

THE PRL AUTOGANZFELD REVISITED: REFUTING THE SOUND LEAKAGE HYPOTHESIS

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ABSTRACT: Internal patterns in the PRL autoganzfeld database may shed some light on the plausibility of that hypothesis. This hypothesis would predict stronger effects for sessions where the subject is not sure about his ratings, because in those sessions the experimenter may be able to influence him or her into another direction. A secondary analysis where the scoring in sessions with an extreme rating is compared with the scoring in sessions with a lower rating shows the opposite trend. Therefore it can be concluded that this pattern does not support the auditory sound leakage hypothesis.

The PRL autoganzfeld database, which is available for serious independent researchers, is a rich source for secondary analyses. In its original form it consists of 354 records, each describing an individual session in the PRL autoganzfeld series. Each record consists of 80 fields with information like the time, date, set, target, and ratings, but also gender of sender, receiver, and experimenter, and lots of other dependent measures relating to the session, and the participants.

In the course of the last few years a number of "calculated" fields have been added. For instance, number of sessions per day was inferred from the time and date information.

A number of informal analyses resulted from questions that researchers in the field have asked. The results of these analyses were generally discussed within the context of the electronic discussion group "PDF." For example, it turns out that the PRL database did not support the often heard supposition that having more than 1 session per day is detrimental for the results. Also, there appears to be suggestive indications for a gender interaction effect where female experimenters with male receivers produce the best results.

In this short contribution we will focus on an analysis that was done in order to see if the PRL database showed internal patterns that would support or contradict the sound leakage hypothesis put forward by Wiseman et al. (Wiseman, R., Smith, M., & Kornbrot, D., 1994). The results of this

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analysis were communicated to Wiseman et al. before they published their report, but although they claim that "the likelihood of potential non-psi explanations can also be assessed on the basis of whether they account for internal effects" (p. 450) they did not include these internal pattern figures in their report.

THE SOUND LEAKAGE HYPOTHESIS

According to the sound leakage hypothesis, sound cues originating with the sender could have been perceived by the experimenter during an autoganzfeld (AGF) session. The experimenter could have inferred the target from these cues and could subsequently have communicated this information to the "receiver" during the judging phase of the experiment.

The authors conclude after an elaborate evaluation of the different acoustic pathways from sender to experimenter that within the actual situation "... it would have been almost impossible to consciously detect sender noise. However, some studies concerned with auditory sensory subliminal perception suggest unconscious registration" (p. 449).

Thus the experimenter is supposed to have not been explicitly aware of the target and it must be concluded that the influence that the experimenter must have exerted on the subjects' choice has also been of a similar unconscious nature.

Experimenters directly involved in the AGF series have generally considered the sound leakage hypothesis as a ridiculous proposal. This feeling was partly based on the informal qualitative evaluation of the quality of the hits. And, indeed, it is quite difficult to see how unconscious pressure by the experimenter on the receiver during judging would

TABLE I
SCORING PERCENTAGE
FOR SESSIONS WITH DIFFERENT MAXIMUM RATINGS

Maximum Rating	N	Hits	Percentage
< 39	240	80	33.3
39	32	11	34.4
40	82	31	37.8
TOTAL	354	122	34.5

result in strong hits. Rather, one would expect that unconscious pressure is most effective in cases where the subject is uncertain about how to rate his or her mentation against the targets.

Of course, the informal impression by the experimenters involved in the PRL AGF series cannot count as a scientific argument, so it was therefore decided to evaluate the results of the PRL AGF series as a function of how well a subject felt one of the targets was fitting his or her mentation.

THE RATINGS AS INDICATOR FOR A STRONG HIT

At the end of the judging procedure, the subject is asked to give a rating from 1-40 for each of the possible targets. Although subjects surely differ in the interpretation of this scale, it is obvious that if a subject gives the highest possible rating, they are rather certain that they have identified the target. Table 1 gives the scoring percentages for the sessions where the maximum rating was a 40, a 39, or otherwise.

It can be seen that in 82 sessions of the 354, the subject decided to give the maximum rating to one of the targets. In 31 cases this turned out to be the target. These sessions alone were therefore significant with a z score of 2.4.

DISCUSSION

Table 1 implies that a considerable number of hits were produced in sessions where the subject did consider his mentation to apply strongly to one of the targets. It can be argued that in these sessions the sound leakage hypothesis seems extremely implausible. However, in some cases

TABLE 2
SCORING PERCENTAGE FOR SESSIONS WITH DIFFERENT MAXIMUM
RATINGS FOR SESSIONS WITH A LARGE INTER-RATING VARIANCE

Maximum Rating	<i>N</i>	Hits	Percentage
< 39	182	56	30.8
39	32	11	34.4
40	74	28	37.8
TOTAL	288	95	33

subjects tend to give overall high ratings (e.g., 37, 38, 39, and 40). In those cases, the subject may not have been sure which one to choose and may have been subject to subtle unconscious influencing by the experimenter.

We therefore repeated the analysis only for the subset of trials where the variance in the 4 ratings is larger than 1 *sd* below the mean variance of the 4 ratings of the sessions. Table 2 reports these results:

It can be seen that this does not change the overall picture. The sessions with a maximum rating are still significantly above chance ($z = 2.42$)

REFERENCES

- BEM, D. J., & HONORTON, C. (1994) Does psi exist? Replicable evidence for an anomalous process of information transfer. *Psychological Bulletin*, 115, 4-18.
- WISEMAN, R., SMITH, M., & KORNBROT, D. (1994). Assessing possible sender-to-experimenter acoustic leakage in the PRL Autoganzfeld. *Proceedings of Presented Papers: The Parapsychological Association 37th Annual Convention*, 439-454.

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