

A REPORT ON INFORMAL GANZFELD TRIALS AND COMPARISON OF RECEIVER/SENDER SEX PAIRING: Avoiding the File Drawer¹

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Abstract

Twenty-seven participants contributed 29 trials in an unplanned, and thus informal, series of ganzfeld sessions conducted by the author at the Institute for Parapsychology, Durham, North Carolina. The data from these sessions are presented in order to liberate them from the file drawer. The often neglected question of receiver/sender sex pairing is also considered, including relevant data from two other similar ganzfeld studies.

Twelve of the 29 trials in this study (41.3%) had the target correctly identified from the judging set of art prints which consisted of the target and three decoys. This result is significantly above the null hypothesis expectation of 25%, exact binomial $p = .04$, $z = 1.76$. (All p -values are one-tailed unless otherwise specified). The effect size, Cohen's d (Cohen, 1977), is .35 and the 95% confidence interval (CI) is a hit rate from 26% to 57%.

A comparison of sex pairing in the telepathy condition of this series was conducted with data from two other successful, small n telepathy ganzfeld studies by female investigators: the Schlitz study (1992), and a study by S. Cunningham (Morris, et al., 1993). The study by Cunningham was presented as one of two ganzfeld studies with Morris, Taylor, and McAlpine (1993). This comparison was conducted in an effort to examine a suspected relationship between sex pairing and the ratio of direct hits, with the receiver/sender pairings of female/female expected to produce a higher ratio of hits for female investigators. When all three studies were combined, the following effect sizes were obtained: male/female = .61; female/male = .52; female/female = .35; male/male = .30. As can be seen, the suspected relationship was not supported, with the mixed sex pairings producing the largest effect sizes, and the same sex pairings producing the lowest.

Introduction

The early 1970's saw the first reports of psi communication in the ganzfeld published (Honorton and Harper, 1974; Braud, Wood, & Braud, 1975), and the ensuing twenty years has seen the process of ganzfeld research in parapsychology continue to be refined and improved by researchers at laboratories world-wide. Although the debate over its status still rages in some quarters (Hyman & Honorton, 1986; Bem & Honorton, 1994; Hyman, 1994), it is probably still the most accepted of our methods and bodies of findings.

Early work in the ganzfeld used what has been referred to in parapsychology as a manual ganzfeld set-up, utilizing either Viewmaster slides or static targets, such as art prints or picture postcards (Honorton and Harper, 1974). The Institute for Parapsychology began its

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ganzfeld research in 1983 (Zingrone, Hansen & Peristrom, 1983) in an attempt to replicate the findings of Honorton's team at the Psychophysical Research Laboratories (PRL). For these studies, static targets were used. Although the initial studies did not obtain positive significant scoring, when analyzed using subjects judging, several interesting internal findings did support the PRL success model.

The data base collected at the Institute for Parapsychology and presented by R. Broughton, et al. (1989), consisted of four separate series conducted as individual studies. Data collection for these studies began in April, 1986, and finished in April, 1989. The database totalled 159 sessions and 144 participants, with a total of 41 direct hits and 118 misses, resulting in a hit rate of 26% for the entire database. In a comparison of the hit rate for PRL first-time participants to the hit rate of the Institute for Parapsychology's first-timers, of which there were 120, the Institute found that the performance of first timers was better than that of participants with prior ganzfeld experience, but not significantly so. However, of the 28 participants meeting three of the four-factor model of success predicted by Honorton's work (psi experiences + mental disciplines + loading on the Feeling/Perceiving on the Myers Briggs Type Indicator, a personality questionnaire), 12 scored direct hits (43%, exact binomial $p = .03$, $z = 1.89$). Of four participants meeting all four criteria (as above, plus prior psi testing), a 50% hit rate was achieved.

