

# What Kant Has To Teach Us About What Mary Learns

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## 0. Introduction

As Frank Jackson's famous philosophical tale tells it, Mary has been raised in a black-and-white room, which she finally leaves, and, without the mediation of black-and-white monitors, sees something red for the first time, say, a ripe tomato or a ripe apple. Mary is also a brilliant neuroscientist who has exhaustive knowledge about all the physical facts concerning color and color vision. Now, according to our intuitions, she makes some cognitive progress when she sees the ripe tomato for the first time. The question is how to account for this cognitive progress. According to Jackson's anti-physicalism, the assumption that Mary already has a complete set of all physical facts about color and color vision forces the physicalist to confront a problem. If Mary already knows all the physical facts about color and color vision and further, if she learns a new fact, the imposing anti-physicalist conclusion is that Mary learns at least one non-physical fact about color and color vision.<sup>1</sup>

There are two classical physicalist reactions to the knowledge argument. The first is the rejection of the intuitive assumption that after Mary is let out, she learns nothing. There is no ontological chasm between physical and phenomenal properties because Mary has made no genuine discovery or cognitive progress in the first place. As Dretske puts it, no one needs to be a dogfish in order to know what is like to be one (1995: 82). Thus, the assumption here is that Mary could deduce, a priori, what it is like to experience red from her physical knowledge if it, without ever experiencing red in her life. This reaction to the knowledge argument usually comes from what Chalmers calls "type-A materialism."<sup>2</sup> A second reaction assumes that Mary makes cognitive progress after she leaves her confinement. This reaction is what Chalmers calls type-B materialism.<sup>3</sup> While recognizing the importance of the type-A materialism in the literature, in this particular paper I take the

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<sup>1</sup> See (Jackson 1982: 130).

<sup>2</sup> See (Chalmers 2006/2010: 111). Exponents of this kind of materialism are (Dennett 1991), (Dretske 1995), (Harman 1990), (Rey 1995), and (Ryle 1949).

<sup>3</sup> See (Chalmers 2006/2010: 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).

type-B materialism for granted as the most intuitive view. Over and above that, I want to provide an alternative account for Mary's cognitive progress.

By far, the most popular version of type-B materialism assumes that on her release 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 Daniel Stoljar, we can call this the PCS.<sup>4</sup> Mary's cognitive progress is just the discovery that Hesperus is Phosphorus or that Cicero is Tully. To put in Tye's recent terms, Mary's progress is not a "possibility-eliminating discovery", that is:

A piece of knowledge that shrinks the set of worlds that are consistent with what we know. It is not a possibility-eliminating discovery that Hesperus is Phosphorus, for that is true just at the worlds at which Hesperus is Hesperus, that is, at all worlds. (Tye 2012: 125).

However, PCS has faced serious objections. Ball and Tye have convincingly argued that there are no phenomenal concepts with the special nature required by the PCS.<sup>5</sup> To be sure, there are phenomenal concepts in the trivial sense of the existence of conceptual representations employed introspectively to pick out the phenomenal character of experience. Still, these newly acquired phenomenal concepts do not carry any new information that Mary had not before in her imprisonment that could account for Mary cognitive progress. In contrast, according to Chalmers's "master argument," the PCS faces a dilemma: either the phenomenal concepts are not physically explicable or if they are, they cannot explain Mary's cognitive progress.<sup>6</sup>

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<sup>4</sup> See (Stoljar 2005). As (Chalmers 2006) puts it, 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 (Levin 2006) endorse similar accounts.

By 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) claim, 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. See (Nagel 1974), (Sturgeon 1994), (Hill 1997), (Rey 1998) and (Levine 2001).

<sup>5</sup> See (Ball 2009) and (Tye 2009).

<sup>6</sup> See (Chalmers 2006: 9).

