

Review of: "What is it like to be Out-of-Body? Phenomenal accounts of experiencers"

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As a principle of reviewing scientific articles one should open one's evaluative report with some positive and encouraging words. In the case of the present paper, it is difficult to follow this rule. Tressoldi and Pederzoli introduce their topic insufficiently, the methodology is weak and the data are poorly discussed. Adhering to the tenet of saying something positive at the beginning of my review, I may mention that any illumination of the phenomenal aspects of out-of-body experiences (OBEs) is in fact important and, thus, the authors certainly tackle an interesting question.

Contrary to the authors' contention, however, OBEs *do not* raise the question of whether they could serve as "a proof that the mind and consciousness can function separately from their biological substrate, the brain" (p. 2). To assume such separation is as naïve as the assumption that the color red seen on a white wall after contemplating a green surface would "really" stick to that wall. A generation of parapsychology experiments have investigated the "objective" nature of an "exteriorized self" (an "astral body", a "fluidic double" etc.) during out-of-body states, but all scratching on white walls has failed to produce evidence for the color red out there. Likewise, perception during an OBE is *not* specifically characterized by "bypassing the constraints of sensory organs" (p. 2), at least not any more than dreams, imaginations and hallucinations are. Any analysis of phenomenal reports of people with OBEs which does not take into account the distinct literatures on residual perception after sensory damage, on phantom percepts after the loss of a peripheral sensory organ, on the perception-like experiences in cortical deafferentation syndromes, or on the synesthesias in people using sensory substitution systems must remain incomplete. It is the neglect of this bigger picture of the phenomenology of perceptual cognition that seduces researchers to succumb to the belief in an independence of brain and mind or to claim similar esoteric views. Metzinger (2009) informs about both the value of phenomenal reports of OBEs for philosophy, and the dangers of "analyzing" such reports without consideration of neuropsychology and cognitive neuroscience.

A word on methods. Feeding a search engine (scholar.google.com) with two key words and restrict the publication period to two decades is a method whose use I would have discouraged, had I been asked to supervise some college student work. The thirteen reports retrieved (the number was boosted by "personal interactions with people interested in this topic" (p. 3)) constitute a slap in the face of those having presented similar analyses, in some instances based on hundreds of cases (Green, 1968; Gabbard and Twemlow, 1984; Buhlman, 1996; Terhune, 2009, to name just a few). Most of these sources are parapsychologically motivated (i.e. driven by an agenda to prove the independence of mind and brain), yet they all have enriched our knowledge of how it is to be out-of-body. The authors would have been well-advised to read the voluminous literature on the phenomenology of OBEs, to order the newly collected reports according to existing

taxonomies and to discuss them against a rich established background.

The discussion of the thirteen reports reformulates what has been listed in the Results section. The mix of subtitles - from broad headings like "consciousness status" to phenomenal details of "color perception" - lacks any ordering principle and reflects a conceptual confusion that prevents new insight into the phenomenology of the out-of-body state. One example is the almost passing reference to synesthetic perception. Synesthesia is frequently mentioned by those having experienced OBEs, especially by habitual experiencers. It is a highly important phenomenal detail because it offers an explanation for the so-called "veridical" perceptions during an OBE. Patients observing their seizure from an elevated perspective, just floating under the ceiling, not only see their body shaking, but they also "see" other persons entering the room (provided they hear them entering) and "see" them handling their body (provided they feel the corresponding touch). This phenomenal "seeing" is a top-down generated translation of auditory and tactile impressions. A conceptually equivalent form of "seeing", bypassing eyes and visual cortex, is shown by cortically blind patients, who "see" the keys held in front of their eyes (provided they hear their jingling), but who also identify any object held in front of their eyes as keys, if only object presentation is accompanied by a jingling sound (Goldenberg et al., 1995). Again, the parapsychology literature is full of useful phenomenological analyses of such out-of-body "vision" (see, for instance, the book by Ring and Cooper, 1999, on OBEs in the blind). But basic knowledge of the cognitive science of perception and the neuropsychological mechanisms underlying perceptual cognition is required to interpret phenomenal observations.

I take full responsibility for the harshness of this evaluation. However, to pay lip-service to any potential of the present essay to become a scientific contribution would constitute a disservice to the field of corporeal awareness specifically, and to science in general.

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