

TELEPATHY AND DREAMS: A CONTROLLED EXPERIMENT WITH ELECTROENCEPHALOGRAM-ELECTRO-OCULOGRAM MONITORING

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A study was designed to investigate telepathic effects in dreams. A single *S*, who had previously been successful in a similar study at another laboratory, spent 8 nights at the Maimonides Dream Laboratory. On each night, a target (art print) was randomly selected by a staff member (agent) after *S* was in bed. The agent spent the night in a distant room, attempting to influence *S*'s dreams telepathically, once the monitoring experimenters signaled that a dream period had begun. At the end of each dream period (detected by electroencephalogram-electro-oculogram monitoring), *S* was awakened by the experimenters and the dream report was elicited and tape-recorded. Only the agent was aware of the target content and he remained in his room throughout the night. Blind evaluations of target-dream correspondences by both *S* and an outside judge produced statistically significant results supporting the telepathy hypothesis.

In primitive and ancient societies, dreams were typically thought to be the work of supernatural entities, appearing to mortals with messages of hope or despair. It was generally believed that dreams could provide a glimpse of the future, reveal events happening at a distance or indicate the thoughts of another person. For many centuries, the recordings of purportedly paranormal dreams referred to anecdotal material. Calpurnia, for example, was said to have dreamed that she saw her husband's statue bleeding like a fountain from dozens of wounds. As a result, she pleaded in vain with Julius Caesar not to go to the Roman forum on the day that he was assassinated.

The development of psychoanalysis caused the observation of this type of

dream to move from the anecdotal to the clinical level. A number of reports have appeared in the psychiatric literature describing presumptively paranormal dreams occurring in the context of the psychotherapeutic situation. An extensive review of these reports has been made by Devereux (1).

With the development of psychophysiological techniques for the monitoring of dreams, it became possible to move from a clinical level of observation to an experimental level of investigation. In 1962, a Dream Laboratory was established at the Maimonides Medical Center, Brooklyn, New York, for the investigation of telepathy and dreaming. Formal work involving standardized electroencephalogram-electro-oculogram (EEG-EOG) monitoring began in 1964. Since that time, eight experimental studies have been completed, five of which yielded statistically significant results supporting the telepathy hypothesis (4, 7). The eighth of these studies utilized the services of a clinical psychologist who had success-

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dreams. Rank the targets individually for each dream in the spaces provided below.

Following the ranking of each target picture on a dream by dream basis, *S* completed the second page of the evaluation form (containing a 100-unit rating scale) which stated:

The final ranking is a composite of the individual dream rankings. It is to be entered in the boxes provided on the bottom of this sheet. Each ranking should also be rated. By drawing lines from each target letter to the rating scale, you can show how close or distant from the dream protocol each of the eight targets is considered. In other words, this rating scale represents your confidence in the rankings. Use a straight edge or ruler to draw the lines. Ties are not permitted in either the ranking or the rating procedure.

The third page of the evaluation form stated:

The same instructions apply here that were previously outlined. In this instance, score the targets on the basis of the *entire* dream protocol, including material from the postsleep interview.

Before the study began, it had been decided to utilize *S*'s evaluations from the third page to test the telepathy hypothesis. These ranks and ratings were made on the basis of *S*'s dreams, *S*'s associational material and *S*'s "guess for the night."

The eight transcripts were sent to an outside *J*, along with copies of the eight target pictures, for evaluation of target-transcript correspondences. The *J*'s judging form (Figure 1) read, in part:

Using a red pencil, color the space that represents, in your judgment, the correspondence between target material and protocol content.

J was instructed to make three such ratings for each target-transcript combination. One rating was made on the basis of the dreams alone, one rating was made on the basis of *S*'s guess for the night and one rating was made on the basis of the entire protocol.

RESULTS

Statistical Analysis, Subject Evaluation

The results of *S* ranking were assessed by the binomial method. It had been decided in advance to consider all ranks of 1, 2, 3 and 4 as "hits." All ranks of 5, 6, 7 and 8 were designated "misses." When the ranks were inspected, there were eight hits and no misses. This distribution is significant at the .004 level. The night by night ranks are presented in Table 1.