Nevertheless, as Tye puts it: “Surely if anyone ever made a significant discovery, Mary does here” (Tye 2009: 55). Correspondingly, this essay addresses the following question: assuming that Mary has made a cognitive progress on her release and that this progress cannot be accounted for by assuming her acquisition of new phenomenal concepts, how can we explain Mary’s cognitive improvement? My aim to defend the claim that Mary’s cognitive improvement *is founded at the nonconceptual level*. The defense of my claim is based on Kant’s distinction between nonconceptual (sensible intuition) and conceptual representations. Imprisoned Mary has the physical concept RED. What she lacks is the nonconceptual representation of the color red. Mary’s predicament can be couched in following Kantian terms: without sensible intuition of the color red, Mary’s physical concepts of the color red and of the phenomenal character of the experience of red are mere empty concepts. In Kantian nonconceptualist framework, Mary’s cognitive progress must be accounted for in terms of what Kant calls *Erkenntnis*: the recognition that some object or property, nonconceptually represented by the senses, fall under a concept. On her release, firstly Mary recognizes (by means of her old concept RED) that red is the color her vision is now nonconceptually representing, and secondly, she recognizes by means of the same concept RED) that phenomenal red is the phenomenal character of the visual experience that she is now undergoing and that is introspectively attending to.

The essay is structured as follows. After this brief introduction, in the first section, I present the rationale for PCS and reject Ball and Tye’s recent view that there are no phenomenal concepts. In the second and final section, I present and defend a Kantian solution to the puzzle of Mary.

## **1. Are There Phenomenal Concepts?**

The simplest way of regimenting the knowledge argument so that it fits nicely with Jackson’s original tale, making it easier to understand the recent criticism of the PCS, has been suggested by Tye as follows:<sup>7</sup>

1. In her room, Mary knows all the physical facts pertaining to color vision.
2. After Mary leaves her room and she sees something red, she comes to know something new (something she cannot know in her room).
3. Therefore, after Mary leaves her room, she comes to know a non-physical fact.

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<sup>7</sup> (Tye 2009: 123-124).

4. Therefore, Physicalism is false.

On occasion, the knowledge argument is reconstructed so that it takes the form of a priori reasoning:<sup>8</sup>

5. Mary in her room knows P and she is an ideal a priori reasoner, but still she isn't in a position to know Q.
6. If 5. is true, then Q does not follow a priori from P.
7. If  $P \rightarrow Q$  is not a priori, then physicalism is false.
8. Therefore, Physicalism is false.

Physicalists must deny step 4. But, as we saw, there are two classical physicalist reactions to the knowledge argument. The first reaction is rejecting the key assumption that Mary makes a cognitive discovery by rejecting step 2. This is the claim that Dretske among others support. There is no ontological chasm between physical and phenomenal properties because on her release Mary makes no cognitive progress about what it is like to experience in the first place. This reaction to the knowledge argument usually comes from what Chalmers calls "type-A materialism."

A second response assumes that it is a fact that Mary makes cognitive progress after she has finally sees a ripe tomato. This second reaction to the knowledge argument is what Chalmers calls "type-B materialism." Type-B materialists deny the conclusion 4. of the argument: from 1. and 2.), it does not follow there are non-physical facts about phenomenal red. Here, phenomenal concepts are brought into the picture. By far the most popular version of this type-B materialism assumes that Mary's cognitive progress can be accounted for by assuming that she acquires new special phenomenal concepts of what is like to experience red that she was already aware of by means of a physical concept.

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. The rationale that supports PCS assumes that it accomplishes two tasks. It is supposed to explain the existence of an epistemic gap between physical and phenomenal properties but at the same time, it explains why there is no ontological gap between those same properties so that we are entitled to assume that phenomenal and physical properties are identical. In the particular case of Mary, phenomenal concepts are supposed to explain Mary's cognitive progress, without assuming an ontological chasm

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<sup>8</sup> See (Chalmers 2006/2010), as quoted in (Tye 2009: 124).

between physical and phenomenal properties or facts, that is, assuming that what she now thinks by means of a new phenomenal concept is the same physical property of fact she already knew in her black-and-white room by means of an old physical concept.

The PCS is supposed to accomplish two tasks.

