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The Feeling of Being Stared at: A Parapsychological Classic with a Facelift

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Abstract

Findings in parapsychology suggest an effect of distant intentionality related to remote staring. Previously, either the covariation of a distant gaze with the electrodermal activity (EDA) of the person being observed (staree) or with the person's conscious guesses are measured. We combined these two strands of research. Thereby we allowed for the starees at any time to indicate whether they felt being stared at or not. We distracted the starers by a demanding mental task in half of the sessions or we instructed them to keep their minds busy with anything but the staree. Overall 50 sessions were conducted. The experiment failed to demonstrate a clear cut effect. The difference between the staring and non-staring conditions was not significant. For the comparison of distraction and standard procedures we found no significant differences for EDA or conscious report. However in a post hoc analysis one of the conscious report variables approached significance for the interaction between staring and distraction in the predicted direction. The effect size of the staring effect in this condition was d = 0.57. We conclude that the starer's mental strategy during the non-staring periods may be important.

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Introduction

The era of examining the "everyday phenomenon" of feeling unseen gazes in a laboratory setting has a long history and can be differentiated in two main paradigms.

In the first kind of experiments participants are gazed at by another person either sitting directly behind them, or through a one-way mirror. Alternatively a closed circuit television system can be used. A randomized series of trials is then conducted, alternating staring and non-staring conditions. After each trial the starees have to make guesses if they have just been gazed at or not (Titchener, 1898; Coover, 1913; Poortman, 1959; Williams, 1983; Sheldrake, 1998, 2001). Most of these studies were quite informal and hardly shielded against sensory cueing.

A radical change in methodology began with the studies of William Braud in the early 1990s. Braud and his colleagues pointed out that the effect sizes of the former studies were not very impressive and that stronger effects could be obtained if the relatively "unconscious" autonomic nervous system activity were to be used as the indicator of staring detection, rather than conscious guessing "…because … autonomic reactions might be less distorted by higher cognitive processes and therefore might provide a purer and more sensitive indicator" (1993b, p. 392). From the late 1970s until the early 1990s a series of 37 so called DMILS ("direct mental interactions with living systems") studies was conducted in the laboratories of the Mind Science Foundation in San Antonio (Schlitz & Braud, 1997). In DMILS research an individual (*agent*) tries by means of mental intention and volition to interact with the behavioural or psychophysiological response of another, sensory isolated living target system (*receiver*). The most frequent response system that is studied in DMILS research is the electrodermal activity (EDA) of the receiver which the agent attempts to calm or activate during an experimental session. A typical DMILS session consists of 10 randomized and counterbalanced "activate" periods, 10 "calm" periods (and 20 "rest" periods in between). Under

the null hypothesis there is no difference to be expected between the receivers' EDA arousal during the calm or activate periods.

In the first "remote staring" DMILS studies that Braud and colleagues conducted (Braud, Shafer & Andrews, 1993a, 1993b), the paradigm of former DMILS-studies was combined with a quite simple design to test if people were able to detect when they are gazed at by a sender in a distant room. An experimental staring session usually consists of two periods in random sequence: during a staring period the starer (*agent* or *sender*) is told to look intently at the real-time image (on a monitor or screen) of the staree (*receiver*) which is transmitted to him by a closed-circuit television system. The starers` experimental task thereby is to either observe the starees or not, and during the control periods, to just turn away from the monitor and to keep their mind busy with something else.

Altogether the four series of remote-staring experiments conducted by Braud and colleagues revealed significant results. The starees´ EDA was significantly more activated during the staring periods compared to their EDA level during the non-staring periods.

Most of the experiments that followed the same paradigm (Schlitz & LaBerge, 1997; Wiseman & Schlitz, 1997, 1999; Wiseman & Smith, 1994; Wiseman, Smith, Freedman, Wasserman & Hurst, 1995) also revealed significant results and in a meta-analysis on all EDA staring studies we could find a small but significant effect size (d = .13 p = .01, k = 15 studies, N = 379 sessions; Schmidt, Schneider, Utts & Walach, 2004).

