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Tye's Criticism of the Knowledge Argument

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1. Introduction

Traditionally, one of the primary obstacles for physicalist accounts of the mind has been the apparent contrast between the intrinsic natures of our experiences and of the brain states with which they are allegedly identical. For instance, the intrinsic nature of an itch seems quite different from that of any electro-chemical state or event in the brain.

In speaking of the "intrinsic nature" of an itch I am referring to the itchiness of it, or what it feels like when you have an itch. This has been called by some philosophers the 'raw feel' or 'phenomenal content' or 'qualia' of an itch. Each of our experiences (e.g., itches, pains and perceptual experiences) is characterized by its own distinctive quale. The problem for physicalists is that these qualia do not appear to be anything like the neural states with which they would like to identify them.

Some critics of physicalism have tried to develop this point by means of what has come to be called 'the knowledge argument'. Frank Jackson is one of this argument's leading exponents, and it is to his formulation of it that I shall now turn.¹

2. Jackson's Knowledge Argument

Jackson begins by asking us to suppose that there is a brilliant neurophysiologist named Mary, who lives in a black and white room and who investigates the world by means of a black and white television monitor. She has acquired a complete knowledge of all the physical facts involved in visual perception. For instance, she knows all the physical information there is to know about what happens when a person sees a ripe tomato. Now suppose that Mary leaves the black and white room and sees a tomato. For the first time in her life, she has an experience of

redness. Jackson says that as a result of this experience Mary learns something, for she comes into the possession of knowledge that she did not have before experiencing redness for herself. Namely, she acquires knowledge of what it is like to see redness. Recall, however, that, ex hypothesi, before her experience of redness, Mary knew all of the physical information about the experiences that people undergo when they see ripe tomatoes. It follows, says Jackson, that the information that Mary comes to know as a result of her experience of redness is not physical information. Since there is thus non-physical information, physicalism is false.

3. Tye's Criticism of the Knowledge Argument

In stating his conclusion, Jackson says that the problem with physicalism is that "the qualia are left out of the physicalist story."² This way of expressing his conclusion may suggest to defenders of physicalism a strategy for responding to Jackson's argument. For in referring to "the physicalist story" Jackson is referring to a body of information about physical things, states and events. Naturally, then, physicalists can agree that the qualia themselves will be "left out of the physicalist story," for no body of information can include the qualia themselves. At best, a body of information can only include all of the information about qualia. This is all that we should require physical theories to contain; and, the physicalist adds, they fulfil this requirement.

This line of criticism has been developed by Michael Tye.³ According to Tye, when Mary has her first experience of redness she does not acquire any new factual knowledge about the experiences of other people when they view ripe tomatoes. That is, she does not discover any facts about their experiences that she did not already know when she was in her black and white room. For when she was in her room she knew all the information there was to know about their experiences, and she knew it because the physical theories that she had mastered contained all of that information. At this point, a dualist may object that surely there is a fact about other people's experiences of redness that Mary learns when she experiences redness for the first time. Namely, she learns that their experiences (probably) had the quale that her own experience of redness has (I shall dub this quale 'R'); before having her first R-experience she did not know that their

experiences had R, but, as a result of that experience, she now knows this fact. Tye denies this.⁴ According to him, Mary already knew, before her first R-experience, that other people's experiences of redness had R.

In support of this claim, Tye adduces considerations of the following sort.⁵ Suppose that Mary is still in her black and white room. She has all the physical information about what goes on when other people see ripe tomatoes. Furthermore, the other people themselves know of their own experiences that they have R (assuming that they do have R). For instance, when George sees a ripe tomato he has experience e, and he knows of e that it has R. On Tye's view, Mary also knows that George's e has R, even though she has not yet experienced R for herself. This is because Mary knows (based, say, on George's testimony) that e has the quale, whatever it is, that is typically produced in George by his viewing red objects. Since she also knows that George uses 'R' to refer to that quale, she knows that e has R, even though she herself has not experienced R. By reasoning in a similar fashion for other people who experience R-qualia, one can show that for each of their experiences that has R, Mary knows that it has R. So it seems that Mary, prior to her own R-experience, really does know all the facts concerning the experiences of other people who see ripe tomatoes, including the facts about what qualia those experiences possess. Tye concludes that Jackson has failed to demonstrate the incompleteness of physicalism, for he has not shown that there is a fact about other people's experiences that Mary does not know.

