ISSN: 1445-2308
Australian Journal of Parapsychology
Volume 21, Number 2, pp. 164-182

Ecological Approaches to Scopaesthesia

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Abstract: Scopaesthesia—the scientific term for 'the sense of being stared at'—has been reported to have been experienced by between 70% to 90% of people in Europe and the USA when surveyed. Sheldrake (2003) presented such findings, discussions of early research, and preliminary field-based designs, which then translated into extensive laboratory-based work in the late 1980s. The results of Sheldrake's work have presented highly significant results suggestive of potential psi processes at work that challenge materialist paradigms. Even though such studies employ experimental controls to explore potential psi processes, one could argue that they lack ecological validity since 'staring detection' seems to thrive in the chaos and spontaneity of real-world settings. This paper explores the need for ecological approaches to scopaesthesia and aims to show what could be gained from such efforts. Three field studies are discussed which, to the author's knowledge, are the only known field-based approaches, with two being unpublished dissertation and thesis works.

Keywords: scopaesthesia, sense of being stared at, field studies, ecological validity, judging, physiological reactions.

INTRODUCTION

Scopaesthesia—more commonly known as 'the sense of being stared at'—is the purported ability of one being able to sense when another in the local environment is staring at the back of one's head (or the back of the body in general), without the aid of any known sensory cues, especially visual stimuli to detect the stare (i.e., cues in the peripheral vision; see Sheldrake, 1994, 2003). This could also include knowing the direction from where the stare is coming from (see Sheldrake, 2003, for an overview of the topic). Scopaesthesia is the scientific term for this phenomenon, deriving from the Greek words for *looking* and *knowing* (Carpenter, 2005). It has also been referred to as remote *staring detection* (Braud, 2005), to detach from the idea of a *sensory detection* (Braud, 2005), to detach from the idea of a *sensory* process which staring detection might not involve, where a

feeling of being stared at may be more appropriate due to reports of physiological cues before recognition of the stare occurs. The act of then turning around to acknowledge the stare can be a conscious or unconscious process, but certainly demonstrates a need to scan one's surroundings when in some public place or open environment. This could be seen at the very least as a basic evolutionary need to assess potential dangers within our surroundings, such as predator/prey relationships (for overviews of an evolutionary/biological basis for psi, see for example: Broughton, 1988, 2015a; Savva, 2014).

Awareness for research in this area has grown within parapsychology and popular science due to the work of Rupert Sheldrake (1994, 2003), who revived such research since its inception at the turn of the 20th century. The original research by Titchener (1898) and Coover (1913), found no evidence to support this commonly reported phenomenon. While Titchener did not describe the conditions of his study and just reported negative results, Coover did go into the details of the study with his own students at Stanford University, with basic protocols of starees sitting with their backs to the starer. Dice throws would determine 'stare' and 'no-stare' periods. Even so, Coover found no significant effect in that instance to suggest people can know when they are being stared at. Such studies were used by critics for many years as typical references to dismiss the phenomenon out-of-hand, as being caused by known sensory cues (Sheldrake, 2003, p. 168); at least until further studies emerged several decades later. First came a Dutch study where correct identification of staring occurred significantly more than non-staring (Poortman, 1959), and then two student projects reporting significant staring effects, one at the University of Edinburgh (UK), which applied separation of subjects and a one-way mirror (Peterson, 1978), and one at the University of Adelaide (Australia) adopting the use of CCTV in which to stare at participants (Williams, 1983).

All such empirical research into scopaesthesia, including potential theories and related phenomena, have been summarised by Sheldrake (2003). This then followed with a special issue of the *Journal of Consciousness Studies* (2005, volume 12, issue 6), which presented the views of critics to such research, in which Sheldrake was invited to present his own views and a final response to all contributions (Sheldrake, 2005). Research carried out by Sheldrake consistently demonstrated potential psi processes at work (Sheldrake, 2003, 2005). These studies began with very basic home-styled designs (participants in one room with the staree turned away from the starer), through to laboratory-based studies with one-way mirrors (Sheldrake, 1994, 2003) and technology-based designs (Sheldrake, Overby, & Beeharee, 2008).

