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## Frank Jackson's Knowledge Argument: On Qualia, Physical Information, and the Supposed Falsity of Physicalism

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### Abstract

In "Epiphenomenal Qualia" Frank Jackson argues against Physicalism (the thesis that all correct information is physical information) and for the existence of qualia on the grounds that all of the physical information possible cannot explain the qualitative feel of experience (qualia). In "The Knowledge Argument for Qualia" Jackson partakes in a thought experiment using the examples of "Fred" and "Mary" to show that having all of the physical information about color; including all of the information about physical history, physiology, behavior, light waves, and the physical sciences fails to provide the information of what it is like for Fred and Mary to experience (see) color. Given that all of the physical information cannot provide all of the information available, Jackson concludes that Physicalism is false and that qualia exist, for some information is not physical. I argue against Jackson on the grounds that he assumes that physical information must be publicly accessible and that the experience of color (privately accessible information) cannot be physical information. Moreover, I argue that all information is contextually dependent upon one's physical environment and physiological functions, thus it is possible that conscious experience is a kind of physical information and that Physicalism is true.

# Frank Jackson's Knowledge Argument: On Qualia, Physical Information, and the Supposed Falsity of Physicalism

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## Abstract

In "Epiphenomenal Qualia" Frank Jackson argues against Physicalism (the thesis that all correct information is physical information) and for the existence of qualia on the grounds that all of the physical information possible cannot explain the qualitative feel of experience (qualia). In "The Knowledge Argument for Qualia" Jackson partakes in a thought experiment using the examples of "Fred" and "Mary" to show that having all of the physical information about color; including all of the information about physical history, physiology, behavior, light waves, and the physical sciences fails to provide the information of what it is like for Fred and Mary to experience (see) color. Given that *all* of the physical information cannot provide all of the information available, Jackson concludes that Physicalism is false and that qualia exist, for some information is not physical. I argue against Jackson on the grounds that he assumes that physical information must be publicly accessible and that the experience of color (privately accessible information) cannot be physical information. Moreover, I argue that *all* information is contextually dependent upon one's physical environment and physiological functions, thus it is possible that conscious experience is a *kind of physical information* and that Physicalism is true.

In "Epiphenomenal Qualia" Frank Jackson argues with the Knowledge Argument (KA) against Physicalism on the grounds that it fails to provide *all* of the information necessary to explain the qualitative aspects of consciousness and *experience*. Instead of consciousness being explained by physical information, Jackson proposes that consciousness is characterized by qualia which he defines as "certain features of the bodily sensations, but also of certain perceptual experiences, which no amount of purely physical information includes" (24). Jackson holds Physicalism to be the "thesis that all (correct) information is physical information" which fails to explain qualia because information about qualia cannot be discovered through the discovery of physical information (24). That is, physical information, which includes the "physical, chemical,

and biological sciences” in addition to the “functions” one can infer from observing the relations of physical objects, cannot explain nor discover what it is like to *experience* the color red or the feeling of pain (24). Thus, according to Jackson, qualia are not explainable by physical information and Physicalism is false given that Physicalism fails to provide *all* of the information with physical information (25-26). In the first section of the paper I will present Jackson’s Knowledge Argument. Then, I will argue against (KA) on the grounds that Jackson’s notion of physical information is perhaps too narrow and that it is possible for conscious experience to be a *different kind* of physical information.

## I. Jackson’s “Knowledge Argument for Qualia”

Jackson attempts to refute Physicalism and argue for qualia with his advancement of the “Knowledge Argument for Qualia” (KA) which he sets forth using the examples of Fred and Mary (24-26). Fred is an individual who has the best “color vision” ever recorded, with an unparalleled ability to “discriminate” between colors, and additionally, he can make a discrimination of color we are not capable of making (24). When given a “batch of ripe tomatoes” Fred consistently sorts the tomatoes into two “equal” groups, even after Fred has been “blind folded” and the tomatoes have been mixed up (24). Upon the blindfolds removal Fred can still sort the tomatoes into the same groups (24). Fred is asked how he sorts the tomatoes and replies that the ripe tomatoes are not all the same color to him, nor are other objects “we classify together as red” (24). While other people see only one red color, Fred sees two distinct colors which he calls “red<sub>1</sub>” and “red<sub>2</sub>” to avoid confusion with the other people who can see *only* red (24). That is, Fred sees “red<sub>1</sub>” and “red<sub>2</sub>” as distinctly as we distinguish red from blue, but we only experience the *single* color “red” whereas Fred experiences red as two colors.