However, the way the EDA was measured showed some shortcomings and thus leaves some doubt about the validity of the results. Therefore we evaluated the EDA methodology of all published EDA-DMILS and Remote Staring studies and compared them with a sample of studies published in leading psychophysiological journals (Schmidt & Walach, 2000). The results of this evaluation indicated that the EDA methodology applied by parapsychologists did not compare to state-of-the-art EDA measurement recommended by psychophysiologists (Boucsein, 1992; Venables & Christie, 1980). None of the studies complied with the "Publication Recommendations for

Electrodermal Measurements" issued by leading psychophysiologists in 1981 (Fowles et al., 1981), and most of them even violated common psychophysiological knowledge.

In comparison the more recent studies conducted and promoted by Rupert Sheldrake, follow the older paradigm that takes the conscious report of the staree as the outcome-variable. Sheldrake conducts or supervises big series of experiments mostly in schools that can always prove overall positive results with extremely high significances: while the responses at staring trials are constantly above chance they are around chance at non-staring trials (e.g. Sheldrake, 1998, 1999, 2000, 2003, 2005, 2008). Nevertheless there are still a lot of controversies concerning the methodology as well as the statistical analysis of these experiments (Colwell et al, 2000; Schmidt, 2003, 2005).

So far a direct comparison between these two paradigms, which are also termed *EDA-CCTV* and *Direct Looking* (Baker, 2005) by assessing concurrently the starees´ EDA *and* the conscious guessing has taken place in only one study (i.e., Lobach & Bierman, 2004). In this experiment the autonomic responses measured by EDA for detecting a possible staring effect just reached significance while at the same time the conscious guesses did not differ meaningfully from chance expectations. In real life however many people claim to detect and become aware if someone is staring at them unseen from behind. Thus evidence for this effect should be revealed by an experimental setting taking conscious guessing into account. By measuring nervous processes and comparing them with the conscious guessing it may be possible to find results about their interactions and the possible correlation of this interaction with other variables (i.e., personality, belief in Psi, mood) preconditioned that such an effect exists at all.

In the present remote staring study we combined both aforementioned paradigms by assessing concurrently the starees´ autonomic reaction (EDA) and their conscious guessing. So far conscious reports in staring experiments were received by a forced-choice procedure where "...the receiver must engage in overt cognitive processing to provide a response to the target" (Delanoy, 2001, p. 35), which in this case is either "yes" or "no". But this procedure is rather

different from a daily life experience and may elicit a lot of different processes – e.g. guessing strategies, response biases or intellectual analyzing – that obscure experimental outcomes. Therefore we replaced the forced choice situation by an open response procedure. Participants were not prompted to give an answer but could indicate at any time during the session if they had feelings of being stared at or not by either pressing or releasing a switch. Of course they were blinded against the number of staring vs. non-staring epochs, their length or their starting point.

Moreover we introduced a new procedure concerning the "starers". In former studies they were asked to maximize their attention to the starees during staring periods and to think about something else during non-staring periods. Based on the "white bear" studies by Daniel Wegner and colleagues´ that dealt with the well-known daily life phenomenon of the impossible task to suppress unwanted thoughts (e.g. Wegner et al, 1987, 1990, Abramovitz, 2001) it can be assumed that the effectiveness of the explicit instruction "not to think about the staree" given by default for the non-staring condition is questionable: "…during stare trials, the experimenter quietly directed his/her attention toward the receiver, *during non-stare trials the experimenter quietly directed this attention away from the receiver.*" (Wiseman & Schlitz, 1997; p. 202).

Instead of "thinking about anything else" the starees´ image could very easy come back unintentionally to the starers´ mind. So if the remote staring effect – mediated by focused intention / attention as instructed – is genuine it should be detected in an experimental setting by contrasting experimental (staring) and control condition (non-staring) adequately. In order to do so we induced the attention component by instructing the starers *to focus intensely* on the starees´ video-feed during the staring-condition and occupied them with a demanding computer game throughout the non-staring periods in half of the experimental sessions. To see if this new procedure would make any difference a comparison was made in a between subject design with the other half of the sessions run in the usual fashion (see above) of the standard paradigm.

