. When the refrigerator pump goes off, x immediately notices this, but more pertinently, she can also remember what the qualitative character of her (just terminated) habituated perception had been like. She can reliably tell that it was a humming sound, rather than the sound of a trumpet. She can even compare that humming to her habituated perception of her laptop's hum, as being, say, louder or more acute. And if x can remember what the qualitative character of her perception had been like, then her perception must have had a qualitative character for x to remember. To be sure, this is not *guaranteed* to be the case: the possibility that x *constructs* these memories after the fact is not precluded by the considerations adduced thus far. But I take it that the simpler, more straightforward explanation is that (typically) x remembers her actual experiences.

I have suggested that qualitative character may well be present in perceptions of habituated stimuli. But this claim is inessential to the main point I would like to make. The main point is that perception of habituated stimuli is not a clear or obvious case of absence of qualitative character, so contrasting it with conscious perception of the same stimuli cannot be taken to shed light on qualitative character. If so, in studying the contrast between conscious and habituated perception, in an attempt to understand

consciousness, scientists are not trying to understand qualitative character. This is, in effect, our negative claim with regard to the perception of habituated stimuli:

(NCH) In studying the perception of habituated stimuli, cognitive psychologists are *not* targeting the phenomenon of qualitative character.

That is, the study of habituated perception cannot be taken to shed light on the phenomenon of qualitative character.

With subliminal perception, things are less clear than with perception of habituated stimuli. We really cannot tell whether (i) the subliminal perception of blue has a bluish character of which the subject is simply unaware or (ii) the perception really does have no bluish character. But again, this already suggests that subliminal perception does not constitute clear evidence for the absence of qualitative character, and therefore its contrast with conscious perception cannot be taken to shed scientific light on the nature of qualitative character. So the following negative claim is also warranted:

(NCS) In studying subliminal perception, cognitive psychologists are *not* targeting the phenomenon of qualitative character.

Together, (NCH) and (NCS) provide strong evidence for (NC).

Consider by contrast subjective character, or intransitive self-consciousness. If this is what x 's subliminal and habituated perceptions lack, then the following should be false:

(9) x perceives the blue patch self-consciously.

(10) x perceives the refrigerator pump self-consciously.

This seems right: x is in fact completely unaware of her visual perception of the blue patch and her auditory perception of the refrigerator pump. (Once the pump goes off, she becomes aware that she *had been* hearing it, and may self-consciously remember having heard it. But as long as the stimulus is habituated, she does not hear it self-consciously.)

That is, there is no intransitive self-consciousness involved in such perceptions. The contrast between conscious and subliminal or habituated perception therefore *is* a contrast between perception with and without intransitive self-consciousness (and hence subjective character). This establishes the positive claim with respect to the study of subliminal and habituated perception:

(PCS) In studying subliminal perception, cognitive psychologists *are* targeting the phenomenon of subjective character (intransitive self-consciousness).

(PCH) In studying the perception of habituated stimuli, cognitive psychologists *are* targeting the phenomenon of subjective character (intransitive self-consciousness).

That is, the study of subliminal and habituated perception *can* be taken to shed light on the nature of subjective character. This provides strong evidence in favor of (PC). A similar analysis may well apply to the study of other phenomena of unconscious execution of cognitive functions, though I will not pursue such an analysis here. At least as far as subliminal and habituated perception are concerned, then, research into consciousness at the psychological level does not target qualitative character, but rather subjective character.

4.2. Blindsight

Let us move on, then, to the *neurophysiological* level. At this level, the phenomena studied in consciousness research are mainly neurological syndromes in which a subject performs certain cognitive functions, but is unaware of doing so. A quite exhaustive and still relevant survey can be found in Farah 1995. The phenomena she covers are blindsight, neglect, extinction, covert face recognition in prosopagnosia, and covert reading in pure alexia.

The paradigmatic phenomenon in this category is no doubt *blindsight*. Blindsight is a condition caused by lesion to the higher brain. When a blindsighted patient is asked

to report what she perceives, she reports that she perceives nothing; but when she is asked to *guess* what she perceives, her guesses are correct well above chance. (The *locus classicus* here is Weiskrantz 1986; see also Weiskrantz 1997.) Cognitive scientists conclude that the blindsighted patient does perceive her surroundings, but her perceptions are non-conscious. The disorder is not primarily at the level of perceptual functioning, then, but at the level of conscious awareness. This is what makes it relevant to study of consciousness, as a means for isolating the singular contribution of consciousness to the execution of the functions the blindsighted executes unconsciously.¹⁰

Again, our task is to consider what concept of consciousness is operative in cognitive scientists' work when they suppose that blindsight involves loss of consciousness. That is, we must assume, with the scientist, that something like the following reports a non-conscious perception:

(11) x blindsees a snow ball.

