

A GANZFELD EXPERIMENT USING MUSICAL TARGETS

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ABSTRACT

An ESP ganzfeld experiment was set up using music as the target. 100 trials were carried out, mainly in Essex, over a period of 15 months. 120 different people participated in the trials, as Receivers, Senders and Helpers. Some attended more than one session and played more than one role. A hit rate of 25% was expected by chance and a hit rate of 24% was achieved, which therefore is not significant. However, the first 50 trials produced a hit rate of 32%, which could suggest that the initial feelings of excitement may have contributed to greater psychic awareness. A group of judges blind to the sequence of targets were employed to study the results, and their scoring confirmed that a few subjects had scored significantly above chance. Other factors such as age and sex also provided specific information.

INTRODUCTION

Attempts to devise reliable tests in psychical research originated in the 1880s as the subject began to be treated seriously. Mainly card- and colour-guessing strategies were designed.

The term 'Extra-Sensory Perception' (ESP for short) was popularized by J. B. Rhine in the 1930s to encompass general clairvoyant and telepathic abilities and it became the title of his first monograph, published in 1934 (Rhine, 1934).

The concept of ESP requires a belief that nature can extend beyond the domain of purely physical law, i.e. that knowledge can be acquired by a mode of perception that is independent of the five senses but experienced by an individual as if present at the event. The materialistic world requires physical proof for a phenomenon that may well always remain outside physical boundaries. Hence the difficulty of verification in the dualistic reality of mind and matter.

Many people who claim psychic gifts or awareness seem to enter into various altered states of consciousness during their psychic functioning. These can range from the full trance of some mediums and spiritualists to the hypnagogic and hypnopompic conditions that seem to favour the dream state. They can be self-induced or achieved through drugs.

What seems to happen during these times is that the subjects relax their critical left-brain-hemisphere faculties and allow a dream-like state to pervade their minds. Depending on the strength of their ability to 'let go', the subjects achieve different levels of entrancement. One of the biggest problems encountered is sensory awareness. If the brain is constantly being reminded of its physical surroundings, then the survival instinct to stay alert can overcome possible psychic impressions. If the imagination is being curtailed in this way, what lies below the surface, even in psychological terms, can be suppressed. Parapsychologists for the last twenty-five years have used various devices for achieving sensory deprivation in their subjects. These have included a flotation tank of salt water heated to blood temperature used by P. Kubzansky and S.

Freedman and the so-called 'witches' cradle' used by Krippner and Honorton at the Maimonides Hospital in New York (cited in Wilson & Holroyd, 1981). It was felt that masking the physical senses would allow psychic impressions to come through more easily.

The ganzfeld procedure has been written about extensively in many articles and has a proven track record (see for example Honorton & Harper, 1974).

Experiments using actual music as the target have not been conducted very often. Brief reports by R. Shulman appeared in the *Journal of Parapsychology* in 1938 (Shulman, 1938), and some by R. W. George in the *Parapsychology Bulletin* in 1948 (George, 1948). The ganzfeld procedure was not used and only simple tunes played on various instruments were employed. This precluded the possibility of an emotional response from the sender. The results were at chance level.

H. H. J. Keil conducted tests at Duke University—reported in 1965—using music as the target (Keil, 1965). However, as before, the ganzfeld procedure was not used, and the music was chosen by the subjects themselves. The purpose of the experiment was to see whether the order of music being listened to could be ascertained by a receiver. The results were positive but this was because one particular subject scored very highly.

The purpose of the experiment discussed in this paper was to investigate what I as experimenter believed to be an under-researched area. It drew on my experience and interest in the fields of both music and parapsychology.

METHOD

100 sessions of the experiment were held.

85 took place at my own home in Essex.

4 took place at the University of Sheffield Music Department.

4 took place at the University of Edinburgh Parapsychology Unit.

5 took place at various places in York.

2 took place at the Arthur Findlay College in Stansted, Essex.

A video was made of a typical trial at my home in Essex. Since this was not an actual part of the experiment the result was not incorporated into the 100 proper sessions.

Safeguards and Environment

For the trials in Essex at my house two buildings separated by twenty-five yards were used for the Receiver and the Sender (see Figure 1). The building where the Receiver and Helper remained for the ganzfeld was my own living accommodation. The other building consisted of a purpose-built music studio. The only external sound that could be heard from either building was bird song on some occasions. The nature and distance apart of the buildings as well as the low volume used for the Sender's music ensured that no sound leakage was possible. Nobody was present for the ganzfeld trials except participants. Only the front door of one building could be partially seen via a side window (with blinds) from the other. For night-time sessions, security lighting would come on automatically should anyone leave either building.

