Consciousness and Cognition 22 (2013) 672–676

Contents lists available at SciVerse ScienceDirect

Consciousness and Cognition

journal homepage: www.elsevier.com/locate/concog

Commentary

Interactively guided introspection is getting science closer to an effective consciousness meter ☆

Tom Froese

Instituto de Investigaciones en Matemáticas Aplicadas y en Sistemas (IIMAS), Centro de Ciencias de la Complejidad (C3), Universidad Nacional Autónoma de México (UNAM), Apdo. 20-726, 01000 Mexico DF, Mexico

ARTICLE INFO

Keywords:
Introspection
Choice blindness
Measures of consciousness
Second-person method

ABSTRACT

The ever-increasing precision of brain measurement brings with it a demand for more reliable and fine-grained measures of conscious experience. However, introspection has long been assumed to be too limited and fallible. This skepticism is primarily based on a series of classic psychological experiments, which suggested that more is seen than can be retrospectively reported (Sperling, 1960), and that we can be easily fooled into retrospectively describing intentional choices that we have never made (Johansson, Hall, Silkström, & Olsson, 2005; Nisbett & Wilson, 1977). However, the work by Petitmengin, Remillieux, Cahour, and Carter-Thomas (2013) could resolve this dilemma. They showed that subjects can be interactively guided to become better aware of their past experience, thereby overturning the "choice blindness" results of Johansson et al. (2005). Although some more fine-tuning of the experimental protocol is needed, interactively guided introspection may well become the most reliable and exhaustive measure of consciousness.

© 2013 Elsevier Inc. All rights reserved.

1. Introduction

As the philosopher Chalmers (1996) has famously pointed out, in the absence of some kind of "consciousness meter" that directly measures our lived experience, reportability and awareness are the best we can do. And, indeed, after a long taboo of introspective studies in mainstream psychology, a review of the recent literature shows that first-person methods of accessing and describing conscious experience have started to make a scientific comeback (Froese, Gould, & Barrett, 2011). One crucial outstanding challenge is to show that first-person methods can have the same kind of systematic validity and reliability that is normally required of third-person methods. As a step in this direction a number of indirect measures of conscious experience, such as confidence ratings and post-decision wagering, have been proposed and experimentally evaluated (e.g. Dienes & Seth, 2010; Wierzchoń, Asanowicz, Paulewicz, & Cleeremans, 2012).

However, such indirect measures are not without their problems. For example, it has been shown that in the case of perceptual experience a more direct measure of conscious experience, i.e. the perceptual awareness scale, can give a more accurate indication of subjects' perceptual awareness (Overgaard, Timmermans, Sandberg, & Cleeremans, 2010; Sandberg, Timmermans, Overgaard, & Cleeremans, 2010). This seems to suggest that there is also a place for the most exhaustive direct measure of conscious experience, namely open-ended verbal report, in the science of consciousness.

DOI of original article: http://dx.doi.org/10.1016/j.concog.2013.02.004

☆ Commentary on Petitmengin, C., Remillieux, A., Cahour, B., & Carter-Thomas, S. (2013). A gap in Nisbett and Wilson's findings? A first-person access to our cognitive processes. *Consciousness and Cognition, 22*(2), 654–669.

E-mail address: t.froese@gmail.com

1053-8100/$ - see front matter © 2013 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.concog.2013.04.004

But can we trust the subject's verbal reports? This has been a much-debated topic in recent philosophy of mind (e.g. Dennett, 2002; Jack & Roepstorff, 2003; Schwitzgebel, 2007). More importantly, classic psychological experiments seem to have clearly demonstrated the limits and fallibility of naïve introspection, especially when recalling past experiences. In the case of visual experience it has been found that more is seen than can be retrospectively reported (Sperling, 1960). And regarding choice discrimination tasks, it has been shown that we can be easily fooled into retrospectively describing intentional choices that we have never made (Nisbett & Wilson, 1977). These results have withstood the test of time, including new experimental variations (e.g. Johansson, Hall, Silkström, & Olsson, 2005; Lamme, 2003). But this half-century experimental consensus about the limits and fallibility of retrospective introspection might have finally been overturned – if the new results by Petitmengin, Remillieux, Cahour, and Carter-Thomas (2013) stand up to closer scrutiny.