Tye admits that when Mary experiences R for the first time, she in some sense learns something new. She learns "what it is like" to experience R. However, adds Tye, in learning this she does not come to know any additional facts about the experiences of George, or of any other people that she did not already know before experiencing R. This is because, on Tye's analysis,⁶ to know what it is like to experience R is to satisfy three requirements: first, one must undergo an experience that has R; secondly, one must know (the fact) that it has R; and, thirdly, one must acquire this knowledge by means of introspection. Here, the second requirement attests to the

fact that, for Tye, knowing what it is like involves some factual knowledge; for according to it, in order for Mary to know what it is like to experience R, she must come to know the fact that one of her own experiences f has R. Note, though, that while this is new factual knowledge that Mary did not have before experiencing R, the only fact that she learns of (namely, that f has R) is a fact about her own experience. That is, in learning what it is like to experience R, she has not learned anything new about other people's experiences (e.g., George's e), so it may yet be true that she already knew everything about them before she experienced R. Thus, on his analysis, Tye can consistently maintain both that Mary learns something new when she has her first R-experience (namely, she learns what it is like to experience R), and that she already knew beforehand all of the facts about other people's experiences of ripe tomatoes.

It should also be noted that on Tye's view, when Mary learns what it is like to experience R, she does not thereby come to know of any fact that is different in kind from the facts that she already knew about other people's experiences. For example, she already knew of George's e that it had R, and she learns a fact of this same sort about her own experience (i.e., she learns of her f that it has R). The only difference is that she now knows this type of fact in a new way, for she now knows it of her own experience by means of introspection, whereas previously she had known it only of other people's experiences by means of observation and their testimony. In other words, when Mary learns what it is like to experience R, she merely "come[s] to know facts of an old sort, facts just like those [she] already knew about the experiences of [her] ... fellows, but in a new way,"⁷ where this "new way" is: by means of introspection. Tye concludes that Mary's first R-experience does not usher in her discovery of any new sort of fact. It therefore does not establish the existence of a type of fact of which Mary was ignorant when she knew all the facts about the physical world. As a result, it poses no threat to physicalism.

4. An Initial Rejoinder to Tye

Tye's response to Jackson may seem to contain some trenchant criticisms of the knowledge argument, but it does not in the end, I believe, constitute a conclusive refutation of it.

In order to see why it fails to do so, it is necessary to examine the nature of the qualia-knowledge that Mary possesses when she is in her black and white room. While she is there, she knows, of each experience that has a certain quale, that it has that quale (e.g., she knows of George's e that it has R). Now, while a dualist may be perfectly willing to concede that Mary thus enjoys a complete knowledge of what has R, he would still want to deny that she knows all the facts about R, for he would want to deny that she knows what R is. That is to say, he would want to maintain that while she knows every true statement in which R is attributed to an experience, she does not know what it is that is therein being ascribed to the experiences. This last claim should be qualified, for Mary does know something about the quale that is being ascribed. For example, she knows that it is a quale, or a "raw feel," one that she has not yet experienced. Moreover, she knows some of its extrinsic, relational features; e.g., she knows that it is the quale that is typically produced in George when he sees red things (indeed, it is by exploiting knowledge of this sort that Mary is able to discover what experiences have R). However, she does not know what R's intrinsic nature is. In this respect, Mary's situation is analogous to that of Ralph, who does not know what a kidney is. Ralph does know that kidneys are had by all and only the things that have hearts, and he knows what a heart is. He also knows of all the things that have hearts. Given this knowledge, Ralph knows of all the things that have kidneys; that is, for each thing that has a kidney, he knows that it has one. Thus, Ralph can be said to have some kidney-knowledge; indeed, he enjoys a complete knowledge of what has a kidney. There remain, however, some facts about kidneys that he does not know. In particular, he does not know what a kidney is. In short, although Ralph knows of a relational feature of kidneys (namely, that they are had by exactly the things that have hearts), and although this affords him a complete knowledge of what things have kidneys, he still does not know what the intrinsic nature of a kidney is. As a result, all of his kidney-knowledge is of the form, "Kidneys, whatever they are, bear this relation to hearts," and, "Kidneys, whatever they are, are had by people, dogs, horses, etc." Similarly, all of Mary's knowledge about R is of the form, "R, whatever it is, is produced in George by his

viewing red objects," and, "R, whatever it is, is had by George's experience e, Sally's experience h, Sam's experience i, etc."⁸ Mary has this knowledge, but she still does not know what R is.