For all other sessions well-separated rooms on different floors or in different buildings were used.

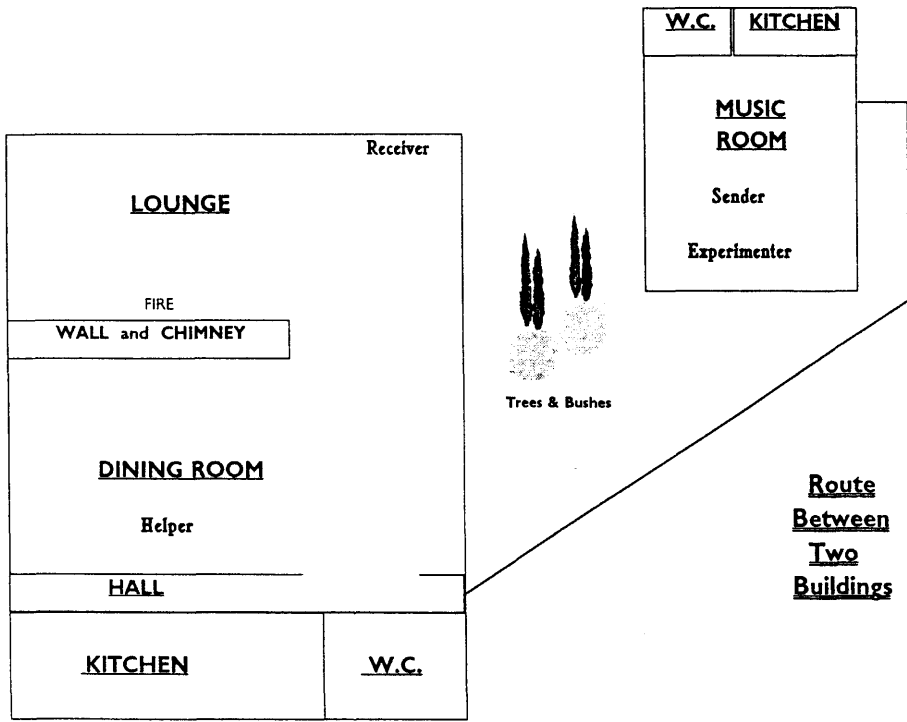


Figure 1

Participants

Hundreds of circulars (see Appendix) were sent to a variety of adults around the country. The main sources were amateur music students of my own, members of the Society for Psychical Research and of the Ghost Club Society, friends and friends of friends. There were no formal selection criteria other than availability at suitable times and a willingness to participate.

Altogether 120 different people took part in the trials:—

- 76 different Receivers
- 69 different Senders
- 38 different Helpers

Receivers' ages ranged from 18 to 75 years (mean age approximately 40 years). 72 women participated and 48 men.

Musical Targets

It was decided to create a 'pool' of 20 packages of music with four pieces within each, making a total of 80 different pieces of music available. For ease of identification each package was numbered (1-20) and each track within each package was lettered (a, b, c or d). Each lettered track was chosen intentionally to be as different as possible from the others and of an approximate duration of five minutes.

The **a** tracks tended to be orchestral from the Baroque to the 20th Century.

The **b** tracks tended to be vocal/choral from the Medieval period to the 20th Century.

The **c** tracks tended to be for solo instrument from the Medieval period to the 20th Century.

The **d** tracks tended to be for percussion or electronic instruments exclusively from the 20th Century.

The target sets were compiled by the Experimenter and nobody else had knowledge of the music recorded.

Apparatus

Two rooms (preferably in different buildings) were needed for these trials.

In the Receiver room the following equipment was available:—

A very comfortable armchair for the Receiver to sink into.

A blanket for extra warmth should it be needed.

Ping-pong ball halves and medical tape to cover the Receiver's eyes.

A red (40-watt) light bulb in an adjustable lamp.

A cassette playback machine and headphones for the Receiver to hear white noise and the relaxation tape.

Another tape recorder to record the Receiver's utterances during the ganzfeld and to play back the music to be listened to.

The complete pool of music recorded for the purpose of the experiment.

Paper and pencil for the Receiver to make any notes he (*or she*—to be understood as appropriate throughout the following) wished concerning the experiment and his (*or her*) scores.

The form for the Receiver to fill in prior to joining the Sender.

Blank headphones for the Helper should the Receiver not wish him to hear his utterances during the ganzfeld.

In the Sender room the following apparatus was available:—

A comfortable chair for the Sender to sit in.

A playback cassette machine for the Sender to listen to the chosen music.

Another tape recorder for the Sender to record his impressions on concerning the music.

Paper and pencil for the Sender to make any notes he wished concerning the music.