2. Toward the "Double Blind Interview"

Petitmengin and colleagues are actually in agreement that naïve retrospective introspection is limited and prone to confabulation. However, they claim that the fact that we are normally not skilled at accessing our experience does not mean that this experience is inaccessible in principle. What is needed is a principled method of becoming aware of our primary lived experience and of distinguishing it from our secondary cognition, i.e. the beliefs, judgments, justifications, etc. that we may have habitually formed about that experience. Since this is difficult to achieve alone, except perhaps with extensive mindfulness training, Petitmengin (2006) has been arguing that the subject's first-person introspection should be supported by an interactive second-person approach, namely a special kind of guided "elicitation interview" whereby a suitably trained interviewer helps the subject to come into contact with their experience and to describe it.

But how can we experimentally verify to what extent the verbal descriptions of conscious experience resulting from this elicitation interview process are indeed accurate and reliable? And how do the results of this method compare across different subjects and interviewers? How do they compare with more traditional debriefing interviews as well as other more specialized interview methods, e.g. interpretative phenomenological analysis (Reid, Flowers, & Larkin, 2005) and descriptive experience sampling (Hurlburt, 2011)? Different approaches have been tried with good results. For example, the phenomenological data produced by specialized interview methods has been checked for internal consistency (Hurlburt & Heavey, 2002), for correlations with other standard psychological measures (Heavey & Hurlburt, 2008), and for correlations with neuroscientific data (Petitmengin, Navarro, & Le Van Quyen, 2007). Nevertheless, it is difficult to use these approaches to precisely quantify the extent to which the interviewers have improved a subject's introspective access to their experience.

I have previously proposed that one relatively straightforward response to this methodological challenge is to employ second-person approaches in the classical skeptical experimental paradigms, and to see whether the subjects are thereby able to improve their introspective performance (Froese, Gould, & Seth, 2011). One fitting example is the well-established paradigm of crowded visual displays (e.g. Lamme, 2010), which has followed on from the pioneering work of Sperling (1960). Subjects are briefly presented with an array of visual stimuli and then asked to report what they have seen. It has been found that, although subjects report that they consciously experienced the whole crowded visual display (and they can indeed report any one of the items if appropriately primed), if left to their own devices they can subsequently report only a small subset of about four items. The methodological question is to what extent this retrospective blindness can be overcome with the guiding help of a suitably trained interviewer. Ideally the interviewer should not have seen the crowded display that was presented to the subject. This helps to avoid introducing implicit biases into the interview process, which is why we proposed to call this particular kind of second-person method the "Double Blind Interview" (Froese, Gould, & Seth, 2011).

How many additional items can thereby be recalled? The more items, the better the method. Of course, if these additional items do not match the display, then nothing certain can be concluded about the reliability of the method (these items might have actually featured in the subject's visual experience, or not, but the experimenter cannot objectively distinguish between a possible confabulation and misperception). However, if these additional items do accurately describe features of the display, then it is beyond reasonable doubt to conclude that the method improved retrospective access to the original visual experience. In this manner we can objectively validate and calibrate different introspective methods for measuring conscious experience (Froese, Gould, & Seth, 2011).

Although Petitmengin has previously voiced concerns regarding this proposal of using external performance criteria for evaluating the reliability of interview-based measures of conscious experience (Petitmengin & Bitbol, 2011), it now so happens that Petitmengin et al. (2013) are the first to try out a version of this approach in practice. They incorporated the elicitation interview into the "choice blindness" paradigm by Johansson, Hall, Sikström, Tärning, and Lind (2006), which was based on, and further confirmed, the seminal work by Nisbett and Wilson (1977). In the original paradigm subjects are presented with a pair of portraits of women and are asked to choose which one they prefer. This procedure is repeated for 15 trials. After 6 of the trials subjects are handed their chosen photo and asked to explain their choice; but in 3 of these trials they have actually been secretly handed the non-chosen photo. Are subjects aware of this manipulation? The findings by Petitmengin and colleagues are compelling: without the help of the elicitation interview subjects detected their choice had been manipulated in only 33% of trials (thereby replicating the results of Johansson and colleagues), but in the case of choices that were followed by an elicitation interview subjects detected the manipulation 80% of the time. This is a significant result: it is the first experimentally verified evidence for the direct efficacy of a second-person approach to the measure of conscious experience.

Download English Version:

https://daneshyari.com/en/article/10458421

Download Persian Version:

https://daneshyari.com/article/10458421

Daneshyari.com