Method

Design

The design was a (2 × 2) mixed design with both between- and within-group manipulations. *Condition* (2 levels, distraction – no-distraction) was the between-subjects variable while *Instruction* (2 levels, staring – non-staring) was the within-subjects variable.

Participants (starees/starers)

Fifty volunteers, 26 women and 24 men, aged 20 – 57 years (Mean = 32.5), participated as starees and were recruited through leaflets. The motivation for participating was interest in the staring effect and thus the sample was self-selected. Participants were reimbursed with 10 Euros.

Each experimental session was conducted individually by one of two persons (one woman and one man) each of whom were acting at the same time as experimenter and starer for 25 experimental sessions. The female experimenter tested 11 men and 13 women while the male experimenter tested 13 men and 13 women respectively. Both experimenters were student assistants hired for this experiment and both were extensively trained throughout a preceding pilot study. The experiment was organized and conducted by the first author.

Setting

All experimental sessions were conducted in a two-floor-building with starer and staree being located in two entirely separated rooms in different wings (see Figure 1). The lab (starees´ room) was located on the ground floor and the starers´ room on the first floor approximately 20 metres apart. The physical separation of these rooms together with the standard use of a closed-circuit television system minimized the possibility of any sensory leakage between starer and staree.

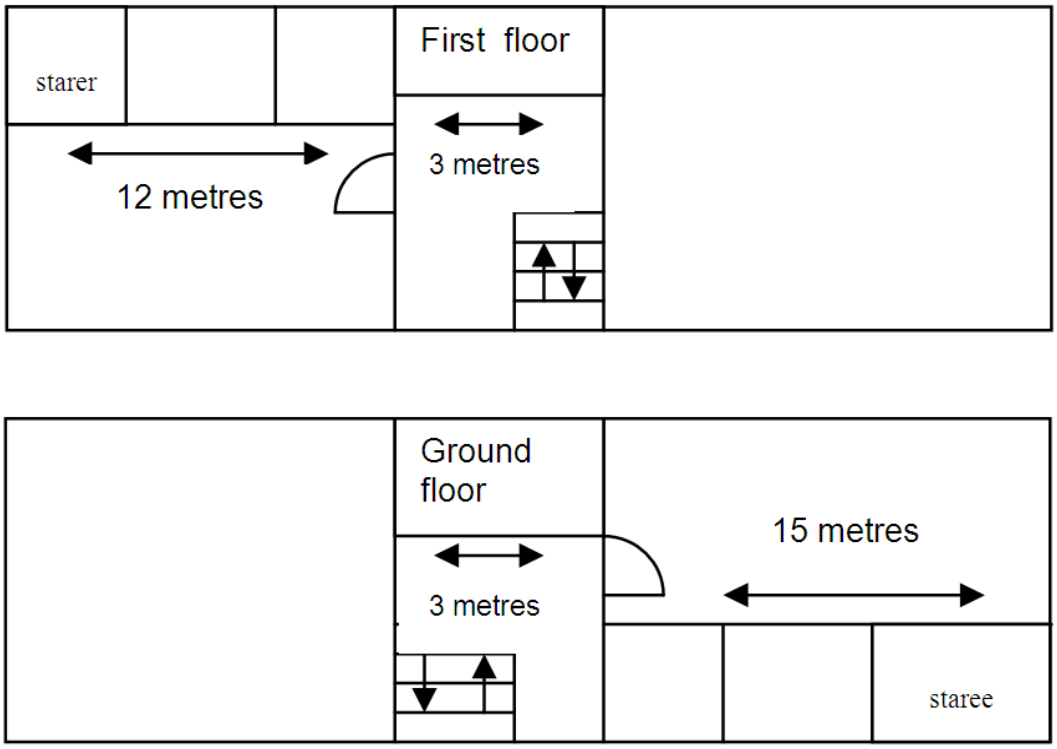

Figure 1. Plan of the location where the experiment took place

Materials

Video equipment: An Axis Netcam206 video camera was positioned at the left side of the staree about 45 degrees of centre at eye level (see Braud et al., 1993a). Thus real-time images of the staree´s shoulders, neck and head were continuously transmitted to a 19" monitor in the starer's room. The camera continued recording even when the starer was not provided with the image in the no-stare condition. This one-way closed circuit television system allowed the starer to see the staree but not the other way round.