The first is to make sense of the existence of an *epistemic* gap between physical and phenomenal properties and, therefore, Mary's cognitive conceptual progress. To account for the epistemic gap is to explain why we cannot derive a priori phenomenal truths from physical and indexical truths. This inference must be a posteriori: that is, based on experience of red. By attending to the subjective character of her experience of red for the first time, Mary acquires a new phenomenal concept of what it is like to experience red. This is how she finally comes to know what it is like to experience red.

And the second task is to close the putative *ontological* gap between those same properties is ruled out. Since "what it is like to experience red" is a physical property that is represented by a newly acquired phenomenal concept, Mary's cognitive progress does not entail an ontological chasm between physical and phenomenal properties. In a nutshell, according to the PCS, we can account for Mary's new knowledge without assuming that what she now thinks by means of a new phenomenal concept PHENOMENAL RED is not the same physical property that she already knew when she was imprisoned.

Recently, the PCS has become under attack. Ball and Tye argue that there are no phenomenal concepts with the special nature required by the PCS.<sup>9</sup> To be sure, there are phenomenal concepts in the trivial sense of the existence of conceptual representations employed introspectively to pick out the phenomenal 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," the PCS faces a dilemma: either the phenomenal concepts are not physically explicable or if they are, they cannot explain Mary's cognitive progress.<sup>10</sup>

This paper focuses on Ball and Tye's objections. 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. To start with, assuming that Mary has exhaustive knowledge about color and color vision,

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<sup>9</sup> See (Ball 2009) and (Tye 2009).

<sup>10</sup> See (Chalmers 2006: 9).

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, then the only way that she can associate *new* properties with the experience of red is if these properties are non-physical.<sup>11</sup>

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, “[M]aybe *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). Ball and Tye’s 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,<sup>12</sup> 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, deferential concepts are required to account for *cogent agreement and disagreement* because the possibility of this cogent agreement and disagreement requires a shared concept.<sup>13</sup> Unsurprisingly, Tye’s main reasons for construing color concepts as deferential are the reasonable assumption that people who have never undergone a relevant experience can still cogently agree and disagree about

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<sup>11</sup> Tye 2009: 128.

<sup>12</sup> In Burge’s words: “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. But there remains a sense in which the two can share a thought that the flower is red. In this case, there is a concept of red that does not depend on a visual phenomenal character at all, shareable by different individuals. The relevant shared psychological abilities are associated with a complex of shared background information about red things. . . . But the blind person lacks the sighted person’s perceptual ability to recognize red things. So, there remains an intentional content, or better an array of intentional contents, that they do not share” (Hahn and Ramberg 2003: 413–414).

<sup>13</sup> See (Burge 1979).

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 fire hydrant, and so on.<sup>14</sup>

Ball makes these objections explicit through a *reductio*:<sup>15</sup>

1. Mary's original concept of RED lacks some feature that Mary's phenomenal concept RED<sub>p</sub> 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<sub>p</sub> 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<sub>p</sub> 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<sub>p</sub> are both tokens. This is obviously absurd.

However, demonstrative concepts are never deferential. Could phenomenal concepts not be demonstrative concepts that utilize physical sortals? According to Tye and Ball, Mary could also possess this kind of demonstrative concept in her confinement.<sup>16</sup> Under the qualia realist assumption that the phenomenal character of the experience is an intrinsic property of experience or of the brain, Mary could possess such a demonstrative concept of what it is like to experience red by pointing to a brain image via a cerebroscope. This means not only that she already possessed a demonstrative concept, but also that this concept is not phenomenal in the relevant sense of being a concept whose acquisition hinges crucially on the subject having the relevant experience.

Ball's and Tye's case against the existence of a phenomenal concept in the relevant sense required for B-materialists is far from convincing, though. 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

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<sup>14</sup> (Tye 2009: 66).

<sup>15</sup> (Ball 2009: 16).

