TYPE-2 BLINDSIGHT, SELF-ATTRIBUTION AND QUALIA: A PROBLEM FOR QUALIA-BASED ACCOUNTS OF BLINDSIGHT

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Abstract

Type-2 blindsight is a phenomenon in which a patient with blindsight reports some awareness corresponding to the presentation of stimuli in their scotoma, without this awareness being a normal experience of those stimuli. Recent research into type-2 blindsight has raised many interesting questions for philosophical debates about consciousness. In this paper I argue that blindsight, as it is traditionally understood (e.g., Weiskrantz, 2008), cannot properly incorporate type-2 blindsight. This has resulted in type-2 blindsight often being treated as a peripheral phenomenon. I discuss a recent study in which a blindsight subject (GY) reported on his visual experiences in his scotoma under type-2 conditions. I argue that traditional accounts of blindsight cannot explain GY’s reports, and that his reports also raise serious issues for those who wish to defend a standard notion of qualia. In particular, the case puts pressure on two major tenets underlying the notion of qualia (the ‘constitutive claim’ and the ‘revelation thesis’). It is argued that those who wish to defend qualia must reject one or other of these tenets in the face of evidence from GY’s first-person reports.

Introduction

The canonical definition of ‘blindsight’, as given by Lawrence Weiskrantz, is “visual capacity in a field defect in the absence of acknowledged awareness.”¹ Weiskrantz and others noted, in early studies, that the blindsight subject ‘DB’ often had some form of awareness of high-contrast or moving stimuli in his blind field. This became known as type-2 blindsight: when a patient with blindsight (as defined above) reports some awareness corresponding to the presentation of stimuli in their scotoma, but without this awareness being a normal experience of

those stimuli.²

Weiskrantz and others have treated the existence of type-2 blindsight as peripheral to the main topic of interest. Weiskrantz explicitly states that he was at pains to eliminate awareness in trials with DB (Weiskrantz, 2008). Type-2 blindsight continues to be relatively little studied, but in recent work it has received more attention.³ One of the reasons for this is that the canonical definition of blindsight cannot easily accommodate type-2 blindsight. If blindsight is visual capacity in the absence of acknowledged awareness, then it is difficult to see how cases of acknowledged awareness can be incorporated.

In this article, I argue that the canonical definition of blindsight cannot accommodate type-2 blindsight and that personal-level definitions of blindsight are deeply problematic. One such personal-level definition is that blindsight shows preserved visual function in the absence of qualia. This account, much like the canonical definition, cannot accommodate type-2 blindsight and ultimately fails to capture the phenomenon. To illustrate this point I consider a recent case study in which GY was asked to report on his visual experiences in type-2 cases.⁴ I argue that GY’s reports pose a major problem for any qualia based account of blindsight and, in general, show the weakness of personal-level definitions of blindsight.

Characterising Blindsight

Blindsight has been subjected to a variety of contentious interpretations from philosophers, from which a variety of more or less remarkable philosophical claims have been said to follow. It has been claimed, for example, that blindsight is a case of totally spared visual functioning with only the tip of the iceberg (consciousness) shaved off (McGinn, 1991). And it has been claimed that the existence of blindsight proves the existence of qualia, since without them we could not characterise the phenomenon (Holt, 2003). Such claims have convinced few, and in the past decade interest in the phenomenon in philosophical circles seems to have waned. There is a sense that we have done what we

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² A scotoma is an area of absent vision caused by damage to part of the visual system.
³ There were some discussions of this in the 1990’s such as Barbur et al (1993); Weiskrantz et al (1995); and Zeki and Ffytche (1998). But it was not until more recently that it became a major avenue of blindsight research: Stoerig and Barth (2001); Overgaard et al (2008); Schurger et al (2006, 2008); Ffytche and Zeki (2011); Silvanto et al (2008); Sahraie et al (2010).
⁴ A well known blindsight subject.