It should be added that there is an important disanalogy between the situations of Mary and Ralph, for whereas Ralph can discover what a kidney is by having one described to him, Mary cannot discover what R is by having it described to her. Indeed, Mary already knew all of the true descriptions that characterize people's experiences when they see ripe tomatoes, and this was insufficient to instill in her the knowledge of what R is. So it seems that the intrinsic nature of R can only be known by being experienced first-hand, and not by being described to one by someone else. In other words, one can only know what R is by acquaintance, not by description. As Bertrand Russell said, "The word 'red' can only be understood through acquaintance with the object."⁹ In conclusion, Tye is wrong when he says that Mary does not discover any new facts when she learns what it is like to experience R; for Mary discovers a fact about the identity of R: she discovers what R is. As a result, she also discovers a fact about George's e, for she discovers what quale it is that e possessed. Contrary to what Tye claims, then, Mary's discovery of what it is like to experience R does involve her acquisition of new factual knowledge about e.

5. Different Ways of Apprehending the Same Quale

Tye may try to rebut this claim by arguing that Mary already knew (before leaving her room) what R is, and that she therefore already knew everything about the intrinsic nature of e. To this end, he may note that according to physicalism, R is a physical feature. It may be a neurophysiological property or, perhaps, a functionally defined one. Either way, since it is a physical feature, Mary knew all the facts about it when she was in her black and white room. For instance, she knew what it is: she knew that R just is this neurophysiological (or functional) property. When she left her room and saw a ripe tomato, she merely came to know of R in a new way. That is, when she was in her room, she was aware of R as a neurophysiologically (or, perhaps, functionally) described property, and when she left she became aware of R in a new way, namely, as the phenomenal content of her own experience. In both cases, the same property

presented itself to her, but in different ways.

It is difficult to assess such a position, for it raises questions concerning our criteria for property identity. How are we generally to determine whether two predicates refer to two different properties, or whether they instead refer to one and the same property that merely appears to us in two different ways? Fortunately, we need not delve into such matters here, for this Tyeian response is unsatisfactory for two reasons.

First, we must note the oddity inherent in speaking of a raw feel or quale, such as R, as being something that may appear to us in different ways. For in speaking of R in this manner, we seem to be thinking of it as though it were an external object that we may experience in different ways; we seem to be thinking of it as an object of which we may have experiences that differ in their phenomenal contents or qualia. But R is itself one of these qualia. In other words, R is not an object that we may experience in different ways, for it is itself one of the ways in which we experience objects. It is itself one of the qualitative modifications of our experiences of objects (e.g., ripe tomatoes), and not one of the objects of which we have such experiences.

The second difficulty with the above Tyeian response is that even if its central point were true, the knowledge argument could be made sound by means of a simple amendment. To see how this could be done, recall that the Tyeian response has as its central point the claim that R just is a neurophysiologically (or, perhaps, functionally) defined property, and that, therefore, Mary already knew what R was when she was in her black and white room; she merely apprehends that same neurophysiological property in a new way when she leaves her room and sees a ripe tomato. Suppose that this is true. The fact remains that Mary, before leaving her room, did not know that R could be experienced in the manner in which she experiences it after leaving her room. That is, she did not know that it could appear in the way that it does when it comprises the phenomenal content of her experience of the ripe tomato. After all, once Mary has seen the ripe tomato there can surely be nothing wrong with her saying the following: "When I was in my room, I knew of R in strictly neurophysiological terms. But now I am aware of R as the

phenomenal content of my own experience, and I never dreamt it could appear in this way. And certainly it is true that it now appears to me in this new way; i.e., it is a fact that it so appears. Furthermore," she may conclude, "it probably appeared to George in this manner when he underwent e. And, again, it is a fact that it so appeared to him. Here, then, is a fact about e that I did not know when I was in my room." In short, it is a fact that R (even if it is a purely neurophysiological property) appeared to George in a particular way when he underwent e; and Mary, before leaving her room, was ignorant of the nature of this way.