Both rooms were adequately heated and had easy internal access to toilet facilities.

Experimental Procedure (see Figure 2)

Typically a group of three people (Receiver, Sender and Helper) arrived at the venue.

The participants were greeted by the Experimenter and offered refreshment in the main living room where the experiment was to take place.

The trial procedure was explained to all participants together.

The roles in the trial—Receiver, Sender, Helper—were decided upon.

The Receiver was informed that he would sit in a very comfortable armchair and have ping-pong ball halves taped (medical variety) over his eyes and headphones placed over his ears by the Helper.

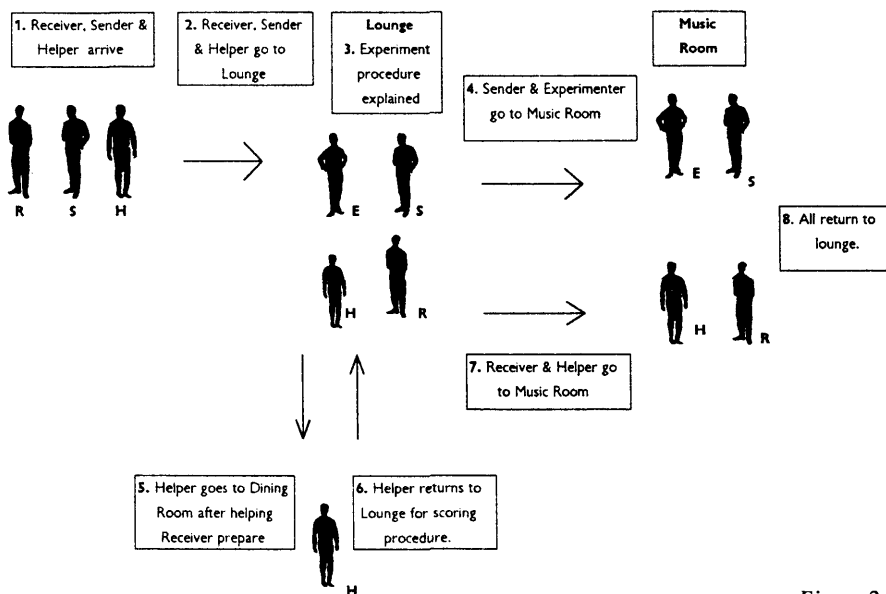


Figure 2

The Receiver was shown how to change the volume on the headphones.

The details were explained to the Receiver: a red light would shine into his covered eyes throughout the experiment. At the start of the experiment a cassette tape would be played through the headphones, allowing him to hear a few seconds of white noise so as to acclimatize himself to the sound. This would be followed by a 15-minute spoken relaxation tape. On the return of the white noise any visual, auditory or emotional feelings were to be spoken aloud. This would be tape recorded. It was stressed that the decision as to whether to speak or not was always his. He was assured of confidentiality about statements spoken. The option was given to stop the experiment at any time. (In 100 sessions nobody did.)

Whilst the Receiver was listening to the white noise, the Sender would be listening to one piece of music repeatedly and trying to send any visual, auditory or emotional feelings to the Receiver.

At the end of the white noise the Receiver was to call out to the Helper. The Helper would remove the headphones and ping-pong ball halves.

The previously-chosen envelope was then to be opened and the four tracks specified listened to. The Receiver was to score the four tracks according to how well he believed they fitted his thoughts and feelings during the ganzfeld. Each piece was to be scored differently for statistical purposes and care was to be taken not to choose the music according to musical preferences (unless, of course, they happened to coincide). Rough paper was provided to allow the Receiver to adjust his scores without defiling the form provided, which contained space for comments and scoring. The Receiver was asked a few simple questions about himself, which were written on the scoring form.

The Receiver was told that, subject to his having given four scores on the form, he could then cross over to the other building with the Helper and rejoin the Experimenter and the Sender.

Written instructions were made available to be kept by the participants in case they forgot any details of the procedure.

To enhance security precautions, the Receiver and the Helper were not invited to inspect the second building (where the Sender and the Experimenter would be situated during the experiment).

Blank headphones were available for the Helper to wear while he waited in the adjacent room, should the Receiver not wish him to hear what he was describing during the ganzfeld. The randomization procedure was adopted (see later notes) and the sealed target chosen from the pool. At this stage the content was unknown.

After final questions and synchronization of watches, the Experimenter and the Sender departed from the building/room, leaving the Receiver and the Helper together. The Experimenter and the Sender went across to the other building and waited for a period of about twenty minutes before the Sender opened the envelope to see which track he was to listen to. (This period of time corresponded to the Receiver being made comfortable in the ganzfeld and listening to the 15-minute relaxation tape. Toilet time allowed.) The Experimenter set up the playback machine to allow one track to be played, and explained to the Sender that he would be asked to repeat his thoughts after each playback into a separate tape recorder.

