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# ON THE RELATIONSHIP BETWEEN COGNITIVE AND SENSORY PHENOMENOLOGY

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## abstract

*My main aim in this paper is to consider what methodology is best suited to adopt for one who believes that there is cognitive phenomenology (CP) in order to argue for its irreducibility to sensory phenomenology. I shall first present and criticize a methodology widely adopted by the deniers of CP in order to reject the irreducibility claim, the so called “exclude-and-isolate” methodology. I shall use my criticisms against it as a lever for backing up a certain conception of the nature of cognitive phenomenal properties. The key notion in this conception is that of factual intimacy which I shall mobilize to put forward the idea that cognitive phenomenal properties are inseparable, in practice and in ordinary cases, from sensory phenomenal properties (leaving open the possibility of their explanatory and metaphysical independence). I shall then present a strategy to prove irreducibility which is compliant with the inseparability claim. One such strategy is in my view provided by combining the so-called phenomenal contrast methodology with a methodology that, instead of contrasting couples of cases, compares them in order to disclose the presence of phenomenological commonalities. What the comparison methodology shows is that experiences with different sensory features can share a common phenomenal component. Since this possibility obtains even by assuming that all of a subject’s sensory features differ, it follows that the common phenomenal component cannot be sensory in nature. This is enough to prove that the phenomenology in question is cognitive and that this phenomenology is irreducible to the sensory one.*

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## keywords

*cognitive phenomenology, sensory phenomenology, irreducibility, separability, independence*

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**1. The Reduction Question**

My main aim in this paper is to consider what kind of methodology is best suited to adopt for one who believes that there is cognitive phenomenology and that this phenomenology is irreducible to sensory phenomenology. In the ongoing debate the advocates of cognitive phenomenology (CP) have put forward several different argumentative strategies in support of their position. What I shall suggest in this paper is a partly new strategy that, while incorporating some aspects of a widely used one (the so-called phenomenal contrast strategy), integrates it in a more complex framework (that is the reason why I qualify the strategy I shall put forward as “partly new”).

My paper has two main sections. The first one is critical, whereas the second one contains my positive proposal for dealing with the aforementioned issue. In the first part I shall discuss some criticisms that those who oppose CP have put forward. I shall consider in particular those criticisms that have been grounded on the fact that, up to now, no one has succeeded in presenting clear and unquestionable examples of cases in which cognitive phenomenal properties (cpp<sub>s</sub>) are instantiated, but no sensory phenomenal property (spp) is. My attitude towards these criticisms will not consist in contrasting them by devising some further example, not yet cooked up, more fanciful and ingenious than the ones already suggested by the advocates of CP. My reason for so doing is that, many valuable attempts notwithstanding, I believe that no example up to the requested standards can actually be provided. What I shall do instead is to use those criticisms as a lever for backing up a certain conception of the nature of cpp<sub>s</sub>. The key notion in this conception is that of *factual intimacy* which I shall mobilize to put forward the idea that cpp<sub>s</sub> are inseparable, *in practice and in ordinary cases*, from spp<sub>s</sub> (leaving open the possibility of their explanatory and metaphysical independence). As I shall claim, factual inseparability does not have to be taken as equivalent with *dependence* conceived in the strong metaphysical sense; these two notions are distinct. Even though I agree that a possible move for a defender of CP to make from the failure of finding cases of states which only exemplify cpp<sub>s</sub> but no spp is to hold a dependence claim of the former on the latter, I do not believe that this move is mandatory. In my view, not only a proponent of CP is not forced to make such a move, but rather she would better avoid making it (since it is a rather risky concession to her adversaries), unless she endorses the dependence claim for other reasons, grounded on her conception of the nature of the phenomenological domain. In this paper I shall not argue for the existence of cognitive phenomenology. Rather, I shall take its existence for granted and focus my attention on its nature, in particular as regards

its relation with sensory phenomenology<sup>1</sup>. In my view, a reflection on the nature of the phenomenology of cognitive states and processes is an essential preliminary step towards dealing with the methodological issue of how to argue for the cognitive phenomenology thesis. For, what methodology is best suited to adopt largely depends on what the nature of cognitive phenomenology and its relation to sensory phenomenology turn out to be.

In the ongoing debate, the issue as to whether there is a phenomenology associated with cognitive states and processes is hardly ever called into question, apart from some isolated exceptions<sup>2</sup>. In general, what people quarrel about is not whether cognitive states and activities such as thinking, reasoning and understanding are associated with some kind of experience which is phenomenally conscious in the sense that there is something it is like for the subject who undergoes those experiences to be in them (this is the most neutral and the least theoretically-laden characterization of cognitive phenomenology that almost everyone accepts<sup>3</sup>), but rather whether the phenomenology associated with such states and activities is proprietary and *sui generis*<sup>4</sup>. My main reason for not arguing for the existence of cognitive phenomenology, understood in the above mentioned neutral characterization of the notion, is not that this is an almost undisputed point within the current debate on this topic<sup>5</sup>; rather, I do not feel any need to argue for its existence, because that there is a phenomenal conscious experience associated with (at least some of) our cognitive states and activities seems to me a self-imposing datum of our experiential life that no one could seriously put into question. If I were asked to provide some evidence in support of this claim, I would invite to consider a situation that I am pretty sure most people are likely to have gone through sometimes. I, for one, have undoubtedly had it. The situation is the following. You are reading a book/listening to someone who is talking to you and due to some kind of disturbance that seriously affects you at that moment (anxiety, stress, tiredness or something else) you do not understand a word of what you are reading/listening to. The linguistic material you are exposed to in such cases is one you are familiar with and you are aware of this; they are all well-known words of

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1 In so doing I shall mainly concentrate on what Smithies (2013) labels the “Reduction Question” in the current debate on cognitive phenomenology which he puts as follows: “What is the relationship between the phenomenology of cognition and the phenomenology of sensory perception? Are the phenomenal properties of cognition identical or distinct from phenomenal properties of sensory perception?” (Smithies 2013, p. 745).

2 A paradigmatic example of one such position can be found in the following passage: “Cognitive states are prime examples of states for which there is *not* something it is like to be in them; of states that lack a phenomenology” (Braddon-Mitchell & Jackson 2007, p. 129).

