

A KANTIAN ACCOUNT OF THE KNOWLEDGE ARGUMENT

Kant e o argumento do conhecimento

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“Thoughts without intuitions are empty,
intuitions without concepts are blind”.

Immanuel Kant

Abstract: This paper is a new defense of type-B materialism against Jackson’s knowledge argument (1982) inspired by the Kantian main opposition between concepts and sensible intuitions. Like all materialists of type B, I argue that on her release from her black-and-white room, Mary makes cognitive progress. However, contrary to the so-called phenomenal concept strategy (henceforth PCS), *I do not think that such progress can be accounted for in terms of the acquisition of new concepts.* I also reject Tye’s recent account of Mary’s cognitive progress as the acquisition of a “thing-knowledge.” What is crucial is not the Russellian opposition between knowing things and knowing truths, but rather the Kantian opposition between conceptual and nonconceptual representations of the same thing (property). Mary’s phenomenal knowledge is here accounted for as the result of the cooperation of her newly acquired nonconceptual representation of the same phenomenal redness (the same thing) she had a conceptual representation before. As that new nonconceptual representation carries information about the same physical property she already represented but now coded in analog rather than in digital form (Dretske, 1981), that nonconceptual representation can be accounted for in physical terms as Chalmers’s Master argument requires. Nevertheless, that representation can account for Mary’s cognitive progress since it carries information coded in analog form, something that the imprisoned she could never possess.

Keywords: Knowledge Argument; Nonconceptual content; Knowledge by acquaintance; Phenomenal concepts.

Resumo: Este artigo é uma nova defesa do materialismo tipo B contra o argumento do conhecimento de Jackson (1982), inspirado pela principal oposição kantiana entre conceitos e intuições sensíveis. Como todos os materialistas do tipo B, argumento que, ao sair de seu quarto preto-e-branco, Mary faz progressos cognitivos. No entanto, ao contrário da chamada estratégia de conceito fenomenal, não creio que tal progresso possa ser explicado em termos da aquisição de novos conceitos. Também rejeito a explicação recente de Tye segundo a qual o progresso cognitivo de Mary poderia ser compreendido pela aquisição de um conhecimento por contato (knowledge by acquaintance). O que é crucial não é a oposição russelliana entre conhecer coisas e conhecer verdades, mas sim a oposição kantiana entre representações conceituais e não-conceituais das mesmas propriedades. O conhecimento fenomenal de Mary é aqui explicado como o resultado da cooperação de sua recém-adquirida representação não-conceitual com uma representação conceitual que Mary já possuía de uma mesma propriedade.

Palavras-chave: Argumento do conhecimento; Conteúdos não-conceituais; Conhecimento por contato; Conceitos fenomenais.

1. Introduction

Jackson formulates his knowledge argument in the following terms:

Mary is a brilliant scientist who is, for whatever reason, forced to investigate the world from a black and white room via a black and white television monitor. She specializes in the neurophysiology of vision and acquires, let us suppose, all the physical information there is to obtain about what goes on when we see ripe tomatoes, or the sky, and use terms like ‘red’, ‘blue’, and so on. She discovers, for example, just which wave-length combinations from the sky stimulate the retina, and exactly how this produces via the central nervous system the contraction of the vocal chords and expulsion of air from the lungs that results in the uttering of the sentence ‘The sky is blue’. (It can hardly be denied that it is in principle possible to obtain all this physical information from black and white television, otherwise the Open University would of necessity need to use color television.)

What will happen when Mary is released from her black and white room or is given a color television monitor? Will she learn anything or not? It seems just obvious that she will learn something about the world and our visual experience of it. But then it is inescapable that her previous knowledge was incomplete. But she had all the physical information. Ergo there is more to have than that, and Physicalism is false (1982: 130).

There are two classical physicalist reactions to the knowledge argument. First, rejecting the key assumption that after Mary is let out she learns something, the physicalist might directly impugn the neo-dualist conclusion of the argument. There is no ontological chasm between physical and phenomenal properties because there is no genuine discovery or cognitive progress in the first place. This reaction to the knowledge argument usually comes from what Chalmers calls type-A materialism (2006; 2010: 111). Exponents of this kind of materialism are Dennett (1991), Dretske (1995), Harman (1990), Rey (1995), and Ryle (1949).

A second response might be to admit that Mary makes cognitive progress after she leaves her confinement from the black-and-white room. This reaction to the knowledge argument is what Chalmers calls type-B materialism (2010: 115). Exponents of type-B materialism are Block & Stalnaker (1999), Hill (1997), Levine (1983), Loar (1990; 1997), Lycan (1996), Papineau (1993), Perry (2001), and Tye (1995; 2003; 2009; 2012).

By far the most popular version of this type-B materialism assumes that Mary acquires new special phenomenal concepts of some physical property or fact she

already knew by means of a physical concept in her confinement. Following Stoljar (2005), we can call this the phenomenal concept strategy (henceforth PCS). Proponents of the PCS argue that phenomenal concepts have a special nature. They are not just any ordinary concepts used introspectively to pick out the phenomenal character of one's experience: they are special concepts in the sense that one can only acquire them when one undergoes some experience and attends to the phenomenal character of that very experience¹.