People were keen to achieve hits and disappointment was often expressed when misses were forthcoming. When one lady, who had informed the Experimenter at the start of the session that she was a medium and very psychic, scored a complete miss, she accused the Experimenter and the Sender of having been listening to the wrong piece! A gentleman of a very sceptical nature, after having been a Sender on a hit experiment and a Helper on another hit session, exclaimed that his credibility as a sceptic was being lost . . . to his chagrin!

Randomization

All present were invited to shuffle the pile of 80 identical pairs of envelopes. The Receiver was asked to choose either his own date of birth or the date of the experiment. The digits were then added together (e.g. 04 02 1951 = 22). The Sender was then asked whether the appropriate envelope (in the above example the twenty-second) should be chosen from the left or the right. The stapled pair of envelopes were removed from the pool and separated. The Helper was given the large brown envelope containing the package number and the Sender was given the white envelope containing the same package number as well as a further small brown envelope containing a track letter a-d. All numbers were written on the inside of a folded card to avoid recognition from the outside.

Packaging (see Figure 3)

4 sets of 20 large, thick brown envelopes were used for the Receivers' choices.

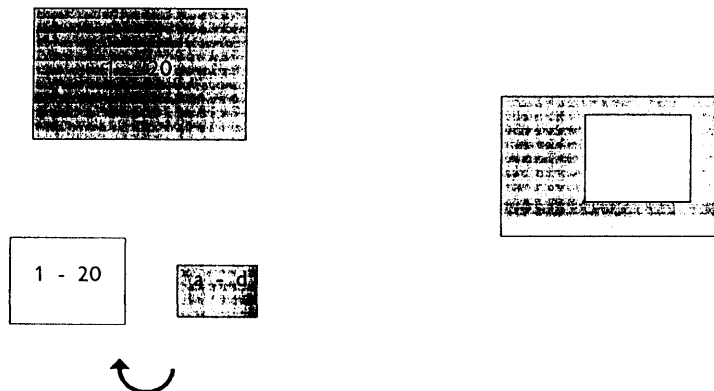


Figure 3. *A pictorial chart to clarify packaging procedure.*

4 sets of 20 small brown envelopes were used for the Senders' track choices.

Inside each of the large brown and the white envelopes in each set of 20 was placed a folded card bearing a package number of 1-20.

Inside each of the small brown envelopes was placed a card bearing a track letter of a-d. This was sealed and placed inside the white envelopes only.

The large brown and the white envelopes were sealed and stapled together in pairs (of the same package number), thus producing a target pool of 80 pieces.

Identical unused envelopes were available to allow re-insertion of pieces after each trial.

RESULTS

The overall hit rate of 24% where chance would have indicated 25% was clearly not significant. However, during the course of the trials and after further scrutiny, some data seemed to indicate favourable conditions for ESP in a musical context.

Receivers' Transcripts

Written transcripts of everything spoken, sung, tapped out, etc., were made by the Experimenter after the participants had departed. The results were classified into the following categories: visual images, auditory sensations, olfactory sensations, tactile sensations and emotional experiences. By far the largest number of references came from the visual category.

Visual Images

Some of the personal visual imagery probably originated from the daily activities of the Receiver (e.g. shopping lists, the video watched the night before). No doubt some of the images encountered on more than one occasion also may have had a similar origin (e.g. horror film, London, Easter). The results provide quite an interesting idea of what comes into 'normal' human beings' minds when they are in a relaxed state, regardless of the attempts of a hidden Sender to communicate with them. It can be argued (convincingly, I

believe) that the white noise caused people to think of water and water-related subjects: 28% mentioned it by name and a further 24% spoke of waterfalls. The red light may have been responsible for 28% mentioning the sun and 19% speaking of brightness. However, the 'top ten' percentages of visual images mentioned also contained children, birds, black, green and, at the top of the list with 29%, blue!

Association of ideas seemed to play a part in some Receivers' dialogues. Having started with a comment on the white noise, they would move on to waterfalls and suitably pastoral surroundings, perhaps bringing in a reference to the sea or cliffs. Above the cliffs in the blue sky birds can be seen and on this bright sunny day people and children are out walking. This rather idealistic 'British' scene contains twelve of the most commented-upon visual images!