<sup>16</sup>See (Tye 2003, 2009), and (Ball 2009).

that we must account for *non-cogent* disagreement is a reason to assume the existence of non-deferential concepts. Singular concepts like the concept HESPERUS and the concept PHOSPHORUS are certainly not deferential. When I claim that Venus is beautiful, thinking of it under the concept HESPERUS, and you deny this, thinking of 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.<sup>17</sup>

Ball's and Tye's position becomes even more unsustainable when we consider that Mary's concept to pick out the phenomenal redness must be a demonstrative one. To be sure, by means of a cerebroscope, Mary can acquire a demonstrative concept of the phenomenal redness. Still, it is obvious that such demonstrative concept is quite different from the one she acquires after her release: "Oh, *this* is what it is like to experience red," pointing to a ripe tomato or to a hydrant. The first demonstrative concept looks like something this: "Oh, *this* is what it is like to experience red," pointing to a black-and-white brain image via a cerebroscope. Therefore, a new token of the mental vehicle, "Ah, this is what it is like to experience red," made while pointing to a ripe tomato outside the room, cannot express the same demonstrative concept she had before. That is why Mary can point to a ripe tomato or to a ripe apple that she is staring at outside the room and, remembering the brain image she pointed to via the cerebroscope, still wonder meaningfully whether "*this is that.*"

The situation is analogous to the one described by Recanati.<sup>18</sup> 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. It is noteworthy that between the two demonstrations, no new property regarding 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

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<sup>17</sup>Therefore, I cannot agree with Ball when he says it is "invalid" to assume that Putnam's BEECH and BEECHp may be tokens of different mental types. 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 botanical books and the other he acquires by contemplating the tree. See (Ball 2009: 16).

<sup>18</sup> (Recanati 1993: 74).

room, *cannot* be seen as tokens of the same conceptual type (that is why I write them with superscripts, *this@* and *this\**).

The case of Marianna substantiates my point.<sup>19</sup> Like Mary, Marianna has exhaustive knowledge of color and color vision and was 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 has no hint to which color is which. 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 meaningfully wonder whether *this\** (the brain image of phenomenal redness she was indicating via the cerebroscope in her confinement) is *this@* (the color she sees in front of her).

In a nutshell, if deferential concepts like ARTHRITIS are necessary to make sense of a *cogent disagreement*, non-deferential concepts like THIS RED are also necessary to make sense of a *non-cogent disagreement*. The moral is that phenomenal concepts are not responsible for the enlargement of Mary's knowledge about the phenomenal character of her experience of red. They are necessary only to solve problems of cognitive significance.

## 2. The Missing Cognition of Phenomenal Red

So, against Ball and Tye, I claim that new phenomenal concepts (rather than the reuse of old ones) are indeed required to solve problems of cognitive significance. Still, 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 *exhaustive* knowledge of the color red and of the phenomenal redness, how could this newly acquired demonstrative concept THIS RED (pointing to a ripe tomato) *enlarge* her conceptual expertise (her comprehension) about the color red and the phenomenal redness? Even if Mary does acquire a new phenomenal concept, it is not at the conceptual level of thinking that we can make sense of her cognitive improvement.

In his seminal paper, Jackson opposes Mary's predicament with Fred's opposed condition. While Mary is an ingenious neuroscientist who has exhaustive knowledge about color and color vision, but had never seen the color red and hence did not know what it was like to see red, Fred is someone that has color vision better than anyone else:

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<sup>19</sup> See (Nida-Rümelin 2015, 1996).

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. (1982: 127).

Now let us suppose that despite his extraordinary color vision, Fred also has a significant cognitive deficit; his long-term memory systems for colors do not work properly and hence, he can never conceptualize even the color red that he can easily discriminate from other colors better than anyone else. Though he tries, he can never retain the memory of the most common shade of red, say for example, Ferrari red. Thus, it is worth comparing Mary's predicament with Fred's predicament. Omniscient Mary possesses exhaustive knowledge about the color red and the phenomenal redness by means of her color concept but not the ability to discriminate the color red from others. In contrast, Fred is better than anyone else at discriminating the color red from others but does not possess the understanding that red is the color he is seeing and that the subjective character of the visual experience he is undergoing is what it is like to see red.<sup>20</sup>

