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FACTS, ABILITIES AND CONCEPTS: KNOWLEDGE ARGUMENT AND PHYSICALISM

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One compelling argument challenging the tenability of physicalism, which sees reality as fundamentally comprised of physical facts, is Jackson's knowledge argument. Through a powerful thought experiment involving the case of Mary, the super neuroscientist, the argument demonstrates how knowledge of phenomenal facts cannot be deduced from knowledge of physical facts. For allegedly leaving out phenomenal facts in its account of reality, physicalism is shown to be incomplete and hence mistaken. Physicalists respond to this argument in a variety of ways, challenging, in turn, some aspects of the knowledge argument. This paper focuses on the replies of the ability hypothesis and the phenomenal concept strategy, which respectively try to block the two crucial moves in the knowledge argument: the establishment of an epistemic gap and the inference from the occurrence of this gap to the existence of an ontological gap. The paper critically examines how proponents of these two replies to the knowledge argument respond to some objections to maintain the viability of physicalism.

Keywords: ability hypothesis, knowledge argument, physicalism, phenomenal concept strategy, qualia

INTRODUCTION

Physicalism, as a metaphysical view, contends that the fundamental facts that comprise reality are physical in kind. In relation to minds and mental states, which are intuitively regarded as non-physical, physicalism, in the area of philosophy of mind, has generally come to be known as "the view that the mind is a purely physical part of a purely physical world" (Jackson 2004, 21). With regard to the relation of phenomenal truths (i.e., truths about subjective conscious experiences) and physical truths (i.e., truths about objective physical phenomena), physicalism is "the thesis that the phenomenal, or experiential, truths supervene with metaphysical necessity on the physical truths" (Stoljar 2005, 472).

Non-physicalists have disputed the claims and arguments of physicalists in a variety of ways. One celebrated anti-physicalist argument is Frank Jackson's *knowledge argument.* David Lewis (1997, 585) attests to the strong challenge this argument poses to physicalism as follows: "Arguments against one materialist theory or another are never very conclusive. It is always possible to adjust the details. But the Knowledge Argument, if it worked, would directly refute the bare minimum that is common to all materialist theories." It is thus not surprising that the argument has elicited vigorous reactions from physicalists. In order to defend their metaphysical view, physicalists point out flaws in various aspects of their view's reasoning. Some non-physicalists likewise argue against it but to advance or defend a purported stronger argument against physicalism. They try to show why it is not the best way to demolish physicalism.

This essay shall focus on two physicalist replies to Jackson's knowledge argument, namely, the *ability hypothesis* and the *phenomenal concept strategy*. These replies respectively try to block the two crucial moves in the argument: the establishment of an *epistemic gap* and the inference from the occurrence of this gap to the existence of an *ontological gap*. The objective is to critically examine how these two physicalist replies to the knowledge argument respond to some objections to maintain the viability of physicalism. The discussion shall be divided into three sections. The first shall briefly introduce the key elements of Jackson's knowledge argument and the general outline of the various objections to it. The second and third sections shall respectively discuss the main contentions of the ability hypothesis and phenomenal concept strategy and critically examine their responses to the objections of some of their critics.

KNOWLEDGE AND FACTS

The knowledge argument has been presented in two ways: by Thomas Nagel in his essay "What Is It Like To Be a Bat?" (1991); and by Jackson in his two essays, namely "Epiphenomenal Qualia" (1982) and "What Mary Didn't Know" (1986). In both forms of presentation, the general structure of the argument, however, is basically the same: *phenomenal facts*, referring to facts about our conscious experiences, escape scientific explanations; and, given that physical facts are scientifically explainable, phenomenal facts are, therefore, non-physical. Being non-physical, phenomenal facts are as fundamental as the physical ones, which proves physicalism wrong. Nagel presents this argument by appealing to the intuition that even if we have a complete scientific knowledge of the physiology and behavior of bats, we will still never know the conscious experiences of bats or, as he puts it, *what it is like* to be a bat. Jackson, on the other hand, presents it in terms of a thought experiment that demonstrates that a complete scientific knowledge of color experiences will leave out the phenomenal, what-it-is-like feature of such experiences.

In this essay, we shall focus on Jackson's version of the knowledge argument. Consequently, by "knowledge argument," we shall henceforth mean Jackson's knowledge argument. Furthermore, while Jackson's thought experiment originally involves the two cases of Fred and Mary, it is, however, the case of Mary that has

become the standard representative of Jackson's argument. For our purposes, we shall follow this standard and thus shall focus only on the case of Mary.

The knowledge argument is based on the recognition of an essential feature of the mind named *qualia*. Qualia, along with consciousness, intentionality, privacy, and ontological subjective, constitute the so-called *marks of the mental* (see Mabaquiao 2012, 48-54; Mabaquiao 2013a, 198-220). Qualia refers to the subjective qualities of conscious states or the particular qualities in which the subjects of these states have or experience these states. Philosophers refer to qualia in various ways, such as the "phenomenal properties," "raw feels," "phenomenal feels," the "what-it-like" properties of our conscious experiences, and as the "ways things seem to us." Daniel Dennett (1993, 381) explains: "look at a glass of milk at sunset; *the way it looks to you*—the particular, personal, subjective visual quality of the glass of milk is the quale of your visual experience at the moment. *The way the milk tastes to you then* is another gustatory quale, and *how it sounds to you* as you swallow is an auditory quale."

David Chalmers (1997, 6-11) comes up with the following catalog of our conscious experiences which produce different qualia to different people: *visual experiences* (e.g., color sensations), *auditory experiences* (e.g., musical experience), *tactile experiences* (e.g., the feel of velvet, cold metal, and another person's lips), *olfactory experiences* (e.g., the stench of rotting garbage and warm aroma of freshly-baked bread), *taste experiences* (e.g., the taste of sugar and salt), *experiences of hot and cold, pain, other bodily sensations* (such as headaches, hunger pangs, itches, and tickles), *mental imagery* (e.g., a mental image of a loved one), *conscious thought* (e.g., reflecting on one's actions), *emotions* (e.g., happiness and depression), and the *sense of self* (a sense that there is something behind conscious thoughts). According to Nagel (1991), it is inherent in our conscious experiences that there is something it is like to have or undergo such experiences. If we have pain, for instance, there is necessarily something it is like for us to experience this pain. Moreover, qualia are subjective in the sense that it is relative to the subject of conscious states. Two persons, for instance, may be looking at the same sunset, but their phenomenal experience of the sunset may be different.

