

Dream Studies and Telepathy

An Experimental Approach

Montague Ullman • Stanley Krippner

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Biographical Notes

MONTAGUE ULLMAN, M.D., is currently Director of the Maimonides Community Mental Health Center in Brooklyn, New York, and Professor of Psychiatry at the State University of New York, Downstate Medical Center.

In 1960, he initiated a research program applying the newly discovered Rapid Eye Movement dream monitoring technique to the study of the experimentally induced telepathic dream. In 1961, he gave up the private practice of psychiatry to join the full time staff of the Maimonides Medical Center where he established the Dream Laboratory.

Prior to joining the Maimonides staff, Dr. Ullman was on the psychoanalytic faculty of the New York Medical College. His writings include studies on the psychosomatic effect of hypnotic suggestion and the psychiatric aspects of strokes, as well as papers on the theoretical and physiological aspects of dreaming.

STANLEY KRIPPNER, Ph.D., has been Director of the Dream Laboratory at the Maimonides Medical Center since 1964. He also serves as Director of Research at the New York Institute for the Achievement of Human Potential. Previously, he taught at Kent State University, the University of Hawaii, and the Ontario Curriculum Institute. He is currently on the Faculty of Wagner College.

Dr. Krippner is a fellow of the American Society of Clinical Hypnosis, a member of some forty professional organizations, and a trustee of Horizon, a Canadian foundation currently investigating psychic phenomena. He is the author of over 100 articles, research reports, and chapters in collected works.

Yajnavalka came to Janaka, King of Videha.

The king asked him, "What is the light of man?"

Yajnavalka answered him, "The sun, O King. For with the sun, indeed, as his light man moveth around, goeth about his labors, and returneth."

"But when the sun hath set, Yajnavalka, what is the light of man?"

"The moon, indeed. For with the moon as his light man moveth about, performeth his labor and returneth."

"When the moon hath set, Yajnavalka, what is the light of man?"

"Fire, fire, indeed, is his light. By the fire he performeth his labor and returneth."

"When the sun hath set, the moon hath set, the fire gone out, what is the light of man?"

"The soul, indeed, is his light, man moveth about, performeth his labor and returneth."

There are for the soul two states:

One here in this world, and one in the other world. And betwixt them the state of sleep, when it seeth both those states together.

Having subdued by sleep all that belongeth to the body, sleepless itself, it looketh down upon the sleeping senses.

Leaving its lower nest in breath's protection and upward from the nest immortal soaring wherever it listeth it doth roam about the golden-pinioned swan of spirit.

It moveth in a dream state up and downward, divinely assuming many shapes and forms. Then as a falcon or an eagle, having flown about in space, exhausted, foldeth its wings and is borne to its nest. So doth the spirit haste to that state in which, asleep, it feeleth no desire and dreameth no dreams.

This is indeed its true form, free from desire, free from fear.

For as one embraced by a beloved woman knoweth not of anything without or within, so also the soul in the embrace of the Self knoweth naught without or within.

Then is a father not a father, a mother not a mother, worlds not worlds, the gods not gods.

He is not followed by good, not followed by evil.

For then he hath passed beyond all sorrows of the heart.

The Light of Man
from the Brihadaranyaka Upanishad

CONTENTS

Introduction	11
I. The Pre-REM Era	13
II. Early REM Studies	29
III. Experimental Series	65
IV. Further Explorations	89
V. Some Thoughts on the Nature of the Nocturnal Paranormal Dialogue	105

INTRODUCTION

Our purpose is to present a body of experimental data relating to the theme of telepathy and dreaming and to offer a number of theoretical propositions based on our findings. It is our hope that these formulations will serve both as a guide to future work in this area while at the same time articulating with and enriching the general field of parapsychological research.

In 1962 a Dream Laboratory was established at the Maimonides Medical Center designed to explore the problem of telepathy and dreams by means of the newly discovered Rapid Eye Movement monitoring technique. The series of formal experiments initiated and carried out in this laboratory will provide the main support for the theoretical ideas to be presented. A number of developments anteceded these experiments in the effort to move toward an effective methodology and experimental design. In reviewing these rather crude earlier endeavors it was felt that, in the light of later results, some of the findings are not without interest and possible significance.

The first of these studies was carried out before current dream monitoring techniques were available. The procedure used and the results obtained are briefly described in Chapter I. The next study was based on the use of the Rapid Eye Movement dream monitoring technique¹ and took place in a laboratory made available on the premises of the Parapsychology Foundation. Chapter II deals with the initial efforts to develop a dream-telepathy experiment based on these new physiological measures for determining dream onset and dream termination.

¹ W. Dement and N. Kleitman, "The Relation of Eye Movements during Sleep to Dream Activity: An Objective Method for the Study of Dreaming." *J. Exper. Psychol.*, 53 (1957): 339-346.

The first formal dream study, undertaken at the Maimonides laboratory in 1964, is reported in Chapter III. In 1964 Dr. Stanley Krippner became associated with the laboratory and helped launch the next experimental studies. These are presented in Chapters III and IV, illustrating the way in which the basic methodological design evolved over the course of the past several years.

The theoretical distillate of our work is summarized in Chapter V. Here attention is called to the great range and diversity of experimental approaches needed to more fully explore the parapsychological implications of our own nocturnal existence.

The authors wish to express their appreciation to the funding agencies which have made this work possible. These include the Parapsychology Foundation, the Scaife Foundation, the Ittleson Family Foundation, the J. Aron Charitable Foundation, the Shanti Foundation, and the Society for Comparative Philosophy.

The authors also wish to acknowledge their debt to Dr. Gardner Murphy for the part he played in bringing the Maimonides Dream Laboratory into being and for his constantly available help and counsel. A number of other people have made important contributions to this work from its inception. We are grateful to Mrs. Laura A. Dale for her very dedicated efforts in launching the first dream-telepathy experiment, to Dr. Karlis Osis and Mr. Douglas Dean for their help in initiating the first application of the Rapid Eye Movement monitoring technique to a dream-telepathy experiment, to Mrs. Eileen Garrett for her ready support as well as her willingness to participate in the experiment, and to the many talented people who have worked with us in the Dream Laboratory at Maimonides, sharing the excitement as well as the drudgery that work of this type often entails. We also wish to thank Miss Rhea White, Miss Virginia Glenn, Mrs. Marian A. Nester, Dr. Patricia Carrington, and Mr. Craig Ezell for their invaluable help as judges and Dr. James Schmeidler, Dr. Lee Ross, and Dr. Michael F. Capobianco for helping us solve a number of difficult statistical problems. Last, but not least, our thanks go to Miss Margaret Schneider, Miss Irene Hall, and Mrs. Hadley Smith for dedication beyond the call of duty in the preparation of all our research reports as well as the present manuscript.

