# The Nature of Cognitive Phenomenology

#### Abstract

This is the first in a series of two articles that serve as an introduction to recent debates about cognitive phenomenology. Cognitive phenomenology can be defined as the experience that is associated with cognitive activities, such as thinking, reasoning, and understanding. What is at issue in contemporary debates is not the existence of cognitive phenomenology, so defined, but rather its nature and theoretical role. The first article examines questions about the nature of cognitive phenomenology, while the second article explores the philosophical implications of these questions for the role of consciousness in theories of intentionality, introspective self-knowledge, and knowledge of the external world.

#### 1. Introduction

Cognitive phenomenology can be defined as the experience that is associated with cognitive activities, such as thinking, reasoning, and understanding.<sup>1</sup> An experience is *phenomenally conscious* in the sense that there is something it is like for the subject to have the experience and the *phenomenal character* of the experience is what it is like for the subject to have the experience.

Not all cognitive activities (or states, events, and processes) are associated with experiences. For instance, there need be no experience involved in the state of believing that it's a certain day of the week or in the process of updating one's belief from one day to the next. All of this can be done unconsciously, even during a period

of total unconsciousness, such as dreamless sleep. Nevertheless, experience is typically involved in actively considering the question which day of the week it is and recalling the answer, or realizing that one has forgotten and trying to remember, or working it out through a simple chain of reasoning.

Here is a longer list of cognitive activities that are sometimes, if not always, associated with certain kinds of experiences:

- Considering a hypothesis
- Judging that a hypothesis is true
- Recalling a fact learned in the past
- Recognizing that the conclusion of an argument follows from its premises
- Inferring the conclusion of an argument from its premises
- Drifting aimlessly in thought
- Calculating the solution to a problem
- Deliberating about what to do
- Grasping a metaphor
- Getting a joke
- Understanding a sentence
- Having an unarticulated thought on the tip of your tongue
- Feeling confident, or certain, or doubtful, or incredulous
- Having a suspicion or a hunch

Almost everyone can agree that at least some of these cognitive activities are at least sometimes associated with experiences of certain kinds. To deny this would be to endorse either a radical form of eliminativism on which there are no experiences or

the similarly radical claim that there are no experiences associated with cognition. For current purposes, we can ignore these radical claims, since what is at issue in contemporary debates is not the existence of cognitive phenomenology, as I have defined it, but rather its nature and theoretical role.<sup>2</sup>

This point is easily missed, since some philosophers do claim to reject the very existence of cognitive phenomenology. But it is important to recognize that 'cognitive phenomenology' is a term of art that is used in different ways by different people. Some authors define cognitive phenomenology in terms of controversial assumptions about its nature, in which case the debate concerns its existence, rather than its nature. The problem is that different authors build different assumptions into the definition of cognitive phenomenology, which leads to a confusing and unlovely proliferation of non-equivalent definitions.<sup>3</sup> As I use the term, by contrast, there are no controversial assumptions built into the definition of cognitive phenomenology and so the debate concerns its nature, rather than its existence. The advantage of proceeding in this way is that it focuses our attention on questions about the nature of experiences whose existence everyone can agree upon.

What then are the central questions at issue in debates about the nature of cognitive phenomenology? This article focuses on the following questions:

(1) *The Intentionality Question*. What is the relationship between the phenomenology of cognition and the intentionality of cognition? Are the phenomenal properties of cognition identical with or distinct from intentional properties of cognition?

(2) *The Reduction Question*. What is the relationship between the phenomenology of cognition and the phenomenology of sensory perception? Are the phenomenal properties of cognition identical with or distinct from phenomenal properties of sensory perception?

In response to the first question, proponents of *Cognitive Intentionalism* claim that the phenomenal properties of cognition are identical with intentional properties of cognition, whereas opponents claim that they are distinct. In response to the second question, proponents of *Reductionism* claim that the phenomenal properties of cognition are identical with phenomenal properties of sensory perception, whereas opponents claim that they are distinct and sui generis.

