

Readers who doubt that the falsification is as extreme as I have pictured it need only consult the sources I have referred to. Their doubt might also be reduced by familiarity with some of James Bradley's research (1981, 1984). In his 1984 article, he reported similar misrepresentations of fact on a topic, robustness of procedures of statistical inference, on which psychologists would not be thought to have nearly the strength of preconception that many are known to have about ESP. How much more likely, then, falsification on so emotionally laden a topic as ESP is for many psychologists! In the earlier article, Bradley (1981) presented experimental evidence (for college students, in this case, not psychologists) that confidence in the correctness of one's own erroneous opinions is positively correlated with the degree of expertise one believes oneself to have in the field of knowledge within which the erroneous opinion falls. This finding may help in understanding why the authors of some of these books did not find it necessary to consider critically their own erroneous statements.

A very considerable proportion of psychologists have a potential interest in the question of ESP. In a recent survey (Wagner & Monnet, 1979) of university professors in various fields, 34% of psychologists were found to consider ESP either an established fact or a likely possibility, exactly the same proportion as considered it an impossibility. In this survey, psychologists less frequently expressed a positive opinion than did members of other disciplines, a finding that may be attributable to psychologists' better understanding of sources of error in human judgment. There seems to be no equally sound reason for the curious fact that psychologists differed overwhelmingly from others in their tendency to consider ESP an impossibility. Of natural scientists, only 3% checked that opinion; of the 166 professors in other social sciences, not a single one did.

Both of these groups of psychologists have been ill served by the apparently scholarly books that seem to convey information about the dream experiments. The same may be said about some other lines of parapsychological research. Interested readers might well consult the original sources and form their own judgments.

APPENDIX C

ESP in Dreams: Comments on a Replication "Failure" by the "Failing" Subject

by Robert L. Van de Castle

Child (1985) documents that the fairly impressive data base substantiating the presence of ESP in dreams, particularly that produced at Maimonides Medical Center, has been seriously neglected by psychologists and has been inaccurately described or distorted by some authors discussing the topic. The necessity to objectively examine the evidence for dream telepathy was stressed by Gardner Murphy (1971):

It will take much time and labor, but in both quantitative and qualitative terms, the experimental analysis of dream telepathy is now a problem of such urgency that a mature science can no longer handle it either by ignoring it or by denying it (p. 3).

My own contributions to the exploration of dream telepathy have involved authoring a review chapter on clinical and experimental dream telepathy studies (Van de Castle, 1970), acting as an experimenter in dream telepathy studies (Van de Castle, 1971a, 1971b), co-developing a therapeutic paradigm for utilizing telepathic dreams (Reed, 1985), and serving as an experimental subject in three different laboratories where dream telepathy was investigated. Since my role in this field has been a unique one, I would like to briefly review my experiences in other laboratory settings prior to the "failure to replicate" experiment at Wyoming (Belvedere & Foulkes, 1971), and provide some additional details about that experiment to place the outcome in a more balanced perspective. The Wyoming experiment is being emphasized because Hansel (1980), a leading critic of parapsychology, in his chapter on "Telepathy in Dreams" limited his discussion of the overall successful outcome of 10 investigations at Maimonides Hospital to a single paragraph, but devoted nearly eight pages to his description and discussion of the "unsuccessful" Van de Castle replication.

Montague Ullman, the senior investigator at Maimonides, had visited Calvin Hall and me at the Institute of Dream Research in Miami, Florida, and

encouraged us to explore whether telepathic stimuli might influence dream content. The first experimental attempt occurred on March 12, 1964. Hall, serving as the experimenter and EEG monitor, had concentrated on imagery of a boxing match and I gave a subsequent REM report about "a large auditorium and there was a boxing match going on." Hall's next effort was five nights later. He concentrated upon skiing imagery and my subsequent REM report involved "a girl high in the air on skis." Sometimes the correspondences were questionable. Two REM periods later, Hall concentrated upon an imagined tattoo on his skin and my REM report described a woman's legs and "if one looked closely at her legs, these very ugly varicose veins were apparent and the flesh looked sort of segmented."