Chapter I

THE PRE-REM ERA

Before describing the early efforts to devise an experimental approach to the study of telepathy and dreams it might be well to review the parapsychological scene as it existed in 1953 at the time these exploratory studies were initiated and as it concerned the possible reality of the telepathic dream. This was the period when a number of important psychiatric contributions were made which served the purpose of moving the nature of the inquiry from the level of concern with anecdotal occurrences to one which preserved the element of spontaneity but provided the additional advantages that stem from clinical exploration and understanding. These contributions also had the effect of bringing together the earlier and scattered references to the telepathic dream in the psychiatric literature into a more concerted, active and collaborative attempt to define the clinical conditions under which it occurred. Since these efforts have been extensively reviewed elsewhere,¹ we will limit ourselves here to a brief summarizing statement that may help fill the gap between the clinical and the experimental dimensions of the problem.

The findings outlined below are distilled out of the experience of one of the authors (M.U.) but appear to accord closely with the findings of other observers:

1. In the course of psychoanalytic practice many patients experienced on at least one occasion a dream that might be called presumptively telepathic. A few patients, however, appeared to have been consistent telepathic dreamers in the sense that incidents of this kind occurred often enough and strikingly enough to have become

¹ G. Devereux, ed., *Psychoanalysis and the Occult* (New York: International Universities Press, 1953).

an overtly recognized and explicit focus in the therapeutic process itself. What appears to be reflected among patients is the range and sensitivity to psi events that seem to characterize the population at large.

2. Among the important preconditions for the appearance of a telepathic dream was the existence of a genuine need on the part of the patient to reach or be in touch with the analyst under conditions where ordinary communicative channels are inoperative or where defensive maneuvers make direct contact impossible.

3. The element of anxiety often associated with the crisis-like situations either in the life of the patient or of the therapist further characterized the conditions predisposing to the occurrence of the telepathic dream. Such crises may arise in an effort to head off contact-obstructing psychological currents experienced either by the patient or by the therapist.

4. The element of interest and the recognition of the existence of these paranormal events appear to predispose and facilitate their occurrence. These are empirical observations shared by the group of psychiatrists who participated in the meetings of the Medical Section of the American Society for Psychical Research during the several years of its existence.² The mutual interest among the psychiatrists either generated more dreams of this kind or sensitized them more to detecting their occurrence. In either case there seemed to be a falling off of incidents once the Medical Section was disbanded.

5. Even among the consistent telepathic dreamers it was difficult, if not impossible, to foretell in advance the nature of the target material that would be selected for incorporation into the telepathic dream. What was obvious, however, was the fact that the target material selected could and did lend itself to the kind of metaphorical expression of internal dynamics that characterizes dreaming generally.

6. Certain characterologic features emerged in connection with the group designated as consistent telepathic dreamers. They were largely a group which felt alienated both from themselves and from other people. Besides a high degree of explication of intellectual ideas, they were severely handicapped in their ability to use language as a vehicle for establishing emotional closeness.

It should also be noted that 1953 represented the pre-REM experimental phase in our understanding of dream physiology. There

² 1948-1954.

were available electroencephalographic studies of changes in sleep patterns throughout the night and there was some speculation that perhaps dreams occurred during periods of lighter sleep, but these conjectures were not tied down to experimental data.

Early in 1953, one of the authors (M.U.), working in collaboration with Mrs. Laura A. Dale of the American Society for Psychical Research, developed a plan to explore the possible use of auditory stimuli delivered during the night to the sleeping individuals in the hope that this might serve as a common K-object³ helping to facilitate or elicit a shared telepathic experience. It was felt that the introduction of an auditory stimulus of this kind, coinciding in time for each of the sleepers, might precipitate a dream having certain elements which, when analyzed, would contain a higher yield of telepathic effects than would otherwise occur. This expectation rested on the following theoretical considerations:

1. The stimulus in the case of both agent and percipient, or, if so desired, in the case of either, could be introduced in relation to dissociated states occurring in the case of either or both.

2. The method further seemed to offer a means of embellishing Carington's hypothesis of the K-idea by introducing the K-object in the form of an auditory stimulus simultaneously experienced by both agent and percipient.

3. Both the stimulus in the form of the auditory sound and the response in the form of the dream would be occurring under conditions in which interference by conscious mechanisms would be nil. The response in the form of a dream presents the possibility of the individual registering aspects of his experience which are not clearly in consciousness.

The design could take advantage of any possible facilitating influence created by the auditory stimuli through repetitive trials.

The instrument used in the experiment was known commercially as the "Memory Trainer"⁴ (Figure 1). It was made up of an electric clock in circuit with a two-minute tape cartridge. The clock could be pre-set to go off at a designated time during the night,

³ A term devised by Whately Carington to denote an idea or object shared between subject and agent and thought to facilitate telepathic transfer. (W. Carington, *Thought Transference*. New York: Creative Age press, 1946.)

⁴ The machine was made available to us through Modernophone, Inc., New York City.

on the quarter hour. The message that had been previously recorded on the tape would then play automatically for 15 minutes unless the machine was turned off. An under-pillow microphone and a handy volume control make it possible to regulate the volume so that the sound remains audible but not so loud as to necessarily awaken the sleeper. Both experimenters (M.U. and L.A.D.) were provided with an instrument. The respective homes of the experimenters were approximately 20 miles apart.

