PHENOMENAL KNOWLEDGE

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I. Introduction

Frank Jackson has presented a simple and powerful argument against physicalism [5, 6]. The physicalism that Jackson contests is the thesis that all correct information is physical information. Jackson's argument against this version of physicalism goes roughly as follows. Complete knowledge of physical information would not provide someone who never had the experience of seeing a certain colour with knowledge of what it is like to see the colour. From this Jackson infers that knowledge of what an experience is like is knowledge of non-physical information. He concludes that not all correct information is physical information.

This is the knowledge argument against physicalism. The argument has received extensive critical attention. The main line of critical response proceeds by acknowledging that Jackson has identified knowledge which is not knowledge of physical information, while denying that it is knowledge of non-physical information. It is claimed not to be knowledge of information at all. Its existence thus poses no threat to the physicalist thesis asserting that all correct information is physical information.

This sort of response has a structure which is suitable for refuting the knowledge argument. In order to accomplish a convincing refutation of this form, the response must include some persuasive explanation of what does constitute knowing what it is like to see a colour. Several critics contend that knowing what an experience is like is a kind of knowing how, a kind of knowledge consisting in having abilities rather than information. It will be argued here that this is an untenable view of the knowledge at issue. It will be argued that the knowledge consists in acquaintance with the experience. Acquaintance with an experience does not require having either information or abilities. Acquaintance constitutes a third category of knowledge, irreducible to factual knowledge or knowing how. Knowledge by acquaintance of an experience requires only a maximally direct cognitive relation to the experience. The principal work of the present paper is to offer an exposition and defense of this position. The epistemic considerations on which the knowledge argument is based have considerable plausibility. An appeal to knowledge by acquaintance is particularly useful in accounting for them in a way that casts no doubt on physicalism.

1 The following critical writings are particularly pertinent to the work of the present paper: Bigelow and Pargetter [1], Churchland [2], Lewis [7], Nemirow [8], and Tye [10].
2 This is the approach of David [7], Nemirow [8], and Teller [9].
II. The Knowledge Argument Reviewed

Let us review in more detail Jackson's presentation of the knowledge argument against physicalism. Jackson uses two examples, the example of Mary and the example of Fred. Mary is a neurophysiologist in the distant future. She has managed to become extremely well informed while living in a peculiar state of deprivation. She has always been confined to an entirely black and white environment. She has never experienced any other hue. Yet Mary has learned all of the facts that can be learned in her drab world of black and white. In particular, she has learned all such facts about colour vision. All accurate physical information about colour vision has been conveyed to Mary in black and white via textbooks, television monitors, or the like.

Using this example Jackson argues against physicalism as follows [6, p.291]. In spite of Mary's exhaustive physical knowledge, she does not know all that there is to know. When Mary is released and sees ripe red tomatoes, she will learn what it is like to see something red. Jackson claims that this will be for Mary to learn a fact about others' colour experiences, a fact that she did not previously know. Since by hypothesis she already knew all of the physical information about colour vision, Jackson infers that this is non-physical information. He concludes that not all information is physical.

The other example that Jackson uses in presenting the knowledge argument is that of Fred. Fred has extremely keen colour vision throughout the visible spectrum. In addition, Fred is able quite reliably to discriminate objects into two colour classes where the rest of us see things of only a single shade of red. Fred experiences a phenomenal difference. The objects in the two classes do not look to him to be of the same colour. The members of at least one class do not produce in him the experience that all of these red things produce in the rest of us, the experience of a certain shade of phenomenal redness.

Jackson uses this example as follows. He claims that no physical information would 'tell us what [Fred's] colour experience is like' [5, p.473], something that Fred himself knows. Furthermore:

> [T]he special quality of [Fred's] experience is certainly a fact about it, and one which Physicalism leaves out because no amount of physical information [tells] us what it is. [5, p.473]

Physical information fails to include facts like this fact about Fred's experience. So again it is implied that not all correct information is physical information.