It is often assumed that these questions are connected in such a way that Cognitive Intentionalism stands or falls with the rejection of Reductionism. On this view, the phenomenal properties of cognition cannot be identical with intentional properties of cognition unless they are also sui generis and hence distinct from the phenomenal properties of sensory perception, broadly construed to include perceptual imagery, inner speech, bodily sensations, and bodily components of emotional experience. Nevertheless, it is important to recognize that these claims are logically distinct and there is logical space for them to come apart. On the one hand, one might reject both Reductionism and Cognitive Intentionalism on the grounds that cognition has sui generis phenomenal properties that are distinct from intentional properties of cognition. For instance, one might argue that there is a

generic, non-sensory feeling of understanding – an "Aha!" feeling – that is distinct from and merely contingently related to the intentional content that one understands. On the other hand, one might accept both Reductionism and Cognitive Intentionalism by claiming that the intentional properties of cognition are identical with phenomenal properties of sensory perception. The British Empiricists, for example, combined a reductionist theory of phenomenal consciousness on which all phenomenal properties are sensory in nature with a reductionist theory of cognition on which all cognition is reductively explained in sensory terms.

It remains to be seen whether these combinations are well motivated, but the relationship between Reductionism and Cognitive Intentionalism will be a focus of the discussion to follow. The article is structured as follows: section two examines Cognitive Intentionalism, section three considers connections with Reductionism, and section four concludes with some methodological reflections on debates about the nature of cognitive phenomenology. Finally, the companion article examines the wider philosophical implications of these debates for the role of consciousness in theories of intentionality, introspective self-knowledge, and knowledge of the external world.

## 2. Cognitive Phenomenology and Cognitive Intentionality

One of the central questions at issue in debates about the nature of cognitive phenomenology concerns its role in the *individuation* of cognition. Is cognition merely associated with certain phenomenally conscious experiences or do some of

those experiences play a role in the individuation of cognition – that is, in making it the kind of cognition that it is?

This question about the individuation of cognition is bound up with a further question about the nature of the relationship between the *phenomenology* and the *intentionality* of cognition. After all, cognition is a matter of taking intentional attitudes towards intentional contents: for example, judging that snow is white is a matter of taking the intentional attitude of judgment towards the intentional content that snow is white. Indeed, it is widely assumed that cognition is individuated by its intentional content and its intentional attitude-type. But if cognition is individuated by its intentional properties, then what becomes of the claim that it is individuated by its phenomenal properties: are these equivalent ways of individuating cognition or do we have to choose between them?

The resolution of this issue depends on the nature of the relationship between the phenomenal properties of cognition and its intentional properties. If the phenomenal properties of cognition are identical with its intentional properties, then there need be no conflict between individuating cognition in terms of its phenomenal properties and its intentional properties. But if they are distinct, then we must decide between them in giving an account of the individuation of cognition.

Notice that parallel questions arise for perception as well as cognition. Perception, like cognition, is associated with phenomenally conscious experiences, but it is a further question whether perception is individuated by its associated phenomenology. After all, perception has not only phenomenal properties, but also intentional properties, and so the question arises whether perception is

individuated by its phenomenal properties or its intentional properties and whether these ways of individuating perception are equivalent or in competition. As before, this depends on the nature of the relationship between the phenomenal properties of perception and its intentional properties.

The dominant view, until quite recently, was that the phenomenal properties of perception are distinct from and merely contingently associated with its intentional properties.<sup>4</sup> More recently, however, it has become increasingly popular to claim that the phenomenal properties of perception are necessarily connected with, and indeed identical with, its intentional properties.<sup>5</sup> A parallel contrast can be drawn in the case of cognition. One view is that the phenomenal properties of cognition are distinct from and merely contingently associated with its intentional properties.<sup>6</sup> Another view is that the phenomenal properties of cognition are necessarily connected with, and even identical with, its intentional properties.<sup>7</sup>

Views of the second kind have become known as *Intentionalism*. Intentionalism is sometimes formulated as a *supervenience thesis*, which states that all phenomenal properties supervene upon intentional properties in the sense that there can be no difference in phenomenal properties without some difference in intentional properties. Arguably, however, this supervenience thesis is best explained as a consequence of a more fundamental *identity thesis*, which states that all phenomenal properties of perception are identical to intentional properties.