A number of procedures were employed involving variations in the nature and content of the shared auditory stimulus, variations in the time at which the stimulus went off and variations in terms of who would attempt to assume the agent role by having his or her voice appear on the tape giving instructions to the subject. The machine was not in use for about half of the experimental nights. The work extended over two different time periods, the first from December 1953 to June 1954 and the second from March to July 1955. L.A.D. and M.U. met at planned intervals, generally at the end of a week on a Friday, and compared their results. Records of the dreams were kept by both as well as daily diary notes which were to include everything significant, unusual or affect-laden. On the rare occasions where L.A.D. and M.U. had any contact other than the planned meeting, accurate notes were taken as to what happened.

On Friday the results of the previous week were reviewed by L.A.D. and M.U. at the home of M.U. The dreams of each participant were compared with the other and with the recorded diary notes of the other. At times, a dream seemed to have relevance to events experienced but not recorded. In these instances the events were recorded in longhand at the time the material was being compared and were noted on the typed record page along with the date they were recorded.

Dreams were rated as significant in terms of paranormal content by agreement of both investigators, the judgment being based on

- 1) the non-inferential nature of the paranormal content noted,
- 2) the time-interval between the corresponding events, and
- 3) the existence of correspondences based on manifest content rather than symbolic references.

Over a period of 243 experimental sessions the incidence of dream reports for each investigator was as follows:

L.A.D.

Total number of dreams recorded	283
Number of dreams recorded on stimulus mornings (122 mornings)	163
Number of dreams recorded on non-stimulus mornings (121 mornings)	120
Number of dreams per stimulus morning	1.34
Number of dreams per non-stimulus morning	.99

M.U.

Total number of dreams recorded	218
Number of dreams recorded on stimulus mornings (124) mornings)	129
Number of dreams recorded on non-stimulus mornings (118 mornings)	89
Number of dreams per stimulus morning	1.04
Number of dreams per non-stimulus morning	.75

Combined Totals

Total number of dreams recorded (L.A.D. and M.U.)	501
Number of dreams recorded on stimulus mornings	292
Number of dreams recorded on non-stimulus mornings	209
Number of stimulus mornings	246
Number of non-stimulus mornings	239
Number of dreams per stimulus morning	1.19
Number of dreams per non-stimulus morning	.87
Number of dreams rated as significant	58
Number of significant dreams occurring on stimulus mornings	45
Number of significant dreams occurring on non-stimulus mornings	13

When the ratio of dreams occurring on stimulus mornings (292) to the number of stimulus mornings (246) is compared to the ratio of dreams occurring on non-stimulus mornings (209) to the number of non-stimulus mornings (239) it can be seen that the former is only slightly higher. The dreams regarded as significant (45 out of 58), however, occur far more frequently in relation to stimulus mornings than non-stimulus mornings. This finding in itself sheds no light on whether this is a direct effect of the stimulus itself or an indirect effect due to related psychological variables.

The following examples are drawn from the two-year period over which this study was conducted. They will serve to illustrate the variety of responses that were felt to be of possible significance.

EXAMPLE 1. Correspondence between dream (L.A.D.) and association (M.U.):

Date: Monday, December 14, 1953.

Auditory stimulus: Tape prepared by M.U. contains nonsense syllable (ZIVID)⁵ followed by command to remember and record the dream upon awakening in the morning. This is repeated 8 times in 15-minute intervals.

Time: 3 A.M.

Dream: L.A.D.

I was on a friend's lawn and a man came to plant some ever-green trees. He had a wooden board and bored holes⁶ in it to represent where the trees should go—their spacing. He said to me that his eye used to be better and he could plant direct, but now he had to measure if he wanted to be sure of getting the trees in the right places.

Diary Note: M.U.

Note: Sunday, Dec. 13th building bird houses with Billy.⁷ Later saw his performance at school and during performance had reverie of how to build drinking fountain for the birds. Thought of drilling three holes in the play-house in front of the house and putting plastic screw containers in them.

EXAMPLE 2. Correspondence between dream (L.A.D.) and reality event in the life of Mrs. M.U.:

Date: Wednesday, January 13, 1954.

Non-stimulus morning.

Dream: L.A.D.

Had terribly vivid impression that upper left molar was loose. I

Reality Event: Mrs. M.U.

On Tuesday night, January 13th, Janet (Mrs. M.U.) had inad-

⁵ Nonsense syllables were used as K-objects in order to eliminate possible spurious correlations between the dreams of L.A.D. and M.U. based on parallel associations evoked by the use of a meaningful stimulus.

⁶ See Figure 2 for a comparison of the drawings made by L.A.D. and M.U. at the time they reviewed the material to show the relationship of the holes bored in the wood in the two instances.

⁷ M.U.'s son.

Dream: L.A.D.

wiggled it as a child does with thumb and forefinger and finally it came out. Could feel the hole with my tongue and taste the blood. Very real.

Reality Event: Mrs. M.U.

vertently left a bridge with one tooth in the bathroom. M.U. had found it on the wash basin and had taken it to her. It was a left lower tooth.

EXAMPLE 3. Correspondence between dream (M.U.) and diary note (L.A.D.):

Date: Friday, January 29, 1954.

Auditory stimulus: Nonsense syllable (TAJ) followed by command by M.U. to recall dreams upon awakening.

Time: 3 A.M.

Dream: M.U.

Heard the stimulus. Awoke in the morning with a fragment, which was simply of two men in liveried uniform in the foreground and the vague picture of a woman in the background.

Diary Note: L.A.D.

(recorded after learning of (M.U.'s dream)

On Thursday night, January 28th, I went to the Sports Car Show. Two out of the many cars there impressed me deeply. One was an exquisite Rolls Royce valued at \$30,000. Attending it were a liveried chauffeur and footman. I talked with them and they invited me to inspect the interior of the car. The other car I liked was a little Anglia, valued at \$1300.

EXAMPLE 4. Example of possible precognitive dream (M.U.):

Date: Thursday, February 11, 1954.

Conditions: Same as in Example 3.

Dream: M.U.

I was going to take an exam in psychology at 10 o'clock and had arranged for a taxi to pick me up at 10 minutes to 10. The scene shifted and I was in my car. A child named Jane Morey jumped

Reality Event: M.U.

The child in the dream is the daughter of a physician friend and neighbor. She was involved in an auto accident 15 days after the dream. At my request her father provided me with the fol-

Dream: M.U.

from the top of the car and injured her head. She had a depressed fracture of the skull. The next scene unusually long. There was some question about influence being used to make the exam easier. The exam was held elsewhere and I hoped there was time to get there.