III. Objections From Ability Analysts

Philosophers critical of Jackson's knowledge argument have largely accepted his 'knows-what-it-is-like' description of the sort of knowledge that is new to Mary and special to Fred, and they have largely agreed that knowledge of what an experience is like is not knowledge of physical information. They contend that nonetheless it is
not knowledge that threatens physicalism. One leading approach is to analyze the
knowledge as a kind of know-how. For instance, Laurence Nemirow proposes an
analysis of knowing what a certain visual experience is like that is framed in terms
of an ability to visualize. Nemirow writes:

\[
\text{The expression 'x knows how to visualize red' either should replace, or can}
\text{be used to paraphrase, 'x knows what the experience of seeing red is like'.}
\text{[8, p.494]}
\]

Similarly, David Lewis proposes that knowing what it is like e.g. to taste Vegemite
is identical to possessing certain sorts of abilities. Lewis contends that one who
comes to taste Vegemite ordinarily gains the ability to remember that experience,
and the abilities to imagine it and to recognize it. New experiences ordinarily yield
such abilities. Lewis writes:

\[
\text{The Ability Hypothesis says that knowing what an experience is like just is}
\text{the possession of these abilities to remember, imagine, and recognize. [7,}
\text{p.516]}
\]

Thus, the ability analysts’ response to Jackson’s argument is to contend that in
learning what it is like to see something red Mary gains abilities rather than factual
knowledge. This permits the inference that her learning does not imply the exist-
tence of information that is new to her. Physical information can be exhaustive.

IV. Problems for Ability Analyses

Analyses of knowing what an experience is like in terms of abilities are objection-
able. First, knowing how to visualize any given colour is not sufficient for knowing
what it is like to see the colour. Suppose that Martha is a superlative colour interpo-
lator. She is highly skilled at visualizing an intermediary shade that she has not
experienced between pairs of shades that she has experienced. Martha happens not
to have any familiarity with the shade known as cherry red. She has seen, and
vividly recalls, the look of burgundy red and the look of fire engine red. Suppose
that Martha is now informed that there is a common shade of red, cherry red, which
is a hue midway between burgundy red and fire engine red. At this moment, before
Martha has imaginatively interpolated between those two shades, it is clear that
Martha does not yet know what it is like to see something cherry red. She does not
know this, although she is fully prepared to find out by exercising her imagination.³
Yet Martha already knows how to visualize cherry red, since she knows how to per-
form the imaginative interpolation between burgundy and fire engine red. Thus,
knowing how to visualize something cherry red at will is not sufficient for knowing
what it is like to see the colour.

³ Whether or not she really is ready to find out what it is like to see cherry red is questionable in a
way that does not affect the present point. See fn. 8 below.
Someone in Martha’s situation poses no problem for David Lewis’ proposal that knowing what an experience is like is identical to being able to remember, imagine, and recognize the experience. Lewis’ proposal correctly implies that Martha does not yet know what it is like to see something cherry red. Martha is unable to remember an experience of seeing cherry red because she has never had this experience.

Lewis’ Ability Hypothesis is subject to a different objection. It requires too much of a person in order to know what an experience is like. Nemirow’s ability analysis also makes this mistake. To see this, let us suppose that Mary is in the epistemic condition that Jackson ascribes to her during her confinement. She is as well informed about colour vision as can be accomplished by lessons in black and white. But suppose too that Mary has no visual imagination. She is unable to visualize anything. Now the story continues as before. Mary is released from her black and white confinement and sees something red for the first time. At that point, while she is intently gazing at the colour of red ripe tomatoes, it is clearly true that she knows what it is like to see something red. She has made an exciting discovery. ‘Aha!’ she might well exclaim. Yet she is unable to imagine anything. *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.

This version of the case of Mary enables us to see that knowing what an experience is like requires nothing more than noticing the experience as it is undergone. That is all Mary did, and yet it was enough to justify her issuing an ‘Aha!’ exclaiming a revelation. Memory and imagination are unnecessary. In fact, no ability to do anything other than to notice an experience is required.

This point does not require that we deny all role for abilities in the phenomenon that we call ‘knowing what an experience is like’. *Continuing to know* what an experience is like may require mnemonic or imaginative abilities. But the knowledge argument against physicalism has no need of any such continued knowledge. If Mary, who is fully physically informed, learns some new fact when first she see a spectral colour, then it follows that not all information is physical, however tenuously or fleetingly Mary may know the new fact.