S's ratings were assessed by the Mann-Whitney *U* test (6). The ratings for the correct targets were compared to the ratings for all other targets. The ratings for the correct targets were significantly higher than the other ratings. For the dreams alone, the data are significant at the .003 level; for the entire protocol, the data are also significant at the .003 level.

Statistical Analysis, Evaluation by Outside Judge

The results of *J*'s evaluation were assessed for direct hits (*i.e.*, rank 1) by the binomial method (*e.g.*, $p = \frac{1}{8}$). Five direct hits were obtained when *J* used the dream reports alone; this distribution is significant at the .001 level. When the entire transcript was used by *J*, five direct correspondences were obtained; this is significant at the .001 level. When *S*'s guess for the night was considered independently from the rest of the transcript, six direct correspondences were obtained; this is significant at the .0001 level. These ratings are presented in Table 2.

Anecdotal Material

A description of the target for each night follows, as well as pertinent excerpts from *S*'s transcript.

NIGHT 1

The target randomly selected by *A* for the first night (January 5, 1967) was "The Discovery of America, by Christopher Co-

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Excerpts from postsleep interview. "... The part that didn't seem to have any tie-in ... with personal dynamics or with the experimental situation was the crowded church scene. ... Something of national importance, something of historical significance."

NIGHT 2

For the second experimental night (February 2, 1967), A randomly selected "The Wine Taster," by Vermeer. The painting depicts a man holding a bottle and wearing a large black hat; the woman is drinking a glass of wine.

Excerpts from dream reports. "... It seemed as if one of the figures had on sort of a checked coat. ... A dancing or night club cabaret scene. ... I was over at a friend's house, and ... I was taking a pill. ..."

Excerpts from postsleep interview. "... There is this fellow ... dressed in the clothing of that era. ... I see him wearing a black derby hat. ... Something in the cabaret scene. ... I was taking a glass of water to take this last pill that the girl was offering me. ... We're close friends with them and ... socialize for a drink. ... It's the women who are doing whatever it is that's getting done. I think that it would involve movement on the part of the women. ..."

NIGHT 3

A randomly selected Rousseau's "The Repast of the Lion" for the session on March 15, 1967. The picture shows a lion biting into the flesh of a smaller animal.

Excerpts from dream reports. "I dreamed that I was lying here in this room and I thought I heard ... a voice ..., and they were saying something about this girl was the murderess. ... And I became very upset with this and tried to grab the person and ... started to sort of strangle him. ... Now, George, in the dream was saying something. ... His death was announced. ... George had shot himself. ... It was a great tragedy. ... Then I was very much concerned with keeping track of three dogs. ... There were two puppies ..., and it seemed like the two of them had been sort of fighting before. You could kind of see their jaws were open and you could see their teeth. ..."

TABLE 1
S Ranks and Ratings

Night	Dreams Alone		Entire Transcript	
	Ranks	Ratings	Ranks	Ratings
1	1	99	1	99
2	4	21	4	28
3	2	76	3	78
4	2	52	2	52
5	3	76	3	76
6	2	87	2	69
7	3	85	3	85
8	1	100	1	100