Reality Event: M.U.

following written description of the accident:

"It occurred on Fort Hill Road at our driveway at 6:10 P.M. (Sat.) on 2/27/54. Janie was returning home from a friend's birthday party and was being driven home by the father of another friend. Instead of turning into our driveway to let her out of his car, the father pulled his car to the side of the road opposite our driveway entrance and Jane got out and walked in back of the car to cross the road. A car coming in the opposite direction (and at this point the road curves, so that she was relatively hidden from view by both the curve and the parked car) struck her. She must have seen it coming, because she says she tried to jump back out of the way, and in doing this, she jumped with the right leg in a sideways manner, throwing the left leg out to balance herself. The car apparently hit her left leg just above the heel. She had fractures of both tibia and fibula about 3-4 inches above the ankle, with the tibia compounding posteriorly through the skin. This compounding severely injured the soft tissue in back of the bone, including tibial nerves. Other than minor contusions on her thigh and hip where she fell to the ground, there were no other injuries. She's much better now, although her limp is with her yet."

EXAMPLE 5. Possible precognitive dream (M.U.):

Date: Monday, March 22, 1954.

Auditory stimulus: L.A.D.'s voice on M.U.'s tape and vice versa,
each giving command to recall dreams upon awakening.

Time: 4 A.M.

Dream: M.U.

Someone discovered a snake on the golf course. There was a discussion of the use of a forked stick in catching it. Then someone had bashed the snake's head into the ground and all one could see were the two holes where the teeth had disappeared.

Reality Event: M.U.

M.U. noted the following newspaper account reported in the *New York Post* on this date (March 23, 1954):

SNAKE HANDLER KILLED BY
RATTLER

Waco, Tex. March 22 (AP) A 4½-foot rattler killed a veteran snake hunter who once called fear of snakes "nonsense." J. Ed. Johnson, Jr., an authority on reptiles who long had watched the habits of the deadly rattler, died in a hospital here last night 6 hours and 15 minutes after the rattlesnake sank its fangs into his hand.

It happened as Johnson and two friends hunted snakes in the Barzos River bottomlands, 30 miles south of here. He was Waco's city comptroller but had gained note as an expert on reptiles. Johnson had tracked snakes more than 30 of his 48 years. He had shipped thousands of reptiles to museums.

He was a member of the American Society of Ichthyologists and Herpetologists, The Texas Herpetological League and other similar associations. Herpetology is the study of reptiles. Johnson once said "fear of snakes is nonsense." "They won't bother you if you won't bother them," he

Reality Event: M.U.

said. "Remember, they're afraid of you, too."

But in hunting snakes, he warned, never do it alone. "Too dangerous." Yesterday, Johnson and his two companions spotted four rattlers—all more than four feet long—in a deep ravine. One rattler was behind a rock. John Sparks pinned it down. As Johnson started to slip a loop over its head, the snake sprang free and bit Johnson on the back of his hand. He jerked away with such force the fangs stuck in the flesh. As Sparks killed the snake with a rock, Johnson pulled the fangs out. They cut the wound and put a suction cup on it to draw the venom out.

The ravine was so deep and dirt along its sides so loose the two friends couldn't get Johnson out. One went for help. It was 2 hours and 15 minutes before Johnson reached the hospital.

He once said, "I like people, but snakes are more interesting."

Interestingly enough, on the same night that M.U. had the above dream, Mrs. Dale noted the following dream:

Someone spoke of George Brown and said he was interested in some kind of toads.

EXAMPLE 6. This appears to be a brief but rather striking correspondence between the dreams of L.A.D. and M.U.:

Date: March 25, 1954.

Conditions: Same as in Example 5.

Dream: L.A.D.

Someone (me?) was screaming and screaming for help.

Dream: M.U.

There was someone like Saul standing in the background. I was reading a musical score. I suddenly said in surprise, "This score spells out terror!" I awoke with a very disagreeable feeling.

EXAMPLE 7. Another example of a possible relationship between dreams of L.A.D. and M.U.:

Date: May 16, 1954.

No stimulus used.

Dream: L.A.D.

Upon awakening, recalled having had dream of a clear-cut sexual nature concerning H., but no details remembered.

Dream: M.U.

Dreamed had sexual intercourse three times with B., but the third time was a failure.

EXAMPLE 8. Example in which a dream of L.A.D. seems to relate to both the dream of M.U. and his diary note:

Date: June 14, 1954.

Conditions: Similar to Example 5 but with tapes set to go off before retiring and at 2 A.M.

Dream: L.A.D.

Horrible nightmare: A baby's arm had been amputated. It was dried and in a leather case. My arm was to be amputated and grafted on to the baby and the baby's dried arm was to be grafted on to me. I was assured that this arm would grow normally and so I was willing to permit the operation. But the physician started to cut my arm without giving me an anesthetic. I screamed and fought and yelled for an anesthetic and woke up in a sweat of fright.

Dream: M.U.

Patient named B. seemed to be telling the story. It involved a scheduled event. It had to do with a robbery or a shooting. A white pad was involved. I was unsure as to whether or not it had occurred.

Note: B. was a psychotic patient who suicided during pregnancy as a consequence of an absolute inability to decide whether or not to have the pregnancy terminated by a therapeutic abortion. On one

Dream: M.U.

occasion, after giving consent for the procedure she changed her mind after being brought to the operating room.

Diary Notes

L. returned from the hospital and I saw her.

Note: L. is a neighbor who at the time was going through a psychotic episode. She developed a functional paralysis of both lower limbs, and in the course of several weeks began to show contractures and atrophic disturbances. On Sunday evening, the night before L.A.D.'s dream, she had urged me to amputate both her legs with an axe. She also confided in me that she had thoughts of violence toward her children.

EXAMPLE 9. In this example a dream of L.A.D. appears to relate to two dreams M.U. experienced on two successive nights.

Date: June 15, 1954.

Conditions: Same as in Example 8.

Dream: L.A.D.

Something about being in a summer resort—small hotel or boarding house—Atlantic City?