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can with blindsight, that it is ‘tapped out’. One of the major causes of this attitude is the manner in which blindsight is characterised in the philosophical literature. It is generally described as being a case of visual function in the absence of visual consciousness. This way of understanding blindsight results in type-2 blindsight being treated as peripheral.

The decade over which philosophers have been losing interest in blindsight has seen an improved availability of scanning technologies, and an improved respectability for consciousness as a topic of scientific enquiry. The more recent research, which benefits from both of these improvements, has seen a move from the behavioural criterion suggested by Weiskrantz’s original definition to a criterion that takes the neurological basis for the disorder as its starting point. Many modern studies start from a neurological basis, with descriptions such as: “A lesion that destroys the striate cortex (V1) produces a visual field defect in the contralateral hemifield.”

When blindsight is approached in this way, type-2 blindsight is no longer to be regarded as a peripheral phenomenon. Instead it is central to studying the effects that damage to V1 has on the functioning of the visual system and the role V1 plays in normal conscious visual experience. A major advantage of adopting a sub-personal description of the phenomenon is that type-2 blindsight can be treated as providing important data in trying to understand the phenomenon and its significance for our understanding of the functioning of the visual system. Researchers are no longer required to dismiss large amounts of relevant data based on the fact that the phenomenon does not meet the definition of the condition, nor do they have to control the stimulus to prevent type-2 cases from occurring. Defining blindsight in sub-personal terms also avoids serious problems that personal-level definitions find themselves in. Describing the condition of a blindsighter using personal-level concepts such as qualia creates more problems than it resolves. In what follows, we shall see how accounting for blindsight in terms of qualia can lead to serious problems.

6 For example, see Holt (2003) in which he characterises type-2 blindsight as quasi-visual.
7 Stoerig and Barth (2001) p. 574
Direct Assessment of Qualia

One recent study into type-2 blindsight – a study that does not, in fact, involve the use of any scanning technologies at all – raises a conundrum for philosophers who are committed to a certain notion of qualia. Navindra Persaud and Hakwan Lau (2007) gave GY several philosophical texts on qualia and asked him whether or not he had qualia in his scotoma under type-2 blindsight conditions.8

GY, who apparently is very well informed about blindsight and actively interested in learning about the subject, discussed his understanding of what he had read with Persaud and Lau. He was then asked about his experiences in his scotoma and his experiences in his intact visual field. He acknowledged that he had qualia in his intact field but stated that he did not have qualia in his scotoma, even under conditions where he was aware of something being present.9

Persaud and Lau conclude that GY does not have conscious visual experiences in his scotoma.10 Instead, they claim that GY could have non-visual conscious experiences and that these might explain type-2 blindsight. However, this conclusion is only warranted if we assume that GY’s denial of having visual qualia necessitates that he does not have visual experiences in his scotoma. This claim is not as obvious as they assume it to be.

I do not have space here to go into this argument in depth, but there is good reason to believe that blindsighters in type-2 scenarios do have conscious visual experiences in their scotomata: GY claims to be aware of ‘something’ in his scotoma and that he is aware of that something as being visual (Stoerig & Barth, 2001). GY’s type-2 blindsight has been extensively studied, and he has been found to be able to compare his awareness of stimuli in his intact field with his awareness stimuli in his scotoma and judge them for similarity (Stoerig & Barth, 2001). He can draw what he experiences in his scotoma and the drawings have important similarities to the objects presented to his blind field (Ffychte & Zeki, 2011). And, like other blindsighters, he reports being conscious or aware of a stimulus, or he acts on that stimulus without cuing, when it is presented in type-2 scenarios (Weiskrantz, 2008).