V. An Initial Acquaintance Hypothesis

When we consider someone in Mary’s epistemic condition prior to seeing any spectral colour, it is entirely plausible that the person is in some way ignorant concerning colour experiences. She may know all about them, but this knowledge is pallid and abstract. She does not know these vivid experiences first hand. Jackson maintains that this is factual ignorance, a lack of information. We have seen that it is a mistake to construe this ignorance as a lack of ability. There is a third alternative. It is suggested by a close look at one way in which Jackson himself describes the ignorance. Concerning Fred, who has differing colour experiences in cases where
we see just one shade of red, Jackson writes:

[T]here [is] something about his colour experience, a property of it, of which we [are] ignorant. [5, p.473]

Jackson goes on to claim that this special quality of Fred’s colour experience is a fact about it. But the ignorance that Jackson actually attributes to us in this citation is ignorance of a property of Fred’s colour experience. To be ignorant of a property is not to fail to know a fact. Factual knowledge is knowledge of truths, not properties. Nor is ignorance of a property identical to a lack of ability. A person is ignorant of a property when the property is unfamiliar to the person. In order to be ignorant of a property, it suffices to lack acquaintance with the property. To come to know a property is to become acquainted with the property, just as to come to know a city is to become acquainted with the city, and to come to know a problem is to become acquainted with the problem. It is uncontroversial that some knowledge attributions ascribe a relation of acquaintance, as when we say things like ‘Sam knows Bill’, or ‘Bob knows the agony of defeat’. These considerations suggest a hypothesis about the examples in question to the effect that the difference between ignorance of what an experience is like and knowledge of what an experience is like is a matter of acquaintance.

A simple acquaintance hypothesis about what Mary learns is that learning what an experience is like is identical to becoming acquainted with the experience. When first Mary sees red ripe tomatoes, she learns what it is like to see something red. It is also true of this episode that it is the first time that she undergoes an experience with the phenomenal quality that ordinarily results from seeing something red, phenomenal redness.

Suppose that this quality is a physical property of experiences. If phenomenal redness is a physical property, then from the assumption that Mary already knew all of the physical facts it follows that she already knew that experiences have this property. But during her confinement phenomenal redness was not a property of any of her visual experiences. It seems also to be true that she never knew the property itself, in spite of her knowing all about it. This suggests the more specific acquaintance hypothesis that becoming acquainted with a phenomenal quality consists in experiencing the quality. This further hypothesis puts us in a position to account for Mary’s learning what it is like to see something red. The learning is a

This is not a pellucid supposition. It is not trivial to give an appropriate sense to ‘physical property’, nor to the expression ‘physical information’ in terms of which Jackson formulates physicalism. Presumably the rough idea is that all such properties and information are somehow included in the proper subject matter of the physical sciences, whether or not actual science ever happens to address them. Giving a clear account of the relevant notion of ‘proper subject matter’ would be no mean feat. Fortunately, for the purposes of the present work any reasonable conception of the physical will do. The main contention here is that Fred’s knowledge of the special quality of his experience and Mary’s knowledge of what it is like to see something red are initially matters of acquaintance with the relevant phenomenal qualities. Having this knowledge does not imply possessing of any sort of information. This response to the knowledge argument leaves entirely open the ontological status of all properties and accurate information. Because of this, the present work does not depend on having a satisfactory answer to the question of what it takes for properties or information to fall into the category of physical things.
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matter of Mary’s becoming acquainted with the visual experience that ordinarily results from seeing something red, and this acquaintance consists in Mary’s experiencing phenomenal redness. She experiences the quality, and that teaches her what seeing red things is like. She does not learn any new fact. Rather, she comes to know the quality itself. Likewise, Fred knows the special quality of his experience, and not any special fact.

According to this account, Mary already knew all of the physical facts without knowing what it is like to see something red. Mary came to have the latter knowledge simply by having the right sort of experience, and not by acquiring any new information. So the knowledge argument fails to establish the existence of any non-physical information, if this acquaintance account is correct.

VI. Three Objections Calling for Clarifications

An explanation will soon be offered for why knowledge by acquaintance in such cases consists in experience. But first let us consider whether there is good reason to think that learning what it is like to see something red requires something more than experiencing phenomenal redness.

i. Herbert Feigl appears to have argued that merely experiencing does not constitute knowledge of any sort. Feigl writes: ‘[M]erely having or living through (“erleben”) is not knowledge in any sense’ [4, p.68]. Feigl himself accepts the existence of a sort of knowledge by acquaintance. But he takes it to be a species of factual knowledge.