The general structure of the PCS can be represented as follows. There are concepts we employ to pick out introspectively the phenomenal character of our experience that we can only acquire by means of the experience in question. They are supposed to accomplish two tasks: to explain the existence of an epistemic gap between physical and phenomenal properties, but at the same time to reject the existence of an ontological gap between those same properties. In the particular case of Mary, they are supposed to explain Mary's cognitive progress (when Mary leaves her confinement and attends to the phenomenal character of her new experience of red for the first time), without assuming an ontological chasm between physical and phenomenal properties, that is, assuming that what she now thinks by means of a new phenomenal concept is the same physical property she already knew in her black-and-white room by means of an old physical concept.

Recently, the PCS has come under considerable pressure. Tye (2009) and Ball (2009) argue that there are no phenomenal concepts with the special nature required by the PCS. To be sure, there are phenomenal concepts in the trivial sense of the existence of conceptual representations employed introspectively to pick out the phenomenal

¹ As Chalmers puts it (2006), the *locus classicus* for PCS is Loar's paper "Phenomenal states" (1990, 1997) in which he claims phenomenal concepts are recognitional concepts. A recognitional concept, unlike a theoretical concept, is applied directly on the basis of perceptual acquaintance with its instances, that is, when we recognize an object "as being one of *those*," without relying on theoretical knowledge or other background knowledge. Carruthers (2004), Tye (1995, 2000) and Levine (2006) endorse similar accounts.

In contrast, according to Horgan (1984), Ismael (1999), Perry (2001), and O'Dea (2002), phenomenal concepts are indexical by nature. They are concepts that pick out brain states in an indexical mode of presentation. The suggestion here is that the epistemic gap between physical and phenomenal properties is similar to the familiar gaps between objective and indexical concepts.

Papineau (2006) and Block (2006) suggest, instead, that phenomenal concepts are quotational concepts. They are concepts that somehow contain the states to which they refer. A final group of philosophers worth mentioning defines phenomenal concepts by their conceptual role: phenomenal concepts and physical concepts are associated with distinct faculties and modes of reasoning (Nagel 1974; Sturgeon 1994; Hill 1997; Rey 1998; Levine 2001).

character of experience. Nonetheless, the acquisition of these concepts that we employ in introspection does not depend on our undergoing any experience. In contrast, according to Chalmers's "master argument" (2006), the PCS faces a dilemma: either the phenomenal concepts are not physically explicable or, if they are, they cannot explain Mary's cognitive progress (2006: 9).

This paper is a new defense of what Chalmers calls type-B physicalism against Jackson's famous knowledge argument (1982) inspired by a particular reading of Kantian main opposition between concepts and sensible intuitions. Like all type-B materialists, I argue that on her release from her confinement from the black-and-white room, Mary makes cognitive progress: Mary comes to possess phenomenal knowledge of what is like to experience. Yet, against PCS, I claim Mary's cognitive progress *is not conceptual at all*, not even an enlargement of her expertise or understanding of her old physical concept (as Ball and Tye claim). Likewise, neither do I think that such cognitive progress can be explained in terms of the acquisition of new conceptual competency about her old physical concepts as Alter has recently suggested (2013).

Moreover, against Tye's new proposal, neither do I think that such cognitive progress can be explained as a form of objectual knowledge by acquaintance (2009; 2012). Tye is on the right track, but barking up the wrong tree. What is crucial in the account of Mary's cognitive progress is not the Russellian opposition between knowing things and knowing truths, but the Kantian opposition between conceptual and nonconceptual representations of the same property, between information coded in digital form and information coded in analog form.

To develop this new defense of type-B materialism, the paper progresses as follows. The first section is devoted to situating the status of the PCS within recent philosophical debates. In this regard, we present Ball (2009) and Tye's (2009) claims that there are no phenomenal concepts in the sense required by the PCS to motivate the search for a new solution within the type-B materialist framework². I will try to persuade the reader that Tye, Ball, and Chalmers's arguments have a common root. They all assume that, if physicalism is true and Mary possesses exhaustive scientific knowledge of color and color vision, she could not possibly acquire a new phenomenal concept on the basis of her new experience of red that could account for her epistemic

² For reasons of space, I omit detailed discussion of Chalmers's "master argument" (2006) (it requires a new paper).

progress. Although I am not convinced by Ball and Tye's argument that phenomenal concepts do not exist (I argue that they must exist in order to solve possible problems of cognitive significance), I have to agree with all of them that Mary's epistemic progress cannot be accounted for on the basis of those newly acquired phenomenal concepts.

The next section is devoted to showing that Mary's new acquisition is not conceptual, but rather what Kant calls a sensible intuition. Against Ball and Tye's accounts, I argue that on her release, Mary does not enlarge her expertise or understanding of a concept she had before. Mary's new abilities to discriminate the color red by sight are not conceptual at all. What she acquires is a new nonconceptual representation of the phenomenal redness of which she already had a conceptual representation. Here is where I appeal to the Kantian dictum: without concepts, sensible intuitions are *blind* in the sense that we do not understand what we are nonconceptually representing (what we are sensing). Yet, without sensible intuitions, concepts are *empty* in the sense that we do not have sensible intuitions about the object the physical concept is about. Imprisoned Mary has an "empty" concept of what it is like to experience red in the Kantian sense of being a concept without the correspondent sensible intuition. What happens on her release? She acquires a new nonconceptual representation of the phenomenal redness. And from the cooperation of her old empty physical concepts about phenomenal redness and her newly acquired sensible intuition of the same property, she comes to possess *phenomenal knowledge (Erkenntnis)* of what is like to experience red.

