

In Defence of David Armstrong's Materialist Theory of Perception

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ABSTRACT: There are no qualia. The phenomenological difference between seeing and visualizing something is that the propositions which the experient begins to believe in the first case are only entertained in the second. We can know what it's like to be a bat by knowing that their echolocation informs them non-inferentially of the shapes, sizes, and directional distances away of nearby surfaces. The terms for secondary qualities like colours, though, are names of the type-properties they designate, tracing back causally to a verbal 'baptism,' and so experients don't know the character of colour experiences until they study brain physiology.

RÉSUMÉ : Les qualia n'existent pas. La différence phénoménologique entre voir et imaginer, c'est que les propositions auxquelles l'expérient commence à croire dans le premier cas sont uniquement considérées dans le second. Nous pouvons savoir «quel effet cela fait d'être une chauve-souris» en sachant que leur faculté d'écholocation les informe non-inférentiellement des formes, grandeurs, et distances directionnelles des surfaces à proximité. Toutefois, les termes désignant les qualités secondes (comme les couleurs) sont les noms des propriétés-types qu'ils désignent, et dérivent causalement d'un «baptême» verbal; les expérient ne peuvent donc connaître le caractère des expériences de couleur sans étudier la physiologie du cerveau.

Keywords: David Armstrong, qualia, blindsight, echolocation, inclination to believe, colour

1. Introduction

According to a historical narrative current in the analytic philosophy of mind, non-behaviouristic physicalism in the twentieth century started with U.T.

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Place, J.J.C. Smart, and D.M. Armstrong,¹ but then took a more sophisticated turn when functionalism freed mentalistic concepts of any necessary ties to flesh-and-blood (or, indeed, matter), and from there on the analytic thicket thickened as, later still, ‘possible worlds’ semantics reared its (lovely or unlovely) head.

Strictly speaking, however, Armstrong himself was in 1968 already a functionalist, though not especially interested in computer mentation. Armstrong’s proposed identification of *desires* and *beliefs* as states of the brain proceeded only via prior meaning-analysis of those terms as standing for kinds of inner causes which function together to produce *seeking-behaviour*. Non-ethical *belief*, specifically, was analyzed, basically, as that which causally determines the selection of *means* to given ends.

Armstrong’s account of sensory-type experiences, whether veridical *perceptions* or not, was representationalist and, specifically, doxastic or quasi-doxastic. Sensory perceptions and ‘perceptions’ alike were all (unreasoned) belief-inceptions, except in two sorts of cases. First, it might happen that no acquisition of belief occurs because the experiencer already possesses the belief(s) in question: however, in such a case, the belief-inceptions *would* occur but for that. Secondly (a more common sort of case), it could happen that the experiencer does not acquire the relevant beliefs because of other (contrary) beliefs held already: however, in such a case, the experiencer *would* acquire the relevant beliefs were it not for those other beliefs:

We acquire certain beliefs about the world by means of our senses, but these beliefs are held in check by stronger beliefs that we already possess. ...

But, it will be objected, there are plenty of cases where “perception without belief” occurs and no inclination to believe is acquired. ...

Nevertheless, we may reply, in such cases ... it is possible to formulate a true counterfactual of the form “But for the fact that the perceiver had other, independent, beliefs about the world, he would have acquired certain beliefs — the beliefs corresponding to the content of his perception.”²

Armstrong’s point is perhaps badly put, since beliefs that perceivers don’t come to hold because of stronger contrary beliefs that they have are, of course, *not* actual beliefs of theirs, not even ‘beliefs held in check.’ But Armstrong’s meaning is clear enough. For our purposes, we can *stipulate* that a mind acquires an ‘inclination’ to believe proposition P just whenever it starts believing P or would start believing P if it were not for other beliefs it has, or else — but for

¹ Place; Smart, 1959; Armstrong, 1968.

² Armstrong, 1968, 221–222.

being in such a state already — it would enter an inner state, which either is one of believing P or would be but for other beliefs it has. The present thesis is just that an account of sense-experience along these lines is defensible almost as it stands.