Unless one holds an extreme epiphenomenalist position, these facts

8 GY was given texts on qualia from The Oxford Companion to the Mind, The Stanford Encyclopedia of Philosophy, Jackson (1982) and Dennett (1991).
9 For a transcript of the conversation, see Persaud and Lau (2008), pp. 1047-8.
10 I will hereafter refer to ‘conscious visual experiences’ by ‘visual experiences’.
about GY would suggest that he has visual experiences in his scotoma under type-2 conditions. Most people would agree that if a subject can identify the presence of an object in their visual field, locate and identify it, draw it, compare it with other stimuli in their visual field and act on it appropriately all without cueing or guessing, then they are having some sort of visual experience of that object (or are in some way visually conscious of it). This seems to me to be an obvious, uncontentious claim, one that is obscured by the difficulty of accommodating type-2 blindsight into the canonical, or a personal-level, definition of blindsight.

A Problem For Qualia-Based Accounts

Having accepted that GY is visually conscious of the object in type-2 scenarios, it is not obvious how his denial of having qualia in his blind field can be reconciled with a traditional account of qualia. I am going to assume that any defender of qualia must be defending something more substantial than simply the claim that there is something it is like to have an experience.\(^ {11}\) I assume that (almost) everyone agrees that there is some (not necessarily determinate, irreducible, or intrinsic) way that a red object appears to me when I am conscious of that object as being red. The defender of qualia must be saying something stronger for the position to be contentious. The following are three claims that are consistently made about qualia:

1. They are intrinsic features of visual experience.
2. The constitutive claim: They are the sole determinants of the phenomenal character of experiences. (Tye, 2009).
3. The revelation thesis: In having an experience “… you know or are in a position to know the essence or nature of the experience; the only thing left to learn are facts about the experience which are non-essential or accidental – that is, facts extraneous to its essence.” (Stoljar, 2009)

In what follows I will focus on the second and third of these claims.

The problem can now be stated: GY’s case poses a problem for anyone wishing to maintain both the constitutive claim and the revelation thesis about qualia. Either we must accept that GY is conscious but does not have qualia, or we must offer some principled way of rejecting GY’s claim that he does not have qualia. But this will involve rejecting the

\(^ {11}\) In the weakest and broadest sense of the term ‘something it is like’. See Weisberg (2011).
specialness of our epistemic situation that is implied by the revelation thesis.

GY has visual experiences of some kind in his scotoma in type-2 scenarios. According to the constitutive claim he should have qualia since the phenomenal character of visual experiences are made up of qualitative simples and all visual experiences must have some phenomenal character (something it is like to have that experience). However, the revelation thesis implies that GY is uniquely in a position to judge whether he does or does not have qualia since the revelation thesis states that one knows the essence of an experience just by having it. This implies that an experiencer is the authority on their own experiences at least to the extent that they know whether they are having them or not.

To reiterate: the problem for those who wish to defend the constitutive claim and the revelation thesis is that GY is the authority on whether or not he has qualia in his scotoma, since he is authoritative about his own experience. However, he denies that he has any qualia in his scotoma. Given that we have good reason to believe that GY does have visual experiences in his scotoma, and assuming that the defender of qualia does not wish to slip into epiphenomenalism, they are now in the difficult position of having to either deny GY’s first-person authority about his own experiences (rejecting, in turn, the revelation thesis) or to deny that all visual experiences have qualia (thereby rejecting the constitutive claim). In the next section, I will consider several objections that could be raised against this conclusion.

**Possible Objections**

Someone who wishes to maintain some notion of qualia similar to the one outlined above might raise the following objections:

A. The experiment is methodologically unsound.
B. GY is mistaken when he claims that he lacks qualia.
C. What GY lacks is some capacity and not the quale itself.

The first of these objections may have some truth to it, but not in any sense that is problematic for the argument given in this paper. The second and third arguments both require the defender of qualia to give up on the claim of first-person authority central to the revelation thesis.

**Poor Methodology**
There are grounds for arguing that Persaud and Lau’s paper does not live up to the standards required of a rigorous scientific experiment. They have a data set of one, no control group and giving GY some philosophical discussions about qualia to read hardly gives us the impression of rigorous science. However, none of this matters to the questions we, or they, are considering. The experiments in which GY is tested for type-1 and type-2 blindsight are perfectly rigorous.\textsuperscript{12} It is not necessary for the same methodology to be applied to GY’s judgements about his own experiences. If we were to demand this, then surely we would have to demand the same of philosophers discussing qualia. There is no objection in the fact that GY’s judgements were first-person intuitive judgements rather than conclusions of scientific research, since qualia are supposed to be the sorts of things that we know through our own first-person experience of them.