2. Are there no phenomenal concepts?

On occasion, the knowledge argument is reconstructed so that it takes the form of *a priori* reasoning (Chalmers 2010). However, the simplest way of regimenting the argument so that it fits nicely with Jackson's original tale (1982), making it easier to understand the recent criticism of the PCS, has been suggested by Nida-Rümelin (2002):

Premise P1: Mary has complete physical knowledge about human color vision before her release.

Consequence C1: Therefore, Mary knows all the physical facts about human color vision before her release.

Premise P2: There is some (kind of) knowledge concerning facts about human color vision that Mary could not have before her release.

Consequence C2: Therefore (from P2), there are some facts about human color vision that Mary could not know before her release.

Consequence C3: Therefore (from C1 and C2), there are non-physical facts about human color vision.

Physicalists must deny **C3**. According to the PCS, by attending to her new experience of red, Mary acquires a *new* phenomenal concept of the phenomenal character of the experience of red. Tye (2009), and before him, Ball (2009) reject this assumption on several grounds. To start with, assuming that Mary has exhaustive knowledge about color and color vision (**P1**), one cannot see how Mary could acquire *new* information about the phenomenal character of the experience of red—information that she did not already possess in her confinement—if physicalism is true. If Mary really possesses exhaustive knowledge of all physical facts about color and color vision (**P2**), then the only way that she can associate *new* properties with the experience of red is if these properties are non-physical (Tye, 2009: 128).

Their second key objection is based on the assumption that the general concepts we apply via introspection to pick out the phenomenal character of our experiences are *deferential*; that is, they can be possessed even if they are only partially understood. As Tye puts it: “maybe *fully* understanding a general phenomenal concept requires having had the relevant experience; but if such concepts are like most other concepts, possessing them does not require *full* understanding” (Tye, 2009: 63). The assumption is that by contemplating a ripe tomato for the first time, Mary increases her expertise with regard to the color red. She acquires the new ability to discriminate the color red by sight. Still, *pace* Burge (2003), if the color concept RED is deferential and can be possessed even when it is only partially understood, Mary does not need to undergo the experience of red and acquire the ability to discriminate red things in order to possess that concept any more than Putnam has to undergo the visual experience of beech trees

and acquire the ability to discriminate beech trees from others by sight in order to possess the concept BEECH.

Why do we need to assume that color concepts are deferential? According to Burge's general claim (1979), deferential concepts are required to account *for cogent agreement and disagreement* because the possibility of this cogent agreement and disagreement requires a shared concept. Unsurprisingly, Tye's main reasons for construing color concepts as deferential is the reasonable assumption that people who have never undergone a relevant experience can still cogently agree and disagree about the phenomenal character of the experience in question. For example, Mary or any color-blind person can agree with everyone else that red is the color of a ripe tomato, a hydrant, and so on (Tye, 2009: 66).

Ball (2009: 16) makes these objections explicit through a *reductio*:

1- Mary's original concept of RED lacks some feature that Mary's phenomenal concept RED_p possesses; for example, Mary's concept is not caused by experiences of red, is not linked to images of red, and does not enable Mary to recognize red things or to discriminate red from non-red objects.

2- Therefore, there is no significant type of which RED and RED_p are both tokens. Given the conclusion of the last section, it is clear that this argument is invalid.

Consider an analogous argument: Putnam's concept BEECH lacks some features that my concept BEECH_p possesses; for example, Putnam's concept is not caused by an experience of beeches, is not linked to images of beeches, and does not enable Putnam to recognize beeches.

Therefore, there is no significant concept type of which Putnam's concept BEECH and BEECH_p are both tokens.

This is obviously absurd.

What about the demonstrative concept that Mary deploys when she attends to the phenomenal character of her experience of a ripe tomato and points to the tomato? Could phenomenal concepts not be demonstrative concepts that utilize physical sortals? According to Tye (2003; 2009) and Ball (2009), Mary could also possess this kind of demonstrative concept in her confinement. Under the representationalist assumption that the phenomenal character of the experience of red is the same as the color red that

is represented by that experience, Mary could possess such a demonstrative concept, based on the black-and-white screen of her television and on her previous knowledge that certain things are red. Mary could think of the phenomenal character of the experience of red *de re*, pointing to a ripe tomato that she sees on the screen of her television. This means not only that she already possessed a demonstrative concept, but also that such a concept is not phenomenal in the relevant sense of being a concept whose acquisition hinges crucially on the subject having the relevant experience.

Ball and Tye's case is far from being convincing. If the idea that we must account for cogent agreement and disagreement leads us to the acknowledgement of the existence of deferential concepts, the idea that we must account for *non-cogent* disagreement is a reason to assume the existence of non-deferential concepts. When I present Venus under the concept HESPERUS and you present it under the concept PHOSPHORUS, and we do not know that we are talking about the same planet, we are in a *non-cogent* disagreement about whether Venus is beautiful (Ball, 2009).