Sheldrake (2003, pp. 142-145) also reports having interviewed security guards who work with CCTV monitoring equipment all day, often

with the intent to look for those shop-lifting or committing other crimes. However, much of the literature so far has focused on the laboratory-based studies, designed and refined over time following real-world reports and surveys of the phenomenon (Sheldrake, 1994, 2003). Even so, little focus in the literature has been given to ecological approaches aimed at observing the behavioural signs of scopaesthesia as it plays out, and thus, better aid in its transition into controlled laboratory work.

In the following section, three ecological explorations of scopaesthesia will be reviewed for their strengths and limitations. Much of the field work—besides Sheldrake's studies mentioned above—has been carried out as undergraduate dissertation projects, or through postgraduate research degrees, which as of yet, have not been re-worked into papers for submission to peer-reviewed journals. For example, Watt (2006) reviewed 96 undergraduate dissertations supervised by the Koestler Parapsychology Unit staff between 1987-2007. Of these, 38 focused on psi-based tasks, and three focused on 'staring detection' themed studies. Watt also discusses a file drawer issue regarding how few of these undergraduate works reach publication, or even presentation at the Parapsychological Association convention (or related conferences), and so on. Many universities supporting parapsychological research may have such student projects 'in the file drawer'. For example, some additional projects which have been discovered as a result of this paper, include Martin (2008) at the University of Michigan-Flint (USA), and Allum (2017) and Duffy (2017) at Cardiff Metropolitan University (Wales) under the supervision of Ian Hume, who is particularly known for his work in parapsychology when based at Coventry University (UK).[1]

At the University of Northampton (UK), staring detection studies have also been carried out as part of undergraduate dissertation work. Between the years 2007-2016, two have been identified (Cooper, 2010; Desborough, 2015) which were both supervised by Chris Roe of the *Exceptional Experiences and Consciousness Studies* research group (formerly: *Centre for the Study of Anomalous Psychological Processes*). One of these studies was field-based work.

Reviewed in the next section, are an undergraduate dissertation from the University of Northampton, and a postgraduate research degree from the University of Greenwich (UK) where progress of the project has been presented to the Annual Conference of the Society for Psychical Research (SPR). It appears that a field study published in the *Skeptical Inquirer* as a

[1] If readers of this paper have conducted but not published such studies, or have supervised a student project not yet published, please contact the author. Rupert Sheldrake and Callum E. Cooper are currently seeking such studies to aid in the direction of future research.

response to Sheldrake's (1996) initial findings, marked the beginnings of an ecological approach to scopaesthesia (University of Kentucky, USA)

FIELD STUDIES

Field Study—Design I

Baker (2000a) presented a two-part study to test the claims of scopaesthesia and challenge the empirical findings of Sheldrake. The first part of the two experiments was a field-study design—which I will focus on here. Baker stated:

> Despite the fact that parapsychologists maintain people are sensitive to being stared at and are physically affected under normal social conditions, most of the research in this area has not involved asking people if they're aware of being stared at but has, curiously, monitored subtle, subthreshold physiological differences between staring and nonstaring periods. (Baker, 2000a, pp. 35-36)

Baker further commented that if there is a staring effect, it must be very weak and insignificant. Baker (2000a) also predicted that:

> [P]eople who are cognitively focused (i.e., mentally engrossed in an activity), will never, under normal circumstances, attend to such a weak, nonintrusive, nonmaterial, competing sensation as that of 'being stared at'. Showing that people are not aware they're being stared at is a demonstration of 'common sense,' not an experiment with an unpredictable outcome. (p. 36)

Thus, it was clear from the outset that Baker was against the idea that a staring effect would be found.