Jackson (2004, xvi) formulated his knowledge argument to point out that qualia, the phenomenal properties of our conscious experiences, are left out in the physicalist account of reality. He notes, for instance, that the physical sciences fail to account for the subjective experiences of "sensings of red, the pangs of conscience, the hope that there will not be a war next year…" (2004, xv) and the feelings of "hurtfulness of pains, the itchiness of itches, pangs of jealousy, or about the characteristic experience of tasting a lemon, smelling a rose, hearing a loud noise or seeing the sky" (1982, 127). Whatever elements and properties the physical sciences would speak of to accommodate those subjective experiences in their explanations would not suffice to explain "the phenomenal, conscious side of our psychology."

The knowledge argument specifically concerns color experiences which Jackson subsumes under what he called the "phenomenology of visual experience." He expressed this argument in the celebrated thought experiment involving the case of Mary, whose initial conditions he (1982, 130) described as follows:

> 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 wavelength 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.)

From these initial conditions of Mary, Jackson (1982, 130) then posed a question intended to challenge physicalism; thus: "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?" According to Jackson (1982, 130), the most plausible reply is that Mary "will learn something about the world and our visual experience of it"—particularly, she will learn what it is like to see something red. In other words, Mary, according to Jackson, will acquire new knowledge—something that she has not known prior to her release from her black-and-white room. For Jackson, this only goes to show that Mary's previous knowledge about colors while inside the room was incomplete despite having complete scientific knowledge about the nature of colors. Referring to Mary, Jackson (1982, 130) concluded his argument as follows: "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."

Jackson's knowledge argument against physicalism consists of a two-tier claim: first, that physicalism is incomplete; second, given the first, physicalism is false. Physicalism is incomplete because it cannot account for phenomenal facts. Being non-deducible from any or all physical information, phenomenal facts cannot be given a physicalist account. This means that phenomenal facts are not physical and that they are as fundamental as the physical facts, which thereby proves physicalism to be wrong.

Expectedly, several objections have been leveled against the knowledge argument, especially by physicalists. And interestingly, among these objections was Jackson's own. Accordingly, after defending his argument for fifteen years, Jackson did an about-face, rejected it, and embraced physicalism (Gulick 2008, 190; Alter 2017, 65). However, Jackson's objection to his own knowledge argument (see Jackson 1998, 2003) has generally not been regarded as a serious challenge to the knowledge argument (see Alter 2017 and Gulick 2008). We shall briefly discuss why this is so below. In any case, these objections challenge different aspects of the knowledge argument. To have a better perspective of what these aspects are, some provided a general way of classifying these objections. For our purposes, let us examine the ones by Gulick (2008) and Chalmers (2017).

Gulick (2008, 202-03) identifies six critical points in the knowledge argument that the physicalist may reject. Accordingly, the physicalist may: (1) include phenomenal facts, regarded as physically realized subjective facts, in the physical facts Mary has complete knowledge of prior to her release from the black-and-white room; (2) deny that Mary learns anything new upon her release; (3) claim that Mary gains only new abilities or know-how upon her release; (4) concede that Mary gains new propositional knowledge upon her release but only in the sense of coming to know a previously known proposition in a new way; (5) concede that Mary comes to know new propositions upon her release but only in the sense of coming to know such on a fine-grained mode of individuation; or (6) allow that Mary learns a new course grained proposition upon her release but still deny that her doing so refutes physicalism.

In Chalmers' (2017) case, he classifies the physicalist responses to the knowledge argument in terms of the epistemic and ontological gaps assumed in the knowledge argument. First are the Type-A materialists who deny the epistemic gap: "Paradigmatic type-A materialists deny there is any factual knowledge that Mary lacks inside her black-and-white room..." (Chalmers 2017, 169). Second, are the Type-B materialists who accept that there is an epistemic gap but deny the inference to an ontological gap: "Paradigmatic type-B materialists hold that Mary lacks knowledge, but not of ontologically distinct facts about the world..." (2017, 169).

Gulick's classification can be subsumed under Chalmers.' The first three in Gulick's classification are all Type-A-materialist objections for rejecting the occurrence of an epistemic gap assumed in the knowledge argument. If prior to her release Mary (1) can deduce the so-called phenomenal facts (regarded as physical facts of some kind) from the physical facts of seeing red prior to her release, (2) does not learn anything new after her release, or (3) only learns know-how about seeing red after release, then Mary does not learn new propositions and facts about seeing red after her release. Given such, then there will be no gap between her knowledge of facts and propositions prior to and after the release to speak about.

On the other hand, the last three in Gulick's classification are all Type-B-materialist objections. They all concede that an epistemic gap occurs, but they all reject the inference from this gap to the existence of an ontological gap. They concede that Mary learns new facts and propositions after release that she did not know before release, which then creates a gap (an epistemic gap) with those she already knew before her release. However, if what is "new" about these new facts and propositions has nothing to do with their content but only concerns (4) a new sense, (5) a fine-grained mode, or (6) a course-grained consistent-with-physicalism mode of coming to know them, then the epistemic gap is not due to or will not imply an ontological gap. What brings about the epistemic gap is generally the way the facts already known by Mary prior to her release is known by Mary after her release.

In his own objection to the knowledge argument, Jackson adopts the view of *representationalism* (or *intentionalism*) which contends that the representational which contends that the phenomenal properties of mental states reduce to, or are nothing but, their intentional states (Alter 2017, 65). Jackson further believes that these representational states are physically explicable, which would make phenomenal states as physical states of some kind (Alter 2017, 66). Consequently, Mary, in knowing all

the physical facts about seeing red before release, would likewise already know the phenomenal facts about seeing red (Alter 2017, 66). This makes Jackson's objection a Type-A-materialist objection of the first form in Gulick's classification. Jackson, in short, now believes that the intuition that Mary did not know about the phenomenal facts while in the room is an illusion.