We can also distinguish between Pure and Impure forms of Intentionalism.<sup>8</sup> Pure Intentionalism says that every phenomenal property is identical to some pure intentional property – that is, the property of having some intentional content.

Impure Intentionalism, on the other hand, says that every phenomenal property is identical to some impure intentional property – that is, the property of having some intentional attitude towards some intentional content. Pure Intentionalism implies that all phenomenology is specific to intentional content, whereas Impure Intentionalism allows that some phenomenology is specific to intentional attitude in addition to intentional content. On this view, there might be phenomenal differences between intentional attitudes with the very same intentional contents, such as visually experiencing and visually imagining a scene or judging that hypothesis is true and hoping that it is true.

Intentionalism is sometimes articulated as a thesis about the existence of *phenomenal intentionality* – that is, a kind of intentionality that is identical with, and therefore supervenes upon, phenomenal consciousness. Intentionalism implies that some intentionality is phenomenal intentionality, but it does not imply that all intentionality is phenomenal intentionality. Indeed, there are compelling reasons to reject this further thesis. First, not all intentional states are phenomenally conscious states. We have good reason to believe in the existence of unconscious intentional states insofar as they play an indispensable role in psychological explanation in common sense and cognitive science alike. Second, not all intentional properties of phenomenally conscious states are phenomenal properties of those states. For instance, Putnam (1975) and Burge (1979) describe Twin Earth examples in which it is plausible that intrinsic duplicates embedded in different environments are phenomenal duplicates, but not intentional duplicates. Nevertheless, this is

consistent with the claim that there is a distinctive kind of intentionality – namely, phenomenal intentionality – that phenomenal duplicates share in common.<sup>10</sup>

Intentionalism is neutral with respect to certain questions about the order of explanation between intentionality and phenomenal consciousness. According to Intentionalism, there is a kind of intentionality – namely, phenomenal intentionality – that is identical with phenomenal consciousness. Ultimately, then, neither intentionality nor phenomenal consciousness is more fundamental than the other. <sup>11</sup> But assuming that not all intentionality is phenomenal intentionality, proponents of Intentionalism can disagree about the role of phenomenal consciousness in a more general theory of intentionality. Some claim that phenomenal consciousness can be explained in terms of a more general theory of intentionality together with further conditions that do not presuppose phenomenal consciousness. <sup>12</sup> Others claim that all intentionality can be explained in terms of its relations to phenomenal consciousness. <sup>13</sup> And some deny both of these claims. (These issues are discussed in more detail in the companion article.)

What is the motivation for Intentionalism? A number of different arguments have been proposed, but perhaps the simplest way of motivating Intentionalism is by appealing to intentional similarities between phenomenal duplicates. The basic intuition is that the sharing of phenomenal properties is sufficient for the sharing of certain intentional properties. For instance, if I am having a visual experience that represents a white cup on a black table, then so is any phenomenal duplicate of mine. Similarly, although this is more controversial, if I am thinking that 17 is a prime number, then so is any phenomenal duplicate of mine. Intentionalism does

not imply that phenomenal duplicates are intentional duplicates, but it does imply that there is a distinctive kind of intentionality – namely, phenomenal intentionality – that is always shared between phenomenal duplicates.

Proponents of Intentionalism disagree about whether the thesis should be restricted to perception or extended to cognition:

*Perceptual Intentionalism*: the phenomenal properties of perception are identical with intentional properties of perception.

*Cognitive Intentionalism*: the phenomenal properties of cognition are identical with intentional properties of cognition.

Some proponents of Intentionalism endorse Perceptual Intentionalism, but reject Cognitive Intentionalism: on this view, the phenomenal properties of cognition are distinct from and merely contingently associated with its intentional properties. Hence, two thoughts with the very same content might be associated with non-overlapping phenomenal characters and two thoughts with non-overlapping contents might be associated with the very same phenomenal character.

Why suppose that perception and cognition are asymmetrical in this respect? Some argue for the asymmetry between perception and cognition by appealing to the Reductionist thesis that the phenomenal properties of cognition are identical with phenomenal properties of sensory perception. The argument, briefly stated, is that if Reductionism is true, then Cognitive Intentionalism is false, since the

phenomenal properties of sensory perception are not specific enough to determine intentional properties of cognition. This argument is examined in more detail in section three below.