(A familiar tradition in the philosophy of mind asks us to envisage a jostling throng of conflicting desires, with whatever *wins out* and actually motivates a being's resultant action or inaction more or less stipulatively identified as the being's 'will.' In the same way, inclinations-to-belief can be thought of as 'candidate' beliefs potentially in conflict with one another, with only the doxastic 'winner,' so to speak, constituting the being's eventuating *belief*. One doesn't always 'believe one's eyes,' and what we conclude is an illusion doesn't necessarily *go away* merely because it is outmatched doxastically by contrary-tending information-or-misinformation; in just the same way that an outmatched desire doesn't necessarily go away merely because it runs counter to the desire that has won out and accordingly now constitutes the being's *will*.)

It is worth stressing that nothing in this account involves the experiencer having to be *conscious* of the mental processes taking place. For sure, a very great deal of mental life is not conscious. For instance, beliefs can cause beliefs by a non-linguistic process of *inference*, in a suitably broad sense of 'inference.' A weather-wise codger looks at the sky and 'sees' that it is going to rain. This is not a case of *precognition*. Rather, unconsciously noticing certain cues in the clouds has led the codger to expect rain — through a process, without awareness of its nature, that the codger is ready to trust. And, when it comes to sense-experience, if it is improper use of language to speak of 'phenomenology' that is not conscious, then such phraseology does not need to be employed. Why must all sense-experience and thought have to be conscious rather than subliminal?

And what is meant, anyway, by the word 'phenomenology' in the mouths of analytic philosophers? The term is used below for the way experience immediately appears to the mind having it; or, at least, the way experience would appear to the mind if it were (reliably) introspective enough. The acquisition of a belief or belief-inclination is often conscious, that is, introspectible. But in the analytic philosophy of mind nowadays the words 'phenomenology' and even 'consciousness' are often employed to refer exclusively to non-doxastic introspectible (aspects of) experience. Given that usage of the expressions, Armstrong's position can be stated as the denial that in experience there is really any 'phenomenology' or any 'consciousness.' What, then, is perceptual experience like from the point of view of the perceiver? What is it like to have the experience? According to Armstrong, it is experiencing the (unreasoned) inception of inclinations to believe things about the near or distant physical surroundings.

It is necessary to remember that Armstrong came to his theory of perception by way of epistemology. Philosophers like René Descartes and John Locke thought that all knowledge of the world outside us was based on inference from our sense-experiences. According to them, we interpreted these 'ideas'

as *signs* of external causes, and confirmed our interpretations by subsequent sense-experiences.

Today there is no need to insist on *inference* being limited to conscious thought processes only. Verbal issues aside, the essential question is something like this. Light bounces off a checkered surface, hits our eyeballs, and stimulates our optic nerves. Then we come to believe that there is a checkered surface in view. What is the first *mental* link in the chain of cause-and-effect proceeding from the light's reflection off the checkered surface to the inception of our belief in that surface? According to Descartes and Locke and many later thinkers, the first mental link in that causal chain is the production in our mind of visual 'ideas' — or 'sense-data,' as they were later called. According to Armstrong, it is rather the production in our mind of the belief that there is a checkered surface there in front of us. (If sense-data are qualia-tokens, Armstrong must be classed among those epistemologists denying that there *are* any of those.) It is no part of Armstrong's account to deny that much — indeed most — of what we know about the physical world is known by inference, conscious or otherwise. But, according to Armstrong, the ultimate *premises* of these inferences are mostly propositions about physical existences or occurrences, and what causes our belief in those propositions isn't any process of inference, even in the widest sense.

The plan of the present defence of Armstrong's 'doxastic representationalism' is (following this introduction) to advance a case in favour of the position, including some newish reasons, scientific and phenomenological; then, to answer the case brought against it (or, at least, three currently popular lines of objection presumptively distinct from considerations like the Argument from Illusion, which the sense-datum theorists used to stress) — the case against representationalism, that is, which appeals to 'what it's like' to perceive as a non-human animal does, or as a human does, or would, upon being presented newly with chromatic colours to see, as well as the argument that representationalism cannot account for the experiential difference between normal vision and 'blindsight'; then, lastly, to propose a 'friendly amendment' to Armstrong's account, which will leave his physicalism quite unscathed.