And consider whether what x 's blindseeing lacks is qualitative character or intransitive self-consciousness (subjective character).

This time let us consider first intransitive self-consciousness. If this is what x 's blindseeing lacks, then the following should be false:

(12) x blindsees the snow ball self-consciously.

This indeed appears to be false. It is part of the very concept of blindsight that the subject is unaware (not even peripherally aware) of perceiving what she does; that is, that she does not perceive the stimulus self-consciously. This establishes our positive claim with regard to blindsight:

(PCB) In studying blindsight, cognitive neuroscientists *are* targeting the phenomenon of subjective character (intransitive self-consciousness).

That is, the study of blindsight (and perhaps similar disorders) can, and in fact should, be taken to shed light on intransitive self-consciousness, or subjective character. This constitutes further evidence in support of (PC).

What about qualitative character? If that is what blindsight lacks, then the following is false:

(13) x blindsees the snow ball whitely.

But this is, again, something we cannot determine with any confidence. The problem is again that there are two *prima facie* equally plausible possibilities. It can be that (i) x perceives the snow ball in a non-qualitative manner; or it can be that (ii) x perceives the snow ball qualitatively (more specifically, whitely), but is unaware of this. (She is unaware of this, presumably, precisely because her perception is not intransitively self-conscious.)

Ordinarily, we rely on subjects' first-person reports to determine whether their mental states exhibit qualitative character. But in the case of blindsight, we cannot rely on the subject's report on whether her perceptual state is qualitative, since the subject is unable to report that she has the perceptual state in the first place. The question, then, is whether we can decide the issue on the basis of third-person findings. The answer to this question is unclear at the moment, but the little third-person evidence we have is favorable to (ii), that is, to the possibility that x perceives the snow ball qualitatively but is unaware of the qualitative character of her perception.

The evidence in question is that blindsighted patients can apparently discriminate colors (see especially Stoerig and Cowey 1992; also Weiskrantz 1997). This evidence is most straightforwardly taken to suggest that perceptual states involved in blindsight do exhibit color qualities. This evidence is clearly inconclusive, though. After all, it is also possible that the blindsighted is capable of detection and discrimination of wavelengths in a completely non-qualitative manner, without ever harboring qualitative states that represent genuinely *colorful* objects. Both hypotheses accommodate the evidence. My claim here is not that the third-person evidence we have of color discrimination strongly supports the notion that blindsight can be qualitative, but rather that it supports it *weakly*.

This is because the notion that blindsight is qualitative accommodates the evidence more simply or straightforwardly than the notion that blindsight involves a non-qualitative form of wavelength discrimination at least in one sense, namely, that it constitutes a lesser departure from what happens in normal conscious color perception.

What I have said thus far is supposed to suggest, if somewhat weakly, that blindsighted perception does exhibit qualitative character. But again, more importantly for our present purposes is the fact that it appears that we cannot really know with any confidence whether or not blindseeing is qualitative. This point is sufficient, in itself, to establish our negative claim with regard to blindsight:

(NCB) In studying blindsight, cognitive neuroscientists are *not* targeting the phenomenon of qualitative character.

For the study of blindsight cannot be taken to shed light on a phenomenon nobody knows is relevant to it. If we do not *know* whether blindseeing lacks qualitative character, studying blindseeing cannot augment our *knowledge* (or further our understanding) of qualitative character. Thus (NCB) provides further evidence for (NC). The same may go, *mutatis mutandis*, for the other similar disorders noted by Farah (1995) and studied under the umbrella of consciousness studies in cognitive neuroscience. But establishing that would require a more extensive survey and analysis of the phenomena in question.

(There is a possible, though not particularly central, line of objection to the argument of this subsection, one that may be worth discussion at some length. It might be argued that quite a lot of work in neuroscientific research into consciousness targets a phenomenon that is very different from intransitive self-consciousness, namely, the phenomenon of *binding*. Thus, Crick and Koch's (1990) celebrated neurobiological theory of consciousness conceives of binding as the mark of the conscious. Let me say a little about what the phenomenon of binding is, then why Crick and Koch's work poses a *prima facie* challenge to (PC), and finally why this challenge is ultimately ineffective.

The phenomenon of binding is the fact that the various aspects of a stimulus are experienced by the subject as belonging to one and the same object, even though they are processed in different parts of the brain. For instance, when *x* perceives a snow ball, the

whiteness of the snow ball is represented in one part of the brain, whereas the roundness of it is represented elsewhere. Yet x has a unified, cohesive conscious experience of a round white snow ball. This means that x must have a mechanism by which she *binds* the information about the roundness and the information about the whiteness of the snow ball. (The currently accepted model of binding is in terms of neural synchronization. This model was originally proposed by von der Malsburg (1981). It still has its detractors (see, e.g., Shadlen and Movshon 1999), but is generally thought to be on the right tracks.)

