Why the rare Charles Bonnet cases are not evidence of misrepresentation

Kirkeby-Hinrup, Asger

Published in:
Journal of Philosophical Research

DOI:
10.5840/jpr20148420

2014

Citation for published version (APA):

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

• Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
• You may not further distribute the material or use it for any profit-making activity or commercial gain
• You may freely distribute the URL identifying the publication in the public portal

Take down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.
Why the rare Charles Bonnet cases are not evidence of misrepresentation.

Abstract
Recently, the possibility of misrepresentation has resurfaced in the debate between higher-order thought theorists and their opponents. One new element in the debate has been the rare cases of Charles Bonnet syndrome (RCB cases), as proposed empirical evidence for misrepresentation as posited by the higher-order theories. In this article I will spell out the argument supposedly underlying the claim that the RCB cases are genuine empirical evidence of misrepresentation. I will then proceed to show that this argument relies on a hidden premiss. With this premiss exposed the argument cannot support the notion of misrepresentation posited by higher-order theories.

Keywords
Misrepresentation, higher-order theories, Charles Bonnet syndrome, V1

A recent article by Ned Block (2011) has reinvigorated the debate on misrepresentation within representational theories of consciousness. Misrepresentation is usually leveraged as a problem for theories explaining consciousness by way of higher-order states. Such accounts include the higher-order thought (HOT) theories of Rosenthal (1997; 2001) and Weisberg (2010), the targets of Block's article. The HOT theories maintain that a mental state is conscious iff there is a higher-order thought about that state to the effect that the subject becomes aware of herself as being in that state. The possibility of misrepresentation derives from posited discrepancies between the mental state and the higher-order state that is about it. The debate about misrepresentation was originally sparked by Karen Neander (1998), who hypothesized two possible cases of misrepresentation in the higher-order theories. The first possible case of misrepresentation posited higher-order states, whose content did not correspond to the first-order states they were supposed to be about. For convenience, call this 'mild misrepresentation' and contrast it with the second possible case which can appropriately be termed 'radical misrepresentation'. In radical misrepresentation, the hypothesis is the existence of a higher-order state, where the relevant first-order state did not exist at all. The problem for the higher-order theories is the seemingly counterintuitive claim, that with regards to what the individual consciously thinks or experiences, there is no difference whether the first-order state obtains in the normal way, is mildly misrepresented or not even there at all.

In reply Rosenthal blankly accepts the possibility of misrepresentation and the counterintuitive consequence. Rosenthal goes even further and argues that the distinction between mild and radical misrepresentation collapses into the overall possibility of misrepresentation:

---

1 The problem does not only pertain to the HOT accounts, one of the original formulations of the problem by Karen Neander (1998) was directed at William Lycan's higher-order perception theory.
2 Usually this claim is affixed with riders about the way the higher-order thought comes about (e.g. non-inferentially). For sake of exposition I will take these for granted.
Suppose my higher-order awareness is of a state with the property P, but the
target isn’t P, but rather Q. We could say that the higher-order awareness
misrepresents the target, but we could equally well say that it’s an awareness of a
state that doesn’t occur. The more dramatic the misrepresentation, the greater
the temptation to say the target is absent...A higher-order awareness of a P state
without any P state would be subjectively the same whether or not a Q state
occurs. The first order state can contribute nothing to phenomenology apart from
the way we’re conscious of it. (Rosenthal 2004: 32)

Thus, Rosenthal does not consider the counterintuitive consequence as an actual problem of the
higher-order approach, but rather that it flows naturally from the talk of representations that they
may occasionally falter, a sentiment echoed by Josh Weisberg:

Representation, by its nature, can occur even if the object of representation - the
thing that the representation is about - does not exist. (Weisberg 2010: 7)