2. Four Considerations Favourable to Doxastic Representationalism

First of all, human beings and other animals certainly do acquire information about their environment by means of their sense-organs; and the acquisition process will be *simpler* the more direct it is; it will at least be less subject to certain sorts of malfunction. We know that natural selection does not produce the most adaptive results every time; but it has got some tendency that way.

Secondly, there is the data bearing on the Molyneux Question. Locke's friend William Molyneux wondered whether a man suddenly given sight after having been blind from birth could distinguish from each other a sphere and a cube placed before him, telling which was which without touching. Locke and

Molyneux were confident the right answer was no,³ G.W. Leibniz, for one, was not so sure.⁴ Is the *tactual* experience of roundness, for instance, utterly different, as felt, from the *visual* experience of roundness, and are the two only associated together in the mind because of their regularly observed concomitance? Or is it a question, as representationalism might have it, of the *same* information presented immediately to the mind through different sensory processes and with differing accompaniments? (Visual perception of shape comes together with a flood of colour information and eye-muscle sensations; tactual perception of shape comes together with sensations of hot-and-cold, rough-and-smooth, hard-and-soft, as well as different kinesthetic sensations.)

'S.B.' was a fifty-two-year-old man blind from birth in whose eyes donated corneas were surgically implanted, so that after a few days of visual blur he started to be able to "use his eyes to good effect":⁵

S.B. never learned to read by sight (he read Braille, having been taught it at the blind school) but we found that he could recognise block capital letters, and numbers, by sight without any special training. This surprised us greatly. It turned out that he had been taught upper case, though not lower case, letters at the blind school. They were given raised letters on wooden blocks, which were learned by touch. Although he read upper case block letters immediately by sight, it took him a long time to learn lower case letters, and he never managed to read more than simple words.⁶

Locke and Molyneux believed that tactual and visual perceptions of shape were concomitantly varying but qualitatively disparate sensory experiences. It seems that for S.B. this wasn't so. *S*, for instance, is one sort of physical shape. If what's experienced both tactually and visually in perceiving it is the (unreasoned) inception of the belief that there is something so shaped at hand, S.B.'s quick visual recognition of the shape of block capital letters such as *S* will be quite unsurprising. It will be difficult to explain on an account like Locke's.⁷

³ Locke, Book II, Chapter 9, Section 8.

⁴ Leibniz, 136–137.

⁵ Gregory, 194.

⁶ Gregory, 196. Sadly, S.B. became depressed, "gradually gave up active living, and three years later he died" (195).

⁷ Just what weight against the force of this evidence should be given to the empirical results recorded in Held et al.? These researchers tested five subjects within 48 hours after surgery on *three-dimensional* shapes to confirm or disconfirm "the existence of an innate idea, that there exists a priori an 'amodal' conception of space common to both senses" (551) and concluded: "Our results suggest that the answer to Molyneux's question is likely negative" (552). Interpreting the question as concerning *immediate* post-operative visual-tactual matching capability, they allowed

Here is a third general consideration favouring a doxastic-type account of sense-experience. How much interpretive ‘inferring from sense-data’ (even if it is not conscious inferring) are we prepared to attribute to the simpler animal species? They certainly do use their senses to inform them of things in their environment that matter. Is it very likely that other animals’ sense-experience is correctly characterized by an Armstrong-type representationalist account, but human sense-experience is not? (Indeed, is it very likely that primary-quality perception is correctly characterized by such an account, but not secondary-quality perception?⁸)

And, fourthly, there is a phenomenological appeal. Here readers are invited to compare their own experiences. Consider the following three sorts of conscious experience: veridical seeing; visual hallucination; and imaginative visualization. The first two are more easily mistaken for each other than for the third, and so there must be *something*, whether essential or not, that they have in common with each other but not with visualization. The visual ‘scene’ before the mind can, in principle, be the same. (At any rate, any scene that can be seen *can* be ‘seen’ — in hallucination — or be visualized, though the amount of detail presented is apt to vary.) Nothing about causation or about external reality will be relevant, since it is a question here of the experience as *experienced* by the mind. The *vividness* of the experience undergone will not be what distinguishes seeing-and-hallucinating, on the one hand, from imaginative visualization, on the other hand, if only because veridical seeing does not have to be at all vivid (e.g., in the midst of a fog, or after receiving eye drops).