Thus, I cannot agree with Ball when he says it is "invalid" to assume that Putnam's BEECH and BEECH_p may be tokens of different mental types (2009: 16). If those tokens are disconnected in Putnam's mind, he could non-cogently think something like, "Beech trees are beautiful, without exception, but this tree is not," pointing to a beech tree. If Putnam is a reasonable person, as he seems to be, he must have different unconnected concepts in his mind: one he acquires by reading botanic books and the other he acquires by contemplating the tree.

The same may happen to Mary. Let us suppose on her release she stares at a ripe tomato. She knows that only ripe tomatoes are red, the unripe are green. However, as she does not yet know whether the tomato she is contemplating is ripe, she may wonder whether "this color is the color red." Now, if the question is supposedly to make sense, then she must have different concepts in her mind: RED and THIS COLOR. Of course, when she realizes that they both co-refer, they become linked or the perceptual concept is absorbed by the deferential one.

However, one could now reply on behalf of Tye and Ball: why could Mary not *reuse* the same demonstrative concept she had before to make sense of her question? Why do we have to assume that Mary has acquired a new phenomenal concept? The answer is that it is fallacious to assume that the demonstrative concepts that the

imprisoned Mary could have acquired are the same as those she acquires by staring at the ripe tomato. The first demonstrative concept looks like something: “oh, *this@* is what it is like to experience red,” pointing to a black-and-white brain image via a cerebroscope. However, a new token of the mental vehicle “ah, *this** is what it is like to experience red,” now made pointing to a ripe tomato outside the room, cannot express the same concept she had before. In a nutshell, if deferential concepts like ARTHRITIS are necessary to make sense of a *cogent disagreement*, different concepts are also necessary to make sense of a *non-cogent disagreement*. Mary can point to a ripe tomato she is staring at outside the room and, remembering the brain image she pointed to via the cerebroscope, still wonder whether “*this** is *this@*.”

The situation is analogous to the one described by Recanati (1993). Consider someone thinking “this ship” <pointing to one ship through one window> is not “this ship” <pointing to the same steamer but through different windows> (1993: 74). It is noteworthy that in-between the two demonstrations no new property about the ship has been discovered. The only thing that has changed is the demonstrative context. The only way of making sense of the individual’s thoughts as rational propositional attitudes is under the assumption that, in her mind, she had two different disconnected demonstrative concepts of the same object. Therefore, mental tokens of “this ship” or, *mutatis mutandis*, mental tokens of *this* made inside the black-and-white room and outside the room *cannot* be seen as tokens of the same conceptual type (that is why I write them as *this@* and *this**). Unsurprisingly, in 2012, Tye recognized that mental demonstratives, like all indexicals, are not real concepts. Instead, they are concept-templates, that is, templates to form concepts (2012: 51). What now we need to form genuine demonstrative concepts from concept-templates is the demonstrative context where the demonstrative is employed. And that is the difference between Mary’s employment of a demonstrative in her confinement and Mary’s employment of a demonstrative on her release. They cannot be the same concept.

The case of Marianna (Nida-Rümelin, 1996) substantiates my point. Like Mary, Marianna has exhaustive knowledge of color and color vision and is kept captive in a black-and-white room. Unlike Mary, however, when Marianna leaves the room, she is led into a multicolored vestibule in which there are various patches of different colors on the walls. At this point, she will have visual experiences that she has never had

before: of red, yellow, blue, and so forth. Now pointing to a red patch on the wall, she can wonder whether this* (a flexible demonstrative indicating the phenomenal redness) is this@ (the brain image of phenomenal redness she was indicating via the cerebroscope in her confinement).

3. Maria's nonconceptual representation of red

Thus, against Ball and Tye, I claim that new demonstrative concepts (rather than the reuse of old ones) are required to solve problems of cognitive significance. Nonetheless, I must agree with Ball and Tye when they claim that Mary's cognitive progress cannot be accounted for in terms of the acquisition of new phenomenal concepts. For one thing, if Mary has, in fact, an exhaustive understanding of color and color vision, this demonstrative concept this* carries no information about new properties Mary did not know before. The only thing that differentiates it from her old demonstrative concept is the context of demonstration.

However, according to the Tye/Ball account, color concepts such as RED are also deferential and that is why they both claim that Mary could already possess them in her confinement even if she does not possess "full understanding." On her release, Mary only enlarges her expertise about the color red and color vision of red by learning how to discriminate the different shades by sight. I have to agree with Tye that Burge's reasons for treating color concepts as not deferential are not very convincing. Burge says:

It is obvious that at a certain level the psychological abilities of the blind person and of the normally sighted person differ in the representation of the redness of a flower. They have different concepts of redness, inasmuch as some of the sighted person's concepts are associated with recognitional abilities through perception (2003: 413–414).

I do not think that recognition abilities play any role in the individuation of concepts. That represents an old verificationist tradition that Burge's own anti-individualism teaches us to forget. I have a singular concept of my girlfriend even though I cannot discriminate her from her twin sister. Moreover, as Tye correctly remarks, if a blind person and a normally sighted person differ in their representation of redness, how could they cogently agree or disagree about the color of a rose, for

example? The only acceptable reason to assume that color concepts are not deferential is the one I have already given in the last section: in the same way that we must account for a cogent agreement and disagreement, we must also account for a non-cogent disagreement in Fregean cases.