Of course, once we have come this far, we must reject the supposition with which we began this line of reasoning. For recall that we began by supposing that every quale, including R, just is a physical property that can be defined either neurophysiologically or functionally. But then what are we to conclude from the fact that in spite of having had a complete knowledge of all the physical facts about e while in her room, Mary did not then know that when George underwent e, R appeared to him in the manner in which it did? Are we to conclude that R's so appearing to George is a non-physical fact, even though R is a physical property? But this would mean that R, which we are supposing to be a physical feature, can nonetheless appear in non-physical ways. I do not know what to make of such a conclusion, given the above supposition that there are no non-physical qualia, for on the only construal of 'something's appearing in a non-physical way' that makes any sense, a physical property can so appear only by producing an experience that has some non-physical feature or quale. Thus, we are led back to admitting non-physical qualia into our ontology.

For this reason, we should reject the above Tyeian response. We should reject the claim that R just is a neurophysiologically or functionally defined physical property, and that Mary therefore already knows what R is before leaving her room. We should instead say that while in her room, she does not know what R is. She only discovers what it is when she leaves her room, sees a ripe tomato and for the first time undergoes an experience f that has R. She thereby learns a fact about R's identity, one that she did not know before. She expresses this fact to herself by

saying, "This is R," where the `this' refers to the phenomenal content of her own present experience. From her newly acquired knowledge (together with her old knowledge, which she acquired in her room, that George's e had R) she concludes that:

(1) e had this quale,

where the `this quale' refers to the phenomenal feature of her present experience. (If Mary is a nominalist, she may want to eschew [1] in favour of something like, "e had a quale that closely resembled this.") In uttering (1), Mary expresses a fact about e that she did not know while in her room, and that she came to know only upon leaving it and undergoing f. Thus, since she knew all of the physical facts about e while in her room, the fact which she expresses by means of (1) must be a non-physical fact about e.

6. What Did Mary Believe and When Did She Believe It?

By appealing to a criticism he made of Terence Horgan,¹⁰ Tye may criticize this line of reasoning. Horgan had agreed that when Mary undergoes f, she learns what it is like to see ripe tomatoes. According to Horgan, Mary can express her new knowledge by means of

(2) Seeing ripe tomatoes has this property,

where the phrase `this property' refers to the quale of Mary's present experience. In response to this view, Tye objected that since the indexical `this property' in (2) refers to R, the knowledge expressible by Mary in (2) could equally well be expressed by

(3) Seeing ripe tomatoes has R,

"if the given person is presently experiencing R."¹¹ Tye then reiterated his point that Mary already possessed the knowledge expressed by (3) when she was in her room. Hence, since (2) and (3) express the same knowledge, Mary already had, while still in her room, the knowledge expressed by (2). Consequently, Tye concluded, Horgan seems to be committed to the false conclusion that Mary already knew, before leaving her room, what it is like to experience R; for Horgan equated this knowledge with the knowledge that is expressed by (2).

The key point here is Tye's claim that (2) expresses the same knowledge for Mary as (3),

and that it thus does not express any new factual knowledge that she lacked while in her room. This is relevant to my foregoing criticism of Tye, for, presumably, he would want to maintain that just as (3) expresses the same knowledge as (2), so too does

(4) e had R

express the same knowledge for Mary as (1). He would then conclude that since Mary had the knowledge expressed by (4) before leaving her room, she must also have then possessed the knowledge expressed by (1). Tye would thereby establish that, contrary to my earlier claim, (1) does not express any new factual knowledge that Mary acquires when she experiences R.

I do not believe that (1) expresses for Mary the same knowledge that was expressed for her by (4) when she was in her room. I want to clarify the nature of my disagreement with Tye on this point, though, for I do not want to be interpreted as arguing simply that (1) and (4) express different items of knowledge for Mary after she leaves her room. Indeed, I believe that they then express the same information for her. Rather, I want to argue that when Mary has her first R-experience, she comes to know a fact that is expressed for her by (1), and that this fact is different from the one that was expressed for her by (4) before she had her first R-experience. After she experiences R, the meaning of (4) changes for her in such a way that it comes to express a new fact, namely, the one that she expresses by means of (1).