There are at least two criticisms against Jackson's representationalist objection to the knowledge argument. One points out that Jackson simply assumes a physicalist version of representationalism in claiming that the representational properties of mental states are physically explicable (Alter 2017, 68-69). For Alter, this makes Jackson's objection to the knowledge argument circular in already assuming physicalism in its premises; it is "question-begging unless independent reasons for believing them were provided--reasons that do not assume physicalism" (Alter 2017, 71). If, however, Jackson will not assume physicalism in his representationalism, Jackson's objection to the knowledge argument is inconsequential. As Alter notes, the knowledge argument is simply given a representationalist form, but the problem raised by the original form remains intact: "Physicalists face a representationalist version of the knowledge argument that inherits the force of the original. Reformulating the challenge in representational terms does little" (Alter 2017, 71).

The criticism points out that for Jackson's representationalism to work as an objection to the knowledge argument, it needs to assume a strong version of *a priorism* in which "Mary could deduce all the representational facts from the microphysical facts" (Gulick 2008, 206). However, under this assumption, Gulick (2008, 213) points out that representationalism is no longer necessary, for simply Mary can already deduce the phenomenal properties from the physical properties of the physical facts known to her while in the room.

Jackson likewise claims that since Mary can no longer know any new physical facts about seeing red after her release, what she instead learns about seeing red after release are simply abilities or know-how. In this regard, Jackson endorses the ability hypothesis advanced by Lewis and Nemirow but via the route of representationalism (Gulick 2008, 193). However, as Alter (2017, 12) points out, the ability hypothesis is an altogether different objection to the knowledge argument for the hypothesis, as in the version of Lewis and Nemirow, can stand without representationalism as a form of grounding. As we shall see later on for Lewis and Nemirow, knowledge of so-called phenomenal states is not knowledge of facts nor of the representational properties of facts but simply knowledge of the so-called "Lewis abilities." Thus, Atler (2017, 12) writes:

> At the end of 'Mind and Illusion' (2003: 271), Jackson endorses the Lewis-Nemirow ability hypothesis, on which Mary acquires abilities but no information when she leaves the room. This, too, would constitute an independent basis for rejecting the knowledge argument. But then, it is the ability hypothesis, not representationalism, that answers the knowledge argument. Moral: Representationalism does not provide any clear resources for answering the knowledge argument.

In the following sections, we shall examine two physicalist responses to the knowledge argument, namely the ability hypothesis and the phenomenal concept strategy. The ability hypothesis is one strong representative of the Type-A-materialist responses, while the phenomenal concept strategy is one strong representative of the Type-B-materialist responses. The ability hypothesis rejects the occurrence of an epistemic gap in the case of Mary for contending that what Mary learns after her release is not propositional or factual knowledge but simply abilities or know-how. On the other hand, the phenomenal concept strategy rejects the inference from the occurrence of an epistemic gap to the existence of an ontological gap by claiming that while Mary learns new factual propositions after her release (which creates an epistemic gap), what is new here simply concerns the kind of concepts (the phenomenal concepts) Mary used to know these propositions.

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Lewis (1997) grants the intuition that Mary learns something new upon her release but argues that what she learns is not factual propositions but merely abilities or know-how. In particular, what Mary comes to know corresponds to what Nemirow (2017, 33) calls the *Lewis abilities* (Nemirow 2017), consisting of the abilities to remember, imagine, and recognize an experience. For Lewis (1997, 593), knowing what it is like to experience something is just knowing these abilities in the context of such experience:

> These abilities to remember and imagine and recognize are abilities you cannot gain (unless by super-neurosurgery or by magic) except by tasting Vegemite and learning what it's like. You can't get them by taking lessons on the physics or the parapsychology of the experience, or even by taking comprehensive lessons that cover the whole of physics and parapsychology. The Ability Hypothesis says that knowing what an experience is like just *is* the possession of these abilities to remember, imagine, and recognize. It isn't the possession of any kind of information, ordinary or peculiar. It isn't knowing that certain possibilities aren't actualized. It isn't knowing-that. It's knowing-how.

Accordingly, upon seeing the color red for the first time upon her release, Mary acquires the following abilities. First, she acquires the ability to remember her experience of the color. This means that in future instances, she will be able to recall her experience of the color. Second, she acquires the ability to imagine things related to her experience of the color. Perhaps she can imagine experiencing the same color as instantiated by another object. If what she sees is the color red as instantiated by a flower (say a red rose), this experience will give her the ability to imagine seeing the same color as instantiated by other objects, say by a red car or a red carpet. Or she can imagine experiencing the same color instantiated by the same or other object in another place or time or in a different social setting. Third, she also acquires the ability to recognize her experience of the color when she experientially encounters the same

color again. If, in the future, she is to experience the same color, she will know that it is the same color experience that she first had upon release from her black-and-white room. This ability will likewise enable her to distinguish her particular experience of the color red from her other color experiences (say, her experience of seeing the color blue or green).

Consequently, for the ability hypothesis, Mary's experience of the so-called "what it is like to see red" is nothing but the three Lewis abilities with regard to her experience of red. The so-called phenomenal properties of her experience of red are nothing but the three Lewis abilities with regard to her experience. The ability hypothesis, in short, rejects the existence of phenomenal properties or qualia understood as subjective facts about our conscious experiences. With this, there is likewise no such thing as phenomenal knowledge that is epistemically distinct from physical knowledge. As Lewis (1997, 593) notes: "If the Ability Hypothesis is the correct analysis of knowing what an experience is like, then phenomenal information is an illusion." All this leads to the idea that there is, to begin with, no epistemic gap in the case of Mary. And without the epistemic gap, the further move in the knowledge argument that this epistemic gap implies an ontological gap (the gap in the existence of phenomenal and physical facts) cannot take off.

There are a number of objections raised against the ability hypothesis, some to defend the knowledge argument while some to advance an alternative route to reject the argument. For our purposes, we shall examine five of these objections and Nemirow's (2007) replies to these objections. The first objection disputes the idea that the Lewis abilities can properly substitute for phenomenal knowledge. It argues that knowing what it is like to see the color red, for instance, cannot appropriately be translated to the abilities to remember, imagine, and recognize the color red. More particularly, it argues that the Lewis abilities are neither necessary nor sufficient to explain what-it-is-like experiences. Along these lines, Earl Conee (1994, 136-150) presents the cases of an excellent color interpolator named "Martha," and an imagination-impaired version of Mary, the super neuroscientist who, following Nemirow, we shall call "Betty."