This confirmation of the PRL success model on an independent set of data from a different lab using slightly different (manual) ganzfeld techniques is representative of the continuing progress being made towards parapsychology's goal of understanding and identifying the factors that may contribute to success in laboratory psi tasks. It is for this reason, and in response to critics' claims of a file drawer effect, that this presentation on an informal series of ganzfeld trials is made. The present paper focuses on a series of manual ganzfeld trials conducted during the author's time as a student, and then Research Fellow, at the Institute for Parapsychology, beginning in June, 1991 and ending April, 1993, during which she installed the automated ganzfeld setup. The trials presented here were not part of a declared series, but rather were conducted informally in order to allow the author to gain experience as a researcher in the ganzfeld technique. Trials were conducted with visitors who wanted to experience the ganzfeld and who were unable to return for inclusion in a formal study, visiting journalists or film crews, or students in the Institute's Summer Study Program (SSP), as part of their experience and training in the ganzfeld. Because many of the participants were available only for a short time, they were not asked to fill out the participant information form (PIF), or the Myers Briggs Type Indicator (MBTI) forms which were normally required of all participants. For some of the participants, the students of the 1991/1992 SSP, this information (PIF, MBTI) was gathered during classes on free response literature. These data are not, however, available to the author for analysis. A direct hit analysis was used to assess the significance of participants ratings to target pool items.

It was the author's impressions during the conductance of this work that there may be a difference in the hit rate of different receiver/sender sex pairs in the ganzfeld. In particular, that female/female receiver/sender pairings might produce more hits. This was felt to be an often neglected area of inquiry and worthy of further exploration here. Therefore, data on distribution of ranks and receiver/sender sex pairing from this study were compared to the distribution of ranks and sex pairing in the Schlitz study (1992), and a study by S. Cunningham. The study by Cunningham was presented as one of two ganzfeld studies with Morris, Taylor, and McAlpine (1993), and being the only one of the two conducted by a female researcher, will hereafter be referred to as the Cunningham study, to avoid confusion. The Schlitz and Cunningham studies were chosen as studies which seemed to the author to most closely parallel her own, being successful studies with small n 's conducted by female researchers. It should be noted that the two comparative studies used an artistic population as participants and dynamic targets (video clips), while the present study used a general population and static targets.

Method

Participants

Participants were all unselected unpaid volunteers: visitors, members of the Institutes Summer Study program, journalists or media people. There were 13 males and 16 females between the ages of 17 - 56. There were 29 trials from 27 participants with two participants (both SSP students) contributing more than one trial. SSP students and their families made up 16 of the 27 participants and were known to the author, and four more were visiting friends or relatives of the author. The rest were unexpected visitors who expressed interest in taking part in a trial and had the time to do so.

Targets

The target pool for the manual ganzfeld consisted of 50 sets of four targets, from a pool constructed by H. Kanthamani and A. Khilji (1986), which was used for all free response research at the Institute for Parapsychology. The majority of the items were art prints, the remainder being picture postcards. The four items of each set were selected to be as different as possible on various dimensions (e.g. color, emotionality, theme, content, and style, etc.), with little overlap between them. In each set, the individual items were coded and placed between folded sheets of construction paper in sealed envelopes. The outsides of each envelope were marked with a number 1-4. Exact duplicates of each set were maintained so judging could be done with a different set than that used by the sender. This duplicate set of four items, marked with identical codes, were sealed together in a separate envelope and included in the master envelope for that target set. The target sets, numbered serially, were kept in a locked filing cabinet, retrieved only by the data handler for individual trials, and after each session target sets were reconstructed, sealed into new envelopes, and placed back into their original order in the filing cabinet. As is the standard practice at the Institute, the necessary precautions were taken to insure that unauthorized personnel did not have access to the target pool. Targets were selected by using a random number generating program on the Institute's computer. This custom written program employs a modified version of the proprietary FORTRAN-77 pseudo-random number generator and has been extensively tested. All random selections were done by the data handler alone, or by the sender's experimenter alone when a data handler was not being used.