Feigl’s cited claim is surely right if it means that in general a person’s merely having some property or living through some condition is not sufficient for the person to know the property or the condition. If we need to persuade ourselves of this with an example, we can suppose that a certain fellow Barney is a man of modest means, but not in such dire straits as to be pitiable in any respect. Barney wins a very large cash lottery prize. As unkind fate would have it, an accident renders Barney comatose before he finds out about his winnings. Barney might well come to be pitied as his loss of income goes beyond his lottery winnings while he remains unconscious. Thus, Barney lives through the condition of being affluent and has the property of being pitied without knowing either affluence or pity.

The crucial cases for the knowledge argument are relevantly dissimilar to this one. The crucial cases involve only knowledge of experiences. It is plausible that having experiences is sufficient for knowing those experiences. It is most plausible to hold that this is almost sufficient. The ‘almost’ is called for because qualities that are quickly and inattentively experienced may not be thereby known. Momentary peripheral awareness of some new shade of colour is not sufficient really to know that shade. The one thing more that is required in order to know an experienced quality is to notice the quality as it is being experienced.

This slightly amended account still implies no need for factual knowledge in order to have knowledge by acquaintance. Ordinarily we do also acquire factual knowledge when we notice a novel sort of experience. We usually acquire factual
knowledge about accompaniments of the experience, and sometimes of its causes and effects. Novel experiences also ordinarily bring about new abilities to imagine and recognize. But these are contingent epistemic associates of learning what an experience is like. In the latest version of the case of Mary, the version in which she is wholly lacking in imagination, some of these ordinary epistemic companions are not present. None of them need be present in order to know what an experience is like. Mere attentive awareness will do. The acquaintance hypothesis accommodates this possibility by holding that all that it takes for a person to come to know what an experience is like is to notice the experience while undergoing it. This hypothesis, which is restricted to knowing experiences, is not refuted by Feigl's correct point that in general having a property or living through a condition does not imply knowing it in any sense. Knowledge of experiences is exceptional in this way.

ii. By experiencing red things, Mary learns what red things look like. Any knowledge by acquaintance aside, this may continue to appear to be a fact that Mary has learned about red things. But this appearance dissipates when we concentrate on the content of this learning. Learning what red things look like is identical to learning how red things look, and this is identical to learning the look of red things. When we have reached this last formulation of the content of the learning, any appearance of factual content is gone. Clearly this does not say that what is learned is some fact to the effect that something or other is so. It says, concerning a certain look, that what is learned is it. A look is not a fact. This learning seems to be unproblematically classified as a relation of a person to a phenomenal quality, just as the acquaintance approach would have it.

There are closely related facts, such as the fact concerning phenomenal redness that red things look that way. But we have no reason to doubt that Mary knew all such facts before knowing how red things look. Mary already had the capacity to form thoughts using this demonstrative sort of reference to phenomenal qualities. She was able to demonstrate them with comprehension, at least via others’ experiences of them, e.g. as ‘that look’ while indicating another person’s attentive experience of phenomenal redness.

iii. Laurence Nemirow objects to a certain type of analytic proposal that construes knowledge of what an experience is like in terms of acquaintance [8, p.491]. The proposal to which Nemirow objects both asserts that knowing what an experience is like amounts to acquaintance with the experience and denies that this is genuine knowledge. Nemirow observes that this denial of genuine knowledge fails to account for our extensive use of epistemic terms other than ‘know’ in connection with what an experience is like, epistemic terms such as ‘learn’, ‘remember’, and ‘forget’.

We can see that this objection does not threaten the present proposal by noting

\footnote{An anonymous referee for this Journal suggests that this appearance remains.}

\footnote{It is notable that, at least in [5] and [6], Jackson never attempts to formulate the content of Mary’s learning with a ‘that’-clause. I attempt to do so in [3, p.300]. For considerations which now seem to me to eliminate any good reason to think that a ‘that’-clause formulates new information, see the reply to the present objection, and sections VIII and X below.}
that the acquaintance hypothesis advocated here does not offer the sort of eliminative reduction to which Nemirow properly objects. The hypothesis has it that Fred does know something in knowing what his special colour experience is like, and Mary does learn something in coming to know what it is like to see something red. These are to be cases of having knowledge by acquaintance in the former case, and gaining it in the latter case. They are not implied to be cases of acquaintance rather than knowledge. Thus, Nemirow’s objection to any acquaintance proposal that eliminates knowledge does not apply to the present suggestion.