In the case of Martha, Conee (1994, 61) intends to show that "knowing how to visualize any given colour is not sufficient for knowing what it is like to see the colour." Martha can visualize a particular color that she has not yet experienced by extrapolating such color from a pair of related colors that she has actually experienced. She can, for instance, visualize the color of cherry red, which she has not yet experienced, by interpolating the color from the two colors she has already experienced, namely burgundy red and fire engine red. [It will be recalled that Hume claimed that it is possible to have an idea of a color without having an impression of it, by extrapolating it from one's impressions of two closely related colors--see Hume 1975, 1.1.1.10/6; and Morris and Brown 2022).] Conee thinks that although Martha has the ability to visualize cherry red, she cannot, however, be said to likewise have the ability to know what it is like to see the said color. Conee (1994, 61), in this consideration, concludes that knowing how to visualize cherry red is not the same as, or is not sufficient for, knowing what it is like to see the said color. More specifically, Conee contends that the Lewis ability to imagine is not sufficient to substitute for phenomenal knowledge.

In the case of Betty, who is in the same conditions as Mary except for her imagination impairment, Conee asks what would happen if Betty, after release from the black-and-white room, were to see the color of red (say, as instantiated by ripe tomatoes) for the first time, would Betty know what it would be like to see the color red? Conee answers in the positive. Despite her incapacity to imagine, Betty would still make an exciting discovery by knowing what it is like to see something red. What would constitute knowing what an experience would be like here would be the act of noticing the experience as it was being undergone. Consequently, for Conee, this shows that the abilities of memory and imagination are unnecessary for phenomenal knowledge. Conee (1994, 62) writes:

> A *fortiori*, she is not able to imagine, remember, and recognize the experience, as Lewis' Ability Hypothesis requires in order of her to know what it is like to see red. In light of her incapacity to imagine, it is also true that she does not know how to visualize red at will. Hence, knowing what an experience is like does not imply having any such abilities.

Regarding Martha's case, Nemirow (2007, 34) replies that such does not pose a problem to the ability hypothesis. Martha may not know yet what it is like to visualize the extrapolated color at its first instance, but the moment Martha recalls it or recognizes it again, she will know what it is like the experience that color. The point of Nemirow here is that while the ability to visualize will not explain the phenomenal feel of the color experience due to the special situation Martha is in, the other Lewis abilities will be able to explain it. With regard to Betty's case, Nemirow challenges Conee's supposition that Betty will still be able to know what it is like to see the color of the red ripe tomatoes, given that she has lost her ability for visual imagination. As Nemirow (2007, 34) remarks: "By stripping Betty of all ability to imagine color, Conee may have inadvertently denied her the knowledge at issue—namely, knowledge of what it is like to see red while intently staring at a red tomato." Nemirow (2007, 34) further notes that in the case of ordinary people, they know what it is like to see a color because they have their ability for visual imagination intact. Given this, it is thus counter-intuitive to suppose otherwise in the case of Betty.

The second objection to the ability hypothesis is raised by Michael Tye (2000), which involves "knowing with particularity in the moment." Tye (2000, 229-231) contends that when Mary knows what it is like to see the color red at the time she is staring at it (say, as instantiated by a red rose), she presumably also knows what it is like to see such color in its particular shade, say red_{17}, even though Mary does not know, or is not aware, that the red she is seeing is of that particular shade. Consequently, we can say that Mary knows what it is like to see red_{17}. However, because Mary does not know that the red she is seeing is red_{17}, she does not have the Lewis abilities about red_{17}. This proves, for Tye (2000, 231), that "the Ability Hypothesis, as elaborated by Lewis, does not afford us a satisfactory general account of knowing what it is like." Tye notes that Mary may, later on, learn about red_{17} and, along with this, the abilities to remember, imagine, and recall her experience of it.

However, Tye (2000, 231) insists that the knowledge argument is about knowledge and not about learning.

Nemirow (2007, 35), in response, disputes Tye's supposition that Mary lacks the relevant Lewis abilities while looking at a sample of red_{17}. For Nemirow, if Mary can distinguish shades of red in her red experiences, or can distinguish her experience of red_{17} from her experience of red_{16}, then surely Mary has the Lewis abilities with regard to these shades of red, for she can only make the distinction if she has the abilities to remember, imagine, and recognize these shades of red. Nemirow apparently fails to directly address Tye's point here, which is that while Mary knows what it is like to see $red_{17,}$ she does not have the Lewis abilities regarding red_{17} because Mary is not aware that the red she is looking at is red_{17}. She will not be able to remember, imagine, or recognize something she does not know. Tye (2000, 230), in this connection, writes:

> As she stares at the rose, it is also true of her at that time that she knows what it is like to experience the particular determinate hue of red-call it red17-she is seeing. Of course, she does not know that hue as red_{17}. Her conception of it is indexical. She thinks of it only as that shade of red. But she certainly knows what it is like to experience that particular hue at the time at which she is experiencing it.

There are, however, two ways of responding to Tye here. One is that the Lewis abilities with regard to Mary concern color experiences and not names of such experiences. Surely, Mary can remember her experience of a certain color, and distinguish it from her experience of other colors, even if she does not know how the color is called. The second is that the assumption of Tye's objection cannot be granted, namely, that it is possible for Mary not to know the names of the various shades of a certain color. This is inconsistent with the premise of the thought experiment that Mary is a super neuroscientist who knows all the physical facts about colors and color perceptions. Distinguishing shades of colors, along with their scientific names, surely must be part of Mary's complete scientific knowledge of colors. What Mary does not only know, according to the knowledge argument, is what it is like to see colors in their various shades.

The third objection to the ability hypothesis, raised by Janet Levin (1990), involves the ability to draw inferences. The objection contends that the ability hypothesis would not be able "to explain why events of imagining can ground factual assertions about the world" (Nemirow 2007, 36). In particular, Levin (1990, 246) argues that "it would be perverse to claim that bare experience can provide us only with various practical abilities, and never with theoretical knowledge. By being shown an unfamiliar color, I acquire information about its similarities and compatibilities with other colors, and its effects on other of our mental states; surely I seem to be acquiring certain facts about that color and the visual experience of it." The point of the objection is that regarding phenomenal experience as just know-how will not be able to explain the fact that phenomenal experiences can give rise to propositional knowledge, such

as knowledge about similarities and compatibilities of colors and their effects on our mental states.