Procedure

A detailed paper of the manual ganzfeld experimental protocol and equipment used by the Institute has been given previously by Munson, et al, (1988) and Kanthamani, et al, (1988). However, the principal features of that procedure will be reviewed here.

All the ganzfeld sessions were conducted in the ganzfeld suite, two small rooms on the second floor of the Institute. The experimenter's room is accessible through a side hallway, and holds all the recording and monitoring instrumentation. The interior smaller room, the ganzfeld room, is situated directly behind it, and the only entrance is through another room which contains the Institute's foreign language library. During ganzfeld sessions this area of the building is closed to unauthorized personnel. This interior ganzfeld room is situated away from traffic, and reasonably quiet. The room was equipped with a reclining chair for the subject, a small chair for the experimenter, a lamp which can be faded out from the experimenter's room, and a small table which held the necessary materials for the ganzfeld eye shields. The only window of this room was permanently shut and covered with heavy drapes. The two 100-watt red flood lights were fixed high on the opposite wall to the receiver, and were operated by a dimmer switch in experimenter's room. There is an intercom between the two rooms allowing communication between the participant and experimenter. Separate sound systems present the relaxation exercises/white noise and record the participant's mentation. The mentation is also recorded by hand by the experimenter and reviewed with the participant after the impression period and before judging takes place.

All participants were given a brief tour of the Institute at some point prior to the session, as an orientation to the facility. If they had not brought a sender with them, or did not wish to have a sender, then the session condition was clairvoyant. Otherwise, the session condition was telepathic. Also prior to the session, participants were given a description of the rationale and background of the ganzfeld research, and an atmosphere of positive expectations was created around their ganzfeld experience. They were given a brief review of the evidence that internal attention states such as dreaming, hypnosis and meditation may facilitate and increase the possibility of ESP, a description of the way noise reduction by perceptual isolation seems to facilitate, or strengthen reception, of weak psi signals, and the success of past ganzfeld research was emphasized, along with its relevance to our understanding of psi. Participants were encouraged to approach the ganzfeld as an adventure, and a chance to have a novel and exciting experience. They were told to relax and simply allow the process to work for them, and were encouraged to adopt a goal-oriented approach rather than a task-orientation. After this enthusiasm-building discussion, the participant, (along with their sender unless it was a clairvoyant trial), was shown the sender's room in another part of the building and any sending strategies were discussed by the two at that point. Then, both receiver and sender were taken to the ganzfeld room and the receiver prepared for the session. This preparation included having the participant adjust the reclining chair to their comfort level, setting the relaxation tape at a comfortable sound level, tucking in a blanket around them if they wished it, positioning the halved ping pong balls comfortably over the participant's eyes with surgical tape, and positioning of the microphone. The sender watched throughout this procedure and offered words of encouragement. Next, the headphones were settled comfortably over the participants' ears and the experimenter and sender left the room, wishing the participant good luck as they did so. The experimenter closed the ganzfeld room door, as well as the door leading into the hallway, as they exited. The sender was escorted to the sender's room, and the experimenter returned to the experimenter's room. Once back in the experimenter's room the white lights were faded down and the red lights were faded up to a comfortable level for the participant. The relaxation tape was started and this marked the beginning of a trial.

The PRL relaxation and white noise tape was used for all trials in the present study. It contains ocean wave sounds along with a 14-minute sequence of instructions for relaxation exercises based on Jacobson's progressive method. The end of the relaxation sequence is followed by suggestions for the response set and to verbalize the mentation process. Following this, pink noise begins and continues for 25 minutes, during which the participant verbalizes their mentation. One participant requested only pink noise throughout, finding the taped voice uncomfortable.