The acquaintance hypothesis under consideration is the view that coming to know what an experience is like requires only noticing the experience as it is undergone. It should be added that continuing to know what an experience is like is not quite so simple. This knowledge can be sustained either by continuing to notice the experience as it is undergone, or by retaining a memory of the experience. It is plausible that having a memory of the experience requires being able to recreate it in imagination. So the abilities to which Nemirow and Lewis appeal in their analyses, abilities to imagine, to remember, and the like, are plausibly regarded as part of the nature of the general phenomenon that we call knowing what an experience is like.

But again, what is needed to refute the knowledge argument is an account according to which this knowledge can be gained in the absence of any new abilities. We have seen that no such ability is implied by Mary’s initial learning of what it is like to see something red, and this initial learning implies all of the knowledge of what an experience is like that the knowledge argument needs. It is this initial learning that the acquaintance hypothesis accounts for purely in terms of acquaintance. 7

VII. An Objection Calling for Justification

The response to the knowledge argument that is being advocated here is intended to be compatible with the truth of physicalism. The account is intended to be neutral on the question of whether or not the event of a person’s experiencing a phenomenal quality is an entirely physical event. In order to accomplish this neutrality, the account must allow for the possibility that every property is a physical property and all factual information is physical information. It must allow for the physicalist view that during Mary’s confinement in a black and white environment she already knew every fact about colour vision, including every fact about experiencing phenomenal qualities. If this view is correct, then during her confinement Mary would already know all about chromatic phenomenal qualities. This knowledge would make every visual phenomenal quality a topic of many facts known to Mary. It might be contended that, in virtue of having all of this factual knowledge about the qualities, Mary would be thoroughly acquainted with them. Yet during her confinement Mary does not know what it is like to see something red. So it appears that this knowledge cannot be acquired simply by becoming acquainted with phenomenal redness after all.

7 In the Appendix below, this acquaintance-based response to the knowledge argument is briefly compared to similar proposals in the literature.
This objection depends on the assumption that when someone has a familiarity with phenomenal qualities that is acquired by knowing all of the facts about the qualities, the person is acquainted with those qualities. The acquaintance hypothesis that we are considering denies this. The view has it that someone becomes acquainted with a phenomenal quality only by noticing the quality in experience. Knowing every fact about phenomenal qualities does not imply experiencing them, and thus on the present account it does not imply being acquainted with them.

This appears to be a special requirement for acquaintance with phenomenal qualities, and thus it appears to stand in need of some special justification. If someone is thoroughly familiar with say, Cambridge, then the person 'knows Cambridge' in the sense of being acquainted with the city. So why is Mary's thorough familiarity with the facts about visual phenomenal qualities not likewise sufficient for her to know those qualities by acquaintance?

An answer to this question can be derived from something which is plausibly held to be common to all attributions of knowledge: factual knowledge, knowledge consisting in the possession of an ability, and knowledge by acquaintance. Having knowledge of any sort implies achieving some optimal cognitive accomplishment with reference to the object of knowledge. For instance, in order to know a proposition for a fact, it is not enough for a person simply to believe the proposition with good reason. Factual knowledge requires that the person believe the proposition on the best sort of basis that a person can have for believing propositions of the relevant kind. Similarly, in order to know how to drive a car, it is not enough simply to be able to direct the car's motion in some fashion under some conditions. Knowing how to do something requires being adept at doing it throughout some full normal range of occasions on which it is done. Likewise for the case in point. In order for someone to know something by acquaintance, it is not enough for the person simply to have one or another sort of familiarity with the thing. In fact, however it is with the two other forms of knowledge, it seems particularly clear that knowing something by acquaintance requires a person to be familiar with the known entity in the most direct way that it is possible for a person to be aware of that thing.