Nemirow's (2007, 36) response here is simple. Abilities do foster propositional knowledge. The abilities to dance, to speak a language, and others, for instance, do generate propositional knowledge. If you know how to dance, you will know some information about dancing. If you know how to speak a language, you will know some information about language. So, if we understand phenomenal experiences in terms of the Lewis abilities, there is nothing surprising or strange about the fact that these abilities will generate propositional knowledge. Just because a phenomenal experience generates propositional knowledge does not, therefore, invalidate the thesis that knowledge of such experience is non-propositional and just know-how.

The fourth objection to the ability hypothesis, advanced by Brian Loar (1997), involves embedded conditionals. According to Loar, understanding phenomenal experiences as abilities will not be able to explain why references to such experiences can be embedded in conditionals, such as "If P, then Q" where "P" stands for "Coconuts did not have this taste." The point of Loar is that if phenomenal experiences are not factual (but merely abilities), references to such experiences cannot be embedded in conditionals--which are truth-bearing.

Nemirow (2007, 38) responds in two ways. First, Nemirow clarifies that the ability hypothesis is only committed to the view that knowledge of phenomenal experiences is not factual but practical. As such, references to such experiences may indeed be factual; but what is at issue are the experiences themselves, not the references to them. Consequently, Loar criticizes the ability hypothesis for failing to account for a commitment it does not make. Second, Nemirow thinks that even if we grant Loar's extension of the ability hypothesis to cover the conditionals, the ability hypothesis can nonetheless handle it. Nemirow (2007, 38) explains that the ability hypothesis "knowing that this is what it's like to taste coconuts," is equivalent to "being able to recognize, remember, and imagine this experience as the taste of coconuts." The conditional can thus be paraphrased as follows: "If I were unable to recognize, remember, and imagine this as the taste of coconuts, then Q" (2007, 38).

The fifth objection to the ability hypothesis, raised by William Lycan (1996), is based on the fact that imagining can be correct or incorrect. Lycan (1996, 99) writes:

> I can visualize my boyhood home in New Jersey and be fairly certain that the house did look as I am imagining, but then find, upon checking a period photograph, that I have got it wrong. Imagining is a form of representation. Therefore, if to know "what it's like" to experience phenomenal red is in large part to be able to imagine experiencing red, presumably, this means imagining correctly rather than incorrectly.

Lycan contends that if there is a way by which we can tell our description of what it's like to experience something to be correct or incorrect, then our description must be factual or propositional, not know-how. Nemirow (2007, 41) responds by saying that we can indeed speak of whether we are successful or not in making mental representations of our experiences, but "the assumption that representational content

is propositional does not justify the conclusion that the content qualifies as "phenomenal information" (Nemirow, ibid.). This means that the fact that we can speak of whether our mental representation of a phenomenal experience is correct or successful does not mean that the content of this representation counts as phenomenal information or knowledge about phenomenal facts. Lycan assumes that "contents that afford inferences to propositional conclusions are themselves propositional" (1996, 96). For Nemirow, this is not necessarily the case. It is perfectly possible to infer propositional conclusions from non-propositional knowledge such as the Lewis abilities.

FACTS AND CONCEPTS

Stoljar (2005) defines the phenomenal concept strategy (or PCS) as "the strategy of appealing to differences between phenomenal and other concepts in order to answer the central arguments against physicalism." The objective is to locate the source of the epistemic gap in the relationship between our physical concepts and phenomenal concepts rather than in the relationship between physical processes and consciousness themselves. In other words, for the PCS, the epistemic gap that Mary has after her release from the black-and-white room is not due to an ontological gap but to a *conceptual gap*. It is not that there are phenomenal facts existing independently of physical facts such that knowledge of phenomenal facts is not deducible from knowledge of physical facts. Rather, the concepts we employ to talk about physical facts and our conscious experiences, namely, physical concepts and phenomenal concepts, respectively, are logically independent such that an epistemic gap between physical knowledge and phenomenal knowledge arises.

What, then, are phenomenal concepts? And why do they generate epistemic gaps? In general, they are the concepts we use to conceive of or think about our conscious experiences. As these experiences involve qualia, Balog (2011, 5) describes them as the "concepts in terms of which we think about qualia." Another way of saying this is that they are the concepts we use in forming beliefs about our conscious experiences using phenomenal concepts. As Chalmers (2010, 251) writes: "When one believes that one is having a red experience, one deploys a phenomenal concept of a red experience."

Phenomenal concepts have two related features that distinguish them from other kinds of concepts. The first is that we form these concepts upon direct acquaintance or experience of the conscious experiences that they are about (Balog 2011, 6; Stoljar 2005, 470). The second is that phenomenal concepts are conceptually isolated in that they lack "*a priori* connections with non-phenomenal concepts of any type" (Carruthers and Veillet 2007, 2). What this implies is that phenomenal concepts cannot be derived from non-phenomenal concepts. And part of the reason is precisely that these concepts are formed only with a direct acquaintance of the conscious experiences that they are about (Mabaquiao 2015, 59).

The strongest objection to the PCS thus far comes from Chalmers (2007). Chalmers (2007, 168) calls his argument against the PCS as a "master argument," for he believes that it is strong enough to show the failure of the PCS in whatever way it

is interpreted. In presenting this argument and the two replies to this argument that shall be covered, we shall largely be guided by the analysis of Mabaquiao (2015) on the subject matter. Chalmers (2007, 172) begins by positing a psychological feature of human nature he calls "*C*," which is allegedly responsible for the unique character that supporters of the PCS attribute to phenomenal concepts (that they cannot be inferred from physical concepts; that they are isolated, etc.,). Accordingly, it is *C* that is responsible for the epistemic gap between phenomenal and physical concepts. After which, Chalmers relates *C* with the totality of the world's physical facts, which he symbolizes as "*P*."