Participants (starees) were selected from the University of Kentucky library—anyone engaged in computers, TV, eating, drinking, or reading. The starer (Baker) positioned himself behind each participant and intently stared at them for a period of 5 minutes. Following this, he would approach each individual and inform them that they had just been part of a study and asked them to fill in a response form. In total, 40 people had been stared at by Baker. Two potential participants felt that they were 'habitually being observed and routinely were stared at by other people', so were removed from the study. One believed they were being observed by the FBI, and the other felt they had conscious control of ESP abilities. Baker believed that because these two individuals could not designate the starer's position during the time of the stare, their claims of scopaesthesia were perceived as

unlikely and discarded from the overall analysis. Three reported that during the staring period they felt something was 'wrong' or 'odd' and 'unusual'. They were perceived as not engrossed in what they were doing at the time, and observed to have 'stood up, looked around, shifted their position several times' and generally appeared to be distracted. The remaining 35 claimed they were totally unaware of being observed. Baker (2000a) reports that no one looked at him and that his presence was only ever casually noticed.

Baker (2000a) concluded that his studies lend little support to those people (i.e., parapsychologists in his view) who insist people can sense being stared at. In his conclusion for this particular study, he added a note of caution that if and when engaging with the public and informing them that they have just been involved in such a study, they may claim to be 'special people' able to use ESP and are in need of scientific attention. Baker states:

> [U]nless replication of these two studies prove otherwise, it is prudent to conclude that people *cannot* tell when they are being stared at. If experimental pursuits question either the validity or the reliability of the outcome of these two demonstrations, I suggest they repeated them and see for themselves. If people somehow know they are being stared at—but only at a subthreshold level (which at the moment is unproven and only speculative), this "fact" is of theoretical value only and is far too weak, and unreliable to be of any practical use to modern man. (Baker, 2000a, p. 40)

Several things can be noted from this initial detailed study of an ecological approach to scopaesthesia. Some have considered both of Baker's (2000a) studies, field and laboratory, to be somewhat flawed owing to the lack of control group comparison or control conditions by including, for example, a 'no-stare' condition (Dunbar, 2000). However, Baker (2000b) surprisingly argued against such a need, stating that:

> [It would give] us no information bearing upon the experimental question asked. This, simply, is why 'control groups' in these two demonstrations are and were irrelevant and unnecessary. (p. 65)

Sheldrake (2001) also addressed some of the issues of Baker's (2000a) research and assumptions. He notes that with the five individuals who reacted to 'something' and believed it was potentially in relation to the stare, Baker then introduced a new criterion for his study in that the subjects should be able to detect the direction from which the stare was coming from. As none could, the inability was seen as a non-ability, and therefore, unsupportive of a staring effect. Sheldrake argues that a sensitivity to being stared at does not necessarily imply awareness of the starer, or indeed, where they are positioned. Baker excludes two of the most interesting participants, on the grounds that they were attention-seeking individuals.

And in regard to an additional 'quick test' within the field study, those individuals could not detect the direction of Baker's stare and were therefore perceived by him to be making false claims of their abilities. Sheldrake (2001) comments on this point, by stating:

> [I]f the sense of being stared at really exists, people with paranoid tendencies might be more sensitive than most (Sheldrake, 1994), and so might people who claim to have extrasensory abilities. (p. 58)

It is further argued by Sheldrake (2001), that Baker (2001a), in his first formal effort to test the claim of scopaesthesia, actually obtained positive results consistent with such abilities, despite claiming null findings and attempting to dismiss any positive findings with arguments that beg further questions. It has been mentioned that experimenters with known negative or dismissive attitudes towards the phenomenon will differ in their conclusions compared to researchers with a positive mindset towards the same phenomenon (Wiseman & Schlitz, 1997). Baker's (2000a) analysis and conclusions, *a priori*, go in favour of his stated (skeptical) mindset.