EDA measurement: The staree's electrodermal activity was assessed by measuring and recording skin conductance (SC) with a constant voltage method (0.5 V) according to the guidelines by the Society for Psychophysiological Research (Fowles, Christie, et al. 1981; Schmidt & Walach, 2000). A skin conductance device split the data into two channels: the tonic level of skin conductance referred to as the skin conductance level (SCL) and the phasic signal – superimposed on the

tonic level – referred to as the skin conductance response (SCR). The latter one is elicited by the presentation of unknown, novel or unexpected – but clearly identifiable – stimuli. SCRs that happen without the presence of such stimuli inputs are the so called spontaneous or non-specified SCRs (NS.SCRs) (Dawson et al., 2000).

As there were no specific stimuli and we were interested in the participants' arousal during different epochs, only tonic parameters (i.e., SCL, frequency of NS.SCRs, *NS.SCRfreq* and the sum of all amplitudes of NS.SCRs) were the interesting variables in our study (see also Schmidt & Walach, 2000). We calculated all three tonic parameters and combined them in one multivariate analysis of variance (MANOVA).

SCR was derived by treating the SCL with a time constant of 10s. Data was digitized (12-bit) and sampled at 20 Hz for each channel. Skin conductance was measured with two 8mm Ag/AgCL electrodes placed on the thenar and hypothenar eminences of the non-dominant hand. An isotonic electrode gel was applied and a time lag of at least 20 minutes between electrode application and start of measurement was maintained to allow for skin adaptation processes.

Respiration was recorded by a piezo based respiration belt placed on the upper abdomen and also stored in a separate channel.

Measurement of the starees´ conscious guesses: For recording the starees´ report of feeling to be stared at or not they were provided with a tiny switch on their dominant hand. Depending on their guessing they were told to push this switch either into the (feeling of being) "stared-at position" or release it to the (feeling of being) "not-stared-at position". The signal generated by the switch presses of the participant was recorded together with the EDA raw data in a separate channel.

Questionnaires: In order to explore possible interrelationships between personality characteristics as well as the subjects´ present mood or well-being with the autonomic staring detection effect the following scales were applied:

Belief-in-Psi: Three questions equal to the ones that Wiseman and Schlitz used in their study (Wiseman & Schlitz, 1997). The questions

assessed the participants' attitudes toward Psi. They had to indicate their responses on a seven-point scale ranging from –3 to +3. A general "belief-in-Psi" score is obtained by summing the responses over all three questions: (i) Are you convinced about the existence of Psi? (*certain* to *not at all*); (ii) What best describes your own Psi ability? (*I have Psi ability* to *I have no Psi ability*); (iii) Do you believe you might be able to demonstrate any Psi ability in this experiment? (*Yes* to *No*). Each staree had to answer these questions before the experimental session.

Mindfulness: (Freiburg Mindfulness Inventory; FMI): Participants were asked to fill in the 14 item short form of the Freiburg Mindfulness Inventory (FMI) (Walach, Buchheld, Buttenmüller, Kleinknecht & Schmidt, 2006). This includes, apart from awareness for the environment, also the awareness of one's own mental processes, emotions and signals from the body. The short form of this questionnaire can be filled out by persons who are not familiar with the mindfulness concept itself. The rationale for measuring mindfulness in participants was to find out (i) for the staree: how the ability to be continuously aware of the present moment is related to the detection of a remote stare observation; (ii) for the starer: to find out whether the ability to be aware of the present moment is related to a better performance. Mindfulness, intention and attention share aspects that are likely to be important for these kinds of intention experiments. The two starers had to fill out this questionnaire once at the beginning of the study and the starees had to fill out this questionnaire before their particular experimental session.

Well-being: (German: *"Befindlichkeitsskala"*; Bf-s): General well-being was measured by the Bf-s (Zerssen, 1976), an adjective list which measures general well-being in 28 pairs of adjectives with opposite semantic content arranged in a semantic differential. This instrument is a widely used, psychometrically sound scale for measuring short term changes in well-being. Starers and starees had to fill out this scale shortly before and directly after each session.