Hall continued his explorations with me and with five other subjects. In his judgment, a representation of the target material was detectable in 13 of my 17 dreams that he attempted to influence (76 percent). The corresponding figures for the other five subjects ranged from 65 percent to 25 percent. Overall, he concluded that some features of the telepathic stimulus had appeared in 56 percent of the 121 targeted dreams. When Hall utilized a multiple choice format to match target stimuli and dream themes, the matching dream theme was correctly selected by a group of about 100 undergraduate students, at a statistically significant level, in 29 of the 36 cases judged.

Since these six subjects had reported dreams from several nights of REM awakenings as well as home recalled awakenings (range 34–97 dreams), it was possible to calculate how frequently a designated theme was dreamed about when a telepathic stimulus was not involved. For example, some form of punching activity occurred in 4 of my 97 dreams, but the only time I reported a boxing match was when Hall had concentrated upon such imagery. Hall summarized his positive results in an article entitled "Experiments on Telepathically Influenced Dreams" (Hall, 1967).

My experimental sessions at Maimonides Medical Center began on January 5, 1967, and continued on seven subsequent nights spaced from 4 to 11 weeks apart. Although the dates of my participation during this 44 week period are clearly noted in Chapter II of the original edition of *Dream Telepathy* (Ullman, Krippner, & Vaughan, 1973), which provides a brief summary of each of my night's results, Hansel (1980) indicates I "slept in the [Maimonides] Dream Laboratory on eight *successive* [italics added] nights" (p. 245).

An important psychological difference exists when one is repeatedly awakened at every REM period and has a month to recuperate rather than a single day, as happened on four occasions under the time constraints imposed at Wyoming. The entire eight sessions were completed there within a 14 day period. However, when Hansel (1980) describes "the essential differences in procedure" (p. 246) between the two laboratories, he fails to mention this temporal difference and focuses exclusively on the additional safeguards imposed by the Wyoming experimenters.

At Maimonides I ranked the pool of eight pictures for possible correspondences on the morning after each session and also rated them on a 100 point scale. Using a binomial criterion, I obtained eight "hits" (rank of 1–4) and no "misses" (rank of 5–8) for the eight nights ($p = .004$) and my average rating for target pictures was 74.5 and for nontarget pictures was 32.6, a difference significant at $p = .003$ by Mann-Whitney U test. Hansel (1980) notes only that I ranked

each picture but gives no indication of my success level. Hansel reports the outside judge placed the target in the top half of each night's rankings but fails to mention that when my concluding guess of the target's presumed content was utilized by the judge, a total of six direct correspondences (rank of 1) was obtained ($p = .0001$). These statistical analyses appear on page 275 of Ullman et al. (1973) and on pp. 100–101 of Ullman and Krippner (1970).

Child's (1985) article contains further examples of Hansel's (1980) misleading account of the Maimonides research and results. In Hansel's reference notes (1980, p. 253), he indicates that the foreword to (the 1973 edition of) *Dream Telepathy* was written by Murphy Gardner. Hansel (1980) also displayed an inventive style in identifying the Wyoming experimenters: "Replication of the experiment was attempted by Edward Belvedere of the Maimonides Laboratory and David Roulkes of the University of Wyoming" (p. 246). Belvedere was a graduate student who had worked extensively in Foulkes' laboratory and the academic affiliation of both authors was listed as the University of Wyoming in their article (Belvedere & Foulkes, 1971).

A bona fide experimenter from Maimonides would have been a welcome touch on the scene at Wyoming. The psychological climates at the two laboratories were distinctly different. In his *Psychological Bulletin* review of "Some Unintended Consequences of Rigorous Research," Argyris (1968) provides several examples of research where the nature of the laboratory setting changed and distorted the phenomena under study. J. B. Rhine (1964), reviewing some cases of exceptionally high ESP scoring, noted that an atmosphere of contagious enthusiasm and of intense "audience appreciation" for the successful scorer was an important feature. This audience appreciation was definitely present from Hall and from Ullman and Krippner. My perception of the Maimonides ambiance was "The staff always gave me the feeling that I was a visiting sultan and the red carpet was rolled out with a royal flourish" (Ullman et al., 1973, p. 141). At Wyoming, however, not only was the weather cold in midwinter but the reception was also; there were no social interactions with the staff until the study was over.