3 For this characterization see Smithies (2013, p. 744).

4 To claim that the phenomenology associated with cognitive states is “proprietary” is to claim that what-it-is-like consciously to be in any one of them is different from what-it-is-like consciously to be in any other sort of conscious mental state. Some people in the debate qualify (CP) not only as proprietary but also as “distinctive” and “individuable”. Saying that it is *distinctive* amounts to the claim that what-it-is-like consciously to entertain a particular cognitive state is different from what-it-is-like consciously to entertain any other cognitive state. *Individuable* is instead used for the claim that the phenomenology of a cognitive state constitutes its representational content. See Pitt (2011) and Montague (2016) for a defense of the proprietary, individuable, distinctive character of the phenomenology of thoughts.

5 I say almost undisputed because, eliminativists aside (and there are very few of them, if any, around), those who say that there is no cognitive phenomenology take as their critical target a characterization of the notion which is laden with (what they take to be) questionable assumptions. So what they say can be taken to amount to the claim that there is no phenomenal conscious experience associated with our cognitive activities and states that satisfies those assumptions. A parallel can be found in the debate on sensory phenomenology. When people like Dennett (1991), for example, claim that (sensory) qualia do not exist what they mean is that there are no intrinsic, directly accessible, ineffable, private, incorrigible properties of our sensory experience. Of course Dennett does not deny that there is something it is like for one to enjoy an experience and therefore that there is sensory phenomenal consciousness.

your mother language towards which you even have a feeling of familiarity. And yet, pretty mysteriously (actually not completely so, given the influence of the disturbing factors that seriously impair your comprehension on that occasion) your experience is pretty much like, even though not exactly alike, the one you would be in if the (written or acoustic) signs you are exposed to belonged to a language you do not understand<sup>6</sup>. Sometimes very anxious students under exam-tests report having undergone experiences of this kind. But then if you succeed in regaining control over the situation (you relax or do some other helpful activities) what happens to you is a radical change in your “experiential landscape”. Suddenly, those shapes and sounds appear, once again, as meaningful. You still see and hear them (the sensory elements involved are still present to you) but, in a sense, they seem to slide back and live the front stage to their meaning.

Grasping meaning makes a difference in the phenomenal character of your overall experience. Now you are understanding, not just hearing linguistic sounds/seeing linguistic shapes. That there is a difference before and after the event of comprehension occurred is hardly disputable. Your conscious phenomenal experience has undergone a change; the phenomenal character of the experience you are now undergoing is the one typical of understanding experiences (it would not make sense saying to oneself: “Maybe I am not understanding, I am just imagining doing it”). You feel that you are now understanding what you are reading/hearing and this feeling is different from the one you had when you were in the frustrating situation I described. In my view, if one honestly reflects on one’s experience in such cases, one cannot but concede the above stated points. In my view this is enough to start reasoning about the nature of the phenomenology associated with cognitive states and activities. If one were not content with these intuitive remarks and asked for an explicit argument in support of the existence of cognitive phenomenology, I think that the best argument to provide at this stage is what Kriegel (2015) labels the “life would be boring argument”<sup>8</sup>. Not a real knock down argument, as Kriegel himself admits, but maybe the best way to deal with what can be taken a rather awkward request. I say “awkward” because the idea that phenomenal consciousness is a prerogative of the sensory domain is utterly unjustified, despite an influential philosophical tradition, originally fueled by philosophers such as Gilbert Ryle and Charles Lewis, and still dominant until recently, has strived to champion a conception of the mind as constituted by two separate domains (what is known as the “two-separate realms conception of the mind), the purely cognitive and the purely sensory<sup>9</sup>. What grounds the claim that only sensory states and activities can be phenomenally conscious? What grounds the ruling out from the phenomenal conscious domain of what is peculiar and characteristic of us as thinking creatures? In my view nothing, apart from a wrong and misleading theory of consciousness on the one hand (one which denies the legitimacy of cognitive phenomenology for its incompatibility with some requirements built into one’s

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6 I say “pretty much” in order not to conflate this case with those in which no comprehension occurs because the linguistic material the subject is exposed to belongs to a language the subject does not master. I shall present a case of this latter kind in the third section while discussing an example of the “phenomenal contrast argument” provided by Strawson (1994).

7 Of course this does not rule out that the subject may doubt whether she is correctly comprehending and not instead misunderstanding what she is reading or listening to.

8 Actually, it is an observation that can be dressed as an argument. This is Kriegel’s way of framing it: “1) If we did not have irreducible cognitive phenomenology, the contents of our phenomenal awareness from phenomenal onset to sunset would not be disposed to elicit differential feelings of interest in us; but 2) they do; so, 3) we do have irreducible cognitive phenomenology” (Kriegel 2015, p. 41).

9 A clear example of this attitude is the one stigmatized by Sellar’s (1956) famous dichotomy between *sentience* and *sapience*.

theory of phenomenal consciousness<sup>10</sup>), or/and, on the other hand, a conception of cognitive phenomenology burdened with controversial assumptions.

Let me now conclude this section with my “credo” and with some terminological clarifications. I believe that there is a phenomenology of cognition (CP) and that such phenomenology is different in kind from, and irreducible to sensory phenomenology (SP). To defend the irreducibility of CP to SP is to defend what is called in the literature the liberal/inclusivist/expansive view and reject what is otherwise variously called the conservative/exclusivist/frugal/restrictive view<sup>11</sup>. Before starting let me provide some clarifications, in particular concerning: (a) what I am talking about when I talk of *cognitive phenomenology*; (b) what I mean by *sensory phenomenology* and, last but not least, (c) what I mean by *irreducibility*.

First. Cognitive phenomenology. In saying that there is a phenomenology of cognition I want to claim that there is a phenomenology of cognitive processes and activities and also of their products, namely states and acts<sup>12</sup>. Examples include thinking/ judging/ believing/ surmising/ doubting/ remembering/ assuming/understanding something – that p – that p is thus and so<sup>13</sup>.

Second. Sensory phenomenology. By sensory phenomenology I mean the phenomenology of conscious sensory states. Following Lormand (1996, pp. 242-243), I include within that category the following “quartet” of conscious states: i. perceptual experiences (in the different sensory modalities: seeing something, hearing something, feeling something, smelling something, tasting something); ii. conscious bodily sensations (pains, tickles, itches); iii. imagistic experiences of a non linguistic sort; iv. conscious linguistic imagery (as when we think in words)<sup>14</sup>.