Baker's (2001) responses to Sheldrake (2001) raise further questions. For example, Baker asks of the two dismissed participants, who were 'paranoid' about being stared at and believed they had ESP abilities, "[W]here is the evidence they are more sensitive than most to the detection of being stared at?" (Baker, 2001, p. 61). Baker's own response begs the question as to why he did not take such participants and test them further to explore their claims. Even in the early Duke University experiments, this was the aim of J. B. Rhine; to find promising subjects and test them extensively (*cf.* Denis, 1982; Rhine, 1934). Baker's (2001) response appears to only lend further support to Sheldrake's (2001) observations, in that where Baker's findings appear to show promise for staring detection ability, exploration of such outcomes are shut down with new criteria imposed, and justifications posited that are left wanting.

Field Study—Design II

In the study by Cooper (2010), two field-study designs took place between the years 2008 and 2010 inclusive. These were developed as an undergraduate project with the intention of refining Baker's (2000a) protocols. Briefly reported in the dissertation is a pilot study, which was designed in 2008; data was collected in the summer of 2009. The procedure involved going into public spaces as Baker (2000a) had done, and overtly filming people from behind. The camera was not concealed but kept to the experimenter's side (I took the role of starer). In shopping centres and town

market-places, I would position myself on benches, or seat myself in coffee shops (cafés), and waited for a suitable staree to come along. To be suitable for the study, potential starees would need to be window-shopping, and stand there for a sufficient period of time (3-4 minutes at most), or seat themselves on a bench or in a café, and face away from the starer. The camera was then positioned to record the staree, with notes taken as to the trial number and the general clothing of the staree to identify them on playback.

To progress from Baker's (2000a) study, a control condition was included. In this repeated-measures observational design, two sessions would take place for one participant, on the flip of a coin—heads for stare, tails for no-stare. Participants would either first be subjected to 20 seconds of staring, a 10-20 second break, and then a no-staring period. When a no-staring period occurred, the starer would look away and try to think of something else. In this pilot study, 100 participants filmed over several days were collected for data analysis. The benefit of the camera was that it would demonstrate whether the staree would generally look in the direction of the starer, even when a no-stare condition was imposed. Each participant was only stared at once. Thus, each staree only has one chance at successfully reacting, and their participation in the study was brief and unknown to them. Using my own self-judging protocol, I found 26% of people displayed behaviour which could be considered a reaction to the stare condition, while 6% appeared to stare in the starer's direction during the no-stare condition.

The design was then re-assessed with further assistance from my supervisor Chris Roe, to add an objective component to the project. Filming was to take place in the same manner (e.g., coin flips determined stare and no-stare conditions), but in this case Roe reviewed and judged the footage in lieu of my self-judging protocol. A 'fidgeting scale' was also employed to note how much each staree appeared to act in a way that would suggest reaction-type behaviour to a stare. This was a simple Likert scale of 0 (no reaction) to 5 (full turn and apparent identification of starer).

The first pilot study was conducted in the summer months, which was argued as a potential reason for the success and suitable participants staying in the desired position for long periods. For this second study, time was limited for data collection for the project and had to be conducted in the winter months. Much of the footage demonstrated cold, snowy, and icy conditions, which did not produce much need for window shopping, having lunch on benches, or reading, and so on, but as expected, there were displays of behaviour for the need to seek shelter inside, away from the cold. Even so, a further 100 participants were eventually gathered for this second phase. As with the pilot study, selected participants could not be involved in psychologically absorbing activities which may have left them

impervious to any outside awareness such as a stare. Therefore, only those engaged in simple activities were chosen, such as sitting, window shopping, and simply looking in the opposite direction to the starer.

The independent judge (Chris Roe) then assessed the footage of all valid trials in staring and control conditions (no-stare), giving each a score on the fidgeting scale. The judge was blind to stare and no-stare conditions, noting what he perceived to be the order per participant (stare first or no-stare first) and the amount of behavioural reactions. All participants were scored even if no reaction seemed to occur, resulting in a 0:0 (zero:zero) score. A typical scoring outcome for the judge might involve watching the footage with a 'no-staring' trial for the first 20 seconds of footage (unbeknown to the judge that it is a no-staring trial) and seeing the participant move slightly while sitting on a bench, but no body or head turn, thus scoring 1. For the following 20 seconds, the judge continues to watch an actual 'staring' trial (unbeknown to the judge that it is now a staring trial) and perhaps there was a body turn to glance at the environment, but no head turn (e.g., to look directly behind) and so the judge might score that 3 (e.g., 1:3). Every participant was subjected to both a stare and no-stare condition within a window of no more than 2-3 minutes of footage.