Dream: M.U., June 15, 1954

Something about being on a beach. I was with somebody, perhaps Janet's Uncle Bernard, and watching a couple. He was going to make a sketch of Lincoln by copying a man's profile. Then I had a better idea—he could copy the stone carving of Lincoln's face.

Dream: M.U., June 16 1954

I was walking on a boardwalk. I saw a new extension to it which is not in line with the old, but cuts through a different section of houses, and at an angle.

EXAMPLE 10. A dream of L.A.D. about a tooth again seems to relate to a diary note of M.U. involving Mrs. U. and a tooth:

Date: April 26, 1955.

Conditions: Similar to Example 5 with tape set to go off one half hour after retiring and at 5 A.M.

Dream: L.A.D.

A big gold inlay in my right lower molar came out. I went back to a cabin where I was staying, looked into the bathroom mirror and jammed the inlay back into the cavity. I noticed that someone had started to clean up the sink and had left it all covered with Bon Ami scrubbing powder.

Diary Note: M.U.

Janet was in great pain following the preparation of her front tooth for a crown. Part of the temporary covering had broken off. She had had novocaine that afternoon.

EXAMPLE 11. Two dreams of L.A.D., the first relating to a diary note of M.U., the second relating to another diary note entered on the previous day:

Date: June 19, 1955.

Conditions: L.A.D.'s tape was prepared by M.U. on the evening of June 14th as follows: "Laura, you will continue to sleep and hear what I say now in your sleep. Each night I shall add to my tape a few words referring to a significant event of the day. As new stimulus words are added, the old of course will be repeated. You will, by the end of the week, have grasped the meaning of all seven incidents referred to. These incidents will be reflected in your dreams." This was set to go off at 4 A.M.

Dream: L.A.D.

I was a guest in a very swell house. I was sitting in the kitchen with my brother. A gay party was going on upstairs and all the maids were there. My brother had not been invited to this party and I said he had better leave before the maids came down and found him there. He left. I dropped some trays of food on the floor, then I cleaned up the mess. A maid came down and was surprised I was in the kitchen instead of at the party.

I landed in a tiny airplane in a small field. Someone in an adjoining field was running very fast and yelling that he couldn't stop.

Diary Note: M.U.

Successful party here. The words "successful party" were dictated on M.U.'s tape that night (June 18th).

Worried over acceleration of car. Called Packard Co.

(The above was a diary entry on June 17th and referred to difficulty in controlling the car in gear when gas was not being fed.)

DISCUSSION

The findings described stem from experimental work initiated several years ago, and intended as an exploratory study. Although the design was neither rigorous nor objective, both participants were left with the subjective sense of having established contact in a paranormal way through the dream experience. This was an occasional and an unpredictable occurrence and involved about ten per cent of the combined total number of dreams of the two participants. Although most of the dreams rated as significant appear as telepathic, a few of them as noted in several of the examples given, seem to have contained precognitive elements.

There were many more instances of L.A.D.'s dreams relating to events in M.U.'s life than the reverse, and in that sense she seems to have been the subject and M.U. the agent. On occasion, as in Example 10, a dream of L.A.D. would have reference to events occurring in M.U.'s life on successive days. Several times, more than one significant dream occurred on a single evening (Example 11).

Another finding of interest, inasmuch as it continued to occur

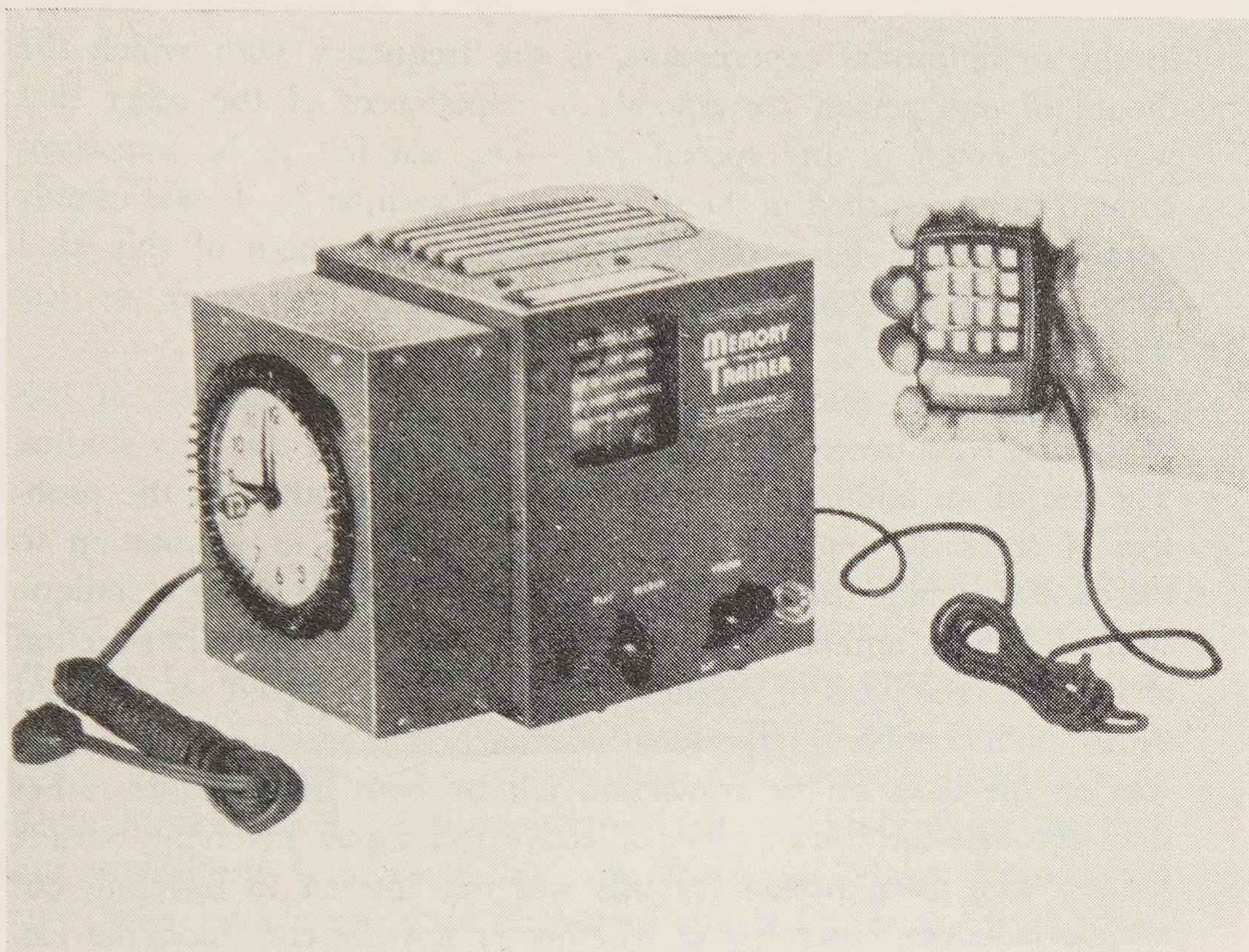
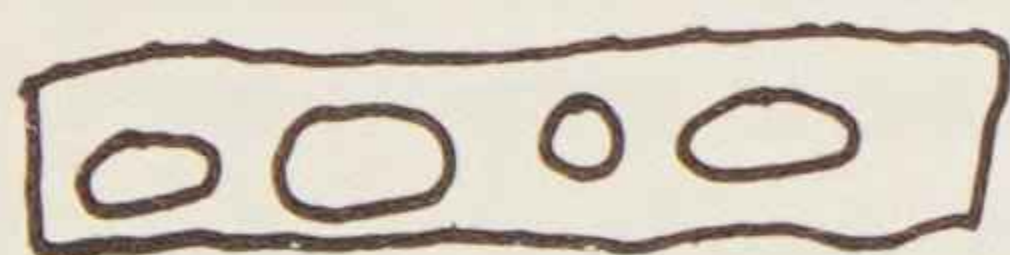