Now, the question is: why should we have to consider Mary's new ability to discriminate colors by sight as a conceptual improvement of her expertise about color and color vision, a full understanding of the concepts (Tye, 2009: 67), rather than a new nonconceptual representation of the colors in questions? More importantly still, should we consider Mary's new discriminative abilities as a sign that only on her release can Mary *master* the concept of red? (Alter, 2013).

To begin with, discriminative abilities are neither necessary nor sufficient conditions for concept possession (that is the lesson we learn from Burge's anti-individualism). They are not necessary just because we possess deferential concepts without the ability to discriminate their instances. Putnam possesses the concept BEECH without the ability to sensibly discriminate a beech tree from other trees in the forest. Furthermore, discriminative abilities are not sufficient for concept possession (Dretske, 1969). Halsey and Chapanis (1951) demonstrated that we are able to discriminate about a million shades of color, but are able to retain in memory only somewhere between eleven and sixteen. Thus, I can discriminate Red233 from Red234 by sight when I see them simultaneously side-by-side in my visual field, but I could not conceptualize the difference if I cannot retain their differences in memory.

Intuitively, Mary's new ability to discriminate colors by sight does not improve her "understanding" about colors. If Mary already has exhaustive knowledge and understanding of what it is like to experience red, how could her new abilities to discriminate red by sight improve her expertise about that concept? It makes no sense. I think that Ball and Tye are still somehow attached to PCS when they suggest that Mary's cognitive progress can be understood as an improvement of her old conceptual abilities. That is what Alter has recently suggested (2013).

We talk about conceptual improvement when the user discovers new properties about the object of the concept she did not know before. That is the famous case of Burge's arthritis. The patient complaining about having arthritis in the thigh learns from the doctor that arthritis is a disease of the joints. Yet, as Ball and Tye remark, Mary

makes no similar discovery: there is no new property of the color red she comes to know on her release. Thus, how could she improve her *understanding* of the concept RED? Even disagreeing with Burge's reasons quoted above, it is hard to follow Ball and Tye here against Burge when they claim the concept RED is deferential like the concept ARTHRITIS. In this regard, I am on Dretske's side when he claims that no one needs to be a dogfish to understand *all* about electromagnetic phenomena (Dretske, 1995: 82). One needs to be a dogfish to *feel* like a dogfish, to experience electromagnetic phenomena.

Here is where I appeal to the famous Kantian dictum: without concepts, sensible intuitions are *blind* in the sense that we do *not understand* what we are nonconceptually representing (what we are sensing). Yet, without sensible intuitions, concepts are *empty* in the sense that we do not have sensible intuitions (sensations) about the object the concept is about. Imprisoned Mary has an "empty" concept of what it is like to experience red, that is, a concept without the correspondent sensible intuition. What happens on her release? She does not improve her *understanding* of what it is like to experience red (how could she? She already had exhaustive knowledge of what it is like to see red). What she acquires is new nonconceptual representation of the phenomenal redness.

The case of Maria substantiates my point. Like Mary, Maria has an exhaustive understanding of what it is like to experience red when kept captive in a black-and-white room. Unlike Marianna, however, when Maria leaves the room, she is led into a room whose walls are all colored by a million shades of red. At this point, she is able to discriminate by sight almost all the million shades of red when they are located simultaneously side-by-side. However, Maria has the ability to retain in memory only between eleven and sixteen shades of red (Halsey and Chapanis, 1951). Thus, how could that newly acquired discriminative ability improve her previous understanding of what it is like to experience red?

4. Is Mary's cognitive progress a case of knowledge by acquaintance?

After rejecting the PCS, Tye (2009; 2012) concluded that Mary's discovery must be understood as a form of objectual knowledge: it is not a matter of having certain abilities (Nemirow 2006), or knowing certain truths. When Mary is released

from her confinement in the black-and-white room and she stares at the ripe tomato for the first time, she becomes *acquainted with* the color red represented by her new visual experience. Under the representationalist assumption that the phenomenal character of experience is nothing but the complex of properties represented by experience, by being acquainted with the color red Mary comes to learn or to know *a new thing*. On the basis of this “thing-knowledge,” she comes to know the phenomenal character of the experience of red. Mary’s cognitive discovery of what it is like to experience red is described by Tye as a mixture of objectual knowledge *of this* phenomenal redness that she comes to know by acquaintance and of propositional knowledge: Mary comes to know that *this* is what it is like to experience red. Tye thus rejects premise P2 of the knowledge argument in Nida-Rümelin’s reconstruction.

Tye’s source of inspiration (Tye 2009: 96) is Russell’s notion of knowledge by acquaintance (Russell, 1912). “Knowledge by acquaintance” is the technical term forged by Russell to describe the *sui generis* nondescriptive and nonrepresentational epistemic relation to an object that provides a direct awareness of it. The crucial point for him is that, unlike propositional attitudes, such an acquaintance-relation does not involve any description of the entities to which it gives the subject unmediated access. Acquaintance is a knowledge of things that is simpler than and logically independent of the knowledge of truths (1912: 46).