George Berkeley thought that what distinguishes seeing and hallucinating alike from visual imagining is the *voluntariness* of the latter;⁹ but not all imagining is in fact voluntary. Sometimes a mind just cannot help picturing to itself a feared eventuality, for example. And, as we know, inattention at least to sounds can sometimes be successfully willed to the point of not hearing them consciously at all.

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themselves to disregard the disorienting shock effect of a flood of new sensations. Moreover, they themselves were careful to acknowledge that their results left unanswered the question: “Would the newly sighted have shown an immediate transfer from touch to vision if they possessed three-dimensional visual representations right from sight onset?” (552). It is, however, no part of Armstrong’s perceptual theory that there exists innately in humans any three-dimensional space concept.

⁸ Without giving up a negative answer to this rhetorical question, it is well to note that *number* is, perhaps, a special case, in that qualia theorists can presumably accept without embarrassment that it is possible to speak univocally of *three* ‘spots’ of phenomenal colour and of *three* spots of painted colour.

⁹ Berkeley, Sections 28–30 and 33–34.

David Hume said that the difference involved here was a difference in “force and vivacity” — something that he could not explain further. But *that*, he said, was what *belief* amounted to.¹⁰

Bertrand Russell once entertained the thought that what distinguishes eyesight-and-hallucination from visualization is the absence within the imaginative experience of any sense of *the time of occurrence* of that which is imagined.¹¹ But is this necessarily the case? Can't you imaginatively picture something taking place before your eyes right now?

Surely that which veridical seeing and visual hallucination have in common experientially, in contrast to visualization, is simply the element of *inclination to believe* (in the sense stipulated above). Isn't this the difference between what it's like to see-or-hallucinate and what it's like merely to visualize something? In imaginative visualization, the propositions concerned are merely *entertained*. (And in visual remembering, on the other hand, the *inclination to believe* in a scene is an inclination to believe in its *past* reality.)

Let's take it, then, that the phenomenological difference between seeing-or-hallucinating and imaginatively visualizing is the difference between starting to believe, or to be inclined to believe, some propositions, on the one hand, and starting merely to entertain those propositions, on the other hand. Just what, though, will be the subject-matter of those propositions? According to Armstrong, primarily visible features of the physical environment. The only alternative would appear to be that the propositions concerned are propositions about nothing but the subject's experience. We ought not to be *too* worried about self-reference here. When one becomes conscious of a pain, is there really any distinction between the pain-experience and the consciousness of it? However the acquisition, A, of a conscious inclination to believe a proposition that reports nothing more than the occurrence of A does seem like a postulate hard to take seriously. Then again, what would be the propositions imaginatively entertained in visualization: propositions, true or false, about the external scene? propositions about the visual experiencing that *would* be involved in veridically seeing such a scene? or both? The first and third answers are fully in keeping with Armstrong's account. The second answer would involve the entertaining by the mind of one or more propositions each of which asserted simply the occurrence of the following: the acquisition, A, of a conscious inclination to believe a proposition asserting nothing beyond the occurrence of A. That just this is what the visualization experience is seems even harder to take seriously.

¹⁰ Hume, 96, 130, 199, and 629.

¹¹ Russell, 57: “what is called the ‘unreality’ of things merely imagined ... will consist in their absence of date.” It seems, however, that it was not dissatisfaction with this conception that led Russell to abandon this epistemological project; see Clark, 204–207.

But what more would there be besides the occurrence of A for such a proposition to assert? If there were to be something more — the occurrence of M — and if that occurrence were not the inception of an inclination to believe anything, M would then be a visual experience that wasn't propositional (representational) in nature, and the conscious difference between seeing-or-hallucinating and visualizing would *not*, then, as far as experiential content goes, be the difference between starting to believe, or to be inclined to believe some proposition, and starting instead merely to entertain it.