Crick and Koch (1990) develop a theory of the mechanism in question, and then offer this as a theory of consciousness. That is, their theory of consciousness presupposes that consciousness is essentially a phenomenon of binding, since it *is* a theory of binding. So for them “ x consciously perceives the snow ball” is equivalent to:

(14) x perceives the snow ball bound-ly.

That is, the notion of consciousness they work with takes binding to be the mark of the conscious.

Now, there is no reason to suppose that x cannot perceive a snow ball boundly without perceiving it self-consciously. If so, work on consciousness that focuses on the binding phenomenon – in particular, work by the Singer group and by the Logothetis group – cannot be taken to shed light on the phenomenon of intransitive self-consciousness. It thus undermines (PC).

This would be a serious challenge to (PC), if anyone in the neuroscientific community accepted Crick and Koch’s presuppositions regarding consciousness. In their original presentation of their theory, Crick and Koch (1990) explain at great length why they think conscious states involve binding. But nowhere do they indicate why they think non-conscious ones do not. There is in fact no reason to think that when x has a subliminal perception of a snow ball, her perception is incohesive and disunified, such that the roundness and the whiteness are each represented individually, but not as belonging to the one and the same object. This problem was quickly noticed by Crick and Koch’s colleagues. Early on, Singer (1994) suggested that binding may be a *necessary condition* for consciousness, but not a *sufficient condition* (see also Revonsuo 1999). This

was recently admitted by Crick and Koch (2003) – “We no longer think that synchronized firing [i.e., the mechanism implementing binding], such as the so-called 40 Hz oscillations, is a sufficient condition for the NCC [the neural correlate of consciousness],” they write (Crick and Koch 2003: 123) – and is currently the consensus in neuroscientific work on binding and consciousness: all conscious states are bound, but not *only* conscious states are; some bound states are non-conscious. Work on binding is conceived of as work on a necessary condition for consciousness, not as work on consciousness *per se* (see Engel et al. 1999 for a recent survey of the field).

What exactly is missing from unconscious bound mental states, that scientists deem them unconscious? One straightforward answer is that intransitive self-consciousness is what is missing. To sustain an argument against PC on the basis of neuroscientific research into binding, the objector would have to exclude this possibility. The focus on binding itself is no argument against PC, since nobody today takes binding to be sufficient for consciousness. That is, nobody implicitly works with a notion of consciousness that sustains an equivalence between “*x* perceives consciously...” and “*x* perceives boundly...”.)

It might be objected that, at the end of the day, the position I defend is only superficially different from Block’s. My own distinction between subjective and qualitative character basically parallels Block’s between access and phenomenal consciousness, and my own analysis of current work in consciousness studies only reinforces his claim that it targets the former instead of the latter.

The objection fails in two ways. Firstly, the notion of subjective character does not parallel that of access consciousness, inasmuch as the latter is dispositional while the former is not. Secondly, subjective character is an aspect of phenomenal consciousness, and so cannot importantly parallel a non-phenomenal notion of consciousness. This is not merely an expedient verbal decision on my part. Labels aside, what is essential to phenomenal consciousness in the present context is that it is the property which generates the mystery of consciousness. It is a substantive claim that subjective character is an aspect of the property that generates the mystery of consciousness, not an unmysterious accompaniment thereto.

5. Conclusion: In Defense of Scientific Practice

This completes the main argument of this paper. I have set to approach the problem of consciousness from the angle of the philosophy of science, by treating consciousness as a scientific concept pregnant with certain philosophical presuppositions, presuppositions the exposition of which is the philosopher's main contribution to research. I have argued that when we approach consciousness from this philosophical-of-science angle, it appears that consciousness is fundamentally a matter of subjective character, not qualitative character. That is, what makes a phenomenally conscious state what it is (i.e., the existence condition of phenomenal consciousness) is the elusive and unusual awareness we have of our concurrent conscious states, not the sensuous quality typically present in them.

The claim that by studying what they do, cognitive scientists are *not* targeting the phenomenon of qualitative character, and *are* targeting the phenomenon of subjective character (construed in terms of intransitive self-consciousness), has been exemplified through a couple of key phenomena, from both psychological and neurophysiological empirical research.

Perhaps more fundamentally, however, I have argued that current scientific practice in consciousness studies is fundamentally sound. The argument may be schematized as follows: 1) Access Consciousness is a dispositional property, the categorical basis of which is subjective character, which is a component of phenomenal consciousness; 2) Science often tries to understand a categorical property by studying the dispositional properties for which it is the basis; therefore, 3) Cognitive Scientists may be trying to understand phenomenal consciousness (or at least a component thereof, namely, subjective character) by studying access consciousness.