Consequently, the relation he deems critical for his argument is "*P&~C*," which means that all physical facts obtain but not the human feature responsible for the phenomenal concepts. In this connection, he asks whether *"P&~C*" is conceivable or not, and what would be the consequence of its conceivability. For Chalmers, there are two possibilities:

The first possibility is the statement, "If *P&~C* is conceivable, then *C* is not physically explicable," which means that if it is possible for all physical facts to obtain but not *C*, then *C* cannot be explained physically (which means that physicalism is false). The second possibility is the statement, "If *P&~C* is not conceivable, then *C* cannot explain our epistemic situation," which means that if it is not possible for all physical facts to obtain but not *C*, then *C* cannot explain our epistemic situation (which means that there is no epistemic gap). However, here now is a twist in the master argument. Chalmers logically derives from these two conditionals the disjunctive statement, "Either *C* is not physically explicable, or *C* cannot explain our epistemic situation."

Minus the technological details, Joaquin (2017, 17-18) presents the main structure of the master argument as follows:

1. If it is conceivable that we have all the physical facts and yet miss out on the key psychological facts necessary to explain phenomenal concepts, then these psychological facts are not explainable in physical terms.
2. If it is not conceivable that we have all physical facts and yet miss out on the key psychological facts necessary to explain phenomenal concepts, then the psychological facts cannot explain our epistemic situation.
3. Therefore, either these psychological facts are not explainable in physical terms, or else they cannot explain our epistemic situation.

Since in a disjunctive statement, you can only validly derive a conclusion by denying one of its horns, whichever logical possibility one takes, the thesis of the PCS is rejected. Thus, if we say that it is false that *C* is not physically explicable, the only valid conclusion would have to be that it is true that *C* cannot explain our epistemic situation, which is tantamount to saying that there is no epistemic gap. However, if we say that it is false that *C* cannot explain our epistemic situation, the only valid conclusion would have to be that it is true that *C* is not physically explicable, which is

tantamount to saying that physicalism is false. In either case, the contention of the PCS that there are epistemic gaps in a purely physical world disintegrates.

Following Mabaquiao's (2015) analysis of Chalmers' objection to the PCS, we shall reinforce the arguments of Peter Carruthers and Bénédicte Veillet (2007) and Katalin Balog (2012) against Chalmers' objection. In the main, Carruthers and Veillet question the grounding of Chalmers' master argument in his zombie argument, whereas Balog points out a critical ambiguity in Chalmer's master argument.

Carruthers and Veillet (2007, 220-21) focus their examination on Chalmers' employment of his zombie argument to ground the second horn of his master argument's dilemma, namely that "If *P&~C* is not conceivable, then *C* cannot explain our epistemic situation." Zombies, in this context, refer to unconscious human duplicates: they share all the physical features of humans (physiology and behavior) except consciousness. Chalmers' zombie argument is originally intended as an argument against the (mind-brain) identity theory, which claims that minds are nothing but brains (Mabaquiao 2013a; Mabaquiao 2013b). In gist, it contends that since the existence of zombies is conceivable (more specifically, logically possible), then human consciousness is not reducible to some physical features of humans, such as their brains.

Using his zombie argument, Chalmers (2007, 178) thus explains the second horn of his master argument's dilemma as follows:

1. If *P & ~C* is not conceivable, then zombies satisfy *C*.
2. Zombies do not share our epistemic situation.
3. If zombies satisfy *C* but do not share our epistemic situation, then *C* cannot explain our epistemic situation.

   _____

4. If *P & ~C* is not conceivable, then *C* cannot explain our epistemic situation.

The critical premise here for Carruthers and Veillet is the third one. Before we examine their objection in this regard, let us first elaborate on the first two premises. For the first premise, if *P&~C* is not conceivable, then in all possible situations where there is *P* (the totality of physical facts), there will always be *C*. Given that zombies are (logically) possible physical entities and, as such, instantiate *P*, then zombies, too, must have *C*. This explains why zombies satisfy C, if *P&~C* is not conceivable. To further simplify, if it is not possible that all physical facts obtain but not the human feature responsible for the epistemic gap, then zombies should also have this human feature.

For the second premise, zombies do not share our epistemic situation simply because, despite the physiological and behavioral identities, humans are conscious while zombies are not. Chalmers (2007, 177) explains that "two individuals share their epistemic situation when they have corresponding beliefs, all of which have corresponding truth-value and epistemic status." By "epistemic status," he (ibid., 176) means that such beliefs are "justified or unjustified, and as cognitively significant or insignificant." In this light, Dave and Zombie Dave have different epistemic situations

because their beliefs about their phenomenal states have different truth-values and justifications. Because Dave is conscious while Zombie Dave is not, when they utter, for instance, the sentence "I am phenomenally conscious," Dave's sentence is true, while Zombie Dave's is false (ibid., 176–177).

Carruthers and Veillet challenge the third part of this explanation. They claim that it can be shown that Dave and Zombie Dave have the same epistemic situation despite Dave being conscious while Zombie Dave is not. If their claim is correct, the second horn of the master argument's dilemma fails. And since such is an integral part of the master argument, the master argument as a whole disintegrates. A crucial consideration here is Chalmers' own qualification that the contents of the beliefs of two physical duplicates (Dave and Zombie Dave, for instance) do not affect the difference or similarity between the epistemic situations of these duplicates. Chalmers (2007, 177) notes:

> A zombie will share the epistemic situation of a conscious being if the zombie and the conscious being have corresponding beliefs, all of which have corresponding truth values and epistemic status… It is important to note that this notion of correspondence *does not require that corresponding beliefs have the same content*… So the claim that a zombie and a conscious being share the epistemic situation *does not require that their beliefs have the same content* (our italics).

Chalmers' point here is best explained through Putnam's twin-earth argument (see Putnam 1991). Thus, Oscar lives on normal earth while Twin Oscar lives on twin earth, and the only difference between normal earth and twin earth is that the chemical composition of water in normal earth is H_2O, while in twin earth, it is XYZ. When Oscar and Twin Oscar utter the same sentence, "water is refreshing," their respective sentences are both true and justified in similar ways given their respective natural environments. From the viewpoint of Chalmers' qualification about epistemic situations, Oscar and Twin Oscar would then share the same epistemic situation despite the fact that the contents of their beliefs are not the same—Oscar's refers to a substance consisting of H_2O, while Twin Oscar's refers to a substance consisting of XYZ.