3. Proposed Responses to the Currently Popular Case against Representationalism

Perhaps the intervention against representationalism that has been most influential in the years following 1974 would be Thomas Nagel's. But it is obvious what supporters of Armstrong's position are going to say about "what it is like to be a bat."¹² There won't be anything to stop them from simply saying that by means of its 'sonar,' a bat, without thinking about it consciously, can acquire information about the shape, size, direction, and distance away of nearby surfaces. They can say that, if we know the information/misinformation so acquired by a bat and know the physiological processes involved, we then will know all there is to know about the character of the bat's experience. Humans already have some ability to tell, without doing any conscious reasoning, from what direction a sound is coming, for example; and it is claimed that training can enhance this ability even up to the level of bats' echolocation capacity.¹³ In any case, what grounds are there for attributing anything more than this to (what it's like to have) the bats' experience?

Secondly, there is the Blindsight Argument. What is it that distinguishes the *experience* of normal wide-awake visual observers from what 'blindsighted' experimental subjects feel, who honestly insist they can't see anything, but still 'guess' much better than chance what is in front of their eyes? Leaving physiological explanations aside, can't we say that normal observers are conscious, not just of a few indefinite things relating to the state of their immediate environment, but of a vast flood of detail, and more again that's tied to different ocular stimulations (e.g., muscular) that they are currently undergoing?¹⁴ The

¹² Nagel.

¹³ "Humans Can Develop Bat-Like Echolocation."

¹⁴ Armstrong, 1968, 232: "Consider ... the great flood of detail that is involved in our visual perceptions. Can we say it is all an acquiring of beliefs or information, or the occurrence of events like the acquiring of beliefs or information?"; Armstrong, 1961, 111–112: "When our sense-organs are operating, when our eyes are open, our ears cocked, when we are tasting, smelling or touching, we are not only acquiring knowledge of facts about our environment, but we also very often have certain characteristic *sensations* associated with the operation of each organ. ... By 'sensation' ... I

blindsighted, however, are *consciously* aware, at most, of a bare (unreasoned) suspicion or two about what is going on in front of them.¹⁵

Thirdly, what about *Mary*? With bats' echolocation, representationalists could hope to get away with explaining the experience of primary qualities fairly easily in straight informational terms. But a different answer has to be given to Frank Jackson's Knowledge Argument, which addresses the perception of secondary qualities such as colours. Before he changed his mind in favour of representationalism and materialism, Jackson proposed the following example contrariwise. Mary, though normally sighted, has lived all her life in a room where everything is black and white only. However, she has cognizance of *all* physical facts (whether known to our science or not). On leaving the black-and-white room, she for the first time encounters colours and learns what it is like to see them. Since she did not know this before, even though she knew all physical facts, it follows, Jackson argued, that not all facts are physical facts, and therefore materialism is false.¹⁶

The practical impossibility of a purely black-and-white room is not important here. We can imagine that Mary was fitted at birth with special glasses converting all the light she saw to black and white.

And we do not need to let the vexed question how to define 'physical' detain us either. It is very largely common ground that, *insofar* as anything physical is caused, the causes are all physical. And it is uncontested that body movements and sound emissions are all physical occurrences — which thus covers almost all outward human behaviour.¹⁷ If there is anything about visual or other

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am referring simply to bodily sensations, to feelings of strain involved in using the eye-muscles, ticklings of the nostrils, burnings of the tongue, pressures on the ear-drums, tinglings of the skin, and things like that. ... The existence of this contingent connection between perception and certain sorts of sensation may *help* to explain the special 'feel' of perception."

¹⁵ This paragraph is taken mostly from Goldstick 2019, 29. Contrary to this reasoning, Charles Siewert invites us in effect to engage in a thought experiment. Can we imagine these suspicions getting stronger and stronger and more and more detailed, without ever turning into a visual experience? (Though, in our usual visual experience, unlike such a thought experiment, most details of a scene are perceptually 'taken in' and *noticeable* but not actually noticed.) On the other hand, can we imagine a visual experience getting dimmer and dimmer and murkier and murkier, without ever ceasing to be a visual experience? Siewert in effect says that the answer is yes. Someone influenced by Armstrong may well answer no. And each can charge that the other's 'free imagination' is moulded by their philosophical preconceptions.