Thus, we can observe Fred’s uncanny ability to discriminate between the tomatoes but we do not *know* what it is like to *see* red as two distinct colors (the *way* Fred sees red as two colors instead of one). Moreover, Jackson emphasizes that upon examining Fred physiologically (his “optical system”) it is observed that he “is able to separate out two groups of wavelengths in the red spectrum as sharply as we are able to sort out yellow from blue” (25). Jackson continues to describe Fred’s physical information pointing out that we “could find out perhaps that Fred’s cones respond differentially to certain light waves in the red section of the spectrum” or maybe he has “an extra cone which leads to a wider range of brain states responsible for visual discriminatory behavior” (25). Thus, Jackson emphasizes, we can have *all* of Fred’s physical information including *everything* about his physiology, history, “behavior and dispositions” and still not have *all* of the information about Fred, because we lack the knowledge of what it is like to *see* red *the way* Fred sees it (25).

Moreover, if when Fred dies and his “optical system” is transplanted “into someone else”, that person may now be capable of experiencing red as Fred did, however as Jackson reiterates, it still follows that *all* of the physical information failed to provide everything there was to know about Fred’s color vision (25). That is, after Fred’s optical system is transplanted into someone else, that person may gain Fred’s experience of red, thus, more knowledge will be known about Fred. However, all of Fred’s physical information had been attained before the transplant, and it did not give us knowledge of what it was like *for* Fred to experience red (25). Given that *all* physical information about Fred fails to provide *everything* there is to know about Fred (his *experience* of red as red<sub>1</sub> and red<sub>2</sub>), and moreover, since no amount of physical information would allow one to *see* red as Fred does, Jackson concludes that, “Physicalism is incomplete” (25).

Jackson similarly uses “Mary” in his second formulation of (KA) to argue for the incompleteness of physical information in providing *everything* there *is* to know. Jackson describes Mary as “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” (25). Thus, Mary has never actually seen (experienced) any other color except for black and white (as Jackson implicitly implies). Additionally, Mary has “all” of “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” (25). As it were, Mary has *all* of the *physical information* about seeing and explaining the experience of color. Jackson further emphasizes the extent of Mary’s knowledge about physical information regarding color in terms of physiological functions:

“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’” (25).

As it were, Mary has all of the physical information about color, its interaction with the body and in turn how the body affects behavior. Jackson explains that it is theoretically possible for Mary to have obtained all of her “physical information from a black and white television” or else “Open University would *of necessity* need to use colour television” (25). Thus, Jackson implies that it is possible to obtain all of the physical information about colors, despite not having seen colors.

After presenting the extent of Mary’s possession of physical information, Jackson poses the question of whether or not Mary will “*learn* anything” when she leaves her “black and white room” or receives a “colour television monitor” (25). Jackson claims it to be obvious that she will learn something new, thus, “her previous knowledge was incomplete” (25). Accordingly, the knowledge Mary gains after seeing color cannot be of physical information, thus, it is also knowledge which cannot be gained by possessing *all*

of the physical information (25). That is, if Mary had all of the physical information about color *before seeing* color, and then learns new information (what it is like to see color), then “Physicalism is false” because it fails to prove that *all* information is physical information, since some information is not physical (25-26). The knowledge of nonphysical information that Mary gains upon *experiencing color* is the knowledge of qualia (i.e. the feel of the sensation of color). Jackson emphasizes that (KA) could be utilized to include (qualia) such as, “taste, hearing, the bodily sensations and generally speaking for the various mental states which are said to have (as it is variously put) raw feels, phenomenal features or qualia” (26). Jackson concludes (KA) by reiterating that the Physicalist fails to account for qualia, and that it is difficult to “deny” (KA)’s “central claim that one can have all of physical information without having all of the information there is to have” (26).