GY is mistaken

Perhaps GY is just mistaken when he claims that he does not have qualia in type-2 cases. Maybe he really does have them but he is either mistaken about what is meant by qualia or in judging that he lacks qualia in type-2 cases.

These objections are immediately appealing. Perhaps GY is subject to the philosophical predicament of being caught in the thrall of a theory that leads to him denying what we all know. But GY is clearly not motivated by qualia denial. He acknowledges that he has qualia in his good field. He is comfortable with the term (if uncertain about some more technical disputes) and happy to apply it to his visual experience in his intact field; he just does not judge himself to have qualia in his scotoma even when he is aware of the stimulus.

So GY is not in thrall to the philosophy of the qualia deniers. However, could it be that he is mistaken in judging his experience in his scotoma to be lacking qualia? After all, GY’s residual capacity is greatly diminished and the experience of which he is aware in his scotoma is unlike anything that he normally experiences in his intact visual field. Perhaps GY judges his qualia in his scotoma not to be qualia just because they are so different from the qualia in his normal conscious experience.

This seems like a reasonable claim to make, but it is not one that is

\textsuperscript{12} As far as I can judge these experiments (Persaud \textit{et al}, 2007) are carried out in accordance with the best practice in blindsight research.
open to anyone who wishes to defend the two claims about qualia outlined above. Adopting this argument means giving up on the special epistemic status of qualia. To assert that GY is mistaken about his claim, we must accept that there is some basis on which we can decide that GY has qualia in his scotoma that trumps his first-person authority. For this to be the case the claim of first-person authority central to the revelation thesis has to be rejected.

GY Lacks Some Other Capacity

It could be argued that what GY lacks is not the qualia but rather some reporting or judging capacity; after all there are cases in which brain damage leads to impaired capacity to report or make judgements about something. A similar objection is sometimes raised against blindsight in general. There is not space to address this claim here but for a comprehensive rebuttal of this claim see Cowey (2004). This response, however, is not very promising. There is a lot of evidence that GY can report on and make judgements about his experiences in his scotoma: he can describe them, draw them, compare them, make judgements about orientation, size, shape, etc. In short, GY does not seem to lack any ability to make reports or judgements about his type-2 experiences. Perhaps one might posit some special faculty of qualitative judgement or reporting, which is selectively impaired in GY’s scotoma, but I have no idea what such a claim would amount to. Also, I would have my suspicions that any such claim would involve giving up on revelation thesis since it would mean rejecting the claim that we come to know the essence of qualia through our experience of them.

Conclusion

It is important to emphasise the extent of the problem this case raises for those who wish to defend qualia. The problem raised here is not simply the familiar one of infallibility (Dennett, 1988; Williamson, 2000) since the problem arises not only with a claim of infallibility but also with any account of qualia that wants to maintain that there is a privileged, first-person epistemic status to qualia. One must either give up on characterising qualia as first-person properties, known solely through first-person experience (the revelation thesis), or on the claim that qualia make up our conscious experience (the constitution claim). Defenders of qualia who wish to avoid epiphenomenalism must either decide upon a new way of picking out and defining qualia, one which

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does not rely entirely on the notion of first-person warrant, or they must deny that qualia are constitutive of conscious experience. Either way, qualia would seem to lose much of their significance for debates about consciousness in the philosophy of mind.

More generally, this example shows how problematic characterising blindsight in first-person terms can be. Claims that blindsight can only be understood by appeal to qualia or as preserved function in the absence of consciousness do not stand up to scrutiny. Indeed, as the example here shows, attempting to characterise blindsight in terms of the presence or absence of qualia can lead to serious problems for any such account.  

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