¹⁶ Jackson, 1986.

¹⁷ I suppose blushing on purpose and silent farting on purpose are real, if not very common exceptions.

experiences which, not being physical in nature, would necessarily be unknown to someone who knew everything physical but no more — if there really is anything like that, it will be something having no effect on anybody's outward behaviour; or rather, something having no effect at any rate on anybody's body movements and sound emissions. Let us define 'qualia,' for present purposes, as non-physical features of experiences that are noticeable (at any rate, upon paying sufficient attention) by the mind having the experiences. Any qualia there are will produce no effect upon anybody's outward behaviour — or, at any rate, none upon the individual's body movements and sound emissions. And let us define a 'zombie' here as a being without a mental life that includes any qualia. Are there any zombies? Are there any people who are not zombies?

The evolutionary advantage of, for example, colour perception in the animal kingdom is to make useful discriminations possible, given the general edibility of greenery, for instance. Zombies could certainly make all those discriminations. The greenness of leaves and grass is definitely a physical fact about them. The light they reflect (under normal conditions) is another physical fact. Animals' ocular stimulations, the ensuing brainy consequences, and the resulting discriminatory behaviour are all physical likewise. The same thing goes for human colour-sorting behaviour, including our verbal colour-sorting. So Smart advanced a conceptual analysis, according to which secondary qualities were simply "powers to cause differential responses."¹⁸

(Jackson turned to materialism essentially because he concluded that taking the mental process of sense-perception to proceed only via a (physicalistically conceived) *illusion* of there being qualia was a better causal explanation of things than postulating the occurrence of any actual qualia in the course of the process.¹⁹ And why not, if it is admitted that qualia have no physical effects — such as whatever brain-states cause behaviour expressing belief in qualia? According to Jackson, then, we are all zombies, despite an 'intuition' we all have to the contrary. The object here, however, is to give an account of sense-perception that will not require any such supposition of universal illusion as Jackson now posits. But, in any case, won't qualia-dualism be a less likely hypothesis than the *disjunction* of such a materialist account with Jackson's materialist error-theory?)

Do not normally sighted perceivers, though, know what red and green look like, even though they mostly don't know the physics of green surfaces or green light, or the physiology of the perception of green? Janet Levin writes:

Mary will have the relevant color concepts as long as she has sufficient information about the structure of that perceptual field, the similarities and differences among

¹⁸ Smart, 1963, 88. However, he did qualify this: "*By and large*, our [colour] concepts can be analysed behaviouristically, but *not quite*" (82).

¹⁹ Jackson, 1998; Jackson, 2003.

the experiences in it, and the “constitutive” truths about it, such as “Nothing can look red all over and green all over at the same time.”²⁰

Does that mean Mary can “have the relevant color concepts” without knowing what it is like to see red or what it is like to see green? Or does Levin consider the knowledge she credits Mary with having to be sufficient for knowing what it is like to see red and what it is like to see green? The extreme position of Armstrong would be that, in spite of full recognitional capacity, colour-sighted perceivers normally *do not know* what (in itself) it is like to see red or to see green, even though they are fully endowed with the know-how to distinguish the two experiences.

What, however, about visible spectrum reversal? Can't we easily imagine a perceiver upon whose brain the colour of blood and stop-signs makes the same visual impression as the colour of violets does upon us, and vice versa? Wouldn't this perceiver make all the same discriminations as we do without knowing how the colour of blood and stop-signs is experienced by us? However, what do we ourselves know about that?

It is a familiar fact that people fitted with glasses that visually reverse *up* and *down* undergo a period of disorientation, followed by a mental life that, to introspection, is very like what they experienced before being fitted with the glasses.²¹ If the same thing were to hold good in the case of spectrum reversal, what is the difference between the *introspectible* experiences of two perceivers differing just in the way imagined? It seems relevant that colour-blind persons often do go for a long time without discovering their colour-blindness, since, without realizing it, they mostly do manage to make the relevant discriminations by other means. They do their colour-sorting by means of inferences, but not conscious inferences, and what they get in introspective consciousness is in consequence immediate, so that for a long time it seems to them to be just like the colour perceptions of everybody else. Indeed, it *is* phenomenologically quite close to what the colour-sighted experience, though introspectible gaps in discriminability can be discovered in fact.