Russell’s view of knowledge by acquaintance in terms of being “directly aware” naturally suggests that he had some kind of perceptual relation in mind, and some philosophers have taken acquaintance that way. Still, Russell’s meaning is best interpreted, technically, as a perception-like relation rather than a perception in the strict sense, because, according to him, among other things we may know by acquaintance are our own selves, universals, and the data of introspection.

Yet, Tye’s notion of acquaintance deviates from Russell’s and from that of Neo-Russellians in some significant aspects. First, Tye rejects Russell’s original claim that we are acquainted with sense-data rather than with material objects (2009: 97). Second, Tye also rejects Russell’s thesis of revelation, the thesis that by acquaintance we have a complete and perfect knowledge of colors as they are in themselves (2009: 97). Third, he also rejects Russell’s principle of acquaintance, namely the idea that “every

proposition which we can understand must be composed wholly of constituents with which we are acquainted” (Russell, 1912: 5).

Tye also deviates from the neo-Russellians’ liberal views of acquaintance. According to those views, Russell’s perception-like model of epistemic contact is too demanding. The ability to have *de dicto* mental states about an object suffices for acquaintance with it (Jeshion, 2010). Moreover, it is also held that there can be indirect testimonial acquaintance. In contrast, Tye holds that the ability to have *de re* mental states about something is not demanding enough.

Furthermore, Tye also deviates from the commonsensical notion of acquaintance in at least one significant aspect. For him and for Russell, knowledge by acquaintance is always objectual and never propositional knowledge, as Tye himself recognizes: “there is a familiar sense of “know” under which I would not count as knowing [someone] if I did not know *any* truths about him” (2009: 96). It seems odd to claim that one knew, for example, Bertrand Russell, without knowing any truths about him, for example, that he was a great philosopher, was born in England, etc.

He provides us with one example of what he means:

My notion of acquaintance can be illustrated by example. I am acquainted with the color red, the city of Athens, the Apple computer at which I am now typing, the feeling of pain, the urge to gamble a large sum of money, and the feeling of jealousy. I have encountered (or am now encountering) all these things in experience (2009: 1001).

To be sure, Tye is right when he (2012), on the basis of Dretske (Dretske, 1969; 1999), claims in opposition to Crane (2012) that not all intentional acts are well modeled as propositional attitudes. To see things (Dretske’s non-cognitive seeing) is certainly not the same as to see facts. I can see a cat without seeing *that* she is a cat, and as Tye rightly emphasizes, “this is not a peculiarity of the verb ‘see’” (2012: 215). Our intentional relations of fearing, loving, desiring, wanting, thinking *things*, etc., are not elliptical forms of propositional attitudes: *fearing that, loving that, desiring that*, etc. Even when our attitudes towards objects depend on concepts, they may entail propositional attitudes, but are not elliptical forms of propositional attitudes. For example, to fear the Devil I need the concept DEVIL and I presuppose the belief that the Devil exists and the belief that he can harm me (propositional attitudes). Yet, my

fear of the Devil is not an elliptical form of any concrete fear *that*. Tye adds two further reasons. First, seeing things, loving things, etc., come in degrees, while seeing facts, loving facts, do not: it is all or nothing (217). Second, a predication such as “that is a color” presupposes a previous contact with the color and hence cannot be characterized as a propositional attitude (216).

To be sure, seeing things is not the same as or does not even entail seeing facts or knowing truths. Mary sees the red color but does not necessarily see or know that red is the color of the ripe tomato on a table, or even that red is a color. Tye’s entire case that Mary acquires an objectual knowledge by acquaintance is based on the assumption that Mary already knew *all facts* (propositional knowledge) about color and color vision [C1 and C3 in the Nida-Rümelin reconstruction (2002) of Jackson’s knowledge argument (1982)]. Thus, if Mary learns something physical on her release, that must be an objectual knowledge or “thing-knowledge.”

However, as we saw, Tye assumes that inside the black-and-white room Mary already possesses a demonstrative concept of what it is like to see red: “we can certainly imagine Mary in her room viewing the brain of someone else via a cerebroscope and using the demonstrative “this” with respect to the brain state” (2009: 127). That said, what prevents us from assuming that Mary already had an objectual knowledge of phenomenal redness? To be sure, Tye could probably protest by arguing that Mary is seeing the phenomenal redness *via a cerebroscope* while his notion of acquaintance requires *a direct encounter*. Even so, it is undeniable that Mary acquires a “thing-knowledge” rather than a propositional knowledge of the phenomenal redness. For one thing, however ingenious Mary is, by staring at the brain image via the cerebroscope for the first time, Mary could ignore all the facts or all the truths about the “thing” whose image she is contemplating via the cerebroscope. Thus, if I am right, the opposition between knowledge of facts and knowledge of things is irrelevant for Mary’s cognitive progress. We cannot say that on her release she comes to know the phenomenal redness “as a thing” because via the cerebroscope she already knew it “as a thing” before. Tye is on the right track, but, as I said before, barking up the wrong tree. What is crucial in the account for Mary’s cognitive progress is not the Russellian opposition between knowing things and knowing truths, but the Kantian opposition between conceptual and nonconceptual representations of the same thing.