Carruthers and Veillet (2007, 222-23) argue that when Dave and Zombie Dave both utter the sentence, "I am phenomenally conscious"—or that "I have phenomenal states"—the contents of their beliefs are different: Dave's refers to his phenomenal states or experiences, while Zombie Dave's refers to something else—states that have the same function as Dave's phenomenal states but not their phenomenal character. Using Chalmers' own terminology, the analogous states of Zombie Dave can be called "schmenomenal states." In this regard, the sentence "I have phenomenal states" of Dave and Zombie Dave is analogous in their epistemic situation to the sentence "Water is refreshing" of Oscar and Twin Oscar, for both sentences are true and justified in similar ways given their respective worlds (normal Earth or twin Earth; and normal world and zombie world). Carruthers and Veillet (2007, 222-23) write: "The physicalist would then argue that Chalmers' and Zombie Chalmers' corresponding

beliefs have the same truth-values and are justified in similar ways, but they are quite importantly *about* different things. So, Chalmers and Zombie Chalmers can share the same epistemic situation after all, just as do Oscar and his twin."

Balog's objection is directed at an ambiguity in Chalmers' master argument. This ambiguity concerns how *C* is conceptualized. Balog (2011, 10) points out that there are two possible conceptualizations of *C* that are consistent with physicalism, namely:

1. $C_{Phen:}$ *C* conceptualized using *phenomenal language*.
2. $C_{Phys:}$ *C* conceptualized using *physical language*.

Chalmers' master argument, to recall, runs as follows:

P1. If *P&~C* is conceivable, then *C* is not physically explicable.
P2. If *P&~C* is not conceivable, then *C* cannot explain our epistemic situation.

Either *C* is not physically explicable, or *C* cannot explain our epistemic situation.

Now, given Balog's two conceptualizations of C, we can thus have four versions of the master argument. Following Mabaquiao (2015, 68-69), we can represent such as follows:

***Version I*: *C* in P1 and P2 (i.e., Premises 1 and 2) as C_{Phys}**

P1. If $P\&\sim C_{Phys}$ is conceivable, then C_{Phys} is not physically explicable.
P2. If $P\&\sim C_{Phys}$ is not conceivable, then C_{Phys} cannot explain our epistemic situation.

Either C_{Phys} is not physically explicable, or C_{Phys} cannot explain our epistemic situation.

***Version II*: *C* in P1 and P2 as C_{Phen}**

P1. If $P\&\sim C_{Phen}$ is conceivable, then C_{Phen} is not physically explicable.
P2. If $P\&\sim C_{Phen}$ is not conceivable, then C_{Phen} cannot explain our epistemic situation.

Either C_{Phen} is not physically explicable, or C_{Phen} cannot explain our epistemic situation.

***Version III*: *C* in P1 as C_{Phys} but in P2 as C_{Phen}**

P1. If $P\&\sim C_{Phys}$ is conceivable, then C_{Phys} is not physically explicable.

P2. If $P\&\sim C_{Phen}$ is not conceivable, then C_{Phen} cannot explain our epistemic situation.

Either C_{Phys} is not physically explicable, or C_{Phen} cannot explain our epistemic situation.

***Version IV*: *C* in P1 as C_{Phen} but in P2 as C_{Phys}**

P1. If $P\&\sim C_{Phen}$ is conceivable, then $C_{Phen\ i}$ is not physically explicable.

P2. If $P\&\sim C_{Phys}$ is not conceivable, then C_{Phys} cannot explain our epistemic situation.

Either C_{Phen} is not physically explicable, or C_{Phys} cannot explain our epistemic situation.

Of these four versions, the only meaningful one for Balog is Version IV. This is because P1 in Versions I and III (i.e., If $P\&\sim C_{Phys}$ is conceivable, then C_{Phys} is not physically explicable), and P2 in Versions II and III (i.e., If $P\&\sim C_{Phen}$ is not conceivable, then C_{Phen} cannot explain our epistemic situation), for Balog, "are vacuously true by virtue of having a false antecedent" (Balog 2011, 11). More specifically, this is because, on the one hand, the antecedent of P1 in Versions I and III is false simply because $P\&\sim C_{Phys}$ *is not* conceivable (ibid.). The antecedent of P2 in Versions II and III, on the other hand, is false simply because $P\&\sim C_{Phen}$ is conceivable (ibid., 12).

In contrast, P1 and P2 in Version IV are true but not vacuously because their antecedents are true (in the sense that $P\&\sim C_{Phen}$ is indeed conceivable), and $P\&\sim C_{Phys}$ is indeed not conceivable. Balog, however, qualifies that the conclusion of this version (Version IV) (which is "Either C_{Phen} is not physically explicable, or C_{Phys} cannot explain our epistemic situation") is no threat to physicalism because while C_{Phen} is not physically explicable, C_{Phys} is; and while C_{Phys} cannot explain our epistemic situation, C_{Phen} can.

C is physically explicable (with respect to its conceptualization as C_{Phys}) and can explain our epistemic situation (with respect to its conceptualization as C_{Phen}). Consequently, the master argument *in its meaningful form* is actually not a threat to physicalism and thus is not really an objection to the PCS. It just presents another way of explaining why we have the epistemic gaps. As Balog (2012, 17-18) explains:

> Here is my answer to the Master Argument. Yes, it is correct both that C_{Phen} is not physical explicable and that C_{Phys} cannot explain our epistemic situation—but this is perfectly compatible with physicalism! What I concede here—what the Master Argument succeeds at showing—is merely the existence of epistemic gaps—not the existence of an ontological gap… *P* doesn't perspicuously explain C_{Phen} but it *does* perspicuously explain C_{Phys}! Similarly, C_{Phys} doesn't perspicuously explain *E*, but C_{Phen} does.

There are, however, certain questions that Balog needs to address for her objection to the master argument to be fully successful. First, she must account for the new epistemic gaps that will arise (a) between *P* and C_{Phen} and (b) between C_{Phen} and C_{Phys} in a manner that will not lead to an ontological gap. Second, she must deal with the charge, as Chalmers (2007, 181) himself noted that her explanation here might lead to circularity.