To the question, ‘How does something green look to a normally sighted perceiver?’, the representationalist answer will be that it looks (to be) green. But what does that mean? What does the adjective ‘green’ convey? What is it to *be green*? To be *green* is to be surfaced in a certain visually detectable way; but *what way*?

²⁰ Levin, 255.

²¹ Though not necessarily just the same. The awareness one has of one's head before or after donning any special glasses owes little to any experience of *seeing* it. And there are reports that the experimental subject's head *feels* out of place even after the experience of adjusting to the glasses has fully run its course. But this is not a *visual* difference in what is experienced. See Harris.

In another article, I have urged that ‘green’ is the *name* of a colour, just as ‘water’ is the *name* of a liquid.²² In both cases, as with proper names, the term has no — or rather, here, *scant* — descriptive content regarding that which it denotes. You can recognize and name an individual you know without that name conveying anything *about* that individual. The meaning of the word ‘water’ does convey the descriptive property of liquidity. But that water is colourless, for instance, is a synthetic, not analytic, truth.

And, as with ‘water,’ so with ‘red,’ ‘green,’ etc. The names of these colours certainly don’t convey any information about the physics of light. Are there, though, distinct qualia associated with your perception of these hues? Doesn’t being ‘red’ mean being so surfaced as to produce a certain visual impression on normally sighted human viewers in broad daylight? Just what visual impression? The impression of *looking red*. Your recognitional capacity does not ensure that you know what the experience is like in itself. Certainly, if you woke up tomorrow with ‘inverted spectrum’ vision, you would quite possibly start calling blood ‘violet,’ and so forth, at any rate until you learned — from the reports of other viewers, haematologists, physicists, and so on — that blood itself and the light reflected from it had not changed and, at the same time, learned — from the reports of brain physiologists — that you, however, *had* changed while asleep. But, having learned all that, you then would say — wouldn’t you? — that blood had now come to *look violet to you*.²³ Later still, we can imagine your introspectible stream of consciousness settling down to what it had been like before. In any case, it is a fact about the linguistic meaning of the English word ‘red’ that the colour it designates is *that* hue, specifically, which ‘red’ or its ultimate synonymous ancestor was originally introduced (consciously or otherwise) to designate. ‘Red’ is the *name* of a colour. As Armstrong shockingly put it back in 1968, “Suppose that our concept of red is *all blank or gap?*”²⁴

In another sense, of course, our mental ‘concepts’ of red, green, and the rest are rich to overflowing. The ‘concepts’ we have in this sense vary from culture to culture and from individual to individual. To mention only some of the *cultural* associations of green, for instance, it is known as the colour of envy, inexperience, Islam, Ireland, environmentalism, money (in the USA), and ‘Go.’ It would be a bad mistake to think these associations and countless others do not contribute to people’s *experience* of the colour green. Where the word ‘Jane’ names a friend (or enemy) of yours, this will parallel your *concept* of Jane. All this is in principle fully introspectible, unlike the physiology of your visual experience of green.

²² Goldstick, 1986.

²³ Goldstick, 1986, 79.

²⁴ Armstrong, 1968, 275.

And there is no reason why black-and-white Mary couldn't know all this while still closeted. There is a temptation that should be resisted here. We can imagine another individual, Sam, who has been raised in a special environment that contains nothing that is usually green in our normal environment, and who to date has learned no physics, no physiology, and no cultural or other associations of that colour, but who early on was taught the use of the word 'green' ostensibly, by means of reference to coloured wallpaper bearing abstract designs and the shining of an artificial light on a screen; so that Sam does not now know, for example, that (most) grass and leaves and go-signs are green, but does know the meaning of the word 'green' as well as any English-speaker (because, after all, Sam is perfectly well able to use the word 'green' correctly²⁵). The temptation is to say that Mary and Sam each possess factual knowledge of colour that the other does not, what Sam knows being the specific character of the visual experience of seeing green, at least in the case of his own perceptions. But the character of the visual experience insofar as it is introspectible is exhausted by psychological facts that Mary can indeed know because of their ultimately behavioural import; and the *intrinsic* — brainy — character of the experience is likewise something that Mary will know fully. Sam, though, does possess know-how that the still closeted Mary lacks; for Sam has the ability, in viewing red and green objects, to pick out which are red and which are green, and, likewise, of course, to identify which visual experiences are of red and which are not. As well, Sam, unlike Mary, has the ability to *imagine* the colours red and green visually.