## II. Jackson’s Assumptions

What are Jackson’s assumptions in his presentation of Fred and Mary? Jackson’s first assumption is in how he defines physical information. Jackson points out that we can have all of the physical information about Fred including all of the information about his physical history, his behavior, including his observable ability to discriminate between colors, in addition to all of the information about his physiology such as his brain and optical system (25). Mary also has all of the “physical information” about color including how light waves interact with the central nervous system, optical system, and physiologically influence behavior (25). On the basis of Jackson’s use of physical information, we can infer that physical information for Jackson means information which is *publicly accessible*. That is, information which is physically observable or can be learned about a physical process including through scientific investigation (23-24).

Jackson’s assumption that physical information is information which is publicly accessible can be shown with reference to Mary having all of the physical information about color, however lacking the knowledge of what it is like to *see* color. Thus, Mary can have all of the (publicly accessible) “physical information” about color and lack knowledge of the experience of *seeing* color (25). On this basis, Jackson concludes that when Mary leaves her black and white room she will gain knowledge that her possession of all of the (publicly accessible) physical information could not provide; the knowledge of what it is like to experience color (25-26). Accordingly, Jackson takes “qualia”, that is, Fred’s experience of red<sub>1</sub> and red<sub>2</sub>, and Mary’s gained knowledge of color to be *privately accessible information*. Thus, all of the *publicly accessible* “physical information” failed to provide knowledge of the *privately accessible information* of what it was like *for* Fred to experience red, and *for* Mary to experience color.

What do I mean that by “qualia” Jackson means *privately accessible information*? It was observed that Mary could have all of the physical information about color, and we could have all of the physical information about Fred. However, all of the *publicly accessible* “physical information” including all of the information about behavior, physiology, light waves, and history failed to provide information about the personal experience of what it is like *for* Fred to experience red, and *for* Mary to experience color (25). Thus, only Fred had *direct immediate* access to his *privately accessible information* of his experience of red<sub>1</sub> and red<sub>2</sub> and could not explain *his* experience to others, while others had all of the *publicly accessible information* about Fred and could not access what it was like *for Fred* to experience red (24-25). As it were, the ‘feeling of being happy’ and ‘what it is like to see red’ are kinds of *privately accessible information* which only the individual having the experience, experiences *immediately* and *directly* as their *own* experience. Others can at best observe that I physically appear to be happy, or observe that I have physiological changes in my brain correlated with happiness, but they lack *my* experience of happiness as only *I* can experience it.

Given that Jackson restricts “physical information” to be information which is publicly accessible, and knowledge of qualia to be information which is only privately accessible; Jackson is led to the conclusion that Physicalism is false since all of the “physical information” (publicly accessible information) fails to provide all of the information available, thus, lacking information about “qualia” (privately accessible information) (26). Accordingly, Jackson assumes that all “physical information” must be publicly accessible information, and that private information cannot be physical information since private information is not publicly accessible. Thus, since “physical information” must be publicly accessible information, and that information of “qualia” (what it is like to have an experience) is *only* privately and not publicly accessible; Jackson concludes that physical information is not *all* of the information available, and that qualia exist because private information cannot be discovered with physical information (publicly accessible information). As it were, Jackson’s use of the term “physical information” to describe *publicly accessible information* leads him to ignore the possibility that private and public information could both be different *kinds* of physical information.

### III. The Possibility of Conscious Experience being a Kind of Physical Information

The problem with Jackson’s assumption that physical information must be publicly accessible is that he assumes that since “qualia” are not publicly accessible, that qualia are a non-physical kind of information. Indeed, it may be the case that all of the publicly accessible “physical information” about the “living brain, the kind of states, their functional roles” and “their relation to what goes on at other times and in other brains” may not be capable of explaining what it is like to experience “the hurtfulness of pains, the itchiness of itches, pangs of jealousy” or what it is like to “smell”, “taste”, “see”, or

“hear” (24). However, it is observed that when Fred’s “optical system” is transplanted into someone else, the knowledge that person gains of Fred’s experience of an “extra colour” is a *result* of *physically* receiving Fred’s optical system (25). Moreover, before Mary experienced color she was confined to a *physical* environment that was only black and white. It is only after Mary is introduced a new *physical* environment which *allows* Mary to experience color that Mary can experience colors (25). Thus, the privately accessible knowledge Mary gains by *seeing* color (what Jackson thinks is “qualia”) is a result of her interaction with a physical environment. Accordingly, it is possible for Mary’s experience of color to be a *kind of physical information*, for without interacting with a new physical environment, Mary would not have experienced *what it is like* to see color at all.

