



COMMENTARY

## Commentary on Sheldrake and Smart (2023): Directional Scopaeesthesia

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The paper by Sheldrake and Smart (2023) concerns the feeling of being stared at, or scopaeesthesia. I here comment on the article whose rejection I had recommended in the process of peer review. My recommendation was based on the *Journal's* advice to referees, that claimed observations and proffered explanations could be more speculative or less plausible than in some mainstream disciplinary journals, but that '*those observations and explanations must conform to rigorous standards of observational techniques and logical argument*'. Sheldrake and Smart's contribution does not conform to these standards.

Examination of the "natural history" of scopaeesthesia by listing opinions of nearly a thousand "surveillance officers, detectives, martial arts teachers, celebrity photographers, wildlife photographers, and hunters" (p. 312) gives testimony to the widespread belief in the phenomenon but does not say anything about its existence beyond an object of belief. Therefore, the very first sentence of the Abstract offers a mixture of fact and fake information: "The sense of being stared at, or scopaeesthesia, is very common, and its existence is supported by experimental evidence" (p. 312). I agree with the first part of the sentence – obiquity and pervasiveness of the experience of scopaeesthesia have already been documented in a huge body of literature. I strongly disagree with the second part; experimental evidence for scopaeesthesia as an objective perceptual phenomenon is currently absent – again, rigorous research standards are assumed (see Carpenter, 2005).

What Sheldrake and Smart laudably recognize is the theoretical importance of the *directionality* of the phenomenon (under the assumption that it exists). That is, does the feeling of being stared at depend on the starrer's gaze direction? The question is not new; Sheldrake has presented it for a long time (e.g., Sheldrake, 2005). Analyses of the current case collection now provide a clear answer: people experiencing scopaeesthesia do report that gaze direction matters. This was to be expected as the direction of other people's gaze is an important cue for the judgment of social interactions (Gutersdam & Graziano, 2020a). But whether scopaeesthesia as a purported objective phenomenon profits from a directed gaze cannot be determined by the present data set. And previous tests suffered from the embarrassingly poor methodological standards they applied. For instance, Sheldrake (2003) introduced preliminary data collected in a binary decision paradigm in which an experimental starrer looked at a blindfolded person sitting in front of him via a mirror placed on the person's left or right side and indicating whether the starrer's gaze was felt from left or right by lifting her arm on the corresponding side. Success in such a paradigm depends on the trial-by-trial feedback provided in a long series of pseudorandomized sequences. Performance is thus an instance of implicit sequence learning and does not indicate the presence of a perceptual phenomenon (Brug-



ger & Taylor, 2003).

Interestingly, recent work on extramission theories of visual perception (i.e., the notion that something «leaves the eyes» in order to achieve a visual percept) has recognized that research should not be directed towards the “optics of extramission” but to the motor aspects of gaze direction (Schott, 2019). In a series of cleverly designed experiments, Arvid Gutersdam and collaborators have investigated the importance of gaze detection for the feeling of being stared at and the belief in an extramission component of visual perception (Gutersdam et al., 2019, 2020; Gutersdam & Graziano, 2020a, 2020b). In recognizing that scopaesthesia is a mere object of belief (and not a perceptual or attentional phenomenon), these authors have contributed to the biological bases of an individual’s specific irrational belief and, more generally, they have uncovered the roots of the formation and maintenance of the belief in scientifically unsubstantiated phenomena. This brings me to another citation from the article by Sheldrake and Smart, i.e., the title of their paper, “*Directional scopaesthesia and its implications for theories of vision.*” As scopaesthesia does not exist, it cannot have any implications on any theories of vision (nor on anything at all). It is *the belief in scopaesthesia* which makes it a valuable topic of the history and sociology of science. If folk psychological beliefs about extramission and the feeling of being stared at are held by the ‘folk of scientists’, this topic is especially interesting. It helps illustrate the relative resistance of paranormal beliefs towards education and delineates how the ‘madness of crowds’ (Mackay, 1841) can evade academic thinking.

In a nutshell, the article by Sheldrake and Smart falls short from being smart. The contribution is a useful illustration of the true-believer syndrome (Keene, 1976), the perseverative maintenance of a belief in phenomena whose existence has not been supported by any scientific exploration of acceptable quality standards.

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