Third. Irreducibility. In his recent book Chudnoff characterizes irreducibility as the claim according to which: “Some cognitive states put one in phenomenal states for which no wholly sensory states suffice” (2015, p. 15). In my paper I shall not make use of this characterization. My main reason for so doing is that, even though this way of formulating the irreducibility claim does not (logically) imply that phenomenal cognitive states do indeed require sensory phenomenal states (in the sense that they could not occur in isolation from the latter) – and I think that any acceptable characterization of irreducibility should live this option open –, to talk of the non-sufficiency of sensory phenomenology for cognitive phenomenology strongly “encourages” the idea that the former is nonetheless required. Now, I think that this is not something that should be taken for granted by “building” it into the very characterization of the notion of “irreducibility” itself. That is why I prefer to avoid Chudnoff’s characterization of the notion of irreducibility and make use of the more traditional one framed in terms of non-identity. According to this characterization, a property P1 is irreducible to another property P2 if and only if P1 fails to be identical with P2. So, as regards our present discussion,

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10 This is so for example with Tye (1995), Dretske (1995), and Carruthers (2000). One such requirement is the one that follows from the claim that conscious states are representational states endowed with non-conceptual content. If one allows that only perceptual states can have such a kind of content, it follows that all conscious states are perceptual states.

11 In the foregoing I shall use the couple liberal/conservative for talking about the two parties in the debate.

12 On why this distinction between cognitive processes and activities and their products is worth drawing see Kriegel (2015, p. 38).

13 Kriegel (2015) provides a list of cases of cognitive propositional states. For a list including other types of cognitive activities see Smithies (2013, p. 744). Among the items in Smithies’ list there are the following cases: considering a hypothesis, judging that a hypothesis is true, recognizing that the conclusion of an argument follows from its premises, calculating the solution to a problem, grasping a metaphor, getting a joke, understanding a sentence, having an unarticulated thought on the tip of one’s tongue.

14 Sometimes this quartet is integrated with a fifth element, primary emotional experiences (feeling anger, fear). See e.g. Tye and Wright (2011, p. 329).

irreducibility of  $cpp_s$  to  $spp_s$  amounts to the claim that the former are not identical with the latter. This way of characterizing irreducibility is in line with the way in which Smithies frames the “Reduction question” that he takes to be one of the central questions in the debate about the nature of cognitive phenomenology. According to this way of phrasing the notion of irreducibility the main issue turns out to be the following: “Are the phenomenal properties of cognition identical with or distinct from phenomenal properties of sensory perception?” (Smithies 2013, p. 745). Those who defend irreducibility answer the question by saying that the two properties are different, whereas those who defend reducibility answer the question by saying that they are identical.

As I have said, my main aim here is to defend irreducibility and consider which methodology is best suited to adopt for achieving that aim. So the central question to consider is how the non-identity claim should be argued for. One possibility is to prove it by proving that  $cpp_s$  are independent of  $spp_s$  (that is they can exist in isolation from the latter). Even though this is a possible strategy to pursue because, as Chudnoff rightly claims (2015, p. 16), independence entails irreducibility (and therefore if you prove independence then irreducibility follows as a free lunch), but not viceversa because irreducibility is weaker than independence, this is not the strategy I shall adopt here. For, even though I believe that it is possible to hypothesize a situation in which  $cpp_s$  occur without any  $spp_s$  (in the sense that there does not seem to be any logical incoherence in conceiving one such situation<sup>15</sup>), I do not think that any such situation could ever be positively conceived by us (because, as I shall claim,  $cpp_s$  are factually inseparable from  $spp_s$ ). If this were not so, one should be able to provide compelling examples of states which exemplify  $cpp_s$  but no  $spp_s$ . But all the attempts to provide such examples notwithstanding, I do not think that they are good enough to convince a denier of CP (who will always say that it is simply false that there is no accompanying sensory phenomenology). I therefore prefer to follow a different line of defense of the non-identity claim.

Instead of showing that  $cpp_s$  are not identical with  $spp_s$  because they can exist in isolation from the latter, I shall show that they are non-identical because they can vary independently from each other (two states with the same  $spp_s$  can present differences in their overall phenomenology and two states with different  $spp_s$  can exhibit similarities in their overall phenomenology). This will be the topic of the third section. In the next one I shall take into account some criticisms that have been put forward against the irreducibility of CP. What I shall try to show is that what they put into question is not irreducibility, but factual separability. I shall concede this point, that is I shall accept what in my view those criticisms show, but I shall also contend that factual inseparability is compatible with irreducibility.

## 2. Irreducibility and separability

In this part I want to discuss and criticize some assumptions concerning what irreducibility should require that are mobilized by many deniers of CP in their arguments. According to these assumptions, irreducibility requires non-identity and non-identity, in its turn, requires separability, or, as I shall say, it requires the satisfaction of the “separability requirement”. The line of thought that can be taken to be in place in many of the conservatives’ arguments can thus be reconstructed as follows. Two assumptions concerning irreducibility are taken in and then a conclusion is drawn as to what irreducibility should require.

Assumptions:

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<sup>15</sup> An emblematic example is provided by Kriegel’s Zoe case (Kriegel 2015, pp. 54-61). For a critical but sympathetic discussion of Zoe argument see Sacchi & Voltolini (2016) and Voltolini (this volume).

(A1) (Irreducibility requires non-identity): a given kind of properties is irreducible to another kind of properties iff the two kinds are non-identical;

(A2) (Non-identity requires factual separability): two kinds of properties are non-identical iff each one of them can actually occur without the other.

(Conclusion)

A given kind of properties is irreducible to another kind of properties iff each one of them can actually occur without the other.

Even though I agree with (A1), I disagree with (A2): two properties can fail to be identical and yet one of them could not actually occur without the other. Of course the rejection of (A2) needs some motivation, but I think that this is something that can be provided.

Let me now consider some arguments that exemplify the above sketched argumentative strategy. What all of them exhibit is a kind of methodology, quite common in the conservative camp, which can be labelled the “exclude-and-isolate methodology”. I shall criticize it by claiming that it is based on an ungrounded assumption, namely (A2): that non-identity requires separability. In my view, this assumption reflects a conception of the structure and nature of the phenomenological domain that is not mandatory for an advocate of CP to endorse. Actually, I shall claim, the defender of the liberal view should reject that assumption. One example of this strategy is provided by Prinz (2011, p. 193). According to Prinz,

(1) If the liberal position is true, there are phenomenal qualities over and above sensory qualities. That is:

(2) When we add up our sensory simulations, inner speech, and emotions, there is a phenomenal remainder.