The Receiver did not always move along these traditional lines. On 56 occasions non-pastoral visualizations were produced, with 28% achieving direct hits. Trial 96 is an example (full transcript):—

Mood is serious but not sad; heavy orchestral music; perhaps it's Beethoven or something like it; tension; I see an orchestra; music connected with a serious event; solemn not emotional; grey buildings; monument; grey; orchestral strings; people standing together; solemn; in a square or something; grey; Russian Revolution perhaps? powerful music; strong; people walking in grey; crowds.

The Sender was listening to the 'March to the Scaffold' from Berlioz's *Symphonie Fantastique*. The music conveys the journey of a condemned man to the guillotine during a period approximating to the French Revolution. It is a serious piece of music for full orchestra with the main texture provided by the string section. The Receiver scored the piece 85%. (The other pieces scored 35%, 25% and 2%.) The three blind judges were unanimous in scoring this a hit.

Further analysis of the Receivers' visual imagery reveals the preponderance of outdoor scenes despite the trials all having taken place indoors. Possible explanations for this could be the slight claustrophobic feel of the sensory deprivation being countered by the mind conjuring up bright, open images. One wonders whether people from completely different climates and cultures would have produced similar visual material.

Auditory Sensations

This section is of obvious importance since the experiment was primarily concerned with the possible conveyance of telepathic signals regarding sound and its effect upon the listener.

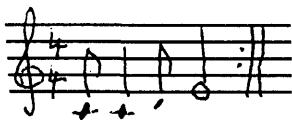
In some cases it was difficult to differentiate in the commentary between visual and auditory imagery (e.g. when the Receiver mentioned Mozart he could have been seeing his face as he imagined it to be from a painting or a film—*Amadeus*?—rather than hearing his music and then putting a name to it). Obviously when the Receivers either themselves sung or specified clearly that they could hear sounds this problem did not arise.

The human element of auditory sensations is very apparent, since vocal manifestations were reported by the largest number of Receivers.

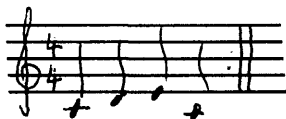
Although many Receivers heard music—they knew the nature of the experiment in advance so this was to be expected—few were willing to

communicate it in song. This was almost certainly due to embarrassment. Generally the sung and tapped examples bore little resemblance to the music sent.

One trial which was a miss (No. 90) produced an interesting occurrence. The music being sent was the opening of the 4th Movement of Berlioz's *Symphonie Fantastique* (also previously mentioned in the section on visual imagery, but with a different Receiver and Sender). Written for convenience in the key of C major, it begins:—



The Receiver sang the opening of *Frère Jacques*:—



There was only a semitone difference between the key of the Berlioz and the Receiver's voice. Not being a musician, she did not realize the connection and neither did she know that Berlioz was French. Hence her failure to choose that particular track. In conversation after the trial, the Receiver spoke of the tune 'just coming into her head from out of the blue'.

Despite music being 'heard' by the Receivers, there was not a single instance of the precise title of a piece of music being given which proved to be correct. Success was encountered in terms of general information; for example, "I can hear string music", "I can hear drums beating". Pitch and timbre were also successfully identified.

Where Receivers scored most highly was in their recognition of the 'feel' of the music rather than in specific terms. One such example was Trial 35 (full transcript):—

Rhythm and shouting; sense of rhythm; dancing movement; movement; lots of percussion; graveyard; xylophone; rhythm all the time.

The Receiver correctly identified a rondena for flamenco guitar.

Perhaps some Receivers could 'tune in' to certain Senders and vice versa with different degrees of success.

Tactile Sensations

It is of course difficult to separate normal bodily functions from those that may have been brought about specifically by the ganzfeld experiment. It is worth mentioning that, despite many of the trials taking place in the summer or with adequate heating during the winter, a number of Receivers remarked on feeling cold during the ganzfeld sessions.

Olfactory Sensations

Very few olfactory sensations were reported in the trials. The occasional

references to perfume and candles may have been due to the actual presence of these smells.

Emotional Experiences

The trials prompted many different emotions in people, which may have already been with them prior to the trial or may have been conveyed via the Sender. Quite a wide range of emotions were felt by the Receivers. There is a fairly even distribution of the happy, peaceful, etc. feelings compared with the tense, unrelaxed sensations.

When the emotions expressed by the Receivers are compared with the Senders' reactions to the music, little of significance can be found generally. However, a possible exception can be reported in Trial 29, which was a hit (full transcripts):—

Receiver: People singing; celebration; slowing down; deeper; water; voices; singing; joyful; train; lots of people; shaking a fist.

Sender: Vaguely Christmassy; feeling of excitement; children very strongly; candles and feeling of anticipation; foreigners like when I went on a bus in Germany and people all burst into song in descant and harmony; very Germanic; slapping knickerbockers; excitement; boys' choir; extra people Jean [Receiver] as a schoolteacher is trying to orchestrate all this and is watching from the sidelines; heart-in-mouth in case they sing a wobbly note; violins are slightly off; anxiety as she tries to get all this together for a public performance.