## 3. Cognitive Phenomenology and Sensory Phenomenology

What is the relationship between the phenomenology of cognition and the phenomenology of sensory perception? Proponents of Reductionism argue that the phenomenal properties of cognition are identical with phenomenal properties of sensory perception, broadly construed, whereas opponents argue that they are distinct and sui generis. As we have seen, Reductionism has implications for Cognitive Intentionalism, since there is a simple, but influential line of argument that if Reductionism is true, then Cognitive Intentionalism is false:

- (1) Reductionism is true.
- (2) If Reductionism is true, then Cognitive Intentionalism is false.
- (3) Therefore, Cognitive Intentionalism is false.

Proponents of Cognitive Intentionalism must either reject premise one by arguing that Reductionism is false or reject premise two by arguing that Reductionism is consistent with Cognitive Intentionalism. In this section, I will consider each of these strategies in turn.

To begin with Reductionism, this is a substantive thesis that is not true just by the definition of phenomenal consciousness. Indeed, phenomenal consciousness cannot be defined in more basic terms, but only by means of roughly synonymous expressions, or ostensively, by giving examples. Paradigmatic examples include not only perceptual experiences, but also experiences of perceptual memory and imagination, bodily sensations, and experiences of emotion, agency, attention, and cognition. What, if anything, do all these diverse experiences have in common?

Reductionism is the thesis that all of these experiences are instances of sensory perception in a suitably broad sense of the term that encompasses not only perception in the various sensory modalities, including bodily perception, but also perceptual imagery, including linguistic and non-linguistic imagery. Experiences of perceptual memory and imagination are explained in terms of perceptual imagery, while inner speech, is also explained as a kind of perceptual imagery. Meanwhile, experiences of emotion, agency, attention, and cognition are explained as complexes of perceptual experience, including perceptual experience of the body, and perceptual imagery, including both linguistic and non-linguistic imagery.

Many of these claims have been challenged in the literature, but let us restrict our attention to cognition.<sup>17</sup> The debate here is largely concerned with the question of whether or not Reductionism is supported by introspective reflection upon the phenomenal character of cognitive experience. Opponents of Reductionism have developed two main lines of argument that appeal, respectively, to examples of non-sensory cognitive experience and examples of phenomenal contrast.

The first argument against Reductionism appeals to examples of non-sensory cognitive experience. Much of our conscious thinking is associated with perceptual imagery and inner speech, but the question remains whether this is always the case.

In empirical studies conducted by Hurlburt and Akhter (2008), many experimental subjects report experiences of "unsymbolized thinking" in which conscious thinking occurs without any associated experience of linguistic or non-linguistic imagery. Similarly, Siewert (1998: 276-7) gives examples of what he calls "noniconic thinking", such as remembering that you've left your keys at home, or realizing that you're late for an appointment. More complex chains of thought are described by Strawson (1994: 18-21) and Siewert (1998: 277-8), which unfold with more speed and determinacy than can easily be explained in terms of the occurrence of verbal and non-verbal imagery. Also, Goldman (1993: 24) alludes to the familiar "tip of the tongue" phenomenon in which one has an experience of thinking some thought that one is unable to put into words.

Proponents of Reductionism have two options for dealing with examples of this kind. The first option is to insist that such examples can always be explained in terms of a combination of linguistic and non-linguistic imagery together with associated perceptual and emotional experiences. So, for example, if I suddenly realize that I've left my keys at home, then I might feel an emotion of irritation while uttering inner expletives to myself and visualizing my keys on the kitchen table. However, while such associated experiences are often involved in episodes of thinking, it's not clear that they are always involved. It seems to me, for instance, that I am sometimes struck by thoughts about my mother that occur to me without visualizing her face, silently intoning her name, or feeling any particular emotion of filial affection. Such cases are not easily handled by the first option alone.