TABLE 2
J's Evaluation

	Correct Target-Transcript Pair	Incorrect Target-Transcript Pairs Presented in Order of Magnitude						
Dreams alone*								
Night 1.....	61	51	45	20	1	1	1	1
Night 2.....	5	17	11	1	1	1	1	1
Night 3.....	61	31	30	17	10	1	1	1
Night 4.....	10	91	51	6	4	1	1	1
Night 5.....	11	30	11	1	1	1	1	1
Night 6.....	71	60	11	11	8	4	1	1
Night 7.....	70	15	15	6	1	1	1	1
Night 8.....	30	10	9	1	1	1	1	1
Entire transcript*								
Night 1.....	61	41	31	20	11	1	1	1
Night 2.....	1	11	10	5	1	1	1	1
Night 3.....	61	40	31	21	14	1	1	1
Night 4.....	1	90	50	10	1	1	1	1
Night 5.....	20	31	20	6	1	1	1	1
Night 6.....	60	41	7	6	5	1	1	1
Night 7.....	70	21	20	20	19	1	1	1
Night 8.....	50	15	11	6	1	1	1	1
Guess for the night†								
Night 1.....	61	60	21	10	1	1	1	1
Night 2.....	1	11	1	1	1	1	1	1
Night 3.....	41	31	21	20	10	1	1	1
Night 4.....	11	91	11	4	1	1	1	1
Night 5.....	31	20	11	1	1	1	1	1
Night 6.....	70	31	7	2	1	1	1	1
Night 7.....	50	26	20	10	1	1	1	1
Night 8.....	50	40	20	1	1	1	1	1

* Significant at the .001 level, binomial method ($\frac{1}{8}$).

† Significant at the .0001 level, binomial method ($\frac{1}{8}$).

Excerpts from postsleep interview. "... Again in this dream there were two references that were dealing with death. ... There were two dogs. ... The teeth were there, and they had