In this second phase with improved methods, the independent judge was not able to accurately identify which of the two 20-second periods of footage per participant was the staring condition. Only 42 trials were correctly identified as the staring condition by the judge out of 100 (a 42% hit-rate where MCE = 50%). All of the participants who did receive a fidgeting/reaction score (any above a 0:0 score) were further analysed, thus accounting for 44 suitable participants. However, the result again demonstrated no significant difference in scoring between staring and no-staring trials. Finally, all fidgeting scores of between 4 and 5 (regarded as a 'direct hit' or 'confirmed stare') were analysed to see if these high scores were correctly identified as staring trials (if a staring effect were present, we would expect at least half to be correctly identified by chance alone). Out of 10 high scoring trials, only three were correctly identified as the staring trial. Therefore, in this refined second pilot trial of an ecological approach to scopaesthesia, the null hypothesis was retained.

Field Study—Design III

Doctoral research carried out by Ross Friday, under the supervision of David Luke, adopted a field study design for testing scopaesthesia (Friday, 2019). The findings were presented at the annual conference of the SPR (Friday & Luke, 2018). The unique element to this research, and extending that of the previous and somewhat limited studies of ecological

design, is that Friday proposed exploration of acoustasthesia also—the 'sense of being heard'. Previous phases of Friday's project had explored both the ability to detect a stare, or detect when being listened to, under laboratory conditions (Friday & Luke, 2014, 2015, 2017).[2] This study also incorporated physiological reactions determined by electrodermal activity (EDA), in order to compare arousal levels in participants within varying conditions such as: (a) not under any surveillance[3] (control group), (b) whilst being stared at, (c) whilst being listened to, and (d) whilst being stared at and listened to (study 1, $N = 112$). Based on self-report data, initial findings appeared to suggest participants were able to detect being stared at *and* listened to. However, when reporting bias was accounted for through participant self-reports (see Friday, 2019, p.112), no significant differences to the control condition were found.

A replication was carried out with improvements and amendments to the methodology (study 2, $N = 110$). Statistical power was improved through the running of more self-report trials to counteract report bias As Friday (2019) states "concerns of participant fatigue during an hour-long study which was already demanding in terms of attention and concentration led to the researcher deciding on just eight self-report trials per participant … increasing the number of trials to 16 would double the statistical power of the self-report results" (p.154) while caution was given as to this not impacting on participant dedication to the task at hand. In this replication, significant findings were reported for being stared at *and* listened to. No significant findings were reported for the EDA, except when running the experiment with a Stroop test and placed in a position where they were made to think that their results mattered for some reason, when in fact it was a distraction from staring periods about to be focused upon. The Stroop test was used as a suitably engaging, novel but somewhat confusing task for participants to engage in, as a distraction from staring (NB: It has also been used to explore ADHD; see Banks, 2017; Friday, 2019, p. 98). *No-staring* vs. *being listened to* showed no significant effect (a + c), and *stare* vs. *stared at and listened to* (b + d) showed no significant effect for EDA, yet all four other comparisons provided significant findings in the differences for EDA. The conclusion was that being stared at or listened to had to *matter* to the participant to demonstrate a possible psi component at play alongside measurable stress levels.

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[2] Although not of ecological focus, the findings of Friday and Luke have been replicated For example, O'Connell (2018) found a near-significant positive correlation between mood and level of staring detection (i.e., where higher participant mood and confidence was observed, higher accurate identification of staring was observed).

[3] It should be noted that in Friday's study, terms such as 'stared at' 'watched' and 'under surveillance' were used interchangeably (Friday, October 24, 2021).