The second option is to explain away these cases as introspective errors. Thus, Carruthers (1998, 2011) argues that what we take to be introspective access to conscious thinking is in fact the result of an automatic and unconscious process of self-interpretation in which we attribute thoughts to ourselves on the basis of inference from observation of behavior or introspection of perceptual experience. So, for instance, I might self-ascribe thoughts about my mother in order to explain why I am writing her an email and visualizing my last visit home. One problem with this proposal is that sometimes there is no basis in observable behavior or introspectible perceptual experience from which such an inference could plausibly be made. Another problem is that the appeal to introspective error undermines the introspective basis for Reductionism and so it needs to be independently motivated. Carruthers appeals to evidence from social psychology and cognitive psychology that subjects often confabulate explanations of their behavior. Nevertheless, the question remains whether we can extrapolate from these cases to the more general conclusion that introspection of cognitive experience is always the result of interpretation or confabulation.<sup>19</sup>

The second argument against Reductionism appeals to examples of *phenomenal contrast*. For instance, Strawson (1994: 5-9) argues that understanding a language involves a distinctive kind of "understanding experience" by appealing to the phenomenal contrast between the experience of Jack, a monoglot Englishman, and Jacques, a monoglot Frenchman, as they listen to the same news broadcast on French television.<sup>20</sup> Similarly, we can give examples in which there is a phenomenal

contrast between one's experiences before and after one succeeds in parsing initially incomprehensible sentences, such as the following:

Dogs dogs dog dog dogs. (Horgan and Tienson 2002: 523)

The boy the man the girl saw chased fled. (Pitt 2004: 27)

Moreover, this experience of understanding cannot be explained in terms of a generic feeling of understanding – an "Aha!" feeling – since the experience of understanding varies depending on the intentional content that is understood. This is best illustrated by examples of phenomenal contrast between one's experience before and after one switches one's interpretation of an ambiguous sentence, such as the following:

I hope the food's not too hot for you. Siewert (1998: 278)

Visiting relatives can be boring. (Horgan and Tienson 2002: 523)

Notice that these examples can be used not only in arguing against Reductionism, but also in arguing more directly for Cognitive Intentionalism. The argument for Cognitive Intentionalism is that the phenomenal differences between these cases make for intentional differences, which are best explained by the thesis that the phenomenal properties of cognition are identical with intentional properties. The argument against Reductionism is that the phenomenally contrasting cases are alike

in sensory phenomenology, but different in cognitive phenomenology, and so cognitive phenomenology cannot be reduced to sensory phenomenology.

Proponents of Reductionism respond by explaining the phenomenal changes involved in interpreting a sentence in terms of changes in sensory perception or perceptual imagery. One interesting strategy here is to appeal to the fact that understanding language affects one's perception of its non-semantic properties, including syntactic, phonological, and orthographic properties. For instance, understanding speech involves segmenting it into words and phrases, whereas foreign speech seems like a continuous, unstructured stream of sound. Moreover, understanding a language makes a phenomenal difference by affecting one's perceptual experience of phonemes, which are language-specific types of sounds that are treated as equivalent in a given language. For example, the words 'raw' and 'law' sound the same to Japanese speakers, but sound different to English speakers, while the 't' in 'stun' and 'ton' sounds the same to English speakers, but sounds different to Chinese speakers.<sup>21</sup>

Opponents of Reductionism reply that understanding language involves experience of semantic properties as well as non-semantic properties. For instance, the phenomenal change involved in switching one's interpretation of an ambiguous sentence, like 'This curry is hot,' cannot be explained solely in terms of one's experience of non-semantic properties of the sentence, since this remains constant under changes in interpretation. Moreover, while the experience of interpreting a sentence may be accompanied by changes in non-linguistic imagery, such as imagining sensations of spice or temperature, it is not clear that there is any

compelling motivation, introspective or otherwise, for the claim that such changes in imagery are always involved.