The opposition between Mary's and Fred's predicaments can be captured by the famous Kantian slogan: "thoughts [concepts] without content [intuitions] are empty, intuitions without concepts are blind" (A51/B75). Fred, with his fantastic color vision but without the concept RED, has only *blind* intuitions of red, that is, nonconceptual representations of the color red that he cannot understand by means of the concept RED.<sup>21</sup> Thus, Fred can

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<sup>20</sup> Even though I am not arguing in favor of nonconceptualism, but rather taking it for granted, I think that thought-experiments are enough to establish nonconceptualism. If Fred's story is conceivable and further, that is metaphysical possible, it must also be possible to be able to discriminate the color red from others without being able to possess the minimal comprehension of what he is discriminating by means. The capacity to discriminate the color red from others is prior and quite independent from the capacity to understand what one discriminates.

<sup>21</sup> By *nonconceptual representation of the color red* I understand here the ability to discriminate the color red from the other colors. Kant was certainly the first who has connected the nonconceptual representation with the ability to discriminate: "I would go still further and say: it is one thing to discriminate [unterscheiden] things from each other, and quite another thing to recognize the difference between them [den Unterschied der Dinge zu erkennen]. The latter is only possible by means of judgments and cannot occur in the case of animals, who are not endowed with reason. The following division may be of great use. Differentiating logically means recognizing that [erkennen dass] a thing A is not B; it is always a negative judgment. Physically discriminating [physisch unterscheiden] means being driving to different actions by different representations. The dog differentiates the roast from the loaf, and it does so because the way in which it is affected by the roast is different from the way in which it

discriminate the color red from other colors better than anyone else, even though he cannot verbally or mentally articulate the sensible representation of red in combination with other concepts he might possess. In contrast, imprisoned Mary has only an *empty* concept of RED and of what it is like to see red, without empirical intuition.

Here, some explanations are in order. First, to state that Fred's sensible intuition of red without the concept of RED is *blind* is not to say that without the concept RED, Fred's sensible intuition of red is a mere manifold of sensations devoid of reference.<sup>22</sup> Instead, the Kantian slogan states only that without the concept RED, Fred cannot *understand* that it is red that his intuition is representing and that the subjective character of the visual experience he is undergoing is what it is like to see red. Likewise, to state that without the sensible intuition of red, the concept RED is *empty* is not to say that with the sensible intuition of red, we do not understand the concept RED. In opposition to what Strawson calls the Kantian principle of significance, an empty concept is not a concept without meaning<sup>23</sup> but rather, a concept without sensible application.

Now we can answer the question about what Mary learns. In the *Critique* Kant defines sensation (*Empfindung, sensatio*) as the subjective character of an objective perception or intuition of something:

The effect of an object on the capacity for representation, insofar as we are affected by it, is sensation. That intuition is related to the object through sensation is called empirical (A19-20/B34).

A perception [*Wahrnehmung*] that relates solely to a subject as a modification of its state is sensation (*sensatio*) (A320/B376-7).

On her release, Mary acquires a nonconceptual sensible representation of the color red whose subjective character is what it is like to see red (*sensatio*). That sensible intuition is the only thing that ingenious Mary could not know or think a priori in her confinement. Thus, Mary could never deduce a priori seeing red from her concept RED, however exhaustive her knowledge of that concept. Likewise, let us assume now that one day Fred is

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is affected by the loaf (for different things cause different sensations)" (FSS., § 6, AA, 2: 60; 104).

<sup>22</sup>This slogan has too often been misunderstood as if Kant was stating that without concepts, intuitions are blind in the sense of representing nothing: but as I said in the introduction, I am not engaged in this historical debate. This essay is systematic rather than historico-philosophical.

<sup>23</sup>See Strawson 1966: 33-35.

miraculously cured from his disease and begins to conceptualize the colors he sees better than anyone else. Undoubtedly, Fred makes quite significant cognitive progress. Now, we face the same question as before: What does it mean to say that Fred *learns* something? The answer is simple. He acquires a *conceptual comprehension* that red is the color of the things he was seeing and at the same time, that the subjective character of the experience he was undergoing is what it is like to see red. Thus, to a first approximation, Mary's cognitive improvement depends on her acquisition of a nonconceptual representation of the color red whose subjective character (*sensatio*, *Empfindung*) is what it is like to see red.

