

The Ganzfeld Method: Its Current Status

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Abstract: A brief overview is given of the theoretical background to the use of the ganzfeld technique and an assessment is made of its current status as a replicable means of producing psi-effect in the laboratory. A presentation is made of the issues arising from the Milton and Wiseman review of the work done since the Berm and Honorton 1994 paper.⁴

The so-called ganzfeld technique is a modern method for studying extrasensory perception, in particular that of telepathy. The method is based on the old idea that various altered states of consciousness such as dreams and trance are conducive to *psi*-experiences. According to the working model lying behind the ganzfeld method, this is due to a reduction of the noise produced by our ordinary senses, sight and hearing in particular. Reducing this noise should therefore increase the relative strength of the assumed *psi*-signal.

The original ganzfeld technique was exclusively a procedure for studying telepathy using visual information. As we shall see, however, in recent years the technique has sometimes been more diversified.

A typical ganzfeld experiment involves two participants – one sender and one receiver, who are located in different sound-attenuated rooms. The receiver is subjected to a mild form of perceptual isolation. He or she is sitting in a comfortable chair with Ping-Pong ball halves placed over the eyes and headphones over the ears. A red light is directed at the eyes, creating a homogeneous visual field – a visual ganzfeld. White noise, or some similar monotonous sound, such as the sound from the sea, is played through the earphones, creating a homogeneous auditory field – an auditory ganzfeld. In addition, the receiver is often but not always given relaxation instructions in order to minimise somatic noise.

The sender is then shown a target such as a photograph or a video clip randomly selected from a large pool. The sender attempts to transmit the target stimuli (chosen randomly from a series of pictures or slides or nowadays from film clips) to the receiver, who continuously reports the images, sensory impressions and feelings that come to his or her mind. This part of the procedure goes on for about half an hour. The receiver is then shown four stimuli in a randomised order. One of them is the target. The remaining ones are decoy stimuli of the same type as the target pool. The receiver examines each stimulus and estimates how well it matches his or her experiences while being in the receiving state. A hit occurs when the target receives the highest rating or ranking. By chance alone, this would happen 25% of the time.

An impressive amount of positive results were reported in a first wave of ganzfeld research. In 1985, however, Ray Hyman, who is a sceptic of parapsychology, published a meta-analysis of 42 ganzfeld studies conducted between 1974 and 1981.

⁴ See the Editorial for an update on this.

His general conclusion from this analysis was that the positive findings could be accounted for by various methodological flaws. In response, Honorton conducted a parallel meta-analysis, comprising 28 of the 42 studies reviewed by Hyman: those for which *direct* hit rates were reported. This meta-analysis showed the overall results to be very strong, with a mean hit rate of 38% and a p -value around 10^{-11} . Honorton's conclusion was that the flaws identified by Hyman were not serious enough to overthrow the results.

The debate ended in a constructive way with, Hyman and Honorton in 1986 releasing a joint communiqué. Still disagreeing on how the existing ganzfeld results should be interpreted, they recommended the use of a set of more stringent procedures for future ganzfeld studies.

In 1994, Daryl Bem, a well-known social psychologist, and parapsychologist Charles Honorton reported a series of new ganzfeld studies, closely following the guidelines agreed upon by Hyman and Honorton. The 11 studies were partly automated; consequently, they were referred to as *autoganzfeld* studies. Another innovation was that not only stills but also video-clips were used as stimuli. The results of the new studies were clearly significant, and the mean hit rate was only slightly lower than before: 35%.

How did Hyman react to these results? He recognised that the autoganzfeld studies complied with most of the stringent standards spelled out in the joint communiqué by himself and Honorton, but not that the studies complied with all of them. Hyman's main criticism was that the randomisation procedures had not been adequately tested. This criticism was nevertheless challenged by Bem. (Sadly, Honorton had died by a heart attack in 1992, at the age of 46.)

Another criticism came from Wiseman and two co-authors – Mathew Smith and Diana Kornbroth. They suggested that there might have been some leakage between the two rooms containing the sender and the receiver. No hard evidence for such a leakage was reported, however.

Whereas the general opinion was that the autoganzfeld studies confirmed the previous ganzfeld results, the resultant enthusiasm over that progress had been made was soon tempered and turned into an intense debate which still persists today. This resulted from a new meta-analysis of some 30 additional ganzfeld studies in 7 different laboratories published in 1997 by Julie Milton and Wiseman. The new meta-analysis failed to confirm the positive findings from the previous ones: the mean hit rate had dropped to 27% only; the mean effect size was close to zero; and the cumulative results did not reach significance.

Why did this happen? There are two different interpretations of the failure to replicate the previous positive results:

- (1) Previous positive results were methodological artefacts after all.
- (2) The conditions of previous positive results were more conducive to *psi* than the conditions of the new ones.

In order to evaluate these two interpretations, Milton and Wiseman made an attempt to compare the autoganzfeld studies with the new ones with respect to five factors which Bem and Honorton had assumed to be *psi*-conductive: extraversion, reported *psi* experience, target type, belief in *psi*, creativity and social ambience on the part of the experimenters. Unfortunately, relevant data were in general lacking. There

is some suggestion, however, that the autoganzfeld subjects may have been especially creative, and, perhaps more importantly, that Bem and Honorton paid unusual attention to promote a warm social ambience.

It must also be mentioned, however, that a large part of the new ganzfeld experiments differed from the previous ones, either by using auditory instead of visual stimuli or by dropping the use of the sender in all or some trials. It may thus be argued that Milton and Wiseman did *not* test how replicable the more genuine ganzfeld method is in producing *psi*-effects. Moreover, if four studies which were completed but not published when Milton and Wiseman prepared their report had been included, the overall results would have been significant. Nevertheless, the fact remains that the strong results obtained in the previous meta-analyses did not reappear in the Milton and Wiseman meta-analysis. Hopefully, the reason for this decline will be clarified in future ganzfeld research.⁵

One approach in the future ganzfeld research will certainly be to continue collecting ganzfeld data in a traditional way, following the guidelines suggested by Hyman and Honorton more or less strictly. In due course, this approach will lead to new meta-analyses being conducted.

Another, perhaps more exciting approach, is to try to improve the traditional ganzfeld method. This can be done, for example, by trying to make the method maximally *psi* conducive. Another approach would be to better utilise the mentation reports from the receiver. Both of these approaches have been taken by Adrian Parker at the University of Gothenburg.

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⁵ The reader is recommended to read the references given in the editorial for an update on this.

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