Personality: (NEO-FFI; Borkenau & Ostendorf, 1993) The German translation of the NEO-FFI is a 60 item personality inventory assessing the five standard traits: Neuroticism, Extraversion, Openness,

Conscientiousness and Agreeableness. High scorers report a receptivity to novel experiences and actions and a high frequency of, and interest in, imaginative and reflective thought.

Distraction condition: In half of the sessions (distraction condition) the starer had to perform a demanding cognitive task during the non-staring epochs. In the other half of the sessions (standard condition) there was no such task and the starer was just told not to think about the staree. The distraction task was displayed on the same screen where the video image of the staree was shown during staring epochs. It consisted of a matrix (10 × 10) of 100 two digit numbers. The task was to identify as fast as possible the presence of certain predefined numbers. Time pressure was heightened by a time bar and very short time intervals.

Randomization: The sequences of the experimental conditions were in a randomized order with the same number of staring and non-staring trials. They were balanced to avoid linear trends (such as a steady decrease in skin conductance or trends caused by shifts in the amplifier etc) potentially resulting in artefacts (see Schlitz et al., 2003). An algorithmic random process was employed to draw a sequence out of a pool of sequences fulfilling the above criteria. One epoch lasted 60 seconds. There were 10 staring and 10 non-staring epochs. Staring and non-staring epochs were interspersed by short rest intervals of variable length (5 to 15 seconds, randomly assigned). Thus the overall session length summed up to 23 to 30 minutes.

Procedure: Each experimental session was run individually by one of the two experimenters. After arriving at the laboratory participants were informed about the purpose of the experiment and gave their consent. Before the session started the starees had to fill out questionnaires on mood, personality, mindfulness and paranormal belief, and jewelleries as well as mobile phones had to be removed. After taking seat in a comfortable chair the EDA electrodes and the respiration belt were attached. In order to eliminate any noises from outside which could influence the measurement of the EDA the starees

wore special headphones, which extremely attenuated sounds from the environment (Sennheiser HD 280 Pro). To make them relaxed and comfortable they additionally listened to a special music (Dr. Harold Moses – "The Drone") which did not contain any sudden changes or beats so as to not interfere with the EDA measurement. Starees were blind against the number and the timing of the sequences. They were just told that the camera would be on throughout the whole experimental session and that the starer would look intensively at their image revealed by the camera at randomly fixed times. Starees should press the switch they hold in their dominant hand each time they felt that the starer would attempt to gain their attention by looking intensly at their video-feed image (staring condition) and should release the switch when they felt that this attention had vanished (non-staring condition). Moreover they were told to sit quiet and relaxed and not to move unnecessarily. After having been instructed participants were left alone for five minutes in order to record their basal skin conductance (baseline). Afterwards the experimenter re-entered the lab, stored the baseline data and went to a room upstairs. Exactly six minutes after leaving the lab the experimenter started the computer program that ran the whole session. The program – written in VBA – sampled and stored the incoming data, selected the random sequence and controlled the monitor for the starer by switching between the picture of the staree and a blank screen (standard or "no matrix" – condition) or the computer game (distraction or "matrix" – condition). Due to a randomized order the experimenters manually set up the program for either the standard or the distraction condition. The sequence of these two conditions throughout all the sessions was in a randomized order with the same number of sessions for both. Each of the experimenters had a package of sealed envelopes locked in a cabinet drawer. Before starting the program they chose the envelope labelled with the smallest number to find out about the ongoing condition. It is important to notice that both starers and starees were blind to the trial sequences. After the session was finished, the experimenters waited for five more minutes before entering the lab. Thereby a second EDA baseline could be recorded.

In a preceding pilot study with ten participants the laboratory set-up, the measurement devices and all procedures were tested in order to guarantee an ideal performance. All methodological details and statistical analyses of the main study were predefined in a protocol that was deposited with E. Bauer (IGPP, Freiburg/Germany) before the beginning of the main study.