Gardner Murphy personally funded the replication effort. My original preference for the experimenter was Rechtshaffen (1970), because he had reported some impressive examples of telepathic REM dream responses to hypnotic dream targets. When the Maimonides staff found that his lab was unavailable, they made arrangements to utilize Foulkes' lab. I wrote a letter dated December 2, 1969, to Foulkes with the following comments and requests for the study:

The date of January 22 would seem to be a good starting one. I'm not sure how long it will take us to complete the eight-night series. . . . My usual morning-after reaction at Maimonides was that of experiencing a headache and a feeling of being a little giddy or becoming unglued.

Glad to hear you have a potential agent lined up. I hope that it will be arranged to have more than just this one person as a possible agent.

As you know, reproductions of paintings were used in the Maimonides series but we have also found it acceptable to use *colored photographs* [italics added] from such magazines as *Life* and *Look*. . . . I would have a strong preference for a system in which the potential stimuli . . . are selected so that each one will be as different as possible from each other.

A special attempt is made to try and differentiate the type of emotionality that might be expected from each picture. . . . With such a method, it makes it much easier for a judge to evaluate possible correspondences.

I'm hoping that there will be some opportunity for discussion during the day time hours of your recent projects and to swap some ideas about scoring dreams and related topics.

This letter was apparently received because of the specificity of the details replied to in my letter from Foulkes dated January 6, 1970.

We look forward to your arrival on the 22nd.

About the study: (1) We hope to have 3 female potential agents for your selection.

(2) Targets are being selected with an eye to systematic heterogeneity of content. Our selector, who has done it before (for a pilot study) has the idea, and did a good job of getting qualitatively different pictures the first time around.

(3) The only problem with unlimited flexibility [for scheduling] is that none of us is a full time sleep researcher. We have classes to teach or take and other day time responsibilities. [The study occurred during between-semester vacation.]

When awakened for my third REM report on my first experimental night at Wyoming, I described an interaction with Foulkes:

We were . . . discussing the planning of this experiment. . . . He was saying things about the important role that the persons who made up the random numbers could play. And I was saying something about, "Yes, these experiments get to be very complicated and that it can be all sorts of unconsciously motivated mistakes and that the person in that role could be a fairly critical one."

These remarks about the critical role of the picture selector turned out to be very prophetic. When presented the pool of pictures to judge the next morning, I felt it was not very heterogeneous and it also contained four black and white photos. When I complained that they had not followed my instructions regarding the use of colored photographs, I was told they had never received such instructions.

I was particularly distressed by the lack of emotionality and content differentiation in the picture pool and suggested another night's unofficial trial to see if more heterogeneity of material would appear. When it didn't, I requested a rearrangement of the subsequent pools so that greater heterogeneity of themes would be present and also asked to have all the pictures in color. Foulkes assigned this task to the original selector who was preparing to leave that day for vacation. I was informed that the selector had subsequently rearranged the pictures in an improved heterogeneous manner but that my request for all colored pictures could not be honored because of time constraints. By including five additional art prints at that point, a total of 22 or the 56 (39 percent) subsequent pictures used in the experiment contained color.

Was the objective of improved heterogeneity achieved? This is obviously a matter of subjective judgment, so several examples will be given for the reader to judge. For example, one night, the target pool contained two slides showing hands and grids, a slide of a figure with his hands over his head, and a slide of workmen with their hands prominently displayed.

On night 6, the target picture was a black and white close-up of a nursing mother nude to the waist. One picture was a man nude from the waist up holding

and kissing a woman; another was of several people drinking at a cocktail party with some whiskey bottles nearby; another was a farmer holding a bushel basket full of corn at his waist. All four pictures could be considered to represent some form of oral imagery.