(3) If this were the case, it should be possible to experience the remainder *without* the concomitant imagery.

(1) and (2) are OK. If the liberal position is true, then sensory qualities do not exhaust phenomenal qualities. But what about (3)? What reasons are there for claiming that (3) holds? The considerations that Prinz adduces in support of (3) are the following:

(3<sup>1</sup>) the components of *sensory* consciousness can all be experienced in isolation;

(3<sup>2</sup>) If there were distinctively cognitive phenomenal qualities, then there is no reason to suppose that they are different in this respect.

(3<sup>1</sup>) and (3<sup>2</sup>) license the conclusion that we should be able to experience cognitive phenomenal qualities in isolation. But, he claims “I have encountered no compelling example of an imageless, dispassionate, languageless, conscious thought. If there were cognitive phenomenology, examples should be abundant” (Prinz 2011, p. 193).

Another application of the “exclude-and-isolate methodology” comes from Tye and Wright (2011). According to them there is no phenomenology that outstrips the purely sensory one: any phenomenal feature of a conscious state can be accounted for in terms of sensory phenomenology. For, they claim “If you doubt this, take it away. Take away *all* the associated images, *all* the relevant perceptual experiences, *all* the experienced bodily reactions...*all* the emotional responses. Do you really think that there is any *phenomenal* difference left?” (2011, p. 337). The argument that can be reconstructed from this passage is analogous to Prinz’s. According to Tye and Wright,

- (a) if the liberal view were correct, there should be something more in the phenomenology of a given state besides its sensory phenomenal features.
- (b) If there were something more in the phenomenology of a given state besides its sensory phenomenal features, it should be something that is left over after we strip our total experiential states of their phenomenal sensory features.
- (c) But when all the sensory phenomenal features are taken away no phenomenal difference is left.
- (d) Therefore: the liberal view cannot be correct.

Again (a) is OK. But what about (b)? What ground is there for claiming that (b) holds? A possible explanation (which does not figure in Tye and Wright's quote but which was explicit in Prinz's) is that since "factual separability" holds in the sensory phenomenal domain, it should also hold in the cognitive phenomenal domain if it existed.

In what follows I shall critically discuss the "exclude-and-isolate" methodology exemplified in the two previous arguments and consider which possible moves are open to a defender of CP.

To start with, and on behalf of the conservatives' strategy, it must be said that the separability requirement (the requirement figuring in A2 that non-identity requires separability), seems to be satisfied in a considerable number of cases. It certainly holds for many kind of physical properties. Let us consider for example a shape property (being round) and a color property (being red). These two properties satisfy the separability requirement, because even though it is possible for them to be co-instantiated (an object can be both round and red), it is also possible for each one of them to occur without the other (a round object can be non-red and a red object can be non-round). Moreover, and most importantly, the separability requirement seems to be satisfied not just by physical properties of objects, but also by the corresponding phenomenal properties. Let us consider for example the phenomenal properties that correspond to the two aforementioned properties of physical object: red\* and round\* (the properties that our experience exemplifies when we see or seem to see a red/round object and which account for the phenomenal character of our experience, for what-it-is-like for us to enjoy it). What holds for red and round holds also for red\* and round\*: it is possible for one's experience to exemplify red\* but not round\* and vice versa.

Granting the plausibility of the separability requirement, a possible move for a defender of CP is to accept both (A1) and (A2), but deny that there are no compelling examples of imageless, dispassionate, languageless, conscious thoughts. Siewert (1998, pp. 276-267) is replete with such examples of "non-iconic thoughts"<sup>16</sup>. If one does not find these examples compelling one could consider the more complex ones presented by Strawson (1994, pp. 18-21) and by Siewert himself (1998, pp. 277-278) which concern complex chains of thoughts unfolding with such a speed and determinacy as to seriously challenge the possibility of explaining them in terms of the occurrence of verbal and non-verbal imagery. To further support the claim that cognitive phenomenal properties can occur without any sensory accompaniment the advocate of CP could avail herself of those empirical studies (such as the one by Hurlburt and Akhter 2008) that seem to attest, on the ground of the experimental subjects' reports, the frequent occurrence of episodes of conscious thinking unaccompanied by any kind of imagery, be it linguistic or non-linguistic. My attitude towards this line of response is negative. First of all, I do not think that these

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<sup>16</sup> These examples include suddenly remembering or realizing something, e.g. that you have left your pen drive in your office at the very beginning of your talk; your suddenly realizing that you are late for the flight you had planned to take.



cases could really convince the opponent; they heavily hinge on the subjects' introspective reports and, as everyone in the debate knows, this is not taken to be a firm ground on which to back a philosophical claim<sup>17</sup>. As a matter of fact, an opponent could always reply, on the ground of her own introspective access to those experiences, that it is false that in the suggested cases there is no sensory phenomenology involved and that this phenomenology, or better an appropriate combination of sensory phenomenal properties, can explain all the apparent counterexamples to the conservative position<sup>18</sup>. Moreover, if there were examples that resisted the above mentioned reductive line of explanation, the opponent could resort to the strategy of explaining them away as introspective errors along the lines indicated by Carruthers (2011), according to whom what we take to be a genuine introspective access to our cognitive experience is actually the result of an interpretative process automatic and unconscious akin to confabulation<sup>19</sup>.