What do I mean when I say that by feeling happy or seeing the color red I am experiencing a *kind of physical information*? After all, Mary had all of the publicly accessible “physical information” about color and still did not know what it was like to *see* color. It is true that Mary *knew* all of the physical information about how the optical system perceives light waves, and the ways in which the light waves affect the body’s physiological processes, the brain, and behavior (25). However, Mary’s knowledge of “physical information” is dependent upon her *physical* environment in the same manner that her knowledge of color is. If it were the case that Mary had always been blind and deaf, Mary would lack the knowledge of what it was like to experience color and sound. Similarly, Mary would be *incapable* of knowing all of the “physical” information about colors and the body’s physiological functions, for she would have no way of learning this information. Moreover, a colorblind person may fail to see red and green due to limitations of their optic system, as such, their experience is limited to the capacity of their physiological functions. Thus, *public and privately accessible information* is contextually dependent and limited upon the features of one’s physical environment in correspondence to the limitations of one’s physiological functions.

What I hope to have established is that it is possible that *all* information is in a sense *physical information*, for one cannot have information *at all* without there *first* being a *kind* of physical information within the context of a *physical* environment. When I say *kind of physical information* I do not mean that feeling happy or seeing red resembles some physical feature in the environment nor that you will find ‘happy’ or ‘red’ by examining someone’s brain. No, I mean that the knowledge of the experience of feeling happy or seeing red is based upon (1): one’s physiological functions and (2): one’s physiological functions in interaction with the physical environment. Thus, I gain knowledge of the experience of red only under the conditions (1): that my optical system and brain allows me to experience red, and (2): there must be (at least once) something physical in the environment that interacts with (1) in such a way to allow for the experience of ‘red’.



Jackson could object to this because I am still not explaining *what it is like* to experience 'red' or 'happy'. This is true, it may be the case that it is not possible to explain the qualitative *feel* of experience in terms of a physical process in the body, or that all of the publicly accessible information about color and feeling happy cannot tell us what it is like to experience color or happiness. However, it does not follow that since 'seeing red' or 'feeling jealous' cannot currently be physically explained and reduced to physical terms (i.e. a physical process) that experience itself is not a *kind* of physical information. Thus, it may just be the case that our conscious experience is a *kind of physical information*, which just happens to be currently undiscoverable through empirical observation and the physical sciences; however, it could be discovered in the future. Thus, the experience of consciousness is currently only observable by the person undergoing the experience, but the experience itself is *physical information* resulting from a *physical* and *physically* activated process.

#### IV. Conclusion

While Jackson argues in (KA) that Physicalism is false given that *all* of the physical information failed to provide knowledge of what it is like for Fred to experience red and for Mary to experience color (25-26). (KA) fails in that it already assumes the existence of qualia, and thus, Physicalism to be false. That is to say, Jackson believes that there are features of experience like 'feeling happy' or 'seeing red' (qualia) which cannot be discovered with *all* of the "physical information" about the physiological processes of the brain, the nervous system, ties to behavior and the physical happenings in the world (23-26). As it were, when Mary leaves her black and white room and (most likely) first experiences color; Jackson takes it to be the case that Mary is gaining knowledge of the experience of color (qualia) which her possession of *all* of the physical information could not provide (25). Thus, Mary's previous knowledge of all of the physical information was "incomplete" and Physicalism is false.

However, I argued that Jackson mistakenly assumes that physical information can *only* be publicly accessible information, and since information of conscious experience is *only* privately accessible. Jackson assumes that information of conscious experience cannot be physical information. Thus, Jackson fails to see that the qualities of conscious experience have the possibility of being a *kind of physical information*. Moreover, I argued that it is only because of the capacity of Mary's physiological functions and their interaction with the physical environment that Mary can gain Knowledge at all. Thus, Mary can gain the knowledge of what it is like to *see* color, if and only if Mary (1): has the physiological capability of seeing color and (2): interacts with an environment which physically allows her to see color. Thus, when Mary gains knowledge of the experience of color, it is possible that Mary is actually experiencing a *kind of physical information*. As it were, Mary's knowledge before experiencing color would have been previously limited by not

having all of the *kinds of physical information*. Accordingly, it is possible that all information is physical and Physicalism is true.

## Reference

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