Hypotheses: According to former studies we hypothesized a significant difference in the starees´ electrodermal activity between staring and non-staring periods. Furthermore we expected the starees to press the switch for conscious guessing more often and for longer periods during staring trials than during non-staring trials. Concerning the two different assessments of the non-staring condition we hypothesized a significantly larger difference in the starees´ electrodermal activity as well as a difference in the frequencies of pushing the switch between staring and non-staring trials throughout all the experimental sessions when the starer was occupied by the mental task (distraction condition).

Furthermore correlations between well-being, paranormal belief, mindfulness and the outcome measures for the autonomic reaction as well as the conscious guesses were hypothesized.

Data Analyses

SCR-channel: The data was first transformed into standardized measurement units (μSiemens) and then treated with a 0.5 Hz low-pass filter. Afterwards each of the twenty epochs was analyzed for the number of non-specific skin conductance responses (NS.SCR.frequencies) as well as for the sum of amplitudes of these responses (NS.SCR.amplitudes) with a special software (EDA-Para, Florian Schaefer, University of Wuppertal, Germany). The threshold for the identification of responses was 0.01 μS (microsiemens). Thresholds used in different studies reach from 0.3 μS (Fahrenberg & Foerster, 1982) down to 0.015 μS (Clements & Turpin, 1995), with a majority of researchers using 0.05 μS according to the experimental task.

Each of these parameters was added up separately for the two conditions (stare and non-stare) throughout all trials of one experimental session resulting into two pairs of values (consisting of the sums of staring and non-staring trials) for each session.

After being transformed to standardized measurement units (μS) each of the 60 sec epochs was averaged. These mean values were averaged over all epochs of the same type (10 × staring and 10 × non-staring). Thus each session resulted in one pair of values (consisting of the mean value of the staring and the mean value for the non-staring epochs).

Respiratory activity: Respiratory activity was recorded in order to control the EDA data for artefacts. The decision for not analyzing it within the scope of the present study was made in advance. However the data is available for later analyses.

Conscious guessing: Changes in the switch position were also analyzed per epoch and then summed up over all trials for each of the two conditions. Two variables were extracted from this data: (i) number of times the switch was moved from the "not stared at" to the "stared at" position. (ii) percentage of samples within a trial where the switch was in the "stared at" position (with 100% indication all the time and 0% indicating never).

Criteria for exclusion of data

In our protocol we prespecified a set of exclusion criteria for the EDA data in order to exclude SCR non-responders from the analysis. It is known from the literature (e.g. Boucsein, 1992) that 10% to 15% of the general population lack the characteristic response patterns towards stimuli in their EDA. Since these participants would only add zero results to our database we excluded them. Specifically a dataset was excluded from analysis if: (i) mean SCL-value for more than four 60 second epochs was less than 0.5 μS; (ii) the complete dataset showed less than 10 NS.SCR > 0.01 μS; (iii) one electrode was disconnected

during recording; (iv) the staree wanted to discontinue the experimental session; (v) anything else happened that could invalidate data recording.[1]

Statistics

Two separate multivariate repeated measurement analyses of variances (MANOVA) were calculated. One for all three EDA variables and one for the two conscious response variables. The within subject factor (repeated measurement) was *staring vs. non-staring*, the between subjects factor *distraction vs. no distraction*. All data were analysed with SPSS for Windows.

Results

Unconscious Response (EDA)

Table 1 contains the raw results for the three EDA variables broken down according to two factors.

Table 1. Means and standard deviations (in brackets) for the EDA variables, *number of non-specific skin conductance responses* (NS.SCR), *sum of amplitudes of NS.SCR* and *skin conductance level* (SCL) for the two factors staring vs. non-staring (within-subject) and distraction vs. no distraction (between subject)

		Distraction (n = 16)	No Distraction (n = 19)	Total (n = 35)
NS.SCR frequency	Staring	20.19 (10.03)	23.00 (14.84)	21.71 (12.77)
	Non-staring	18.06 (8.64)	24.32 (16.28)	21.46 (13.54)
Sum of amplitude (μS)	Staring	5.22 (4.76)	4.81 (3.76)	5.00 (4.19)
	Non-staring	4.74 (4.97)	5.06 (4.19)	4.91 (4.49)
SCL (μS)	Staring	3.87 (25.22)	3.78 (17.35)	3,82 (2.10)
	Non-staring	3.87 (25.74)	3.74 (17.36)	3.80 (2.13)

[1] Of the 50 participants only 35 fulfilled the inclusion criteria concerning the EDA data analysis. We had a prespecified sample size of 40 in our protocol. But as the study proceeded more slowly than expected and more participants than anticipated fulfilled the exclusion criteria we had to stop with 35 valid data sets only, as the experimenters were no longer available. This decision was taken without any inspection or analysis of the data and was motivated purely by pragmatic reasons.