Now I can see someone still wondering why Mary's newly acquired phenomenal concepts cannot account for her cognitive progress. A few paragraphs above, I argued that Mary's cognitive progress cannot be accounted for at the conceptual level because Mary has exhaustive knowledge about the color red and of what it is like to see red. If she learns something on her release, that cannot be accounted for in conceptual terms. However, there are additional reasons for not accounting for Mary's cognitive improvement by means of the acquisition of a new phenomenal concept. One reason is this. Those concepts rely on the discriminatory abilities but not the other way around. I can only acquire the phenomenal concept of what it is like to experience red after I learn how to discriminate the color red from others, but not the other way around. As Fred's predicament clearly shows, I can discriminate the color red from others without understanding what I am representing by the sensible intuition of red and without understanding that the subjective character of my experience is what it is like to see red. As Kant puts it, "[A]ppearances would nonetheless offer objects to our intuition, *for intuition by no means requires the function of thinking*" (A90-1/B122-3). Thus, what is improving Mary's condition is not the acquisition of a new phenomenal concept of RED or the improvement of her expertise about her old physical concept of RED. Rather, what is improving Mary's condition is her newly acquired ability to see red things whose subjective character is what it is like to see red.

However, since Kantian sensible intuition is cognitively *blind* without concepts, the simple intuition of the color red is *not enough* per se to account for Mary's cognitive progress. In other words, if Mary in fact learns something, the simple ability to represent a red thing by vision is not sufficient to account alone for her *cognitive* improvement. For one thing, by the same token that she acquires the ability of discriminating red from other colors, she also acquires the ability to discriminate a thousand shades of red that have no cognitive impact in her life because she cannot retain them in her memory and hence, cannot conceptualize those shades.

Now the key to understanding what causes Mary's cognitive improvement relies on Kant's distinction between *Kenntnis* (objectual knowledge) *Erkenntnis* (recognitional propositional knowledge).<sup>24</sup> In his typology of representations in the *Critique*, Kant defines cognition (*cognitio*, *Erkenntnis*) as "objective perception" as follows:

The genus is representation (*representatio*) in general. Under it stand representations with consciousness (*perceptio*). A perception [*Wahrnehmung*], that relates solely to a subject as a modification of its state, is sensation (*sensatio*). An objective perception is cognition (*cognitio*). This is either intuition or concept (*intuitus vel conceptus*). The first relates immediately to the object and is singular; the second is mediate, conveyed by a mark, which can be common to many things. A concept is either an empirical or a pure concept, and the pure concept, insofar as it has its origin solely in the understanding (not in a pure image of sensibility), is called *notio*. A concept made up of notions, which goes beyond the possibility of experience, is an idea or a concept of reason (A320/B376–7).

In *Bloomberg Logic*, we find a slightly different typology:

We now want briefly to indicate the degrees of the representations of all cognitions.

First degree: "in general, to represent something [is the most universal and most usual[,] also the easiest cognition of a thing. But representing something, where consciousness is combined with it, is distinct from simply representing, where we are frequently not even conscious to what these representations are actually related."

2nd degree, namely, to be acquainted [*kennen*], "then I am acquainted with what I represent."

3rd degree: "the following degree is to understand something, i.e., to be acquainted with something through the understanding, or to be acquainted with something distinctly through a distinct concept" (BL., fifth section, § 139, AA. 24: 132–133; pp. 103–104).

Here, "cognition" does not mean only objective perception (*Kenntnis*). Rather, it is a general name for all kinds of propositional knowledge (*Erkenntnis*) that depends both on the nonconceptual sensible representation and on the conceptual representation of the same the object.

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<sup>24</sup> As we know, traditional translators of Kant have overlooked that crucial distinction. The best example is Smith's influential translation of the first *Critique*, which systematically elides the distinction between *knowledge* and *cognition* by translating *Erkenntnis* as "knowledge." See (Kemp Smith 2003).