Thus, in order for someone to know Cambridge, it is sufficient for the person to be thoroughly familiar with Cambridge by sensory observations. There is no substantially more intimate sort of awareness of a city that a person can have. But in order for someone to know a phenomenal quality, it is not sufficient for the person to know facts about the quality, not even all such facts. The reason for this appears to be that whereas a person's awareness of such a quality in knowing a fact about the quality can be mediated by a conceptual representation of the quality, we seem to be capable of a more direct sort of awareness of any such quality. When the quality is a property of someone's experience, the person need not use any such representation to be aware of the property. Perhaps awareness is experiential pure and unmediated; perhaps awareness of an experienced quality is mediated by some particularly transparent sensory form of representation. What matters for the present account is that experiencing a quality is the most direct way to apprehend the quality. That much seems beyond reasonable doubt.

Even that much need not be true, however. A weaker supposition is usable,
though an acquaintance-based objection to the knowledge argument that uses it must be otherwise adjusted accordingly. Let us suppose that all forms of cognition of phenomenal qualities are equally direct, perhaps because they all employ representations. Still, it is quite plausible to think otherwise. Attentively experiencing phenomenal qualities certainly appears to be the most direct sort of awareness of them that we can have. This appearance can be used to explain why we reasonably think that Mary must experience such qualities in order to know them. First we should note that it is an implication of the present supposition, together with the acquaintance hypothesis, that Mary is already acquainted with the qualities simply by knowing facts involving them. This follows because on the present hypothesis her factual knowledge about the qualities renders her as directly aware of them as we can be. So the acquaintance approach would count as false the assumption of the knowledge argument to the effect that Mary learns something by experiencing phenomenal redness for the first time. Since on the current supposition Mary is already acquainted with the experience, she already knows what the experience is like. The plausibility of our initial judgment to the effect that Mary does learn something can be attributed to the plausibility of the thought that experience is required in order to come to know the quality. The knowledge argument would fail by incorrectly assuming that Mary learns what it is like to see something red only when she experiences the quality. It is difficult to believe that this assumption is incorrect, just as difficult as it is to deny that experiencing a quality is a more direct way to be aware of the quality than is thinking abstractly about it. On the present approach, the difficulty in accomplishing this denial would explain the difficulty in believing that Mary did not learn something by experience. Such an account is available to be used if the best theory of the nature of cognition ultimately supports the assumption that all awareness employs equally indirect representations. But at least currently this assumption seems quite wrong. It is more plausible to maintain that the most direct sort of awareness of a phenomenal quality that is possible for a person consists in noticing the quality while experiencing it. Knowledge by acquaintance requires an appropriate optimal cognitive achievement. In the case of acquaintance with phenomenal qualities, the relevant sort of optimal cognition is a maximally direct sort of awareness. Thus, knowledge by acquaintance of a phenomenal quality requires attentively experiencing the quality.

VIII. A Final Objection and Reply

The present view includes an acknowledgement that when Mary becomes acquainted with phenomenal redness for the first time, she apparently thereby becomes able to think about that property in a new way. Suppose that she does. Suppose that either she then has some new and specially intimate sensory form of representation of the property, or she then apprehends the property directly, unmediated by any

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* Hence the quality can come to be known by being imagined rather than being perceived, if the imagining produces an experience that actually has the quality. If imagination cannot do this, then it cannot initiate acquaintance with a phenomenal quality.
representation. This might occasion the following objection. It might be contended that after acquiring this new representational resource Mary can have certain accurate thoughts that she could not have had before. These accurate thoughts consist in attributions of properties to phenomenal redness, such as the property of being true of some experiences. These thoughts are new, the objection continues, because the topic of the thought, phenomenal redness, is presented to Mary via the new way which Mary now has to think of that quality. New accurate thoughts imply new correct information about phenomenal redness. Thus it might be held that Mary's gaining a new way of thinking about phenomenal redness implies Jackson's anti-physicalist conclusion that there is correct information beyond what is included in Mary's exhaustive physical knowledge.

To have a new way to introduce the topic of a thought is to have a new means of referring to that topic. We have a new means of referring to a topic if we have a new symbol for that topic. Plainly the same thought can be newly symbolized. So the conceded representational difference by itself does not show that Mary has a new thought.