On a closer look, Jackson's (1982) emphasis is not on the fact that imprisoned Mary already knows *all facts*, but rather that she possesses all *conceptual* physical information about color and color vision. That is why Jackson compares Mary's predicament with Fred's opposite condition. While Mary is an ingenious neuroscientist who had exhaustive physical information about color and color vision, but has never seen the color red and hence does not know what it is like to experience red, let us assume that Fred is an autistic savant who makes any discriminations of shades of red that anyone has ever made:

Suppose that in an experiment to catalog this variation Fred is discovered. Fred has better color vision than anyone else on record; he makes every discrimination that anyone has ever made, and moreover he makes one that we cannot even begin to make. Show him a batch of ripe tomatoes and he sorts them into two roughly equal groups and does so with complete consistency. That is, if you blindfold him, shuffle the tomatoes up, and then remove the blindfold and ask him to sort them out again, he sorts them into exactly the same two groups. (...)

What kind of experience does Fred have when he sees red₁ and red₂? What is the new color or colors like? We would dearly like to know but do not; *and it seems that no amount of physical information about Fred's brain and optical system tells us*. We find out perhaps that Fred's cones respond differentially to certain light waves in the red section of the spectrum that make no difference to ours (or perhaps he has an extra cone) and that this leads in Fred to a wider range of those brain states responsible for visual discriminatory behavior. But none of this tells us what we really want to know about his color experience. There is something about it we don't know. But we know, we may suppose, everything about Fred's body, his behavior and dispositions to behavior and about his internal physiology, and everything about his history and relation to others that can be given in physical accounts of persons. We have all the physical information. Therefore, knowing all this is *not* knowing everything about Fred. It follows that Physicalism leaves something out. We have all the physical information. Therefore, knowing all this is *not* knowing everything about Fred. It follows that Physicalism leaves something out (1982: 127-28. Emphasis added).

Omniscient Mary possesses all possible physical information but still does not know what it is like to experience red. In contrast, savant Fred is capable of making any discrimination anyone has ever made, but does not understand what he represents. According to Jackson, what they both have in common is the following: we cannot account for Fred's ability and Mary's newly acquired ability to discriminate the color

red from the rest, on the basis of all possible physical information anyone ever could possess. Thus, we must rephrase Jackson's argument in the following terms:

Premise P1': Mary has complete physical information about human color vision before her release.

Consequence C1': Therefore, Mary knows everything about human color vision before her release.

Premise P2': There is some new information about human color vision that Mary could not have acquired before her release.

Consequence C2': Therefore (from P2), there is information about human color vision that Mary could not know before her release.

Consequence C3': Therefore (from C1 and C2), there is non-physical information about human color vision.

I now want to suggest that the key opposition at stake here is the Kantian opposition between nonconceptual and conceptual representations, rather than the Russellian opposition between objectual knowledge and propositional knowledge. In her imprisonment, Mary had an *empty* physical concept of what it is like to experience red in the relevant sense that she had no sensible intuition of the phenomenal redness her concept was about. On her release, what she acquires is a nonconceptual representation of the color red. *Thus, Mary's cognitive progress is not conceptual at all.* That is why PCS is doomed to fail. What Mary acquires is what Fred always had: the ability to represent the phenomenal redness in a fine-grained way, by extracting information coded in analog form. Information is coded in analog form when it is conveyed by means of a signal that carries additional information about the represented object (Dretske, 1981: 135ff). The visual image of a ripe tomato does not merely carry information about its peculiar shade of red, but also information about its bulgy shape, etc. Therefore, while Tye accepts the first premise of the knowledge argument on the Nida-Rümelin reconstruction **P1**, I reject the first premise of the same argument in my own reconstruction **P1'**. However ingenious Mary is, she could not possess physical information in her confinement about the phenomenal redness coded in analog form.

To substantiate the point, let us examine the case of Marie. Like Mary, Marie is kept captive in a black-and-white room. Unlike Marianna, however, when Marie leaves the room, she is led into a monochrome room whose walls are all colored by the same shade of red. At this point, she will have visual experiences that she has never had before. To be sure, Marie can acquire a new demonstrative concept of the color she is staring at and wonder which color is *this*, or whether *this* color is red, etc. Still, Marie has no idea of what color she is staring at, she also has only a *blind* sensible representation of the color red, that is, a representation without any *understanding*. To understand which color she is contemplating on the walls, Marie needs to apply some concept of the color red to what sensibly appears to her on the wall of the monochromatic room. Yet even without understanding that she is seeing the color red and feeling what it is like to see red, it is undeniable that Marie makes a cognitive progress when she leaves Jackson's room and enters the monochromatic room.

5. Conclusion

A further question that Tye faces is whether this encounter in experience qualifies as knowledge in the ordinary sense of the word as he claims. To be sure, the verbs "to see" and "to perceive" are factive verbs. Moreover, Tye emphatically distinguishes *knowing* the phenomenal character (by acquaintance) from *knowing* what it is like to experience red (propositional knowledge). As we saw, knowing what it is like to experience red is described by him as a mixture of objectual knowledge *of this* phenomenal redness that she comes to know by acquaintance and propositional knowledge: that this is what it is like to experience red. I do agree that knowing what it is like is a sort of propositional knowledge. Still, Tye repeatedly claims that we know things by acquaintance in a "perfectly ordinary" sense of "know" (2009: 95, 98, 131). To support his claim he argues such consciousness is epistemically enabling "via consciousness of a thing, one is put in a position to know facts about the thing. (...) It is simply incoherent to suppose that one might be genuinely (non-inferentially) conscious of an entity and yet not know it *at all*" (98).