On the ground of these considerations, instead of accepting (A1) and (A2) and try to deny the conclusion of the opponent's argument, I believe that a better option is to stick to (A1) and reject (A2). This is the strategy I shall adopt. First of all, despite the fact that the separability requirement seems to hold in many cases involving physical and phenomenal properties, one can question its general validity even as to the sensory phenomenal domain. An interesting example that can be used to cast doubts on the idea that all of a sensory state's phenomenal features can be experienced in isolation is that of the experience of hearing a tone. This is a complex sensory state which includes several distinct sensory features, such as timbre, pitch and volume. Each of such features contributes to the phenomenal character of the total sensory state (that phenomenal character would not be the way it is if those sensory features were not present or if any one of them were different from how it is). As regards this case, it does not seem possible to discover the contribution of each sensory feature by applying the exclude-and-isolate methodology. As Hopp maintains on this point, "We could not possibly exclude our consciousness of any two, or even any one, of the tone-components and have an experience of the remaining components left over. Eliminate the experience of a tone's pitch, timbre, or volume, and you eliminate the experience of the tone altogether" (Hopp 2016, p. 47)<sup>20</sup>. An opponent could object that the failure of the separability requirement in the above mentioned example is due to the complexity of the sensory property involved and that this does not challenge her claim which is meant to apply to simple sensory phenomenal properties. Let us grant, for the sake of the argument, that the conservative is right in claiming that the separability requirement holds (unrestrictively or restrictively) in the sensory phenomenal domain. But even granting this, what ground is there for claiming that this requirement should hold also in the cognitive phenomenal domain? Prinz's claim that what holds for one domain should also hold for the other toots the restrictivist own horn and as

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17 For worries about the reliability of introspection in the CP debate see Bayne and Spener (2010); Spener (2011).

18 For such a reply see Tye (1995), Robinson (2005), Prinz (2007).

19 For a criticism of Carruthers' idea that introspection of cognitive experience can always be taken as the result of an unconscious process of self-interpretation see however Smithies (2013, p. 749).

20 This example seems to me better than the one of the McGurk effect which is sometimes discussed in connection with the separability requirement. For even though in that case the resulting perceptual phenomenal state (the subject's hearing the syllable /da-da/) comes out of an interaction between sensory features in different sensory modalities (i.e. the auditory component of one sound, the syllable /ba-ba/, is paired with the visual component of another sound, the syllable /ga-ga/), this does not show that the auditory features of the resulting perceptual states are inseparable from visual features. For, as Chudnoff (2015, p. 106) rightly stresses, one could be in that same auditory phenomenal state without being in that visual phenomenal state (or in any other visual states). One might just hearing /da-da/ for example.

such should not be taken for granted in a critical assessment of the dispute. Why should the cognitive phenomenal domain be structured in the same way as the sensory phenomenal domain? So, to come back to Prinz's argument, not only (3<sup>1</sup>) can be questioned, but even if one concedes it, (3<sup>2</sup>) has to be resisted because if one opens to the possibility of there being two phenomenal domains, the sensory and the cognitive, there is no reason to demand that what holds in one domain holds in the other as well.

I therefore accept (A1) but reject (A2). Even though I agree that separability is sufficient for non-identity, I contest that it is also necessary. Two properties can be non-identical and therefore irreducible even though one of them is inseparable from the other. In my view this is precisely what happens as far as  $cpp_s$  are concerned.

Of course if one claims that these properties are inseparable from  $spp_s$  an explanation is needed for their inseparability. A possible explanation is to say that  $cpp_s$  are inseparable from  $spp_s$  because the former depend on the latter in the strong metaphysical sense that rules out the possibility of cognitive phenomenal states in the absence of any sensory phenomenal state. Even though I acknowledge the legitimacy of this move, I will not endorse it. First because I do not think that the opponents' arguments force a defender of CP to reject Independence<sup>21</sup>. Actually, what those arguments put pressure on is not Independence, but rather factual separability which is a weaker thesis that can be rejected while keeping on sticking to Independence. Second, because I think that the rejection of Independence infects irreducibility itself and weakens the liberal position. Notwithstanding some terminological differences, I think that this is also the moral that can be drawn from Chudnoff's discussion of the opponents' arguments<sup>22</sup>. Even though he characterizes his position as the conjunction of irreducibility and dependence<sup>23</sup>, I think that what he ultimately means by "dependence" is not the negation of Independence, but rather of "factual separability". For, even though he says that his position is inconsistent with independence, what he wants to rule out is the possibility of *actual* cognitive states being instantiated without the concomitant instantiation of some phenomenal sensory state. His talk of *actual* cognitive states is precisely meant to leave open the possibility of cognitive phenomenal states in the absence of all sensory phenomenal states. As regards this possibility (which is what Independence requires) he says that it is one with which no one is acquainted with because, as a matter of fact, any actual cognitive state occurs in conjunction with some sensory state (Chudnoff 2015, p. 121).

If factual inseparability is not explained in terms of the failure of Independence, then an alternative explanation is needed. One possible explanation is provided by Chudnoff himself in terms of a complex conception concerning the structure and the nature of the phenomenal domain that boasts a respectable philosophical pedigree. His conception, that he labels "Phenomenal Holism", and that he characterizes as the thesis that "All partial phenomenal states depend on the total phenomenal states to which they belong" (2015, p. 121), is a strengthened version of classical Gestaltism strongly inspired by Aron Gurwitsch's work. Even though I find this position appealing and recognize that it actually provides an interesting explanation of the failure of the separability requirement, I want to suggest, as a further possible line of explanation, one that a conservative like Prinz could not question, since it is based on that

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21 I shall use the capital letter for signaling that I am referring to the notion in its strong metaphysical sense.

22 Besides Prinz's argument (which he calls "the extra-modality" argument) Chudnoff in his book considers also an argument by Pautz (2013) (that he calls "the missing explanation argument").

23 As Chudnoff claims "even though there are phenomenal states for which wholly sensory states do not suffice, there are no phenomenal states for which wholly cognitive states do suffice. On this view whenever one is in a phenomenal state it is at least in part because one is in a sensory state" (2015, p. 18).

very conceptions of the nature of concepts that he himself endorses, namely neo-empiricism. If one adopts the neo-empiricist conception of concept, either in Prinz's version (concepts as proxytypes<sup>24</sup>) or in Barsalou's version (concepts as simulators<sup>25</sup>) and accepts therefore the idea that the vehicles that the conceptual system uses in cognitive states and activities originate out of the ones used by the perceptual system itself (and so takes concepts as perceptually based<sup>26</sup>), then the fact that  $cpp_s$  are inseparable from  $spp_s$  is exactly what has to be expected given that theoretical framework. To insist that if  $cpp_s$  existed they should occur in isolation from  $spp_s$  would amount to claim that concepts could occur without their corresponding vehicles and this is not something that could actually take place. It is curious, to say the least, that in his argument against CP, Prinz mobilizes an assumption that patently violates the very principles that follow from his own theoretical commitments as regards the perceptually based nature of concepts<sup>27</sup>.