FIGURE 1



Drawing by
L.A.D.



Drawing by
M.U.

FIGURE 2

in the more formal experiments, is the frequency with which the dream of one person corresponds to experiences of the other that were not noted in any special way—i.e., not felt to be important enough to be recorded in the diary (as in Example 2). It was usually possible to make sense out of incidental occurrences of this kind when the motivational pattern of the dream was more or less transparent.

There were many limitations in the techniques used in this study that were overcome through design changes in the later studies. The use of an auditory stimulus was associated both with the problem of threshold intensity and with the problem of adaptation to the same stimulus used repetitively. The use of the diary technique suffered from a number of faults having to do with arbitrary selection of items on the basis of recency as well as choice based on personal rather than possible interpersonal relevance. The assessment of results was on the basis of the conviction felt by both investigators rather than through the use of more objective techniques involving outside judges. The main reason for this was our interest in ferreting out correspondences, regardless of whether or not the corresponding elements were noted in writing before L.A.D. and M.U. met to check their results. Although this limited the evidential value of the results and constituted the main reason why they were not published at the time, they in no way limit the heuristic importance these early efforts had for the more formal investigations that followed.

Chapter II

EARLY REM STUDIES

Periodically throughout the night, episodes of dreaming occur lasting from a few minutes to over a half hour. Reports calling attention to this fact emerged from the physiological laboratories of the University of Chicago in a series of reports first appearing in 1953.¹ This important research resulted in a dramatic breakthrough in our knowledge of the sleep-waking cycle, establishing for the first time significant normative data on dreaming. Many laboratories have been established since then and much financial support has been mobilized to explore in this new way the psychological parameters of our own nocturnal existence. Answers to very basic questions about dreaming, such as frequency of color in dreams, variations in illness and health, or effects of drugs, began to emerge from the laboratory. The answers were, for the first time, firmly grounded in substantive data rather than speculation, intuition, or elaborate clinical formulations based on the recall of an insignificant proportion of the total dream experience.

As might be expected, the new data raised more questions than they answered and it soon became apparent that the relationship of sleep and dreams was anything but a simple affair and that a number of puzzling and paradoxical features characterized the seemingly quiescent sleeping organism. In the first place, the periods of dreaming are periods of high activation of the cortex and certain autonomic centers. The cortex is actually in a state of more global excitation during dreaming than while awake. Breathing becomes irregular, the pulse more rapid. Characteristically, the eyes go into rapid conjugate

¹ E. Aserinsky and N. Kleitman, "Regularly Occurring Periods of Eye Motility, and Concomitant Phenomena during Sleep," *Science*, 118 (1953): 273-274.

movements somewhat resembling sudden scanning movements. Along with these features suggesting a state of high arousal, tonus is lost in certain muscle groups, notably the neck, and the organism is less responsive to outside stimuli. The dreamer appears to be more actively engaged with himself and less actively engaged with the outside world. The onset, duration and termination of these states, as well as the patterning of their occurrence throughout the night, are subject to a physiological controlling mechanism. The regularity, universality and the onset at birth of the dreaming pattern appear to invalidate early psychoanalytic theories which stressed the role of conflict in initiating dreams and in accounting for their purposes and meaning. We seem to possess an internal scanning mechanism that comes into being with clock-like regularity at times when the organism is most deeply asleep and which appears capable of offering up to view our current concerns and problems in a moving and changing sequence of visual metaphors. Residual emotional loose ends from the day before seem to pry open vulnerable areas. These in turn link up with historically antecedent but related experiences, and somewhere out of the pool of existing assets and liabilities there is a movement toward a resolution in terms of exposure, confrontation, awareness and growth or denial, evasion and self-deception.

These new findings were just beginning to make an impact upon the scientific world in 1960 when it occurred to one of the authors (M.U.) to explore the possibilities these new approaches might have to offer for parapsychological research. It was with this in mind that grant support was solicited and obtained from the Parapsychology Foundation for the application of the Rapid Eye Movement technique for the monitoring of sleep and dreams to a study of the telepathic dream. These studies were carried out on the premises of the Parapsychology Foundation with experimental sessions taking place about once every two weeks and extending over a period of a year and a half.