After the experimenter had closed the participant into the ganzfeld room, escorted the sender to their room and then retired to the experimenter's room, the data handler obtained the random numbers from the computer selecting the target set and target, retrieved the target set and gave the sealed target to the sender in the sender's room. If the trial was a clairvoyant condition then the sealed target envelope was left in a previously arranged safe place, inaccessible to the participant, and the rest of the target set was secured in the data handler's desk until completion of the session. The data handler then left the judging packet (a duplicate set of the four possible pictures) outside the experimenter's room. This process occurred during the relaxation part of the audio tape, and before the receiver's mentation period.

During the mentation period the participant was instructed to verbalize all imagery, thoughts, feelings, and impressions that came to mind, which were then tape recorded and recorded by hand. At the end of this mentation period, the experimenter reviewed the mentation with the participant via the microphone, so that the participant could add details or give further descriptions of their imagery, which were added to the mentation notes. After the mentation review, the participant was instructed to remove their eye shields, and carefully sit up. The experimenter then gradually faded down the red lights and simultaneously faded back up the white lights.

As is apparent from Table 3, the Cunningham study shows a greater number of same sex pairs than does the other two studies, with 16 of the 32 trials being female/female pairings. However, when converted to percentages, any scoring difference that seemed to show up for female/female pairings within the combined scores for the three studies disappears. In fact, the percentage of direct hits for male/female and female/male pairs indicates that they may be the more successful sex pairing. Table 4 demonstrates this in greater detail.

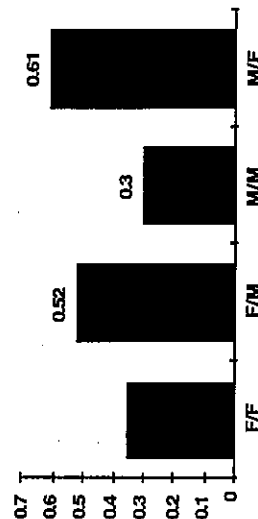
Table 4
Sex Pairs and Rank Distribution: Combined Studies
(Receiver/Sender)

Rank	F/F	F/M	M/M	M/F
1	12	7	7	6
2	9	3	5	1
3	5	2	4	2
4	3	2	2	2
Trials	29	14	18	11
%DH	41	50	39	55

Effect sizes were calculated for the percentage of direct hits in trials contributed only by the individual groupings - 12 hits in 29 trials for the female/female pairs, 7 out of 14 for the female/male pairs, 7 out of 18 for male/male pairs, and 6 out of 11 for the male/female pairs. These are represented in Figure 1 and show that, in fact, it is the mixed sex pairs that demonstrate the greater effect, with receiver teams of male/female producing the largest effect size = .61, and the female/male pairs next with effect size = .52. Same sex pairs evidenced the lowest effect sizes, with the pairing of male/male the lowest at effect size = .30, and the pairing of female/female only slightly higher at effect size = .35. See Figure 1.

Thus, the best pairing for the three combined studies appears to be mixed sex pairing, specifically receiver/sender teams of male/female pairs (effect size = .61), followed closely by female/male pairings (effect size = .52). The suspected relationship of female/female pairing producing the highest hit rates was not supported.

Figure 1
Effect Sizes for Direct Hits Within Sex Pairs



Discussion

The ganzfeld has a history of success in eliciting psi in the laboratory. However, we still know very little about why this may be so. Many social and psychological reasons, as well as the obvious physical ones, may contribute to this success, and into these we have explored very little. This paper reported on the significant results (41% hit rate), from a small series of ganzfeld trials, and attempted to further explore possible correlations between sex pairing and successful response scores. Personal observations by the author during the conductance of these ganzfeld trials caused her to suspect that female/female pairings might produce higher scoring rates. For this reason, a comparison was made with two other successful small n studies conducted by female investigators, the Schlitz and Cunningham studies. However, during the attempt to test this relationship, it turned out that such a test could not conclusively be done, due to the difference in the number of pairs. So, although this suspected relationship was not borne out by the analysis, several interesting findings did emerge.