Let me sum up. We have considered a prominent methodological strategy adopted by the CP deniers and have shown that what that strategy puts pressure on is the claim that  $cpp_s$  are factually separable from  $spp_s$ . We have distinguished factual separability from Independence and have claimed that the questionability of the former does not affect the latter which is a stronger claim. Our next step will consist in addressing the following question: if one allows, as I think one should, that  $cpp_s$  are factually inseparable from  $spp_s$ , which methodology a defender of CP could adopt to prove irreducibility? Of course if irreducibility holds, then, to borrow the opponents' words, there must be something more in the phenomenology of a given cognitive state besides its sensory phenomenology. But how to argue for the existence of this "phenomenological surplus" if the exclude-and-isolate method cannot be adopted? In the next section I shall present a proposal for addressing this issue.

One possible strategy, even though not the one I shall pursue here, is to prove Independence and infer irreducibility from it. For, as Chudnoff shows (2015, p. 17) given that the former entails the latter one can ground a belief in irreducibility in a belief in Independence<sup>28</sup>. A recent attempt to prove Independence is the one provided by Kriegel with his Zoe argument which is a contrast argument of the hypothetical variety<sup>29</sup>. Even though I agree with Kriegel that the envisaged scenario is genuinely logically possible, in the sense that it does not reveal any manifest incoherence or contradiction<sup>30</sup>, I think that the factual inseparability of  $cpp_s$

### 3. Contrast and compare

24 Prinz (2002, 2005).

25 Barsalou (1999, p. 586; 2003, p. 1180).

26 As Prinz puts it "To say that concepts are perceptually based is to say that they are made up from representations that are indigenous to the senses. Concepts are not couched in an amodal code. Their features are visual, auditory, olfactory, motoric, and so on. They are multimedia presentations" (Prinz 2005, p. 7).

27 As a matter of fact, even though the theoretical framework that Prinz adopts in his account of concepts is neutral as regards the reducibility/irreducibility issue, it is not neutral as regards the separability/inseparability issue.

28 This is so for example in Pitt who claims "I believe this [that CP is a *sui generis* sort of phenomenology] because I believe that the conscious occurrence of any of the more familiar sorts of phenomenal properties is neither necessary nor sufficient for the occurrence of conscious thought" (2011, p. 141).

29 This terminology is due to Chudnoff (2015, pp. 44-45) who distinguishes the three following kinds of contrast arguments: (i) pure; (ii) hypothetical and (iii) glossed, where the differences among them have to do with the kind of premises on which they rely on. (i) rely only on premises about the phenomenal differences between actual mental states; (ii) on premises about phenomenal differences between the mental states of hypothetical people that lack all sensory phenomenology and (iii) besides relying on premises about the phenomenal differences between mental states (like the ones of the first variety) rely also on premises that provide a gloss on the phenomenal differences between the mental states involved.

30 Kriegel's argument consists of three stages. In the first stage we are asked to imagine *some partial zombie* Zoe (a creature functionally identical with a normal human being but who lacks phenomenal states of certain kind: visual, auditory, tactile, gustatory, olfactory, algedonic, emotional); in the second stage, by synthesizing all the

from spp<sub>s</sub> prevents us from actually, positively conceiving such a situation and therefore proving Independence (if it is true, that what is needed to prove Independence is to prove the metaphysical possibility of such a scenario and if metaphysical possibility requires that such a scenario be not only negatively but also positively conceivable)<sup>31</sup>. For if positive conceivability requires actual imaginability<sup>32</sup>, then I think that, pace Kriegel<sup>33</sup>, Zoe's situation cannot be imagined, by us at least, not even by using, as Kriegel claims (2015, p. 254, note 38), imaginative empathy, because Zoe's life is so unusual and alien from us that we could never succeed in putting ourselves in Zoe's shoes. As a matter of fact we cannot start imagining such a situation without mobilizing any sensory imagery; as a consequence what we would end up imagining is not Zoe's life, as that life is given to her from the first person point of view, but a different one<sup>34</sup>.

In any case, I shall here adopt a different strategy to prove irreducibility, one which is compliant with the inseparability claim. One such strategy is in my view provided by combining the "phenomenal contrast methodology" with a methodology that, instead of contrasting couples of cases, compares them in order to disclose the presence of phenomenological commonalities. If the former is used to highlight *phenomenal differences* between conscious states which share some of their phenomenal sensory features, the latter, that I shall label the "phenomenal comparison methodology", is used to highlight *phenomenal commonalities* among conscious states which differ in their phenomenal sensory features. These differences notwithstanding, both methodologies make use of one and the same strategy which consists in varying some features of a conscious state while keeping some of its other features constant. I shall label it the "variation methodology" (VM). What (VM) prescribes doing is the following: consider some conscious state (PS1) of a subject S. Make some variation either in (some of) S's cognitive states (while keeping some of S's sensory states constant) or in (some of) S's sensory states (while keeping some of S's cognitive states constant). Call (PS2) the state so obtained. Compare (PS1) with (PS2) and consider (i) whether there is some phenomenological difference between the two and/or (ii) whether there is some phenomenological commonality between them.

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preceding partial zombies, we are asked to envisage a *total sensory-algedonic-emotional zombie*; finally, in the third stage, a *stipulation* is made about this creature. The stipulation consists in taking that person to be a mathematical genius spending her all days formulating mathematical propositions and trying to prove them from a set of axioms. According to Kriegel it is possible to imagine, relatively to our hypothetical creature, a contrast in her inner life. He considers, as an example of this "shift-in-thought", the difference between cases in which the creature grasps a proof and cases in which she fails to have such a grasp. He provides an argument in support of the claim that the contrast in question is phenomenal. From the possibility of the phenomenal contrast he infers that Zoe has phenomenal mental states. Since Zoe does not have any sensory phenomenal state it follows that cognitive phenomenal states can be conceived to occur without any sensory accompaniment, and that therefore they are Independent.

31 The distinction between positive and negative conceivability is due to Chalmers. According to Chalmers "S is negatively conceivable when S is not ruled out a priori, or when there is no (apparent) contradiction in S...Positive notions of conceivability require that one can form some sort of positive conception of a situation in which S is the case. One can place the varieties of positive conceivability under the broad rubric of *imagination*: to positively conceive a situation is to imagine (in some sense) a specific configuration of objects and properties" (2002, pp. 149-150).