We also have a new way of referring to a topic when we have found a new characteristic which is true solely of that topic. So if the new way of referring to phenomenal redness that Mary acquires is a new singular property of phenomenal redness, then Mary does acquire a means for forming new thoughts about it. But nothing in Jackson's example gives us any reason to think that Mary's new means of singling out phenomenal redness is afforded her by some new singular property. The cognitive novelty which is required by the facts of the example is that Mary learns what it is like to see something red upon visually experiencing red things for the first time. If the approach advocated here is correct, then this learning is wholly accounted for by Mary's new experience. The learning consists in becoming acquainted with the visual phenomenal quality which is normally produced by viewing red things, and this is done by experiencing the quality. In this account, no property is otherwise new to Mary. The objection does not challenge this account of Mary's cognitive change. It does not provide reason to think that there is also some singular property that Mary learns to use in order to bring the topic of phenomenal redness into new thoughts.

Perhaps Jackson himself supplies the grounds for justifying the sort of claim about new thoughts that we are considering. At one point he describes Mary's ignorance by saying that there is something about other people that she 'was quite unaware of'. He continues:

\[\ldots [\text{Others'}] \text{ experiences } \ldots \text{ had a feature conspicuous to them but until now hidden from her } \ldots [6, \text{ pp.}292-293]\]

These comments by Jackson are plausible. Our question is whether they show that there was more than a representational change in Mary's thinking. Do they show that Mary underwent a cognitive change by which she gained access to some new thought?

The lack of awareness that Jackson ascribes to Mary and the fact that a certain
feature was conspicuous to others and hidden from Mary are both accounted for by a difference in acquaintance. Others were acquainted with phenomenal redness and Mary was not. But Mary did know all facts about colour vision that can be learned in black and white. This gives us reason to affirm, and no reason to deny, that this visual quality was conceived of by Mary by use of various scientific representations. We have no reason to deny that it was present in her thoughts in this way. Such thinking is not what we call being aware of the quality itself. In such thinking a phenomenal quality is not ‘conspicuous’ to the thinker. For someone to be aware of a phenomenal quality, for it to be conspicuously present, is for the person to know the quality by current acquaintance. Only experiencing it accomplishes that. We have no reason to think that Mary also discovers some new property which was previously unavailable to her to use in her thinking. Jackson’s example gives us no reason to think that Mary’s new way of representing phenomenal redness yields any new thought.

IX. Minimality

The present response to the knowledge argument is epistemologically substantial, but it is very lean. The claim is that there is a kind of knowledge of a phenomenal quality, knowledge by acquaintance, which can consist in attentively experiencing the quality rather than possessing information or abilities. This is not an exotic epistemic state. It is neither ineffable nor unmistakeable. It is the familiar sort of knowledge to which refer when we discuss knowing people and places as well as experiences.

The acquaintance approach is metaphysically noncommittal. The relation of experiencing need not be some simple relation to a phenomenal quality. For all that the approach implies, attentively experiencing a quality might be a brain state with a complex neurophysiological nature, and equally it might be a simple unanalyzable relation of a soul to a nonphysical quality. Physicalism is neither implied nor excluded. The present reply to the knowledge argument contends that the differences in experience that are by hypothesis included in Jackson’s examples constitute the differences in knowledge that are actually present in the examples. The examples thus do not support the existence of any non-physical information. This says nothing metaphysical about experiences.

X. The Basic Intuition Sustained

The knowledge argument begins with a powerful intuition. It seems quite manifest that knowing all of the physical facts about colour vision does not imply having all knowledge of chromatic phenomenal qualities. It does not imply knowing these qualities in the most vivid way. In Jackson’s words, ‘the qualia are left out of the physicalist story’ [5, p.472]. An acquaintance-based response to the knowledge argument enables us to find truth in this intuition, a truth that does not conflict with physicalism.

Thinking abstractly about a phenomenal quality by use of some conceptual repre-
sentation for the quality is phenomenologically different from thinking about the quality while attentively experiencing it. For instance, we who know how red things look can, while neither seeing nor imagining red, have the thought that some experiences are phenomenally red. This thought does not then seem as it does when we have the same thought while attending to phenomenal redness in experience. During the latter thinking, the thought appears to be much more . . . colourful. The phenomenal quality itself seems to do the work in the thinking that is done in the former case by some representation of the quality. Yet whether or not there is this representational difference, by hypothesis and manifestly it is the same thought.