Within the present study, mixed sex pairings yielded an overall higher scoring rate, while the Cunningham study saw pairings of the same sex produce the highest percentage of direct hits. In the Schlitz study, however, there was no difference between the sex pairs, with all pairings doing equally well. Combined scores of the three studies resulted in an overall higher scoring rate for mixed sex pairs than same sex pairs, with male/male pairings yielding the lowest.

One possible reason for the lower hit rate of male/male pairings may have to do more with the issue of disclosure - i.e., that male participants might feel more constrained, defensive, or uncomfortable disclosing their imagery for a female researcher when their senders (who could also hear their mentation), were also male - than with the psi success of the male/male pairing.

Although it appears that male/male pairs did not fare as well as the other pairings, it is possible that this finding is idiosyncratic to the three studies I chose to combine. In a personal communication with Zingrone, I asked her to provide a for similar comparisons from her early ganzfeld trials at the Institute for Parapsychology in which she was the primary experimenter (1985), in this subset of her data (Series 1, n = 28; Series 2, n = 10), she found that male/male pairings produced the highest percentage of direct hits for her study (1994). However, in that study there were very few female/ female pairs in the study overall, only three pairs of female/females.

It seems clear that the only way to resolve such issues is by conducting larger studies that use a counter-balanced representation of the four possible sex pairings. The findings reported herein, while interesting, must be viewed keeping in mind that not only was the original study of a very small n (29 trials), but the Schlitz and Cunningham studies used as comparisons for the sex pairing were also of relatively small n's, 20 and 32 respectively. In addition, both of these studies used artistic populations and dynamic (video clips) targets. Thus, no strong conclusions can be drawn about the findings presented here. More in-depth studies, prepared from more extensive findings, may yield stronger results. Until such studies are carried out, a call is made to all other researchers who have conducted ganzfeld studies to re-examine their data to see if patterns similar to those discussed above are found. It may be fruitful to look at crossed-sex and same-sex studies tested by experimental teams of the same sex, for example the team of Kanthamani and Khiji (Institute of Parapsychology), or that subset of the PRL data in which only male experimenters were involved, to see what types of patterns, if any, are apparent.

If a differential is found in sex scoring, when the experimental team is of the same or different sex, then it may not be the sex of the participant that matters as much as the social situation in which disclosure of mentation occurs. For example, if a laboratory sender is assigned, even though they may be of the opposite sex to the participant (the most 'successful' pairing in this study), a receiver may still find it uncomfortable to know a

stranger is listening to what is potentially intimate imagery or feelings. The mentation from these studies, however, may lend themselves to discourse analysis to examine closer these relationships.

It may be that many of social issues involved in the ganzfeld ritual may have nothing to do with sex differences between receiver/sender pairs, but are more directly related to this issue of disclosure. One way in which to examine this possibility more fully might be to send questionnaires to participants a week after their session, coupled with a thank-you letter, in which they are asked to reflect on the ganzfeld procedure. Impersonal questions (i.e., Was your experimenter the same sex as yourself? If yes, would you have felt more comfortable with an experimenter of the opposite sex? Why or why not?) might elicit more honest and complete feedback than face-to-face questioning within the laboratory setting, especially when the persons doing post-session debriefing are also experimenters, or the lab-assigned senders in question. Although this will not avoid the bias of participants knowing their results prior to reflection, it may provide insight for future research.

Larger studies using well-balanced numbers of sex pairing would also allow a better look at other correlates. Using tools such as the NEO, or MBTI, personality questionnaires for the sender as well as the receiver may allow us to explore the interrelated patterns of personality correlates that play a role in successful pairings.

It is clear that as yet we understand little of what underlies the success of the ganzfeld. Only continued exploration of the different aspects involved in ganzfeld research will bring a thorough understanding of this methodology. It is felt that if psycho-physical factors were the only ones at work with this technique, it would be producing a more consistently positive result in every lab. As this is not the case, ganzfeld work must continue to examine all factors, social, psychological and physical, which may contribute to our understanding of psi communication in the ganzfeld.

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