32 I am here taking "actual imagination" to be imagination grounded in sensory imagery. One could question such a characterization (see e.g. Chalmers 2002) and open to the possibility of imagination devoid of any sensory accompaniment.

33 Kriegel says "It seems to me perfectly possible to imagine such an inner life, even to imagine it from the first-person perspective – to imagine, that is, that it is *one's own* inner life" (2015, p. 57). It has to be stressed however that what Kriegel takes his argument to provide is *prima facie, defeasible* evidence for metaphysical possibility.

34 Commenting on this point Pautz says "we cannot positively imagine such a case. At least I cannot. Just try...If you try to imagine what it would be like, you might imagine seeing all black, having an experience of inner speech ('nothing much is happening'), and so on. But then you will not be imagining a case in which you have cognitive phenomenal properties but *no* sensory properties" (2013, p. 219).

My rationale for integrating the phenomenal contrast methodology within this more general framework is that even though I think that the former is necessary in order to show that cognition can have an impact on the phenomenology of a total mental state, it is not, on its own, sufficient to prove irreducibility, because that method is silent as regards the exact nature of that impact, in particular whether it is merely causal or constitutive (which is what must be proved to prove irreducibility). This is in my view what the phenomenal comparison methodology can instead provide. On its turn, this methodology needs the other because it is unable to prove that phenomenology has an impact on cognition. That is why both are needed: as the phenomenal contrast methodology cannot be used to prove the exact nature of the impact of cognition on phenomenology, so the phenomenal comparison methodology cannot be used to prove that cognition makes an impact on phenomenology. Let me thus summarize the structure of (VM) by saying that in the first step (by applying the phenomenal contrast methodology) one proves that cognition has an impact on the phenomenology of a conscious state; in the second step (by applying the phenomenal comparison methodology) one proves that cognition plays a constitutive and not just a causal role on the phenomenology of the conscious state. Let me start with the phenomenal contrast methodology and consider the dialectic between the CP defender and the CP denier concerning what this methodology can actually prove<sup>35</sup>. Let us consider as a start the structure of the arguments that people adopting it have put forward. These arguments take as their starting point a premise according to which there is some phenomenal difference between some pair of cases which otherwise (seem to) present the same sensory experience. In one known example, devised by Strawson, the envisaged situation involves two subjects, Jacques (a monoglot Frenchman) and Jack (a monoglot Englishman), as they listen to the news in French. By moving from the following three premises<sup>36</sup>:

- 1. Jacques's case and Jack's case contain different phenomenal states
- 2. Jacques's case and Jack's case contain the same sensory states
- 3. Jacques's case and Jack's case contain different cognitive states

the argument takes the form of an inference to the best explanation:

- 4. either the difference in the two subject's phenomenal states is a difference in their sensory states or it is a difference in their cognitive states
- 5. the best explanation for the difference in the phenomenal states is the difference in the cognitive states

And concludes that

- 6. There are phenomenal states such that cognitive states and not sensory states put one in them.

In Strawson's own words "the difference between the two can be expressed by saying that Jacques, when exposed to the stream of sound has what one may perfectly well call 'an experience (as) of understanding' or 'an understanding experience', while Jack does not" (Strawson 1994, p. 6).

Even though it is open to the opponent to reject any of the three above mentioned premises (1-3), the one that is most frequently attacked is (2). Tye and Wright for example say:

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<sup>35</sup> In the foregoing, I shall consider only so called pure phenomenal contrast arguments. These arguments have been used inter alia by Strawson (1994); Siewert (1998), (2011); Pitt (2004); Horgan and Tienson (2002).

<sup>36</sup> For this way of reconstructing Strawson's argument see Chudnoff (2015), p. 46.

We agree that there is a real phenomenal difference here ...When we hear someone speaking in a language we understand, the phonological processing of the sound stream is different from the processing that goes on when we hear someone speaking in a language we do not comprehend. In the former case, the “grouping” of the sound stream is causally influenced by the semantic processing. The result is that the auditory experiences we undergo are different from those we would undergo were we to hear the same sound stream without understanding the language (2011, p. 337).

So, (1) is accepted: there is a contrast and this contrast is phenomenal in nature; (3) is accepted as well: linguistic understanding is a cognitive process; but (2) is rejected: it is not true that the sensory states involved in the two cases are the same<sup>37</sup>.

How can a defender of CP react to her opponent’s move? In my view the best reaction to take is not to deny that the sensory phenomenologies involved are different (this would bring the whole dialectic in a standstill), but to concede this point and claim that the phenomenal difference in the sensory states of the two subjects is nevertheless due to the difference in the cognitive states involved. As a matter of fact, as Tye and Wright’s above quote testifies, that some cognitive states can have an impact on the phenomenology of the whole state one is in is a point that a conservative has not only any problem in conceding, but also generally does concede. In my view, that cognition can have an impact on the whole phenomenology of an at least partly sensory state is exactly what the phenomenal contrast methodology based on phenomenal contrast arguments does actually show. Of course this is not sufficient to prove irreducibility, because to prove it one needs to show that the impact that cognition has on the phenomenology of a conscious state is not merely causal (as the conservative claims<sup>38</sup>), but constitutive. But to prove this last point the phenomenal contrast methodology is of no help, because this methodology is by itself silent as regard the exact nature of the impact of phenomenology on cognition. So my assessment of the phenomenal contrast methodology is this: I agree with the conservative, and disagree with the liberal, that this methodology is unsuited to prove irreducibility. Nonetheless, while judging it not sufficient for the liberal’s own purpose, I deem it necessary as a first step in a more complex argument whose second step is precisely meant to show the constitutive nature of the impact that cognition has on the phenomenology of a partly sensory state.

This second step is in my view provided by the comparison phenomenal methodology. As a start, I shall consider a case of comparison analogous to Strawson’s contrast case. Since in this case more than one subject is involved I shall refer to it as the “intersubjective phenomenal comparison case” to distinguish it from cases of the intrasubjective variety I shall introduce later. The intersubjective case I shall start with is this: think of Jacques and Jack again, but this time, instead of considering, as in Strawson’s case, Jack’s hearing news in French, consider Jack hearing the very same piece of news in English, that is in the language that Jack understands (being Jack an English monoglot). It is undisputable that Jacques’s and Jack’s total experiences in the two cases are different. But their different experiences have also something in common. We have already proved, by applying the first step of the variation methodology, that (some) cognitive states can have an impact on the phenomenology of the whole state the subject is in (as regards our present example, the cognitive states we are concerned with are those of understanding). The central question to address now in order to

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<sup>37</sup> For an analogous reaction to Strawson’s argument see Carruthers and Veillet (2011, p. 52).