On night 7, the target picture was again a black and white close up of a nursing mother nude to the waist. One picture was a close up view of a young man's face with his lips parted and his hands encircled in the hair of a woman facing him; another was a waterfront dock with a jug of wine, fruit, and a basket full of corn; another was a dragonfly eating a leaf; another was a young girl on a round rock playing a flute; another was a pom-pom waving crowd with many open mouthed spectators yelling. An oral theme seemed quite prominent in six of the pictures and, in addition to a nearly identical target picture, the pool associated with it again contained pictures with kissing imagery, bottles of alcoholic beverages, and round baskets of corn.

My first REM report on night 7 referred to "a big argument about . . . two different contracts." My second REM report was about using pieces of paper to "leave a false trail" and a prison sentence for "mal-tampering" with someone's correct identity. My third REM report mentioned "a complaint letter where somebody was writing in to express their dissatisfaction." My fourth REM period involved "a sporting proposition" that turned out to be "a bad deal" and also it being "hard to tell what time it was because I looked at about four different clocks and every one of the four had a different time." There was also a concern about others tolerating an abusive assemblyman and I was getting ready to make a complaint to "the general manager" of the night-time factory shift "to see that this be stopped immediately" because "If I was a psychologist there, then I should be making recommendations about psychological situations."

These REM reports, made before I saw another repeat of a nonheterogeneous pool of pictures, reflected considerable frustration on my part and a sense of injustice because of different contracts, false trails, bad deals, confusing messages, an abusive assemblyman being tolerated, and my psychological recommendations being ignored.

The experiment now had one more night to go. Since I had achieved two direct hits (rank of 1) on nights 3 and 4, one more direct hit on that final night would have yielded statistically significant results in favor of an ESP hypothesis. Besides my frustration over the lack of previous heterogeneity in the picture pools, I was informed that the agent (sender), an undergraduate working in Foulkes' laboratory with whom I had achieved the two direct hits, had decided to withdraw from the experiment. As a consequence, I had to utilize a former agent, with whom I had previously been completely unsuccessful, for that last decisive night.

The pool of pictures on that final night contained seven thematically similar pictures that showed people from a foreign culture or an ethnically distinct subculture in America. The eighth showed a geographically distant location (galaxy). One was a postcard from Austria showing a child being held by a bare breasted woman in peasant costume, standing by a house with a thatched roof; another was a street scene in the French Quarter of New Orleans with black musicians entertaining tourists holding a pitcher of juice; another was a street scene in a ghetto with two black teenagers in shorts holding each other in front of a

spraying fire hydrant; another was a street scene in Latin America with a priest wearing a long lace cassock and a man holding a fringed umbrella over him; another was of two dark skinned women, with many bracelets on their arms, wearing saris or long shawls over their heads and shoulders; another was a crowd of Orientals with the men wearing long gowns slit at the side; another was a young man wearing a black leather jacket, carrying a guitar case, walking down some railroad tracks with a companion wearing a plaid jacket; the remaining picture was of the Milky Way or some astronomical galaxy.

My guess about the target pictures was that it would:

deal with a foreign culture or people from a foreign culture . . . it may be something like a hippy culture within America which would be sort of like a foreign culture. . . . If I were to look for the unifying ones [themes], it would be the element of exotic or foreign culture, far-away places kind of thing. . . . I think the clothing is going to be somewhat unusual . . . somewhat distinctive and different.

Although my guess that a foreign culture or subculture and distinctive clothing was involved should have enabled me to fairly readily select a single corresponding picture if the pool had been sufficiently heterogeneous, the pictures in the pool were too thematically similar to make a correct differentiation. I did not get the necessary direct hit and the study was published as a failure to replicate my previously successful results.

Were the apparent stonewalling defenses erected at Wyoming impenetrable? I will ask the reader to judge whether the following material sounds like random responses to each night's stimuli or whether it might represent some brief breakthroughs of ESP.