The specific goal of these early studies was to explore the feasibility of using the Rapid Eye Movement monitoring technique in an experiment designed to elicit extrasensory effects in the manifest dream content of a sleeping subject by focusing an agent's attention on target material prior to and at the time dreaming states occurred in the subject. This approach sought to link two empirically demonstrable observations, namely, the well-known facilitating in-

fluence of dissociated states on paranormal phenomena and the phenomenon of dreaming, considered as a spontaneous, recurrent, functionally normal dissociated state. The availability of a physiological monitoring system enabled us to explore this relationship in a more consistent and thoroughgoing way by freeing us from the vicissitudes of spontaneous dream recall and insuring instead a near total yield of the night's dreams.

GENERAL PROCEDURE

Collaborating with M.U. in the carrying out of the experiment were Dr. Karlis Osis and Mr. Douglas Dean, both of the Parapsychology Foundation staff, and Mr. Jerry Levin, an EEG technician. Two rooms were used at the Research Laboratory at the Parapsychology Foundation (Figure 1), one (Room A) for the subject and the other (Room B) for the EEG Medcraft four-channel recorder. The agent (or "sender") and the EEG technician (or experimenter, *E*) remained in Room B once the subject had fallen asleep. Subjects, with a few exceptions to be described later, were chosen who were well known to us and who had a history of ESP. The subject (*S*) arrived close to his normal bedtime, usually between 10:30 P.M. and 12:00 midnight. Seven electrodes were attached to the subject's head with electoplast or collodion using Cambridge electrode jelly. The seven electrodes included two eye canthi, one frontal, one parietal, two ear reference electrodes and one ground. The seven wires ran in an easily carried bundle to the plug box from which a wire ran through the wall to the machine.

At this time the intercom was tested for the purpose of introducing *S* to the method of awakening. He was called by his first name and asked what he had been dreaming. A microphone close to the bed and an extension cord carried his reply to the tape recorder set up in the EEG room (Room B.) Frontal and parietal channels indicated the various stages of sleep (Stages I through IV) while the eye leads registered horizontal eye movements. *S* generally returned to Stage I sleep one to two hours after falling asleep. The targets were then viewed by the agent (*A*). *S* was awakened at the termination of each dreaming episode and asked to report his dreams. Such awakening occurred from three to seven times nightly.

A variety of targets were used on different occasions. These

included freehand sketches made after *S* had gone to sleep, pictures selected from magazines or books, Viewmaster reels, three-dimensional objects and strips of 8 mm. motion pictures. When pictures were used as targets, eight to ten were generally prepared by Dr. Osis. They were sealed in a manila envelope and were unknown to anyone participating in the experiment on the night they were used. *A* choose one by random selection.

Although reasonable precautions were taken to exclude sensory cueing between *A* and *S*, they were by no means as rigorous and as stringent as in the formal experiments later carried out at Maimonides, nor was any effort made to quantify the data, our interest centering about the development of the technique itself and the observation of gross target-dream correspondences.

Mrs. Garrett was the first *S* to participate in the experiment. She was studied for a total of three nights. Other *Ss* were chosen from the files of the Parapsychology Foundation or were friends or colleagues of M.U. A number of examples, drawn from the two-year period this work was in progress, illustrate the range of target material used and the ways in which correspondences occurred.

EXPERIMENTAL SESSIONS WITH MRS. GARRETT

EXAMPLE 1.

S: Eileen J. Garrett.

Date: June 6, 1960.

A set of three pictures, cut from a copy of *Life* magazine, were selected by Dr. Osis as the targets. These were turned over to Mrs. Garrett's secretary, Miss Davison, at 4:00 P.M. on the day the experiment was to take place, with the instructions that she was to take them home and await a call from the laboratory between 10:30 and 11:00 P.M. before opening the envelopes containing the pictures.

Mrs. Garrett arrived at 7:45 P.M. with the intention of leaving before midnight on this first attempt. She described her sleep pattern as involving intermittent catnaps and this was borne out in the electroencephalographic tracing. At no point did the EEG indicate a depth of sleep greater than Stage II and, in fact, there were no indications from the record of any clearly demarcated period of dreaming. Since neither of the two *Es*, M.U. and Mr. Dean, felt

that the procedure was working successfully, the call was not put through to Miss Davison and she did not look at the target pictures that evening. At 11:00 P.M., M.U. alone interviewed Mrs. Garrett and was surprised to learn that she recalled having had a dream. *She described an image of horses going uphill. She spontaneously associated the image with a recent visit to the movie Ben-Hur, which she had seen two weeks before.* One of the three pictures selected as targets was actually a color photo of the chariot race taken from an advertisement for Ben-Hur. At the time M.U. did not know this was the target picture and therefore did not know of the correspondence between dream and target until the material was reviewed with Osis and Dean two weeks later.

Comment: Although this session suffered from certain obvious defects, since it was the first trial run and not well controlled, the correspondence (note italicized passage above) taken at face value was strikingly direct.

EXAMPLE 2.

S: Eileen J. Garrett.

Date: October 19, 1960.

On this occasion Mrs. Garrett spent the night at the Laboratory and reported a total of six dreaming episodes. M.U. served as A. Correspondences involving M.U. were noted in Dreams 1 and 5.

1:45 A.M. First dream reported:

"Oh, I was talking. . . . *I wanted to tell you, to tell you to telephone your brother* and I could not find you. *I was talking to your brother—it seemed in the dream that it was your brother* I was wanting you to telephone and his—about Joe's mother, and something to do with the hospital and then I couldn't see where you were so I found myself going, going to a picture—*I went to see him, I went to see a Roman picture, I think it is Roman,* I didn't see it—really; *I think that Spartacus was the thing that I was going to see.* But I never went inside; *I was standing on the outside looking at pictures of Roman soldiers—Roman invasion.* I don't know why I didn't go in; and I don't know why I left that place to see where you were and if you went to the telephone. I think that is all."

Comment: Reference to M.U.'s brother: At the time of the experi-

ment, Mrs. Garrett did not know M.U. had a brother. However, when the dream was discussed with her the following morning, she added an important sequence: "Oh, yes, Monte, before I walked on Broadway, I wanted to draw your attention to the fact that you should telephone your brother. That he expected a telephone call, yet I don't even know if you have a brother or not, and *he was a much bigger man than you and older and I wouldn't have said looking at him that he looked like your brother at all. I'd say he was a heavier man and I would have said that he had, you know a more red face. Good looking, bright and ah—he was an amusing fellow, but not at all like you in any kind of way.* But he seemed to feel that you should have called him and I had to say Monte—please call your brother."