Concerning the epistemic gap that will arise between *P* and C_{Phen}, she notes that it is also attributable to the very nature of phenomenal concepts. With regard to the epistemic gap between C_{Phen} and C_{Phys}, Balog (2012, 18) simply answers: "… C_{Phen} and C_{Phys}, according to the physicalist, express the same fact. Mabaquiao (2015, 71) explains that what Balog means here is that C_{Phen} and C_{Phys} are merely two different modes of presenting (in the Fregean sense) the same *physical* fact. Given this, there is no ontological gap that will arise between C_{Phen} and C_{Phys}. Finally, Balog (2012, 19) does not deny the possibility of circularity, but she rejects the implication that it would make her explanation, or the PCS for that matter, wrong: "circularity by itself doesn't make an argument defective," she notes in Footnote 31 of her paper (2012). In short, she claims that the possible circularity in her explanation is not vicious.

We have seen the two replies to Chalmers' master argument against the PCS. Carruthers and Veillet questioned the grounding of Chalmers' master argument in the latter's zombie argument. They showed that using Chalmers' own explanation of what it means for two individuals to be in the same epistemic situation, it would appear that a human individual and her zombie duplicate, despite their difference with regard to consciousness, can be in the same epistemic situation, such as when both utter the same sentence about their own phenomenal states. The zombie twin may not have the same phenomenal states as the human individual, but it has something analogous to these states (the "schmenomenal states") that would account for the truth of its utterance. Chalmers is forced to consider such, otherwise, the assumption that a human individual and her zombie twin can be the same in all aspects of their physiology and behavior despite the fact that the human individual is conscious while her zombie twin is not will not take off. This assumption, incidentally, cannot be set aside, for it is crucial in zombie argument as a rejection of the (mind-brain) identity theory.

But if the master argument (the second horn of the dilemma) is grounded in the zombie argument, and given that a human individual and her zombie twin can be in the same epistemic situation with regard to their utterance of their own phenomenal states, the master argument crumbles. For its second premise, "If *P&~C* is not conceivable, then *C* cannot explain our epistemic situation," would then have no basis. *P&~C,* all physical facts obtain but not having consciousness is what makes up a zombie. Saying that *P&~C* is not conceivable means that a zombie is not conceivable. And saying that *C* cannot explain our epistemic situation means our consciousness cannot explain our own epistemic situation. But why would this be so if we and our zombie duplicates can have the same epistemic situation?

It may be asked how the case of Oscar and Twin Oscar (in the Twin-earth thought experiment) relates to the case of Chalmers and Zombie Chalmers (see Joaquin 2017, 23). First of all, the supposition that Chalmers and Zombie Chalmers

have the same epistemic situation is not inferred from the case of Oscar and Twin Oscar having the same epistemic situation. The supposition that Chalmers and Zombie Chalmers have the same epistemic situation is based on the very explanation of Chalmers on what would make epistemic situations the same (see Chalmers 2007, 177). And the point of showing that Oscar and Twin Oscar have the same epistemic situation is merely intended to provide a familiar illustration for Chalmers' point regarding the sameness of epistemic situations.

For Balog, the problem with Chalmers' master argument is that it contains ambiguous terms/concepts, which then makes its conclusion questionable. In a way, the master argument would then be an instance of equivocation. To recall Balog's argument, when Chalmers states that "If *P & ~C* is conceivable, then *C* is not physically explicable," it is not clear why *C* cannot be explained physically because it is not clear whether what Chalmers means by *C* is C_{Phys} or C_{Phen}. The same goes for Chalmers' other statement in his master argument, namely, "If *P & ~C* is not conceivable, then *C* cannot explain our epistemic situation." Which cannot explain our epistemic situation here, C_{Phys} or C_{Phen}? These two statements of Chalmers are, therefore *gappy* in that they are indeterminate as to their truth-value. To make them non-gappy, Balog reformulates the master argument as represented by Version IV of Mabaquiao's (2015, 68-69) own reformulations. However, the consequence of this reformulation is that the master argument turns out not to be a real objection to the PCS, but is just another way (an alternative to the knowledge argument) of explaining why we come to have the epistemic gaps.

It may be asked why there is a need to distinguish between the two conceptualizations of Chalmers's *C*; or perhaps between the first-person perspective and third-person perspective (see Joaquin 2007, 28-29). As a proponent of physicalism, shouldn't Balog, or the PCS, work for the reduction of the first-person perspective to the third-person perspective (Joaquin 2007, 28-29). Recall that the PCS accepts the epistemic gap but rejects the inference from this gap to the ontological gap. In other words, what the PCS is trying to do is not to eliminate the epistemic gap, which in effect it will do if it will reduce the first-person perspective to the third-person perspective, but to block the inference from the epistemic gap to the ontological gap--by attributing the epistemic gap to a conceptual gap instead. The elimination of the epistemic gap, it will be recalled, is the project of the ability hypothesis. Given this, the PCS should then be evaluated not in terms of eliminating the epistemic gap but in terms of whether it is successful in blocking the inference from the epistemic gap to the ontological gap.

CONCLUSION

The knowledge argument challenges physicalism by showing that there are facts, the phenomenal facts, whose existence cannot be deduced from the existence of physical facts. For the knowledge argument, this means that phenomenal facts are non-physical and, consequently, that physicalism is mistaken. Two powerful physicalist replies to the knowledge argument are the ability hypothesis and the phenomenal concept strategy (PCS). The ability hypothesis argues that there really are no

phenomenal facts for what is thought to be such are actually just abilities. The PCS, on the other hand, argues that what makes phenomenal facts non-deducible from physical facts is merely the nature of the concepts (the phenomenal concepts) used to conceive these phenomenal facts. These two responses, accordingly, try to block the two crucial moves in the knowledge argument: the ability hypothesis tries to block the establishment of an epistemic gap, whereas the PCS tries to block the inference from the occurrence of an epistemic gap to the existence of an ontological gap. Together, these two replies thus form a formidable two-tier physicalist defense against the knowledge argument.

We examined several objections to the ability hypothesis and the PCS and showed that they could be defended well from these objections. Showing their defensibility, however, is not tantamount to establishing the truth of physicalism. What it does is merely save the *viability* of this truth from the challenge of the knowledge argument. Given this viability, the *ontology war* is alive as ever. Moreover, while the knowledge argument may have failed in demolishing physicalism, it has surely made this war more sophisticated and philosophically exciting.

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