My first REM report on night 3 mentioned "some thing to do with a football game . . . there were a lot of girls playing . . . one of the girls on the team was somebody way back from grammar school."

My second REM report mentioned "some small steel balls with a horn . . . a lot of the ones who were pursuing this guy . . . were younger kids. . . . I had used it [horn] like a baseball bat and hit a small, round metal ball . . . toward a small girl."

My third REM report described

a baseball game . . . these were a bunch of kids that were playing The team up at bat hit a real long ball . . . and the kid in front of me just caught that one beautifully

Teenagers . . . there were maybe four or five of them in a row.

A shift in scene, and it seemed like there was a bunch of teenagers again. . . . I was a teenager myself . . . and went out in the front yard.

The scoutmaster . . . of the troop my kids are in . . . walked through . . . where all these kids were. . . . I was coming up and joking around with him.

My fourth REM report mentioned "something to do with the project with kids that you are all involved with here in the lab. . . . There was one image of a girl . . . parading around."

My fifth REM report mentioned "a bunch of kids cutting the grass. . . . One kid had just made one long swath through the grass."

My guess about the target picture was:

The over-riding thing during the night was the constant kid reference, they were

either as boy scouts or as young kids or as teenagers . . . or this last one of young kids who were perhaps nine or ten years old. . . . So I would look for the picture then that involved a group of boys either playing baseball or some other sport . . . there should be quite a few boys not just an isolated one, there should be at least a half a dozen of them or so.

The target picture was a black and white photo showing six boys and a girl, probably aged about 8-12, laughing and strutting in sort of drum-major fashion across a large grassy area. They are in single file and several are carrying a baton with a small ball on the end. One boy has apparently thrown his baton into the air and is waiting to catch it.

My REM reports had repeatedly referred to a group of children, usually boys, but with an occasional reference to a girl, one of whom was "parading around." There was a reference to "four or five of them in a row," "joking around," one of them making "a beautiful catch," "small, round metal balls," a "yard" and "grass." All of these details were portrayed in the target picture.

Rechtschaffen's (1970) observations from his laboratory study of telepathic dreams was, "When they were hits, they were quite good. . . . A simple matching procedure does not take into account the very unlikely probability of such a specific correspondence" (p. 92).

I gave the target picture a rank of 1 and so did both judges. Foulkes also gave it a high rating in my fourth REM report that night. I dreamed he came into my room and said "Well, I thought I'd let you know, you really have been doing well tonight . . . then he was saying something like he thought I'd be pleased when I saw the pictures because he knew it was going extremely well."

The next experimental session was three nights later, the longest time interval between sessions. The target picture was a black and white photo of a woman, apparently a mental patient, sitting with her head and arms on top of her knees, which are drawn up to her chest. She is sitting on a very wide, wooden bench in front of a high plaster or cement wall with paint peeling from the ceiling.

My first REM report mentioned "an old, wooden chair. . . . I had the Negro girl try and sit on this and it just wasn't a very good fit. . . . Underground subway tracks . . . with the high, like concrete sides, along either side."

My second REM report mentioned

submitting articles for professional journals . . . specifically the *Journal of Consulting Psychology*.

We entered into this building and it turned out that it was a huge one inside and there were various kinds of seats possible . . . this girl said that she would like to sit in these other kinds, which looked like church pews and she sat there.

My third REM report mentioned "we are sort of looking around inside the house. There were some problems with it, it was an older house and there were some cracks in the ceiling."

My prediction about the target picture was:

it would be a somewhat unusual building . . . the interior of the one dream had the church pews. . . . I would look for something maybe to do then with houses or a little bit of an unusual something in the way of buildings or the interior of them. . . . As far as people . . . I see it more as one anticipated more people arriving but as yet they had not . . . you'd notice the number of empty seats more than you would the

full ones. I don't think the picture would convey any set emotion in and of itself. . . . I think the picture would not be particularly unusual as far as the color . . . there isn't very much activity in there . . . the people are either just sitting there, or perhaps implied conversation, but I don't get any feeling of great motoric activity at all.