Since whether or not the so-called empty higher-order thoughts (EHOTs), i.e. higher-order thoughts
with no corresponding first- or lower- order mental state, are possible is difficult to determine from a
purely theoretical perspective some rare cases of Charles Bonnet Syndrome (RCB) have been
deployed as empirical evidence by the proponents of higher-order theories. The RCB cases are given
as evidence of the possibility (and theoretical harmlessness) of misrepresentation. However, the
introduction of the RCB cases to the debate should be seen in the light of a larger ‘empirical turn’
within the philosophical (and especially representationalist) theories of consciousness. While the
empirical turn has been ongoing within philosophy of mind for a couple of decades its necessity has
recently been eloquently expressed by Ned Block (2007) as the best solution to the ‘methodological
puzzle’ of theories of consciousness. The Methodological puzzle derives from the apparent troubles
in empirically separating phenomenal consciousness from the features of reportability and cognitive
access. According to Block the solution to the methodological puzzle is that theories of (phenomenal)
consciousness should be merited by the extent to which they mesh with neuroscientific data. Given
that Block is perhaps the principal opponent of the higher-order theories and recently has published
a new spin on the problem of misrepresentation (Block 2011), the introduction of RCB cases as
empirical support of the higher-order theories is especially relevant. It is so because the argument
from the RCB cases incorporates the mesh criteria\(^3\) with support for the possibility of misrepresentation, thus adhering to Block’s proposed methodology in the process of countering (some of his) his objections. However, all is not good. In the following I shall examine the argument from the RCB cases and argue that they are not straightforward empirical evidence for misrepresentation as advocated. The Charles Bonnet syndrome is characterized by visual hallucinations that are formed, complex, persistent and stereotyped, occurring from sudden and profound loss of vision, usually due to ocular pathology. However, occasionally individuals may develop Charles Bonnet syndrome from damage to one or more cortical areas, primarily the parietal, occipital and temporal lobes. (Gold and Rabins 1989) The rare cases of Charles Bonnet syndrome have been reported in two individuals. Patient FA, an 81 year old female, reported by Duggal & Pierri (2002), and an unnamed 74 year old male reported by Ashwin & Tsaloumas (2007). What is special about these cases is that the cortical damage that underlies the Charles Bonnet syndrome is located in the visual cortex, more specifically in V1.

The combination of crisp conscious visual awareness with the lack of V1 functionality is interesting for the higher-order theorists in the light of recent articles by Victor Lamme (2003; 2004; see also 2006). According to Lamme feedback to V1 is necessary for conscious visual awareness. Furthermore Lamme’s characterization of the pre-conscious activations in the visual cortex, and especially the role of V1 suggests (or, at least, has been interpreted as\(^4\); see e.g. Lau and Rosenthal 2011; Lau and Brown \textit{forthcoming}) that the necessity of V1 for conscious visual awareness derives from its role in generating first-order visual states. This means that given the higher-order approach to consciousness, in the RCB cases the conscious visual awareness is accounted for as usual in terms of a higher-order state, but due to lack of V1 there cannot be any corresponding first-order state that

\(^3\) Apart from the RCB cases there is a body of work attempting to show that Block’s ‘mesh argument’ supports higher-order theories, see e.g. Brown 2011

\(^4\) Note that it has been argued (e.g. Prettyman 2011), that there are competing interpretations on which the RCB cases do not support the higher-order approach.
the higher-order state is about. Thus, it appears the RCB cases are genuine empirical evidence of

**EHOTs**. The argument from the RCB cases can be formalized in the following way:

1) There is evidence that V1 is necessary for normal conscious visual awareness.
2) The necessity of V1 is from its role in generating first-order visual states.
3) Individuals in the RBC cases have no functioning V1.
4) Individuals in the RBC cases have conscious visual awareness.

C) The RBC cases are evidence of EHOTs because:
   i. There is conscious visual awareness (i.e. a higher-order thought).
   ii. There is no V1 processing and thus *ex hypothesis* no first-order state.

Premisses 1 and 2 are based on the role of V1 in the feedforward sweep, as proposed by Lamme (see e.g. Lamme 2003; 2004). The feedforward sweep is the initial pattern of neural activity from the onset of visual stimuli. Activity in V1 start roughly after 40 ms from stimuli onset and from spreads to all cortical areas, even those responsible for high-level information, discrimination and selective behavioural responses (Lamme 2004, p. 867). The necessity of V1 for normal visual awareness stated in premiss 1 relies partly on V1 as the first step in the feedforward sweep, and partly on the role of V1 in recurrent feedback to V1 from later stages of processing, which Lamme argues is required for conscious visual awareness. The necessity stated in premiss 2 relies on the interpretation of the feedforward sweep as constitutive in the generation of first-order visual states. More specifically the fact that activations during the feedforward sweep can guide behaviour while subjects reject being conscious of them, the interpretation suggests a distinction between (unconscious) first-order states generated by the feedforward sweep, and conscious states dependant on recurrent feedback. Since V1 is taken as a necessary component in the feedforward sweep, it is by transitivity therefore necessary for the creation of first-order visual states. Premiss 3 is supported by the two RBC cases reported by Ashwin and Tsaloumas, and Duggal and Pierri. Premiss 4 is based on the