The multivariate analysis of variance yielded no significant effects, neither for the between-subject nor the within-subject factor or their interaction. The results are displayed in table 2.

Table 2. Results of the multivariate analysis of variances for all three EDA variables

Factor	Wilks' Lambda	*F*	*df*	*p*	η^2
Stare	.957	0.470	3	.71	.04
Distraction	.954	0.502	3	.68	.05
Stare × Distraction	.923	0.867	3	.47	.08

Conscious response

Out of our complete sample of 50 participants 7 never used the switch to signal whenever they felt stared at and thus only the remaining 43 data sets were analysed. Twenty of these participants were in the distraction condition and 23 were in the no distraction condition. Our main analysis counted how often the switch was pushed into the "stared at" position during staring and non-staring trials. On average, participants pushed the switch 9.9 times (*range* 1 – 37, *SD* = 7.6) during staring and non-staring trials. We also analysed the percentage of time during which the switch was kept in the "stared at" position by the participant. Overall participants had the switch 23.9% of the time in this position (*range* 0.4% – 60.3%, *SD* = 15.7). The results broken down according to the two factors can be found in table 3.

Table 3. Means and standard deviations (in brackets) for the two conscious report variables number of switch presses and percentage of time switch in on-position for the two factors staring vs. non-staring (within-subject) and distraction vs. no distraction (between subject).

		Distraction (n = 20)	No Distraction (n = 23)	Total (n = 43)
Number of switch presses	Staring	4.55 (2.74)	4.35 (4.45)	4.44 (3.74)
	Non-staring	4.20 (3.68)	4.30 (4.47)	4.26 (4.07)
Switch in "on" position (%)	Staring	29.12 (17.79)	21.56 (15.76)	25.07 (16.97)
	Non-staring	23.09 (13.80)	22.52 (19.56)	22.79 (16.93)

The results of the according multivariate analysis of variance can be seen in table 4. No significant differences were found in this analysis. However in the univariate assessment for the variable *switch in the "on" position (%)* the interaction stare × distraction approached the significance level ($F = 3.371$, $df = 1$, $p = .07$). As one can see in table 3 the direction of this difference is in the hypothesized direction. During the distraction condition there is a difference of 6.03 (SD = 14.85) in the percentage of time button pressed between staring and non-staring. Also the button is in the "on" position for a longer time during the staring condition than during during the non-staring condition. At the same time this difference is only -0.96 (SD = 9.93) in the *no distraction* condition. A *post-hoc t*-test of the difference in an alleged staring effect between the distraction and and no-distraction condition reached significance ($p = .04$, $t_{(41)} = 1.84$, one-tailed) and an according effect size[2] of Cohen's $d = 0.57$.

Table 4. Results of the multivariate analysis of variances for the two conscious report variables

Factor	Wilks' Lambda	*F*	*df*	*p*	η^2
Stare	.958	0.873	2	.43	.04
Distraction	.977	0.472	2	.63	.02
Stare × Distraction	.923	1.670	2	.20	.08

Correlations between measures

In our analyses we found no correlations between well-being, paranormal belief, mindfulness and the outcome measures for the autonomic reaction as well as for the conscious guesses.