I can elucidate this position by quoting Tye himself, for he endorses the empiricist doctrine upon which I am here relying. He introduces this doctrine as "the empiricist thesis that some linguistic terms cannot be fully understood by persons who have not experienced their referents."¹² Tye accepts this thesis and maintains that his views can accommodate it. He proceeds to explicate it (using Jones instead of Mary) as follows:

Consider again `R'. Empiricists would maintain that Jones before the operation does not fully understand `R'. Yet he clearly has some understanding of `R'. He can formulate causal descriptions that R uniquely satisfies, and he has no difficulty in identifying occasions on which R is present in Smith's

experiences.¹³

Nevertheless, Jones "does not fully understand R."¹⁴ This is because R is a phenomenally simple quality that Jones has not yet experienced, and, according to the empiricist thesis, "Full understanding of the meaning of a rigid name for a phenomenally simple quality presupposes experience of that ... quality."¹⁵ Hence, prior to experiencing R Jones only partially understood the term `R'. Once he experiences its referent he gains a full understanding of `R'. So what he meant by `R' before his first R-experience differs from what he means by it after that experience, for with that experience his understanding of `R' changes.

The same can be said of Mary. What she meant by `R' while in her room differs from what she means by it now that she has left her room and experienced R directly. As a result, her utterances that included `R' before her first R-experience have different meanings for her than her post-R-experience utterances. For instance, her pre-R-experience utterance of (4) does not mean what her post-R-experience utterance of (4) means. She means different things by these two utterances, because she means different things by `R' in each of them. This difference in meaning is accounted for by the empiricist thesis: prior to her experience of R, Mary only partially understood `R'; she did not fully understand `R' until she left her room and experienced R for herself.

When she was still in her room, Mary understood `R' solely in terms of R's extrinsic, relational features. In effect, she "black-boxed" R: she knew nothing of its intrinsic nature. She only knew certain causal features of it. For example, she knew that R was typically produced in normal human observers, such as George, when they viewed ripe tomatoes, fire engines, etc. It was in terms of causal generalizations such as these that Mary understood `R', for these generalizations served to fix the reference of `R' for her. Although she was cognizant of these reference-fixers, she was ignorant of the nature of the referent that they determined. Thus, whenever she used `R', she meant something like, "The quality, whatever it is, that satisfies these causal generalizations."

After having her first R-experience, Mary acquires a fuller understanding of `R'. I will not discuss the precise nature of this fuller understanding. It is sufficient for my purposes merely to note that according to the empiricist thesis (which Tye accepts), Mary's understanding of `R' changes when she experiences R, and that, consequently, what she means by uttering (4) also changes. We must therefore distinguish between Mary's two senses of (4). There is, on the one hand, what I shall call her pre-exit (from her room) understanding of (4), and, on the other hand, her post-exit understanding of it. Even though the string of words that she utters is in both cases the same, her pre-exit and post-exit utterances of them have for her different meanings. With this change in meaning there is a concomitant change in belief content: since what Mary meant by her pre-exit utterance of (4) differs from what she means by her post-exit utterance of it, the belief that (4) expressed for her prior to her exit differs from the belief that it subsequently expresses for her. So, if Mary's pre-exit and post-exit beliefs count as instances of knowledge, then (contrary to Tye's claim) the knowledge that (4) expressed for her prior to her exit is not the same as the knowledge that it expresses for her after her exit.

One may object to my claim that `R' changes its meaning for Mary when she has her first R-experience, on the grounds that a term does not generally change its meaning for the person who uses it every time that person learns something new about the object(s) that it denotes: when I discover that most bachelors live on earth, that does not become part of what I mean by `bachelor'.¹⁶ In response, I would like to point out an important difference between the bachelor case and the case of post-exit Mary: in the former case, what I learn about bachelors is not constitutive of the meaning of the word `bachelor' as that word is used by English speakers, whereas in the latter case, Mary learns something about R (namely, its intrinsic nature) that is constitutive of the meaning of the phrase `that quale, the one that happens to be the phenomenal feel of redness for normal humans' (which I abbreviate as `R'). In other words, it is not part of the meaning or definition of `bachelor' that most bachelors live on earth, for, given the way that term is used by English speakers, it is logically possible that most bachelors live on Mars. By contrast,

given the way in which the words that 'R' abbreviates are used in the English language, it is not possible for R to have an intrinsic nature other than the one that it has. Its having that intrinsic nature is part of the very meaning of 'R'. Before she left her room, Mary was ignorant of this part of the meaning of 'R'. She was at that time only able to use 'R' at all because she was aware of some other features that are definitive of its meaning (e.g., its referring to a colour quale that is typically produced in normal humans by their viewing red objects). She used 'R' with only this part of its meaning in mind. Then, when she had her first R-experience, she became aware of the full meaning of the phrase for which 'R' is an abbreviation, and from that moment she used 'R' with this fuller meaning in mind. At that moment, the meaning of 'R' changed for her, and so too did the meanings of her utterances involving 'R'.