For the final phase (Friday & Luke, 2018), the researchers believed that with the laboratory studies, their findings may have been due to scopaesthesia and acoustasthesia being taken away from the natural environment in which it was reported. There were no behavioural and environmental consequences to such phenomena when participants were told to essentially sit there. Therefore, to compliment these laboratory studies, a field study design was applied. More trials were run and participants were not aware of the surveillance. As Friday stated:

> This was the part we were most excited about, it was the most ecologically valid, but it was the most difficult to set up ethics-wise, because with this we couldn't get them into the lab, we didn't have the safety of the lab condition, and we also couldn't get their permission for what we were doing before it actually took place. Effectively, we had to follow people, watch people, and then afterwards, go and ask them whether they felt that they were being watched or listened to. (quoted from SPR conference audio: Friday & Luke, 2018)

The researchers had considered, especially from anecdotal evidence of Sheldrake (2003), that staring detection is more distinct when there is an element of danger or a threat involved. Therefore, two distinct conditions were created for the field study design. Plans had been made to conduct one 'non-threatening scenario' on the University of Greenwich campus, and the other at an underground car park, with 'wanted person' posters carefully placed around to make visitors to the car park more vigilant. However, the university ethics department would not permit a 'threat scenario' unless it took place on campus.

An area near the sports facility was chosen for some seclusion which contained bushes, woods to one side, and one long path with part of it hidden from view. The setup meant that it was not possible for anyone walking down this path to tell who might walk around the corner, so participants could be taken by surprise. It was considered 'not a very comfortable place to be', but had the safety of being on university grounds, and yet had a very distinct feeling from everywhere else on campus. The feelings surrounding the threatening location, a control location and their selection, was determined by the experimenter (Friday), a focus group, and 12 university students who were taken to both locations and were led down the paths which people could walk and be observed. Hypothetical questions were asked about safety in both locations and their feelings towards them. It was reported that "the vast majority of the students (83%) suggested that there was a noticeable difference between the two locations in relation to their atmosphere" (see Friday, 2019, pp.198-199). Positioned from the changing rooms of the sports facility, Friday periodically stared at people

walking the selected path. Starees would meet Friday's research assistant at the other end of the path, where they were then questioned as to whether they felt like they were being watched (study 3, $N = 100$).

Unbeknown to the experimenters at the time, a couple of assaults had taken place in this area close to the time of the study. This would have made those aware of this information more cautious when walking in this area, but the experimenters—while noting the assaults as a terrible thing to have happened—felt that it assisted in the study and its findings when assessing the data (Friday & Luke, 2018). The study took place in the winter. This season was chosen to avoid distractions for people in the summer months (footballs being kicked nearby, lawnmowers, etc.). This is contrary to the previous field study, and yet, the data collection scenario was different. With Cooper (2010) the methodological design required starees to stand still long enough in winter conditions to be filmed and included which was difficult and hindered the study, while with Friday and Luke (2018) starees were uniquely on the move in both locations while being stared at within a set route for the surveillance, which is a practical improvement of the former field study.

Even so, participants would follow the path and try to get away from being outside. Comparing the mean chance expectancy of both outside field conditions, both areas together produced no significant findings. The safe area produced no significant findings, but for the dangerous area significant results were found and suggested that participants were able to tell when they were and were not being stared at in the duration of the path they had to walk outside of the sports facility. This was an unexpected finding for the researchers, as they believed that there would simply be too many distractions for a staring effect to be identified, but they felt that the overall thesis would benefit from a final study of ecological validity.

Overall, Friday and Luke (2018) found the effect for acoustasthesia to be non-significant, but was complemented by scopaesthesia. The more attention someone paid to participants, the more likely participants seemed to be able to detect such effects. Levels of embarrassment, danger, a need to know if one is being watched (e.g., Sheldrake, 2003, has discussed this with CCTV and shoplifters), all appear to be important factors. If you can make it matter to an individual whether they are being stared at or listened to, it appears to improve detection, and thus, the overall outcomes of the study were in favour of scopaesthesia.