If understanding language involves experience of its semantic properties, the question remains whether this is an instance of perception or cognition or both. This is an instance of the difficult and unresolved question of how to draw the boundary between perception and cognition. But however we resolve this question, it is not clear that we should put the experience of semantic properties and phonological properties on opposite sides of the boundary between perception and cognition. There is good evidence that perception of phonemes is *categorical* in the sense that the boundaries between phonemes do not correspond directly to acoustic properties of speech. Perception of phonemes therefore requires high-level processing of sensory inputs, but it is not usually thought that cognition is required. But if experience of phonemes is a phenomenon of high-level perception, then why not experience of semantic properties too?<sup>22</sup>

In light of this, we can distinguish two different strategies for defending Cognitive Intentionalism against the argument from Reductionism. One strategy is to argue that the Reduction thesis is false on the grounds that there is sui generis, non-sensory cognitive phenomenology. Another strategy is to argue that Reductionism is consistent with Cognitive Intentionalism on the grounds that there is high-level sensory phenomenology involved in experience of semantic properties. The choice between these options depends on how we are to draw the boundary between perception and cognition. Here, the burden of argument lies on those who use Reductionism in arguing against Cognitive Intentionalism, since they must argue

not only that all phenomenology is sensory phenomenology, but also that all sensory phenomenology is low-level enough to exclude experience of semantic properties.

## 4. Methodology

Debates about cognitive phenomenology raise methodological questions about the role of introspection in constraining scientific and philosophical theories of the nature of conscious experience. One might assume that questions about the nature of conscious experience can be settled directly on the basis of introspection. And yet the existence of widespread disagreement about the nature of cognitive phenomenology suggests that introspection is powerless to resolve such questions. Indeed, Schwitzgebel (2008) appeals to the existence of disagreements about the nature of conscious experience – and cognitive phenomenology in particular – in arguing that introspection is unreliable and so cannot be relied upon to adjudicate these questions.<sup>23</sup>

This raises a methodological puzzle about how best to conduct debates about the nature of cognitive phenomenology. On the one hand, it seems difficult, if not impossible, to make progress without relying on introspective claims about the nature of conscious experience. And yet, on the other hand, it seems unreasonable to rest too much weight on introspective claims about the nature of conscious experience when those claims are the subject of widespread disagreement. How then should we proceed?

It is important not to overstate the extent of introspective disagreement about cognitive phenomenology. Introspection may be sufficient to establish the

existence of cognitive phenomenology even if it is not sufficient to settle questions about its nature. What seem at first to be introspective disagreements about the existence of cognitive phenomenology are more plausibly construed as theoretical disagreements about its nature. It is perhaps not surprising to discover that these theoretical questions cannot be settled by introspection alone, since disagreements are driven not just by conflicts in the deliverances of introspection, but also by background theoretical disagreement about the wider issues under dispute.

This prompts a natural suggestion about how to proceed. We cannot make progress in debates about the nature of cognitive phenomenology without relying on introspection at all, but we should nevertheless aim to avoid relying solely upon introspection insofar as it generates widespread disagreement. Of course, if we cannot settle debates about the nature of cognitive phenomenology by relying upon introspection alone, then theoretical arguments will need to play a much more central role. Therefore, making progress in these debates requires not only careful introspection, but also improving our understanding of the underlying issues that drive the relevant theoretical disagreements. In this way, we might hope to bring introspection and theory into reflective equilibrium.

In the companion article, I make a start on this process by considering the philosophical implications of debates about the nature of cognitive phenomenology for the role of consciousness in theories of intentionality, introspective self-knowledge, and knowledge of the external world.<sup>24</sup>

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<sup>&</sup>lt;sup>1</sup> The term 'phenomenology' is traditionally used to refer to the study of experience, but it has recently become common to use this term in referring to the subject matter of experience itself.

<sup>&</sup>lt;sup>2</sup> See the essays in Bayne and Montague (2011) for the current state of the art in debates about cognitive phenomenology. Dennett (1988) is an eliminativist about "qualia", which he defines as being ineffable, intrinsic, private, and directly or immediately apprehensible in consciousness, but he is not an eliminativist about conscious experience; indeed, he says explicitly, "I do not deny the reality of conscious experience".

<sup>&</sup>lt;sup>3</sup> Here I am paraphrasing Lewis's (1986: 14) remark about definitions of supervenience.

<sup>&</sup>lt;sup>4</sup> McGinn (1998) calls this view 'the medium conception', while Horgan and Tienson (2002) call it 'separatism'. This view has many influential proponents, including Ryle (1949), Wittgenstein (1953), Sellars (1956), Rorty (1979), Putnam (1981), and Davidson (1986).