To reiterate, the knowledge that (4) expressed for Mary prior to her exit differs from the knowledge that it subsequently expresses for her. Thus, when Tye claims that (1) expresses for Mary just the same knowledge that was already expressed for her by (4), we must remove the ambiguity from this claim by specifying of which utterance of (4) this is true. Clearly, if it is true of either utterance at all, it is true only of the post-exit one. In order for Tye's criticism to succeed, though, he would have to establish that (1) expresses for Mary just the same old knowledge that her pre-exit utterance of (4) expressed, for only then would he have shown that (1) does not express new factual knowledge that she acquires when she experiences R.

7. Qualia Facts

Tye may object to my inference that since Mary's pre-exit and post-exit utterances of (4) have for her different meanings, they therefore express to her different facts (and thus different items of knowledge), for as Tye has noted,¹⁷ it is possible for two statements to differ in meaning while nevertheless expressing the same "factual information."¹⁸ For instance, Mary's post-exit utterance of (4) and her utterance of (1) convey the same factual information, even though (1) and (4) have different meanings. (That they differ in meaning is attested by the fact that post-exit [4] could be true while [1] is false, as would be the case if, e.g., Mary were to leave her room and

experience R, utter [4], and then experience some quale other than R, about which she utters [1]; here, [1] would be false while her post-exit [4] would be true.) Tye might wish to agree that his acceptance of the empiricist thesis commits him to acknowledging the difference in meaning between Mary's pre-exit and post-exit utterances of (4), while adding that they nonetheless express the same factual information.

That they do not in fact express the same factual information can be established by the following considerations. Recall that when Mary was in her room and gave her pre-exit assent to (4), she conceived of R strictly in terms of its relational features. She black-boxed R's intrinsic nature; i.e., she meant by uttering (4) merely that R, whatever quale it may turn out to be, was had by e. Her pre-exit belief of (4) is thus consistent with R's turning out to be, say, one of the blueness-qualia, rather than the specific redness-qualia that it actually is. By contrast, her post-exit utterance of (4) is not consistent with this state of affairs, for the intrinsic nature of R figures in the meaning of that utterance; that is, Mary then understands 'R' as meaning just that intrinsic nature. As a result, when post-exit Mary assents to (4), she thereby regards e as having had a quale with the intrinsic nature that R actually has. Clearly, then, her post-exit belief of (4) is not consistent with e's having had a quale whose intrinsic nature was that of a blueness-qualia. So, since Mary's pre-exit utterance of (4) is consistent with a state of affairs with which her post-exit utterance of it is inconsistent, it follows that her two utterances of (4) do not convey the same factual information.¹⁹

8. Concluding Historical Note

Before closing, I would like to note a striking similarity between Tye's views and those of Herbert Feigl.²⁰ Feigl once considered this question: "What is it that the blind man cannot know concerning colour qualities?"²¹ He concluded that the blind man lacks only knowledge by acquaintance of the colour qualia. He added that there is no fact of which the blind man need be unaware, for, according to Feigl, the blind man may already know by description all of the facts about colour qualia. All that he lacks is knowledge by acquaintance of some of those same facts.

As Feigl put it,

... what one person ... knows by acquaintance may be identical with what someone else knows by description. The colour experiences of the man who can see are known to him by acquaintance, but the blind man can have inferential knowledge, or knowledge by description about those same experiences.²²

In short, the blind man knows in a different way (namely, by description) the same facts about colour qualia that are known to sighted people by acquaintance. Now, recall that according to Tye, when Mary undergoes her first experience of R she does not thereby come to know any fact that she did not already know before leaving her room. Rather, she merely comes to know in a new way the same fact that she had already known beforehand. More specifically, she merely comes to know introspectively a fact that she had previously known by other means. To use Feigl's Russellian terms, Mary merely comes to know by acquaintance a fact that she had previously known by description.