Friday and Luke (2018) noted that if laboratory studies are conducted, they made sure they did everything they could to make sure good rapport was established, making participants feel comfortable, providing beverages, and so on, which has been found to be favourable for many psi-based studies, and indeed, psychology studies in general (e.g., Broughton, 2015b; Desborough, 2015; Palmer & Miller, 2015; Schlitz, et

al., 2006; Watt, Wiseman, & Schlitz, 2002). And yet, as Friday added, for scopaesthesia, having the participant feel uncomfortable, and potentially in a threatening environment, appeared to enhance the potential presence of a staring detection ability when observed in the natural world, which suggests a potential evolutionary purpose for some aspects of psi (Broughton, 1988, 2015a; Savva, 2014, Sheldrake, 2003). Therefore, the elements of anxiety and danger are variables that require further investigation in such research.

DISCUSSION

The commonly cited studies of scopaesthesia have been laboratory based (e.g., Coover, 1913; Sheldrake, 2003; Sheldrake et al., 2008; Wiseman & Schlitz, 1997), and yet we could learn much more about the nature of scopaesthesia (i.e., its purposes and processes) from observational field studies using designs that attempt to document scopaesthesia at play in real-world settings. From such rich data, we have the potential to better inform designs in laboratory-based studies, or provide a selection protocol for participants who appear sensitive to scopaesthesia. The potential for such a selection protocol can be seen in elements of all the documented field studies (Baker, 2000a; Cooper, 2010, Friday & Luke, 2018). Successful 'scopaesthesic participants' could then essentially be asked to take part in a further study under laboratory conditions and could help consolidate a staring detection effect. This proof-oriented approach to identifying potential high scorers, and those who may be more 'psi sensitive' is certainly not new, and was well-noted in J. B. Rhine's early efforts on Duke University campus (Denis, 1982; Rhine, 1934). Whatever the laboratory-based task may be, the researcher would also need to create meaning or purpose for the participant. That is, the participants' awareness of staring would also need to matter to them, thus adding a critical factor to yes/no responses in 'staring' and 'no-staring' conditions.

In the Cooper (2010) study, it was considered that simply going back to places where people may report scopaesthesia in the natural world, does not mean scopaesthesia will be observed again (see Scherer, 1948; *cf.* Cooper, 2020; Marks, 2020, pp. 301-303; Stokes, 2017, on related discussions). However, within the scope of an ecological approach—the field study—any participants seen as potentially prone to psi, especially scopaesthesia in this instance, do warrant further testing within controlled settings, instead of instant doubt toward scopaesthesia or assumed paranoia on the part of the staree (i.e., Baker, 2000a). Cooper's study may have identified perhaps three people at most who could be sensitive to scopaesthesia, regardless of the limitations of the study. And regardless of the various weaknesses of Baker's (2000a) study, two participants who

claimed to have acknowledged Baker's staring were discarded essentially on the grounds of being paranoid. Future effort should be given to potential recruitment of these types of participants for transfer into a laboratory-based study with suitable control conditions.

Having followed the Sheldrake (2001) and Baker (2000a,b, 2001) exchanges, Duncan (2001) states that "from an evolutionary perspective, few would argue that the ability to sense stares is not a valuable survival trait" (p. 75). He further argues that those trying to refute Sheldrake's work may have failed in even trying to see the phenomenon as genuine psi, but see it as produced by subtle natural (normal) causes. For example, it could be argued that there are other mechanisms at work for the success of the field study, including some participant knowledge that they were in a dangerous area where recent attacks had taken place. Did they expect to be watched by a potential attacker? However, Duncan's statement is supported by the findings of Friday and Luke (2018). If scopaesthesia is genuine, it is showing potential evolutionary and survival/life-saving benefits (Broughton, 1988, 2015a; Savva, 2014). Only by taking scopaesthesic participants from the field studies through to being tested under laboratory conditions can we be confident that any behaviour they display suggestive of scopaesthesia is not attributable to conventional means.