Sensuous imaginability makes colour concepts resemble what Brian Loar calls "recognition concepts":

Suppose you go into the California desert and spot a succulent never seen before. You become adept at recognizing instances, and gain a recognitional command of their kind, without a name for it; you are disposed to identify positive and negative instances and thereby pick out a kind. These dispositions are typically linked with capacities to form images, whose conceptual role seems to be to focus thoughts about an identifiable kind in the absence of currently perceived instances.²⁶

Something similar applies to your ability to recognize by sight an individual such as Jane. "Recognitional abilities," Loar stresses, "depend on no

²⁵ Smart, 1959, says, in effect, that "My present visual experience is as of something yellowish-orange in front of me" means something like "My present visual experience resembles what I experience when I see an orange in a good light" (149). But this must be wrong because it is imaginably possible to be like Sam and know the meaning of a colour-word perfectly well without knowing what specific things in the world are so coloured.

²⁶ Loar, 1997, 600; cf. Loar, 1990, 88–89.

consciously accessible analysis into component features; they can be irreducibly gestalt.²⁷ Nevertheless, in the case of our ability to recognize colours by sight, there is this difference from one's recognition of an individual or a succulent plant: *in principle*, a sufficiently attentive, sensitive, and practised observer might well be able to identify the distinguishing features of the individual or the plant that make the recognition possible; but, in the case of the experience of colours, introspection alone — unsupplemented by any physiological information — will never enable an experiencer to get beyond similarities, dissimilarities, and associations.

4. A Friendly Amendment

So far, what you are reading has been a down-the-line defence of Armstrong's 1968 *belief*-theory of sense-experience. The 'crudities' objected to are largely absent. Here, however, is a necessary modification.

Consider Mary emerging at last from the confines of her natal chamber — or finally getting rid of her black-and-white glasses — and seeing nothing but an unvarying red expanse directly in front of her. With no qualia to experience, what new *belief-inclination* does she acquire? At most, 'This must be (the experience of seeing) a solid-colour wall' or the like; but *not* 'This is red' or 'This is what red looks like.' Now consider newly liberated Mary confronting at first an unvarying green expanse instead, with exactly the same brightness and saturation. A different experience surely. But there is no difference, apparently, in the belief-inclinations that Mary acquires.²⁸ Isn't *every* representationalist theory, not just Armstrong's, committed to interpreting any difference in the content of experience as ultimately a difference in representation?

Even if there is no doxastic or quasi-doxastic difference between the two experiences right away, however, as Mary proceeds to live her new life, new beliefs will arise in her about the similarities and dissimilarities of poppies and sunsets, go-signs, grass, and all the rest, as compared to what she saw first upon her liberation. What else was the process occurring when any of us acquired colour concepts initially as infants? For self-aware Mary, the process will equip her as well with well-founded beliefs about the similarities and dissimilarities of all these new visual *experiences* as compared to what she first experienced upon emerging. So, although we cannot credit Mary's first visual experience of red with any belief-inclination inception different from what would have been involved in a first visual experience of green instead, there *is* a difference in what we can call the belief-inclination 'factor' that arises in one case as compared to the other case. For present purposes, we can understand

²⁷ Loar, 1997, 601; and they "need involve no reference to a past instance, or have the form 'is of the same type as that (remembered) one'."

²⁸ I am indebted to William K. Blackburn for pointing this out.

a belief-inclination 'factor' to be a state that either is a belief-inclination or would be if combined with other states functionally like it.

This modification surely preserves doxastic representationalism intact. Which one of us, then, *isn't* a zombie?

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