I welcome Feigl's use in this context of the distinction between knowledge by acquaintance and knowledge by description. However, I reject his application of it, for (as I have argued) the fact that Mary comes to know by acquaintance when she first experiences R (and which is expressed for her by [1]) is not to be identified with any of the facts that she knew by description when she was in her room. Similarly, there are facts about colour qualia that sighted people know by acquaintance and that are not to be identified with any of the facts that the blind man knows by description. These facts, which elude pre-exit Mary and the blind man, are facts about the intrinsic natures of the relevant qualia. They are, as I have argued, not merely facts about what states have those qualia, but are instead facts about what those qualia are.²³

Notes

1. Frank Jackson, "Epiphenomenal Qualia," The Philosophical Quarterly, 32, 127 (April 1982): 127-36. Jackson elaborates on his views in "What Mary Didn't Know," Journal of Philosophy,

83, 5 (May 1986): 291-5.

2. Jackson, "Epiphenomenal Qualia," p. 130.

3. Michael Tye, The Metaphysics of Mind (New York: Cambridge University Press, 1989), Ch. 6, p. 133-50. In his "Acknowledgements" Tye says that this chapter is a virtual reprint of his "The Subjective Qualities of Experience," Mind, 95, 377 (January 1986): 1-17.

4. Tye, The Metaphysics of Mind, p. 144.

5. *Ibid.*, p. 145.

6. As given in (1c), *ibid.*, p. 141. According to Tye's analysis, person \underline{x} knows what it is like to have an experience with a certain quale \underline{Q} if, and only if, "Either \underline{x} is presently undergoing an experience with \underline{Q} and \underline{x} is introspectively aware that his experience has \underline{Q} , or \underline{x} can remember having an experience with \underline{Q} , or \underline{x} can remember having experiences with qualities either phenomenally similar to \underline{Q} or phenomenally constitutive of \underline{Q} and \underline{x} , on the basis of what he is here able to remember, can imagine having an experience with \underline{Q} ."

7. *Ibid.*, p. 142.

8. Tye himself adopts this manner of speaking in the last paragraph of Tye, The Metaphysics of Mind, p. 145, where he says, "One of the things [Mary] knows of [George's] \underline{e} is that it has the phenomenal content (whatever it actually is) that is typically caused in [George] by his viewing red objects."

9. Bertrand Russell, "The Philosophy of Logical Atomism," in Logic and Knowledge, edited by Robert Charles Marsh (London: Unwin Hyman Limited, 1956), p. 195. (Tye alludes to this section from Russell in The Metaphysics of Mind, p. 139.) Russell was here speaking of redness itself. Perhaps he should have confined his remarks to phenomenal redness, i.e. to the phenomenal quale that usually characterizes our experiences when we see red things (i.e., \underline{R}), since some would prefer to reserve the term 'red' for referring to the physical features of external objects that reflect light waves onto the retina in such a way as to induce in the observer an \underline{R} -quale.

10. In Tye, The Metaphysics of Mind, p. 145, footnote number 14. Tye was there criticizing a view presented in Terence Horgan, "Jackson on Physical Information and Qualia," The Philosophical Quarterly, 34, 135 (April 1984): 147-52.
11. Tye, The Metaphysics of Mind, p. 145, footnote number 14.
12. *Ibid.*, p. 148.
13. *Ibid.*, p. 148.
14. *Ibid.*, p. 148.
15. *Ibid.*, p. 148.
16. My thanks to Duncan MacIntosh for this point.
17. In Tye, The Metaphysics of Mind, p. 145-6, footnote number 14.
18. *Ibid.*, p. 146, footnote number 14.
19. An anonymous referee has complained that I am trading on an unclear notion of "factual information." While I cannot pretend to have ready a fully adequate and thorough analysis of this concept, I shall assume for present purposes that whenever one's beliefs are augmented in such a way as to eliminate possibilities with which they were previously compatible, one has thereby acquired new information. So that since Mary's pre-exit belief of (4) is compatible with a possibility which her post-exit belief eliminates (namely, the possibility that e exemplified a blueness quale), the two beliefs must differ in respect of their informational content. This is not to deny that many vexatious questions remain concerning the nature of information about qualia. William Seager probes them insightfully in his Metaphysics of Consciousness (London and New York: Routledge, 1991), esp. p. 144-68.
20. Herbert Feigl, The 'Mental' and the 'Physical' (1958; rpt. Minneapolis: University of Minnesota Press, 1967), p. 68.
21. *Ibid.*, p. 68.
22. *Ibid.*, p. 68.
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