This sort of difference in the phenomenology of the thinking is easily mistaken for a difference in the identity of the thought. In considering Jackson’s example of Mary we see that in her thinking phenomenological difference would accompany the cognitive change that occurs when first she sees something red. This is the very point at which she learns what it is like to see something red. It is tempting to infer that Mary must have a new thought as she sees something red for the first time, and to conclude that the learning is acquisition of the knowledge that the new thought is true.

This temptation to attribute a new thought to Mary should be resisted. Reflection on our own thinking has shown us that a similar phenomenological difference does not imply having a different thought. The acquaintance approach is especially helpful here. It explains how such a phenomenological difference can contribute to acquiring new knowledge without having any new thought. The acquaintance approach seizes on the phenomenological novelty of Mary’s experience in order to account for Mary’s learning. The content of the learning is just the novel quality experienced, not any fact. The learning consists in becoming acquainted with a phenomenal quality. Since this is all it takes to come to know what an experience is like, no new thought is needed.

The physical facts may include every fact about qualia. Still, the physical story does ‘leave out the qualia’, in the sense that knowledge of the physical facts does not imply knowledge of the qualia. Gaining knowledge of phenomenal qualities, though, is no more than a matter of making their acquaintance by attentive experience. It requires only entering into a new cognitive relation to the qualities, not learning any new information. It gives us no reason to doubt that everything is physical.9

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9 I am grateful for discussions of the knowledge argument with Dorit Bar-On, Mark Crimmins, Richard Feldman, David Lewis, and members of the Philosophy Department at Wayne State University. I am also grateful for comments on previous drafts from Joseph Tolliver and anonymous referees for this Journal.
Appendix: Similar Views

Other philosophers have offered responses to the knowledge argument which are similar in some ways to the present approach. In [10] Michael Tye offers an analysis of knowing what it is like to have an experience with a certain phenomenal quality. Though Tye's analysis is not formulated in terms of acquaintance, it resembles the acquaintance account developed in the present work. A main difference is that Tye holds [10, p.9] that knowledge of what an experience is like is 'grounded upon' factual knowledge, while the present account explains this knowledge in a way that does not imply factual knowledge. The present account thus avoids any objection that questions the adequacy of a physicalist account of the factual grounding.

In [2] Paul Churchland very briefly sketches an acquaintance analysis and suggests that it may be the sort of knowledge that Mary acquires [2, pp.23-24]. Churchland's sketch has it that acquaintance knowledge may involve a special 'prelinguistic or sublinguistic medium of representation for sensory variables', or it may involve sensory discriminative abilities [2, p.23]. The latter alternative is subject to the objection that no such ability is needed for Mary to learn what it is like to see something red. The former alternative seems similar in spirit to the acquaintance hypothesis elaborated and defended in the present work.

In [1] John Bigelow and Robert Pargetter explain in terms of acquaintance what Mary learns. They hold that Mary was already acquainted with all correct information about phenomenal redness via some mode of acquaintance or other [1, p.144]. When she experiences this quality she acquires new knowledge in virtue of being in a new mode of acquaintance and thereby having a new way of knowing what she knew before [1, p.141]. This account locates distinctions among items of knowledge where there is no distinction in what is known. Mary is to gain new knowledge, even though everything that she knows is something that she already knew. That is doubtful. This sort of difficulty is avoided in the present account, according to which what Mary comes to know - phenomenal redness - is something which she did not know before, although she may have known all facts about it. Bigelow and Pargetter's work is otherwise quite congenial to the present approach. The two papers are largely mutually reinforcing. I regret that I did not have the benefit of studying their paper until its existence was made known to me by an anonymous referee of this manuscript for this Journal.

In [9] Paul Teller proposes that what is new to Mary is an experience rather than any factual knowledge. Teller concurs, however, with Lewis and Nemirow's ability analyses of knowing what an experience is like. This seems to preclude an adequate response to the version of Jackson's argument discussed above that employs a case in which Mary lacks the relevant abilities.
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4. H. Feigl, _The 'Mental' and the 'Physical'_ (Minneapolis: University of Minnesota Press, 1958).