In the *Jäsche Logic* we find a similar typology:

The first degree of cognition is: to represent something; The second: to represent something with consciousness, or to perceive (*percipere*); The third: to be acquainted with something (*kennen; noscere*), or to represent something in comparison with other things, both as to sameness (*Einerleiheit*) and as to difference; The fourth: to be acquainted with (*kennen*) something with consciousness, i.e., to *cognize* it (*erkennen; cognoscere*). Animals are acquainted with (*kennen*) objects too, but they do not *cognize* (*erkennen*) them (LOG, VIII, AA, 9: 65, 569).

The verb “to cognize” acquires the more precise meaning of *kennen*, that is, *to be acquainted with* something with understanding. It is in this technical sense where cognition must be distinguished from both *Erkenntnis* (recognitional knowledge) and thinking (*Denken*). Thinking (*Denken*) is nothing but the ability to judge by means of concepts, In Kant’s words:

We cannot *think* [*denken*] any object except through categories; we cannot *cognize* [*erkennen*] any object that is thought except through intuitions that correspond to those concepts. (B166, italics in the original)

So that one may not prematurely take issue with the worrisome and disadvantageous consequences of this proposition, I will only mention that the categories are not restricted in *thinking* [*denken*] by the conditions of our sensible intuition, but have an unbounded field, and only the *cognition* [*erkennen*] of objects that we think, the determination of the object, requires intuition; in the absence of the latter, the thought of the object can still have its true and useful consequences for the *use* of the subject’s *reason*, which, however, cannot be expounded here, for it is not always directed to the determination of the object, thus to cognition, but rather also to that of the subject and its willing. (B166, note, italics in the original)

Let us return to Mary’s predicament. While imprisoned, Mary has exhaustive knowledge about the color red and about what it is like to experience red. However, the conditions *for exhaustively knowledge* of all about the color red and what it is like to see red is not enough *for recognizing* the color red and at the same time what it is like to see red. According to Kant’s levels of cognition, we have the following.<sup>25</sup> On her release, she acquires the

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<sup>25</sup> We do not need to assume that such levels correspond to different temporal phases.

first degree of cognition: a non-conscious sensible representation of the color red (*Kenntnis*). Her next acquisition is the *perception*, that is, the conscious representation of the color red and at the same time, the subjective character of what it is like to see red. Her third acquisition is the ability to discriminate red from the other colors. Her fourth and last acquisition is the ability to recognize (*Erkennen*) as red what she sensibly represents and that the subject character of the visual experience she is undergoing is what it is like to see red (*Empfindung*). The only thing required for both cognitions is the concept of RED.

On her release, Mary acquires a nonconceptual sensible representation the color of a ripe tomato for the first time in her life. Knowing that ripe tomatoes are red, she recognizes (*erkennen*) that what she is nonconceptual representing is nothing but the color represented by her concept of redness. Thus, she acquires the cognition of red.

#### **4. Conclusion**

I have argued that Mary's does make a cognitive progress on the release. However, this cognitive improvement cannot be accounted for by acquisition of new concepts. For one thing, in her imprisonment, Mary already knew all the truths about the phenomenal red. For another, as she already had exhaustive knowledge about the phenomenal red, the acquisition of a new concept could not provide her new information.

I have also argued for the claim that the newly acquired phenomenal concepts play a quite different role in Mary's predicament: they are required not to account for Mary's cognitive progress. Rather, they are needed only to solve problems of cognitive significance. Then, in turn, I have argued for the crucial claim of the paper: that Mary's cognitive discovered can only be accounted for in terms of what Kant calls *Erkenntnis*, that is, the recognition by the senses of what is like to experience red. On her release, Mary nonconceptual represents the color of a ripe tomato for the first time in her life (*kennen*). Knowing (propositional knowledge) that ripe tomatoes are red, she recognizes (*erkennen*) that what she is nonconceptual representing is nothing but the color represented by her concept of redness.

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