<sup>&</sup>lt;sup>5</sup> Views of this kind have become known as 'Intentionalism' (or 'Representationalism'). Proponents include McGinn (1988), Harman (1990), Dretske (1995), Tye (1995), Lycan (1996), Siewert (1998), Byrne (2001), Horgan and Tienson (2002), Loar (2003), Chalmers (2004), Crane (2007).

<sup>&</sup>lt;sup>6</sup> See Tye (1995), Lormand (1996), Wilson (2003), Robinson (2005), Prinz (2007).

<sup>&</sup>lt;sup>7</sup> See Strawson (1994), Siewert (1998), Peacocke (1998), Horgan and Tienson (2002), Pitt (2004).

<sup>&</sup>lt;sup>8</sup> See Chalmers (2004) and Crane (2007) for the distinction between Pure and Impure Intentionalism. Compare Horgan and Tienson (2002) for a related distinction between the phenomenology of intentional content and the phenomenology of intentional attitude-type.

- <sup>9</sup> See Kriegel (2013) for an overview of work on phenomenal intentionality. Intentionalism is just one of the claims that Kriegel associates with what he calls "the phenomenal intentionality program".
- <sup>10</sup> See Siewert (1998), Horgan and Tienson (2002), Loar (2003), and Chalmers (2004) for theories that allow for both phenomenal intentionality and externally individuated intentionality. Farkas (2008) adopts the uncompromising proposal that there is no externally individuated intentionality.
- <sup>11</sup> As Chalmers (2004: 179) puts the point, "Consciousness and intentionality are intertwined, all the way down to the ground."
- <sup>12</sup> Intentionalism emerged as part of a reductive program for explaining phenomenal consciousness by explaining intentionality in the work of Dretske (1995), Tye (1995), and Lycan (1996). But many endorse non-reductive versions of Intentionalism that abandon this reductive program, including McGinn (1988), Siewert (1998), Horgan and Tienson (2002), Loar (2003), and Chalmers (2004).
- <sup>13</sup> Searle (1990), Strawson (1994, 2004), Kriegel (2011), and Horgan and Graham (2012) defend versions of the claim that all intentionality can be explained in terms of its relations to phenomenal consciousness. See Smithies (2012) for critical discussion.
- <sup>14</sup> Siewert (1998), Horgan and Tienson (2002), Loar (2003), and Chalmers (2004) propose versions of this argument. For additional arguments, see Tye (1995) and Byrne (2001).
- <sup>15</sup> Tye (1995) is a good example; see also his chapter in Bayne and Montague (2011).
- <sup>16</sup> Reductionism is a consequence of many contemporary theories of phenomenal consciousness, including those of Dretske (1995), Tye (1995), Carruthers (2000), and Prinz (2012).
- <sup>17</sup> On the phenomenology of agency, see Horgan, Tienson and Graham (2003), Peacocke (2007), and Bayne (2008). On the phenomenology of attention, see Block (2010), Watzl (2011), and Wu (2011). On the phenomenology of emotion, see Gunther (2004) and Montague (2009).
- <sup>18</sup> See Tye (1995), Lormand (1996), Robinson (2005), and Prinz (2007) for versions of this strategy.
- <sup>19</sup> In contrast with Carruthers, Nichols and Stich (2003) and Goldman (2006) adopt dual-process theories on which self-ascription of mental states results sometimes from inferential processes and sometimes from non-inferential processes.

<sup>20</sup> Related points are made by James (1890: 281), Moore (1953: 58-9), McDowell (1998: 331-2), Peacocke (1992: 89-90), Siewert (1998: 275-6), and Siegel (2006: 490-1). See also Chudnoff (2013) for examples of phenomenally contrasting pairs involving the experience of grasping a proof.

- <sup>21</sup> See O'Callaghan (2010, 2011) for useful discussions of phoneme perception.
- <sup>22</sup> See Siewert (1998: 361-2), Siegel (2006), and Bayne (2009) for further discussion of the phenomenal character and representational content of high-level perception. Compare Fodor's (1983: 96-7) discussion of the outputs of visual and linguistic modules.
- <sup>23</sup> For further discussion of these methodological issues, see Siewert (2007), Bayne and Spener (2010), Spener (2011) and Horgan (2012).
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