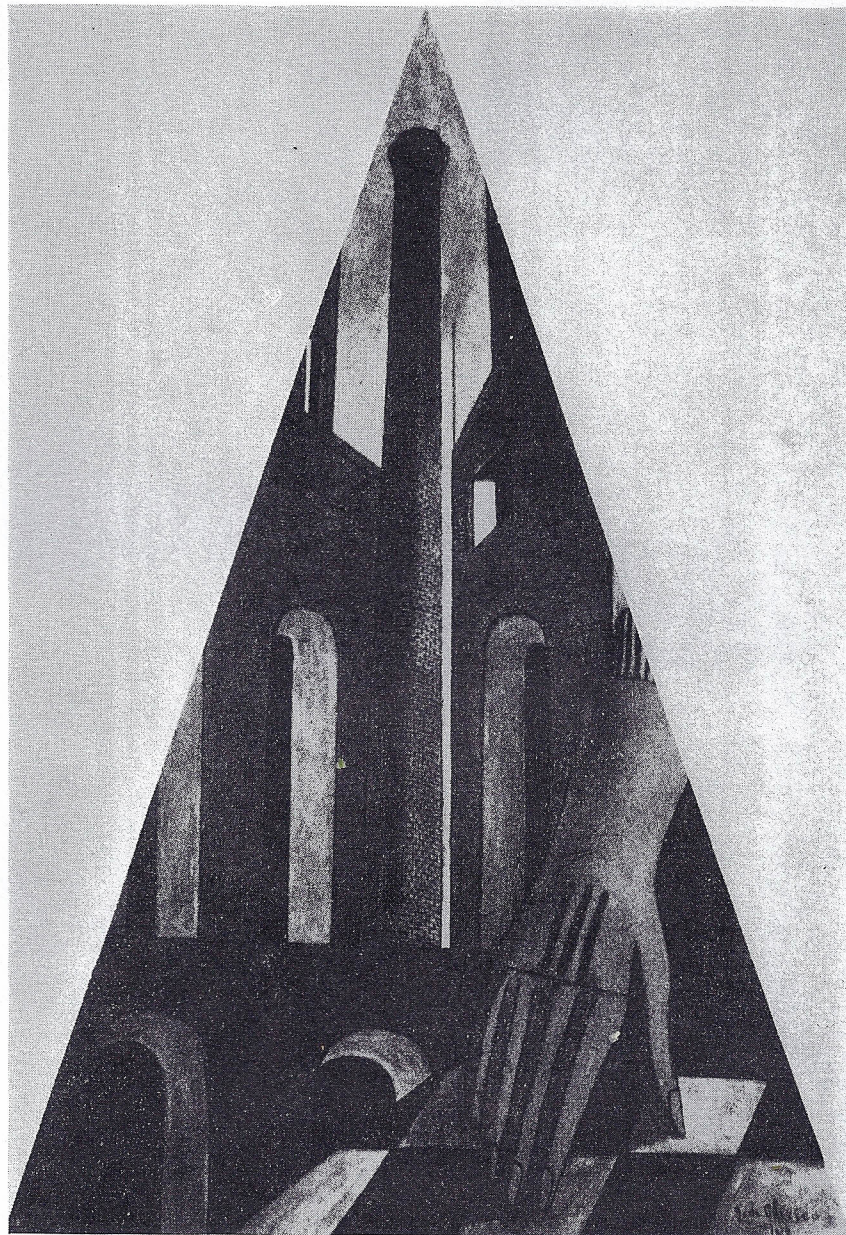


Fig. 2. "The Enigma of Fate" by De Chirico. (Courtesy of Tudor Press, New York.)

they were running it much more like a prison. ... This was a very people-dominated night from beginning to end. ... It seemed as if there was a lot of emphasis on sitting postures."

NIGHT 8

A randomly selected Bichitr's "Man with Arrows and Companions" (Figure 3) on

November 26, 1967. The painting portrays three men, one of whom is holding an arrow. There is a stake in the background around which a piece of rope is tied; a strand of rope can also be seen in the foreground.