I and another judge gave a rank of 1 to the target picture but the other judge gave it a rank of 6. In view of my reasonably specific summary comments that the target picture would probably involve a relatively inactive scene like people sitting inside a building, the rating of 6 was surprising because the alternative pictures in the pool were: a colored photo of watermelon and other fruit; a colored photo of a boat crossing an expanse of water; a photo of a dead Civil War soldier lying on the ground next to a rifle; a photo of two bushmen getting ready to spear a gazelle surrounded by dogs; a colored postcard of a Chagall painting showing a couple, a large chicken, a blue Eiffel Tower, a musical instrument, and a goat's head all floating in the sky; a photo of some peasants in an outdoor setting dropping ballots into a large box; a photo of a young girl, about 5 or 6 years old, using a paint brush to color on a piece of paper with the name "Barbrah" written on it.

The familiar problem of nonheterogeneity also exists in this pool. Three pictures show foreign or ethnic themes (Eiffel Tower, bushmen, peasants); two show several animals; two show weapons (gun, spear) and a dead or soon to be dead figure; two show pieces of paper playing a central role in the picture (ballots, girl's drawing).

As predicted in my dream on that first night in Wyoming, "these experiments get to be very complicated" and "all sorts of unconsciously motivated mistakes" may be involved. Foulkes' later reflections on this study seem relevant.

The replication attempt was unsuccessful. In retrospect, we may have erred too much on the side of "scientism" to the exclusion of creating conditions in which telepathy might reasonably (if it exists at all) be expected to flourish. It proved hard to escape the role of protector of scientific purity or guardian of the scientific morals. Were we sympathetic and encouraging observers, or scientific detectives out to prevent a crime from being committed before our very eyes? . . . Particularly revealing personally was a brief moment of intrapsychic panic when it seemed as though some telepathic influence might be "coming through"—how could it be? Where had I failed to prevent a sensory leakage? Our subject [Van de Castle] clearly felt himself "on trial" before a not entirely sympathetic jury, and we also could not totally avoid the feeling that we too were on trial, with a favorable verdict for the subject raising doubts as to the scrupulosity of our judgment process.

There is no place for sloppy dream research, whether on telepathy or anything else. But being rigorous is a different matter from insecurely flaunting one's rigor as we may have done in our first study (Ullman et al., 1973, p. 236).

When the experiment at Wyoming is referred to in assessing the status of ESP in dreams, I hope the previously unpublished information provided in this report will be useful in evaluating the appropriateness of labelling it as a "replication" or as a "failure."

APPENDIX D

A Group Approach to the Anomalous Dream

by Montague Ullman

While awake, our view of ourselves is one in which we see and stress our autonomy, our individuality, our discreteness. We define our own boundaries and we try to work with them. What I'm suggesting, and which is not at all novel, is that our dreaming self is organized along a different principle. Our dreaming self is more concerned with the nature of our connections with *all* others. There is some part of our being that has never forgotten a basic truth, that in our waking lives throughout history we seem to have continuously lost sight of. The history of the human race, while awake, is a history of fragmentation. It's a history of separating people and communities of people in every possible conceivable way—geographically, nationally, religiously, politically.

Our sleeping self, I am proposing, is connected with the basic truth that we're all members of a single species and that while dreaming our concerns have to do with what has happened in the course of waking experience that interferes with, damages, impedes, obstructs or enhances these connections. While asleep, we seem about to drastically alter the way we experience space and time. While awake, we move through our lives in a sequential, linear moment-by-moment fashion with a point representing birth and another point the present moment. But when we go to sleep and begin to dream we create pictures of what's going on in our psyche from a point that, in terms of space and time, seems to be outside of our waking organization. We are able to recall events going deep into our past. The amount of information that can be gathered from the past is often greater than anything we're able to recall while awake. With this information available we can project much more accurately the implications of a present concern. If parapsychological data are valid, this scanning process does not seem to be limited to the individual.

We experience the dream as a series of images that move in relation to each other and seem to develop in some kind of a sequential pattern. Where do these images come from? We have to go back and define how we look upon the