An overall feeling of enjoyment and excitement through a vocal celebration seems to have been perceived by the Receiver as the Sender listened to the *Ode to St Cecilia* by Britten in an amateur school performance. (The blind judges scored this trial a unanimous hit.)

Receiver Personal Details

Analysis of aspects of Receiver personal details did not on the whole reveal greatly significant results. There follows a brief summary of the main findings.

The attraction of opposite sexes seems to have prevailed to some extent during the course of these trials. Whilst women seem to have still managed to communicate to some extent with their own sex, men displayed little ability in this direction. On both of the occasions when men scored hits as Receivers and Senders they were close personal friends with shared interests and outlooks. When strangers were used the results were all misses. Women were similar in this respect, but not to such a marked degree. Recent (1994) informal ganzfeld trials conducted at the Institute for Parapsychology in Durham, North Carolina, by Kathy Dalton (Dalton, 1994) using visual targets also produced a similar correlation between the sexes, with pairs of men scoring the lowest. There may well be gender implications concerning women's psi ability. Even in male-dominated societies women have maintained a firm traditional role in having powers beyond a male's. 'Female intuition' is colloquially understood to signify access to knowledge beyond the normal senses. The expression 'male intuition' does not arise and yet philosophically intuition is defined as the ability of the mind to see concealed truths.

The Oxford Companion to the Mind edited by R. Gregory casts light on the term in the text: "Psychologists find these important matters [i.e. intuition] for living almost impossible to formulate" (Gregory, 1987).

Several other aspects of the Receivers' personal details were analysed. For example :—

Receivers' Ages

The following chart could be interpreted as indicating that telepathic ability reaches a peak between the ages of 51-60 years approximately, but available data for each age group were limited.

Table 1

Receivers' Ages

Age Range	Number of Receivers	Percentage 'Hits'
under 21	1	0.00%
21 - 30	21	19.04%
31 - 40	24	16.66%
41 - 50	13	30.76%
51 - 60	7	42.85%
61 - 70	7	14.28%
71 - 80	3	0.00%

Other aspects analysed in a similar manner were :—

Receiver-Sender Relationships

Eighty different partnerships were used during the sessions and friendship pairings were more successful than others—25% hit rate as opposed to 14.28% for strangers.

Receivers' Extroversion-Introversion Characteristics

The Experimenter made a classification based on the behaviour of the Receiver in terms of interpersonal interactions during the trial but prior to the result being known. Those displaying extroversion scored 28.84% hits compared with 12.50% achieved by the introverts.

Receivers' Professions

A broad range of professions were represented in the sample and the teachers/lecturers and professional administrators scored a significantly higher percentage of hits (54.54% and 33.33% respectively, as against 8.33% by students and 20% by self-styled housewives).

Receivers' Hobbies

From the wide variety of different hobbies represented, book readers and people interested in the paranormal scored the highest number of hits (50% and 30%, while sports enthusiasts scored 11.11% and amateur musicians 23.80%).

Receivers' Stated Experience of the Paranormal

75% of the people obtaining hits claimed previous experience of paranormal phenomena.

Dates of Trials

Table 2

Dates of Trials

Month	No. of trials	No. of Hits	Percentage
March	5	3	60.00%
April	4	2	50.00%
May	6	0	0.00%
June	4	1	25.00%
July	3	0	0.00%
August	0	N/A	N/A
September	9	3	33.33%
October	5	2	40.00%
November	13	5	38.46%
December	10	3	30.00%
January	3	0	0.00%
February	9	1	11.11%
March	7	1	14.28%
April	16	2	12.50%
May	6	1	16.66%

These results would seem to indicate that the latter half of the year is more conducive to extra-sensory perception. More than half of the Receiver hits (i.e. 13 out of the total of 24) were achieved in the last four months of the year, although only 37 trials were held during this period. In percentage terms this indicates that *37% of the trials achieved 54.17% of the hits.*

In purely numerical terms, taking the trials in groups of ten, the hit rate was as shown in Table 3.

Table 3

Hits at Each Phase of Trials

Trials	No. of Hits	Percentage
1-10	5	50.00%
11-20	1	10.00%
21-30	3	30.00%
31-40	3	30.00%
41-50	4	40.00%
51-60	3	30.00%
61-70	1	10.00%
71-80	1	10.00%
81-90	2	20.00%
91-100	1	10.00%

It is very clear from these results that over the first 50 trials a hit rate of 32% was achieved (mean chance expectation would have been 25%), whilst the last 50 trials scored only 16%.