Now I want to suggest that such a direct encounter in experience is a necessary rather than a *sufficient* condition for *phenomenal knowledge*. Phenomenal knowledge is propositional knowledge that requires cooperation of conceptual and nonconceptual

representation of the same things. Recall Fred's case. Unlike Mary, he is a savant that makes any discrimination that anyone has ever made, and moreover, he makes one that we cannot even begin to make (Jackson, 1982: 127). Nonetheless, because he has no conceptual resources to characterize the shade of colors he is able to discriminate, when he stares at a red patch for the first time, he has only a *blind* sensible representation of the color red. In any ordinary sense of knowledge, he does not *know* the phenomenal character of the experience red because, at that moment, he does not have the faintest idea of what shade he is seeing. He has what Kant calls *Kenntnis* rather than *Erkenntnis* of what he is seeing. Phenomenal knowledge requires understanding of what we are sensibly representing.

In contrast, while imprisoned in the black-and-white room, Mary may have had exhaustive scientific knowledge of color and color vision, but she also did not possess phenomenal knowledge (*Erkenntnis*) of what is like to experience of red. For one thing, she had an *empty* concept of that phenomenal character in the Kantian sense, that is, a concept of something for which the subject lacks a sensible representation. Of course, however empty, an empty concept is still a concept. She has only an empty concept of phenomenal redness on the basis of which she can still cogently agree and disagree with us about the color of ripe tomatoes, etc.

To be sure, one may have scientific knowledge of several things for which we do not have the corresponding sensible intuition. That is what the most significant part of our scientific knowledge is based on, what Kant calls "Analogies of experience." Still, phenomenal knowledge requires both conceptual representations and sensible representations. That is what Kant had in mind when he famously said that, "thoughts without intuitions are empty, intuitions without concepts are blind" (Kant, 1956: A51/B75). In Kantian terms, omniscient Maria lacks phenomenal knowledge of phenomenal redness because she lacks *blind* representations of the color red. In contrast, savant Fred lacks phenomenal knowledge of phenomenal redness in her fine-grained experience because he lacks the concepts for each shade of red he can visually discriminate.

What I now want to suggest in this last section is that the phenomenal character is just *our human way of representing the only existent physical properties by senses*. That is what Kant calls appearance (*Erscheinung*) in opposition to the thing in itself.

Appearance is not an extra-physical property over and above the noumenal properties³. Instead, it is the way noumenal properties appear to our senses or the human subjective way of representing them. That is what I want to call here *Kantian property representationalism*. Confined in her back-and-white room, Mary can only think of colors in the noumenal way, namely, as properties in themselves from her viewpoint of an expert that has exhaustive scientific knowledge, just like a God. Therefore, she has no phenomenal knowledge of what it is like to experience red. Things change dramatically on her release. She learns what it is like to experience red, when she starts to represent nonconceptually with her sight the same noumenal property of light-reflectance that she conceptually represented before in her confinement.

Now, let us see whether this account stands up to the usual charges. If there is any doubt that there are phenomenal concepts in the required sense, that is, concepts that Mary could not possess in her confinement, there is no doubt that there are nonconceptual representations of the color red by sight (Kantian sensible intuitions) that Mary could only acquire on her release, by contemplating a red patch for the first time. In this regard, Ball and Tye's objections to PCS do not apply to my proposal.

Second, could omniscient Mary not infer *a priori* her new nonconceptual representation from her exhaustive knowledge of color and color vision? The answer is no: Mary's new nonconceptual representation is empirical, it depends on Mary's experience of red. Third, how do we know that this nonconceptual representation does not refer to some appearance property over and above the physical property of light-reflectance? For one thing, Mary's newly acquired nonconceptual representation is a sensible intuition of the property for which she already had a physical concept.

Chalmers's dilemma in his "master argument" presents a deeper challenge (2006). However, I think that my account, inspired by Kant, provides an answer. We can *physically* explain the nature of Mary's nonconceptual subjective representation of the color red as the flow of information coded in analog form (Dretske, 1981). However ingenious Mary is, that is an analog code of information that she could not possess while imprisoned because it crucially depends on having the visual experience of the color red. Still, this nonconceptual representation can also account both for Mary's cognitive progress and for the subjective character of her new experience. Without such

³ Here I am assuming the deflationary one-world-two-perspectives reading of Kant's Transcendental Idealism. For obvious reasons of space, I cannot defend such reading here.

nonconceptual representation by sight of the color red, Mary's previous physical concepts about the phenomenal character of experiencing red is *empty* in the Kantian sense that the subject has no sensible intuitions of the object the concept is about.

Now the last objection is this. If Mary could already have objectual knowledge of the phenomenal redness via a cerebroscope in the black-and-white room, why could she not already have a sensible intuition in that room? The answer is obvious. Via a cerebroscope in the Jackson's room, Mary is not seeing the color red, but only a black-and-white image of the brain of someone else. Her mental state is not carrying any information coded in analog form from the red color and from the phenomenal redness.

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