---

5 Further the RCB cases presumably also present additional leverage for the proponents of the higher-order approach to consciousness against their opponents who endorse first-order theories (see e.g. Brown 2011). The argument goes like this: If indeed the individuals in the RCB cases have no first-order visual states, but still have conscious visual awareness, then first-order states cannot account for conscious visual awareness by themselves. Thus, to account for conscious visual awareness it seems that something is needed in addition to the first-order states, to wit, a higher-order thought. More generally the argument proceeds by asking: if it is shown that first-order states cannot by themselves account for conscious visual awareness, why should one believe the first-order states can (by themselves) account for other types of conscious awareness? I shall not further pursue this argument here, since the purpose of this paper is exactly to make the reader doubt that the RCB cases are genuine EHOTs, something that, if successful, would render the above argument moot.
characterizations of the hallucinations in the Charles Bonnet syndrome in general (see e.g. Gold and Rabins 1989; Teunisse et. al. 1996), and is supported by the description of the particular hallucinations provided of the individuals in the RCB cases.

On the face of it each of the premisses in the argument would appear to be warranted, and given that one accepts the premisses the RCB cases do appear to be cases of EHOTs. Thus, the proponents of the argument from RCB assert that the RCB cases are indeed cases of EHOTs:

If we take the primary visual cortex as the neural structure necessary for first-order representations, this is a straightforward case of conscious experience without first-order representations. (Lau and Brown 2011: 9)

Now, some have an intuitive suspicion about drawing conclusions about the ‘normal conscious visual awareness’ and the cognitive architecture underlying consciousness in general on the basis of pathologically based hallucinations. Is it really feasible to infer from the apparent conscious visual awareness of the Charles Bonnet hallucinations (via Lamme’s research on normal visual awareness) to the existence of EHOTs? One might think that this reasoning is dubious, but nevertheless be prima facie compelled to accept the argument. However upon analytical examination it becomes apparent that the argument relies on a hidden premiss. The hidden premiss is that it is taken for granted that the conscious visual awareness mentioned in premisses 1 and 4, are of the same kind. By letting the hidden premiss enter the argument there is a strong and straightforward objection to support our intuitive suspicion. Since essentially the hidden premiss is about the nature of the conscious visual awareness in premiss 4, let us call the hidden premiss 4*.

1) There is evidence that V1 is necessary for normal conscious visual awareness.
2) The necessity of V1 is from its role in generating first-order visual states.
3) Individuals in the RBC cases have no functioning V1.
4) Individuals in the RBC cases have conscious visual awareness.

4*) The conscious visual awareness in premiss 4 is of the same kind as the conscious visual awareness in premiss 1.

C) The RBC cases are evidence of EHOTs because:
   i. There is conscious visual awareness (i.e. higher-order thoughts).
ii. There is no V1 processing and thus *ex hypothesi* no first-order states.

Once premiss 4* is introduced the argument is no longer sound. The problems arise because if 4* is true, then at least one of the other premisses must be false. There are apparently two possibilities here. The first possibility is that V1 cannot be necessary for conscious visual awareness (i.e. premiss 1 is false), since the RCB cases lack V1 and yet have conscious visual awareness (as stated in premisses 3 and 4). The other possibility is that we are forced to accept that if the individuals in the RCB cases have conscious visual awareness, then they *must* have a functioning V1 (i.e. premiss 3 is false), because that follows from the conjunction of premisses 1 and 2. Since neither premiss 1 nor premiss 3 is expendable, it seems the argument cannot be completed if 4* is true. So perhaps the proponents of the argument from the RCB cases had better deny the truth of 4*? However denying that 4* is true obviously does not save the argument. The move from the premisses to the conclusion is simply not warranted if premiss 1 and premiss 4 are not propositions about the same thing. Thus, it may be that for normal cases of conscious visual awareness, feedback to V1 of the sort proposed by Lamme might indeed be necessary. However even if we accept this then crucially the RCB cases can at best show that *if* V1 is necessary for first-order states in normal conscious visual awareness, then *either* the hallucinations in the RCB cases are not *normal* conscious visual awareness, *or* the individuals in the RCB cases do retain sufficient functionality in V1 to support conscious visual awareness.

Unfortunately neither side of this disjunction warrants moving to conclusions about EHOTs. Thus, pending further evidence, there is reason to reject the RCB cases as genuine empirical evidence of EHOTs.
References