This seems to indicate quite strongly that after the initial excitement of undertaking ganzfeld trials a good deal of falling off of enthusiasm was evident in the results. The Experimenter tried not to convey this feeling, but psychically it may have been sensed.

Places of Trials

Very little can be inferred from the results since the majority of the trials took place in one location.

Times of Day

It would seem from the results that the most favourable time of day for ganzfeld trials would be evening (after dark), since a greater number of hits occurred then. However, it should not be overlooked that the small number of trials held in the other three periods (morning, afternoon and 3 a.m.) invalidates significance for these times. The relative success of night-time may have been caused by the circadian clock effect allowing possible psychic manifestations to be enhanced. Alternatively the relatively relaxed feel of 'after work', social time may have aided the relaxed state. The generally-believed concept that night-time is more mysterious, and therefore conducive to success in paranormal trials, may have also played a part.

Music Chosen

Table 4

Music Chosen

Track letter	No. of appearances	No. of times chosen by Receiver	No. of Hits	% Hits
A	25	35	10	28.57%
B	27	25	5	20.00%
C	28	15	3	20.00%
D	20	25	6	24.00%

Various points can be made from these statistics. Firstly, the numbers of times the different tracks appeared confirms that the randomization procedure was successful. Secondly, it would not be illogical to believe that the track a music was more popular with the Receivers, regardless of any telepathic connection. The fact that it scored significantly higher than any of the other tracks would seem to suggest that track a music might be more conducive to telepathy than other types of music. The 'romantic' nature (in musical terms) of many of the track a pieces certainly encouraged the Sender to think in visual terms more easily, e.g. *Swan Lake*, *1812 Overture*, *Ride of the Valkyries*, *Mars*. Rotation of the types of music in future trials would ensure that track a was not being chosen simply because it appeared as the first on the list.

Track c was chosen significantly less often (15 times compared with 35 times for a and 25 each for b and c).

Reference to the list of music used in the trials reveals the more intellectual nature of the c track choices, with far more emotional scope in the a tracks. (Some of the lowest scores and the greatest numbers of misses resulted when the c track was being sent.)

The Hit Music

Table 5

The Hit Music

Track letter	No. of times chosen as HIT	% of total hits
A	10	41.66%
B	5	20.83%
C	3	12.50%
D	6	25.00%

The Miss Music

Two tracks scored particularly negatively in terms of hits: *The Lute Suite in E Minor* by J. S. Bach scored misses on each of the six times it appeared, and *Lux Aeterna* by Ligeti scored four misses. Senders had great difficulty with the intellectual nature of this Bach piece and with hindsight it was probably not a good choice for the target pool. The Ligeti item caused some confusion for Senders since the ethereal quality of the music led some Senders towards 'ghostly' images, but others, who were aware of its use in the film *2001 Space Odyssey*, chose a more science-fiction approach.

Two tracks were chosen more often than the other pieces regardless of their actual occurrence within the target pool (chosen four times each): *Pastoral Symphony* by Beethoven and *Symphony No. 5* by Shostakovich. The Beethoven is a rather obvious choice, bearing in mind the white noise/waterfall connections, but the popularity of the Shostakovich is less accountable for.

Despite the packages' availability, seventeen tracks were not chosen by the Receivers for any of the trials as hits:—

- a tracks: *Brandenburg Concerto No. 2* by J. S. Bach
Water Music by Handel
- b tracks: *Golden Rain* Balinese Monkey Chant
The First Noël Christmas Carol
'Tis You 'Tis I from *Carmen* by Bizet
- c tracks: *Sonata in G Minor* by C. P. E. Bach
Gymnopaedies by Satie
Sokaku Reibo for solo shakuhachi
Farewell a Fancy by Dowland
- d tracks: *Kontakte 1* by Stockhausen
Pulse 1939 by Cowell
Kontakte 2 by Stockhausen
Hierophonie 1974 by Y. Taira
18 Bricks Left on April 21st by Bedford
Apache by the Shadows
We Are the Robots by Kraftwerk
Electronic Plant Music

The reluctance of Receivers to choose the d track (i.e. mainly 20th-Century avant-garde music) is quite significant, since it displays the tendency of non-musicians to shy away from 'difficult' 20th-Century music.

Experimenter Effect

The Experimenter's interactions with the Receivers and Senders varied according to any prior relationship or with the natural first impressions felt at meeting total strangers. The Experimenter tried to maintain a friendly and casual manner with all participants, whilst retaining an air of professionalism in conducting the trials. This admittedly was difficult at times when subjects were either intent on tomfoolery or outwardly hostile. Prior to the experiment, conversations tended to be about the ganzfeld itself, but a certain amount of chit-chat was also acceptable. The Experimenter tried to steer the conversation away from music because of the possibility of prior suggestions invading the time under ganzfeld.