Discussion

We carried out a remote staring experiment that tried to overcome some technical shortcomings of former studies and aimed at studying the "feeling of being stared at" with a sensitive state-of-the-art

[2] Calculated as $d = \frac{2t}{\sqrt{df}}$

methodology grounded in sound psychological knowledge. Therefore we combined physiological measurement (EDA) and concurrently gave our participants the possibility for conscious guessing in an open response assessment. In order to follow the assumption that "…the quality of the starer´s attention is important in determining the nature of the experimental outcome" (Braud, 2001; p. 405), we implemented a new paradigm by operationalizing the "non-staring" condition in two different ways: starers were either distracted from the experimental situation, i.e., the starees´ image, by a demanding cognitive task or left with just a blank screen and the instruction to keep their mind busy with anything but the experiment, following the standard paradigm.

We did not find any staring effect at all, not in the EDA data and not in the 'conscious guessing' data. Thus the experiment failed in demonstrating any staring effect. Regarding the "distraction paradigm" four out of five variables scored in the hypothesized direction. The effect-sizes for to the largest difference reached $d = 0.57$ and the according test got close to significance. These results suggest that distraction may be a crucial and so far neglected issue in these experiments and we conclude that there is first evidence regarding the importance of the activity of the starer in the non-staring condition. In an adequately powered study this effect would have been significant.

Finding no evidence for a staring effect our study can be put in line with two formerly published studies (Lobach & Bierman, 2004; Schlitz, Wiseman, Watt & Radin, 2006). None of these studies could find effects with EDA as well as conscious guessing as dependent variables. In fact it seems "…that the staring paradigm is not the easily replicable paradigm that it is claimed to be" (Lobach & Bierman, 2004; p. 1), and there are different well known lines of reasoning for the failure to replicate the findings of former studies: (i) there is mere anecdotal evidence for a remote staring effect and some experimental studies easily mistake artifacts for effects; (ii) there is such an effect but we missed it for several reasons; (iii) the psi phenomenon under consideration does not show up in a stable and replicable mode but is rather moderated by variables in a larger context.

The first (i) position focuses mainly on the methods and set-ups of earlier work. Some of the earlier studies had methodological shortcomings mainly in randomization and EDA measurements. Parts of the effects found in these studies may be explained by this fact but not all. A detailed discussion can be found in Schmidt, Schneider, Utts & Walach (2004). There we have explained that in our view some effects can be attributed to methodological shortcomings but that there remains a substantial effect which lacks a classical explanation.

Regarding the position (ii) we can put our study in line with the two other recently published studies (Lobach & Bierman, 2004; Schlitz, Wiseman, Radin & Watt, 2005), which also failed to replicate staring effects with EDA as well as conscious guessing as dependent variables. Several reasons are possible for such a failure and we will restrict ourselves to just two. In our Remote Staring meta-analysis (Schmidt, Schneider, Utts & Walach, 2004) we found an effect-size for the EDA paradigm of $d = .13$ which corresponds approximately to an eighth of a standard deviation. For an effect so small in size, all remote staring experiments conducted so far, including the one presented here, are underpowered by far. One would need studies with several hundreds of participants in order to achieve a reasonable power. Thus, it might be the case that the effect could just not be demonstrated because our study was too small. Nevertheless some studies report significant findings although they did not have this size. With a number of 50 sessions our study can even be placed in the upper range of Remote Staring studies. While this may be too small if one assumes a constant and true effect size of roughly $\delta = .13$, it maybe also the case that there are unknown moderators to this effect or that such a constant effect model does not hold true at all for Psi studies (see e.g., Lucadou, 2001). Another possibility is that we did not have adequate experimenters or participants necessary to constitute a Psi-conducive system. Especially remote staring experiments are said to be sensitive to experimenter effects, (e.g., the Wiseman-Schlitz studies, but see also Juniper & Edlmann, 1998). Regarding participants so far only unselected samples have been tested and it was suggested to perform pretests or screening trials to select participants who can perform this task successfully. The

third option (iii), Psi phenomena just showing up in an unstable manner, is of course a valid option, and there are various theoretical models referring to this that have been presented elsewhere (Walach & Schmidt 2005).

We conclude that previous evidence for an intentional influence effect of a person staring at somebody in a distant room through a closed circuit TV system could not be replicated in this study, using state of the art methodology. We found weak evidence for the potential modifying influence of the starer's mindset. Future studies trying to pinpoint the effect would have to be larger by several orders of magnitude.

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