Excerpts from dream reports "Straight

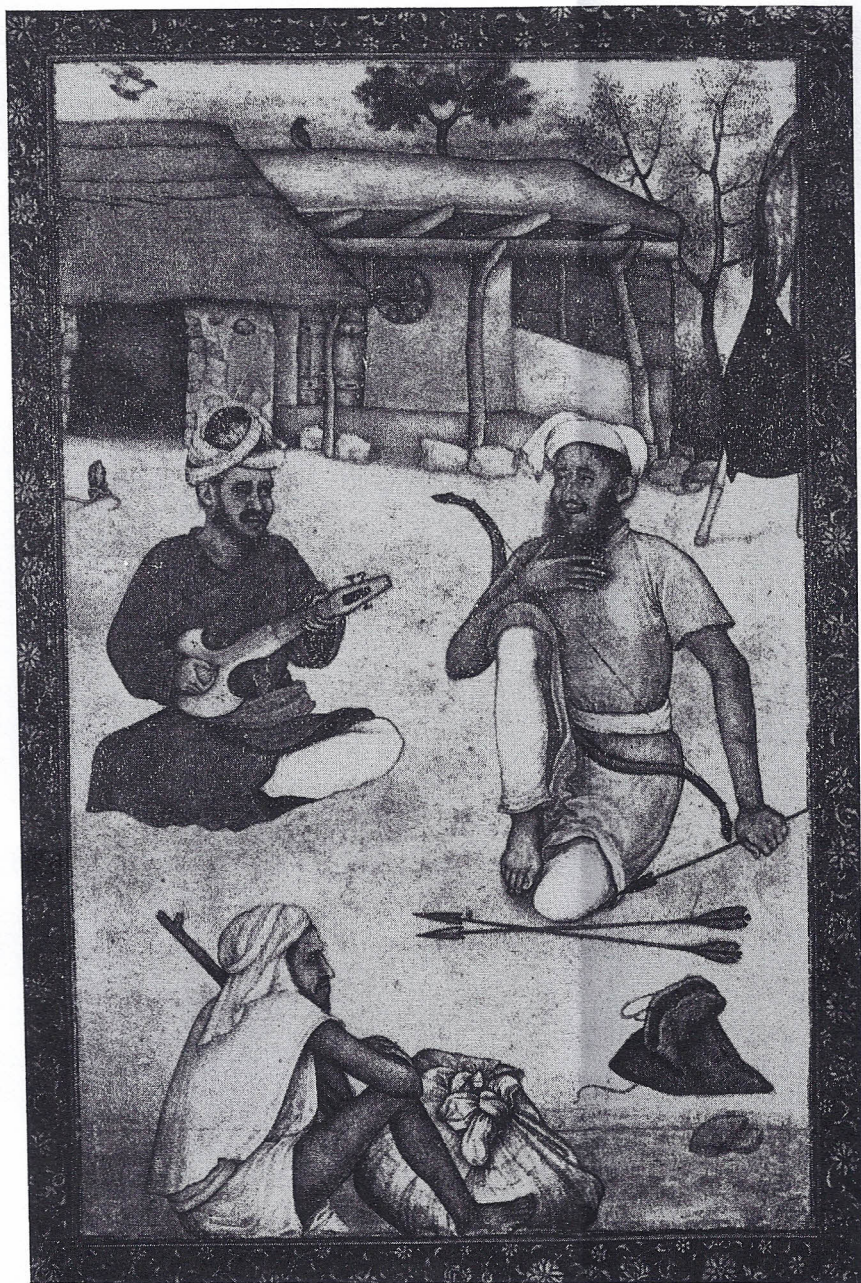


FIG. 3. "Man with Arrows and Companions" by Bichitr. (Courtesy of Tudor Press, New York.)

ahead of me were three men. ... I believe they were holding rifles. ... It seemed like it was a short length of rope. ... The rope was in a direct line for a very short distance; then there was about three or four coils of rope. ..."

Excerpts from postsleep interview. "There were three men ... This word 'gunslinger' came through and it could have fitted in with these three men, and it also could have fitted in with the western theme. ... A rope theme seemed to

come through. . . . My guess would be that it was a scene of Western life involved. People dressed up in cowboy suits with guns. . . . Somewhere in the picture rope imagery appears in a very prominent or conspicuous way. . . . That would be my surmise as to what the target picture would be like."

DISCUSSION

Hall (3) points out the difficulty which external stimuli have in becoming a part of the dream sequence. Rarely do perceptions of external events find representation in dreams; when they do, the perceptual element is usually a minor part of the dream. In addition, the stimulus is generally distorted in some fashion (3, pp. 6-7). Thus, the success of this attempt to influence dreams from a distance is extremely provocative in view of the difficulty that one has in influencing dreams by direct sensory stimulation.

As might be suspected from Hall's remarks, the telepathic stimuli appeared to be distorted in many instances. In other cases, however, they remained quite free from change and emerged from the dream report in an undisguised way. Examples of this latter phenomenon would be the church (night 1), the reference to "a drink" (night 2), the fight between two animals (night 3), the reference to "dance" (night 4), the giant (night 5), the house (night 6), the policeman (night 7) and the rope (night 8).

Instances of distortion might include the transformation of the Atlantic Ocean into Atlantic City (night 1), the transformation of drinking wine to drinking water (night

2), changing of animal aggression into a series of aggressive acts committed by humans (night 3), reporting striped bees rather than girls in striped costumes (night 4), visualizing a penis rather than a tall chimney-like structure (night 5), changing a tree into a telephone pole (night 6), transforming a dead gangster into a dead mouse (night 7) and transforming arrows into rifles (night 8).

Despite these distortions and transformations, *S* and *J* were able to engage in blind matching of targets and dream reports at statistically significant levels. These results, obtained under conditions carefully designed so as to eliminate any reasonable alternative hypothesis, strongly suggest the operation of a telepathic effect in an experimental setting.

REFERENCES

1. Devereux, G. *Psychoanalysis and the Occult*. International Universities Press, New York, 1953.
2. Hall, C. Experimente zur telepathischen Beeinflussung von Träumen. *Z. Parapsychol. Grenzgeb.*, 10: 18-47, 1967.
3. Hall, C. *The Meaning of Dreams*. McGraw-Hill, New York, 1966.
4. Krippner, S. The paranormal dream and man's pliable future. *Psychoanal. Rev.*, 56: 28-43, 1969.
5. Moss, T. and Gengerelli, J. A. Telepathy and emotional stimuli: a controlled experiment. *J. Abnor. Psychol.*, 72: 341-348, 1967.
6. Siegel, S. *Nonparametric Statistics for the Behavioral Sciences*. McGraw-Hill, New York, 1956.
7. Ullman, M., Krippner, S. and Feldstein, S. Experimentally-induced telepathic dreams: two studies using EEG-REM monitoring techniques. *Int. J. Neuropsychiat.*, 2: 420-437, 1966.