The Experimenter started the sessions with an open mind about the possible outcome that music would act as a successful target in ganzfeld trials. After the early high success rate his attitude became more positive, but he grew more sceptical as the results tended increasingly towards a chance outcome.

The possible adverse experimenter effect might be clarified or at least diluted by undertaking two sets of trials: one where the Experimenter truly expected the subjects to score hits and another where the expected results were misses.

The Blind Judges

It was decided to approach three people who had not participated in any of the trials. It was felt that this was necessary in order to obtain an objective view of the correlation between the Receivers' transcripts and their choice of music.

Each judge was given an identical set of transcripts of the Receivers' utterances and an identical set of cassette tapes containing the music to be assessed. An instruction sheet accompanied the packages as well as a list of all the music encountered on the tapes. The judges' task was to score each choice of music according to the transcript of the comments made during the trials by the Receivers. They were asked to try to score each item within each trial differently, and on a separate sheet to indicate their own scoring procedures.

The transcripts were identified only by number, thus ensuring confidentiality for the Receivers.

None of the judges had any experience of psychical research, and they were therefore well suited to mark the transcripts simply according to their appropriateness to the music.

Results of the Blind Judging

For twelve of the trials all three judges were unanimous in scoring direct hits. For sixteen trials the three judges were unanimous in scoring misses. The judges thus unanimously agreed with 28 of the Receivers' scores as hits or misses. It is interesting to note that, of the twelve unanimous hits chosen by the three judges, three trials used the same partnership and two other trials used the same Receiver.

CONCLUSIONS

It was felt that 100 trials constituted a reasonable number to allow the possible enhancement of ESP to be manifested through the agent of music.

From the results achieved no specific conclusion could be drawn as to the relative merits of the places of the trials, but night-time seemed to be more conducive to psi than daytime. The latter third of the year produced a significantly high number of hits and the first few trials produced a 71% hit rate! As the trials continued there was a marked deterioration in hit scores, which may have been caused by less interest being shown by the Receivers and the Senders or by an unintentional goat effect being displayed by the Experimenter.

Receivers aged 41-60 years scored significantly higher than other age ranges, especially if they were teachers/lecturers or worked in administratively responsible careers. The preferred hobbies were books and an interest in the paranormal. Friends scored the greatest number of hits, particularly when females were Receivers.

Dramatic music that provided strong visual imagery and stirred the emotions produced a far better hit rate than purely intellectually-stimulating music. Overall it would seem that randomly-chosen music with randomly-chosen people does *not* enhance ESP. However, it would appear to be possible that some people with appropriate music might be able to make telepathic contact in some ways.

A further experiment is in progress using high scorers to ascertain whether certain people possess psychic abilities that can be enhanced by music.

*Triceratops, Dumney Lane,
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APPENDIX

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TRICERATOPS
Dumney Lane,
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Dear

Ganzfeld Experiment in Music / E.S.P.

As you are probably aware, I am taking a Doctorate in Music and Parapsychology at Sheffield University. I am inviting you to join me in some of my experimental work.

If you act as SUBJECT you will be seated in a comfortable position wearing eyeshields and headphones which play a relaxation tape, followed by unpatterned, soothing sound (white noise). You would say (or sing if you like) out loud your impressions of a remotely located target. Your impressions would be tape recorded and you would then review these with a HELPER. After this you would hear four music items- one of which was the target- and be asked to rate their degree of similarity with your impressions. After your rating, you meet up with the SENDERS who were listening to the tape elsewhere. Discussion follows.

You are completely free to stop the session at any time, for any reason. No one has yet chosen to do so, but you certainly have this option.

The Ganzfeld procedure is very pleasant, relaxing and thought-provoking. It has a long track record of success. If your impressions correspond well with the targets it does not in itself demonstrate that you have E.S.P. ability that you can use whenever you wish and if you do not score well it does not mean that you necessarily have no E.S.P. ability.

Three different people are needed in each session, which normally lasts between one and two hours in total: 1. THE RECEIVER 2. THE SENDER 3. THE HELPER. Participants can be senders or helpers as often as they wish, but initially can only receive once.

Sessions will take place at my house, at the times specified on the accompanying sheet. Kindly indicate which sessions you would be willing to attend, and in what capacity ie. Receiver (R), Sender (S), Helper (H).

You are welcome to bring a partner along to either participate or observe. Do let me know though.

Kindly fill in the attached form and return to me a.s.a.p.

Thanks,