An observation to be made from these fields studies is that among the general public, reports of telepathic experiences and other elements of psi, indicate the mind potentially reaching out to influence something or someone within the environment, are in the majority (*cf.* Sheldrake, 2020, pp. 253-283; Vernon, 2020, pp. 32-64, for overviews). Many believe this has happened to them at some point in their lives. Scopaesthesia occurs quite often with strangers (contrary to our knowledge of telepathy), which would suggest that this process is not just a telepathic exchange (since the individuals involved are not biologically linked or within close social groups), but may have psychokinetic qualities in that the staree often reacts by 'fidgeting' or has a general sense of 'feeling uncomfortable' and a need to then turn and observe their surroundings. Such reports suggest an interference of their relaxed physiological state. This certainly plays to the idea of a threat detection—Sheldrake has questioned whether the act of looking is an act of reaching out and influencing, rather than just an illusion and representation within the brain as the materialist would argue (Sheldrake, 2020; see also Kastrup, 2014, for an overview of his anti-materialist position). Studies of electromagnetic transfers, healing and placing of hands near biological systems, or staring at them to influence their behaviour or direction of travel, would also play into this notion (e.g., Braud, 2003; Herbert, 1973; Joines, Baumann, & Kruth, 2012; Randall, 1982).

Conclusion

Ecological approaches to scopaesthesia have rarely been carried out, although Sheldrake (2003) has made suggestions for how the researcher might go about testing it (i.e., using CCTV tests or hiding in public spaces). From the field studies discussed (Baker, 2000a; Cooper, 2010; Friday & Luke, 2018), all three provide important conclusions for consideration. To reiterate, such outcomes include: making sure starees are not too focused on other people or weather conditions, starees are walking set paths rather than stationary, the use of independent judges, considering physiological reactions to stares (i.e., fidget reactions), and bringing meaning to the influence of a stare and how it may matter to the staree (i.e., their safety and wellbeing in the natural setting). Contrary to some laboratory-based studies for psi where anxiety appears to inhibit its production (e.g., Palmer, 1977), Friday argues from his findings that the situation and the need to detect a stare has to matter to someone, such as when pressure is put on us in timed tasks, through to dangerous environments which could result in injury or worse (Friday & Luke, 2018).

Additionally, Rock (2010) has argued that response bias should be considered by researchers of staring detection, which has been given little attention beyond his assessment. It was found that in re-analysing raw hit rate data of a previous study (Ferris & Rock, 2009), a significant finding of correct no-stare identification was an artefact of response bias, stating that "the results highlight the importance of exploring possible artefactual sources of ostensibly anomalistic cognition" (Rock, 2010, p.150). Friday (2019) also explored this notion through participant self-reports of the laboratory based studies, but as of yet, this has not been considered on the part of the experimenter, starer, or independent judges, which may be used within the context of an ecological approach. Therefore, in further replications, response bias is certainly worthy of consideration from the perspective of the data collection, analysis, and interpretation of findings.

To identify psi, asking ourselves 'what is it for?' is important when we seek out a place in the natural world where it might be observed (Broughton, 1988). From there, as with the Rhinean approach, we can test promising participants in the laboratory, and look at scopaesthesia under the scientific lens, and thus have better controls in place. To date, the laboratory-based studies greatly out-number those that take a formal ecological approach, which, in the case of the latter, is a lost opportunity. If further attention is given to thorough observation of scopaesthesia within the natural world setting, we could enhance our understanding of its operation. We may learn more about behavioural reactions to stares, conducive settings that produce higher correct staring identification, and we

can ask people *in situ* about their reactions and the personal meaning such experiences have for them, within the context of the natural world.

ACKNOWLEDGMENTS

My thanks to Dr. Rupert Sheldrake and Professor Chris Roe for encouraging me to write this paper on the field study approach. Thanks also to Dr. Ross Friday for his correspondence and clarifying several points on his research and procedures. Finally, thanks to the editor Dr. Lance Storm, and the reviewers, for valuable suggestions on an earlier draft which has brought much more clarity of methods and general discussion.

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