Contrary to Block, then, cognitive scientists have not shied away from phenomenal consciousness in order to focus on a closely related but inherently different property. Rather, they have attacked the problem of phenomenal consciousness by examining a dispositional property (access consciousness) whose categorical basis is a crucial component of phenomenal consciousness, the component that *makes* mental states phenomenally conscious.¹¹

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¹ It is interesting to note that philosophers seem divided on which of the two components of phenomenal consciousness is the more fundamental. Evidently, those philosophers who offer representational theories of consciousness (Dretske 1995, Tye 1995, 2000) seem to conceive of qualitative character as more basic. Those who offer higher-order monitoring theories (Armstrong 1968, Lycan 1990, Rosenthal 1997, Carruthers 2000) seem to focus on subjective character. Rosenthal (1991) has argued explicitly in favor of distinguishing consciousness from what he calls "sensory quality," which appears to be the same as what we have called here "qualitative character." I have in several places defended what I call the *self-representational theory* of consciousness (Kriegel 2003a, 2003b, 2006, Forthcoming), according to which (approximately) a mental state is conscious in virtue of representing itself. This sort of view also conceives of consciousness as primarily a matter of subjective character.

² And on a certain conception of the ordinary meaning of "experience," it would not be an experience at all. According to this conception, "experience" is always, and trivially, conscious – because this is just how the term works. In this paper, I wish to remain neutral between the view that this is so (Strawson 1994) and the view that it is not (Carruthers 1989, 2000).

³ In fact, the case of auditory awareness is a better example than that of visual awareness, since it does not depend of the physiological structure of the organ. In visual awareness, the distinction between the focal and the peripheral is determined by the structure of the eye, in particular the fact that the fovea determines what will and what will not be focally seen.

⁴ Actually, Block further distinguishes these two phenomena from what he calls *monitoring consciousness* and *self consciousness*. But his argument focuses primarily on phenomenal and access consciousness.

⁵ Here, and in what follows, I am quoting from the reprint in Block et al. (1997).

⁶ Not that the view that dispositional properties do not always require categorical bases can be held without holding that all properties are dispositional. One might hold that some properties are dispositional and some categorical, and while most dispositional properties are anchored, or based, in corresponding categorical properties, some are not. This view appears somewhat unmotivated. In any case, I will not discuss these

issues in the present paper. Instead, I will *assume* the correctness of the traditional view that all dispositions are based in categorical properties.

⁷ For discussion of this point, I would like to thank Orlin Vakarelov, Steven Biggs, Farid Masrouf, and Keith Lehrer.

⁸ There is a certain disanalogy between this case and more paradigmatic cases, in that in the paradigmatic cases the categorical basis of a disposition is always an obviously microphysical property, whereas in the present case the categorical property – subjective character – is not a microphysical property, at least not in any obvious way. But my hope is that this disanalogy is not sufficient to undermine the notion that subjective character is the categorical basis of access consciousness.

⁹ Block's example is the auditory perception of a drill outside one's window as one is engrossed in a conversation and is thus inattentive to the noise of the drill. He writes (1995: 386-7; italics original): "Suppose that you are engaged in intense conversation when suddenly at noon you realize that right outside your window, there is – and has been for some time – a pneumatic drill digging up the street. You were aware of the noise all along, one might say, but only at noon are you *consciously aware* of it. That is, you were P-conscious [phenomenally conscious] of the noise all along, but at noon you are both P-conscious *and* A-conscious [access-conscious] of it." That is, Block takes this to be a case of phenomenal consciousness in the absence of access consciousness. Clearly, this is not how cognitive scientists treat this case. Indeed, that is the basis for Block's accusation that cognitive scientists are focusing on the wrong phenomenon. But as I will argue in the text, this is precisely a case in which the scientists are focusing on subjective character rather than qualitative character.

¹⁰ In an attempt to present a case of access consciousness in the absence of phenomenal consciousness, Block (1995: 385) appeals to what he calls "super-blindsight." For what is still an unclear reason, blindsighted persons do not seem capable of spontaneously prompting themselves to "guess" what they blindsee. Super-blindsight is an imaginary condition in which the blindsighted patient has no difficulty telling herself spontaneously to "guess" what she perceives, knowing full well the theory of blindsight and the fact that chances are her "guess" is correct, and so navigates her way around the world with little difficulty. Block argues that this person's perceptual state would be access-conscious but not phenomenally conscious. This seems quite right, but as I argued in §3, does not threaten the main thesis of the present paper, the thesis that phenomenal consciousness, or rather a component of it, is the categorical basis of access consciousness.

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