<sup>38</sup> See Carruthers and Veillet (2011, p. 37).

prove that cognition plays a constitutive, and not just a causal, role in that phenomenology is this: is this commonality cognitively phenomenal in nature? If the answer is positive, that is if it can be proved that this commonality is both (i) *phenomenal* and (ii) *cognitive*, it would follow that what the two subjects' experiences share is a cognitive phenomenal core irreducible to sensory phenomenology. Of course, a denier of CP could reject either (i) or (ii). Let us consider these possible countermoves starting from the first one. What the objector could claim is that the subjects of our example do not actually share anything at the phenomenological level and that their phenomenology is completely different as it is the phenomenology of a subject who hears a bell ringing and that of a subject who hears a moo. Jacques and Jack are in cognitive states of the same kind all right, allows the objector, but their states are associated with wholly different phenomenal features. To show the implausibility of this line of defense, I suggest to move to some examples of the intrasubjective variety of the comparison methodology.

Our first example is this. Let us consider a subject (S) who hears two synonymous sentences in two different languages that she masters: say, (E1) "A cat is on the mat" and (E2) "Un gatto è sul tappeto". A second and similar example is that of a subject (S) entertaining a thought in her inner speech (that the cat is on the mat, say) and then expressing it in outer speech by uttering the corresponding sentence "The cat is on the mat". Now, we think it is undisputable that a subject in such situations is able to judge that E1 and E2 express the same content (as regards the first intrasubjective case considered) and to judge, as regards the second case, that she has put into words the very same thought she was silently entertaining in her inner speech. The question to consider now is this: what grounds the subject's judgements? And, more importantly, could the subject make those judgments (in the immediate, non-inferential way in which she ordinarily makes them) if she did not enjoy a "feeling" of phenomenal sameness?

To address these questions consider how one would deal with a corresponding case involving sensory recognition. The case is this. Consider the two following experiential situations: in E3 you hear a melody, Jingle Bells say, played on a given instrument, while in E4 you hear that melody played on a different instrument at a different volume. You recognize the same melody in the two different executions. Would that recognition be possible (in the way in which it normally occurs) if the commonality between the two executions were not felt/experienced? Well, if one allows, as I think one should, that such a recognition would not be possible, why should not the same point be allowed as regards our two previous examples? Moreover, how could one concede it without conceding that the subject experiences the contents of her two mental states and that she experiences those contents to be the same (she has a "feeling of sameness" analogous to the one enjoyed in the melody example). At this point the conservative can concede that a common element is present in the two cases, that this element is phenomenal in nature and that it is responsible for the subject's "feeling of sameness", but deny that this common phenomenal element is not wholly sensory (and so denying the point ii. above). A possibility here is to appeal to imagistic experience of a non-linguistic sort. To this possible countermove my reply is the following. First of all it seems doubtful that the imagistic experience stays fix from one experience to the other, because it often changes even as regards one and the same sentence in different times. Moreover, and more importantly, one can conceive it as changing without this affecting the phenomenal commonality that the subject feels in the two experiences. To show this point you just need to make a further application of the comparison method. So, what the comparison method shows is that experiences with different sensory features can share a common phenomenal component. Since this possibility obtains even by assuming that all of a subject's sensory features change, it follows that the common phenomenal component cannot be sensory in

nature. I take this to be sufficient to prove that the phenomenology in question is cognitive and that this phenomenology is irreducibility to the sensory one.

Let me take stock. My main concern in this paper was to consider what kind of methodology a liberal can adopt in order to prove that cognitive phenomenology is irreducible to sensory phenomenology. As I said from the very beginning, I did not provide any argument in support of the claim that there are cognitive phenomenal properties. That the phenomenology of our conscious lives outstrips the merely sensory domain and encompasses also the cognitive domain is a point that I took for granted. What is the real and substantive matter of dispute is not whether there is a phenomenology of our conscious cognitive states, but rather whether this phenomenology is proprietary and *sui generis*. So, by taking as my starting point an as neutral as possible characterization of cognitive phenomenology – one that in my view both parties in the debate should agree upon –, I focused my attention on the question of the relationship between sensory phenomenal properties and cognitive phenomenal properties. Addressing this question is a preliminary necessary first step in order to start reasoning about any methodological issue; what methodology should be adopted (either to argue for the irreducibility of cognitive phenomenology or against it) very much depends on what kind of relation cognitive phenomenal properties are claimed to stand to the sensory ones. Is the relation in question one of identity or of non-identity? Is it one of independence or of dependence? I focused my attention on the first question because it is the most crucial one as regards the irreducibility vs. reducibility issue. I criticized an assumption that many conservatives make and use in their arguments against CP according to which the non-identity of two properties requires their factual separability (that is the possibility for each one of them to actually occur without the other). I rejected this assumption as ungrounded and claimed that what their arguments actually show is that cognitive phenomenal properties are not factually separable from sensory phenomenal properties. Since factual inseparability is consistent with irreducibility (in the sense that a given kind of properties can turn out to be factually inseparable from another one and yet be non-identical with and therefore irreducible to it), in my next step I tried to put forward a methodology for defending the irreducibility claim that is compliant with factual inseparability. Since irreducibility requires non-identity, to prove that cognitive phenomenal properties are non-identical with sensory ones, albeit factually inseparable from them, I suggested a methodology which shows that each of those properties can vary independently from the other. This is enough in my view to prove the irreducibility of cognitive phenomenology to sensory phenomenology. I do not intend to claim that the variation methodology that I have presented is the only one, or even the best one, available to defend the irreducibility claim. My purpose here was just to show that it is a possible methodology to adopt for someone who endorses the idea that the cognitive phenomenal domain is factually inseparable from the sensory phenomenal domain. What explanation can be provided of the inseparability claim is one further and crucial question that should be addressed. But this is a matter for another paper<sup>39</sup>.

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