M.U.'s brother is bigger, and although younger, is bald and heavier. He is good-looking and bright but is very unlike M.U. in looks, appearance, manner and interests.

Comment: Reference to Spartacus: On listening to the dream, M.U. recalled thinking of Howard Fast, author of the book *Spartacus*, during the half hour preceding the awakening. At 12:00 midnight he drew several variations of the crucifix-like figure shown in Figure 2.

During the half hour preceding the awakening, the associations of M.U. related to Spartacus, the slave revolt he led, and the possible connection of the above image with the crucifixion. Mrs. Garrett added the following associations to this part of her dream in the morning:

"And I saw Spartacus, I haven't seen the film and I got a whole host of Roman soldiers, and I don't think that I was looking at any kind of advertising. I think I actually was looking at a scene in Spartacus, which again I must say I haven't seen and would like to now, of the great host of Roman soldiers in training as though they were talking over walking in or taking over a character."

1:47 A.M.—The target envelope was opened by M.U. It contained a black and white photograph of a young doctor examining a patient seated on an examining table. (Unfortunately this picture is no longer available for reproduction.) After opening the envelope,

M.U. produced a series of freehand sketches incorporating images from both the Spartacus associations and the medical associations connected with the target picture. Figure 3, showing a sword and a stethoscope, was drawn at 2:50 A.M.

4:30 A.M. Fifth dream reported:

"I saw several pictures of the United Nations but I think that might be due to the fact that *I saw my doctor yesterday and he was at the Olympic Games; we talked about the Olympic Games and Rome* and then he talked about going to the United Nations, so maybe that's all connected with him.

"*Then I saw a picture of two men and they were swordsmen but that again may be something to do with him because he is a fencer. Mostly I saw a series of pictures of the Olympic Games and they were awfully pretty and attractive. They were in color. And then the last picture was just Tokyo, 1961, which I think was connected with the Olympic Games. And that's all I can recall on that.*"

Comment: Mrs. Garrett in her dream seems to have combined the disparate images noted in Figure 5 in the person of a doctor who is also a fencer. There is also a reference to Rome as well as the image of two swordsmen.

EXAMPLE 3.

S: Eileen J. Garrett.

Date: October 19, 1960.

Mrs. Garrett had a total of five dreaming episodes, two of which related to the target picture, and one to an outside event that subsequently proved to be of considerable interest. Correspondences to this event in Mrs. Garrett's dream are italicized. The sequence was as follows:

11:32 P.M., onset of the experiment. The target was chosen from six pictures in sealed envelopes by a die throw. However, the envelope was not opened at the beginning of the session. Instead, M.U. drew the series of freehand images shown in Figure 4.

1:00 A.M., target envelope opened. It contained a photograph of what appeared to be a golden metallic Indian mask (Figure 5)

with the face heavily lined and three small decorative circles on top of the head. M.U. was surprised at the appearance of these circles as he had, prior to opening the target, and never having seen the target before, drawn four sketches, each containing three circles.

3:10 A.M. Third dream reported:

"Oh, I must remember this one. *I was talking to Whately Carington, of all people, and he told me to write to Hedda Carington. Oh dear, Hedda Carington. Then he showed me something about papers of his, I couldn't make out where they were. And then I thought he showed me a picture and it looked as though I was looking at some hills but they looked as though they were in Scotland.* And first I saw a lot of animals, sheep and a sheep dog. Then I wandered away and turned around and saw a group of people and they seemed to be singing, making a noise, anyway. But in all that I lost contact with Carington. So I must try and remember to write to Hedda Carington. Isn't that funny?" (S was asked "Is that the whole dream?") "I don't know, I got Fraser Nicol all mixed up in it. I can't think. Fraser had to do something but I do not know what, Monte." (S was told "Go back to sleep.") "Would you remind me about Hedda Carington if I forget it?" ("Yes") "Thank you."

Comment: In the week following the experiment, Mrs. Garrett had two subsequent dreams about Whately Carington. She was considerably perturbed about the matter and after the second dream wrote to Mrs. Carington. Her account of the three dreams dated November 2, 1960, follows:

"At 5:00 A.M. this morning, I had another dream of Whately Carington. This is the third. On Sunday morning, October 30th, I was awakened by what seemed in the dream to be his actual presence. He reproached me that I had not written to his wife as I had promised to do in the dream recorded a week previously in an experiment with Dr. Montague Ullman.

"In the first dream, I remember that he talked of manuscripts and papers of his which had evidently not been dealt with. I would not say that he said they were lost, but he did seem confused as to their whereabouts, and he suggested that I must write to his wife Hedda, and he mentioned that Fraser Nicol had something to do with the manuscripts. He did not say Fraser Nicol—he simply said Fraser. I concluded that Mr. Nicol must have known Mr. Carington.

"The second dream episode happened when I slept at Mount Vernon, again at 5:00 A.M. when I am nearly always waking up. I then had a very vivid feeling of seeing him in the dream—tall, gaunt and very thin—not so confused this time, but seemingly aware that I had not written his wife. He did not give me any precise instructions for his wife, but still had manuscripts that had not been got together on his mind.

"The third dream may have been due to the fact that, having taken the second episode seriously, I hastened to write to Mrs. Carington on November 1st, telling her that I had had these visitations, and asking her if she could elucidate why Mr. Carington was so disturbed about his manuscripts. I inquired as to whether she had any of his papers. This third dream may have arisen from a rather mixed-up dream night, when I seemed to be barely sleeping but sifting many experiences through my mind. As the Research Department well knows, I do this often. I had promised Fraser Nicol that I would try to find out from Mr. Carington some indication of what troubled him, and which particular paper he sought. At the same time, I seemed to know what he was saying, but the most that I can remember on awakening was that he talked rather quickly and precisely about 'an extended approach to communication, structured and newly related systems.' I have not been able to recall any more about the dream."

Mrs. Garrett's letter to Mrs. Carington follows:

Dear Mrs. Carington:

I suppose I should have written you long ago, but now I have to write and inquire about your health, and what has happened with you. Let me explain: I have been doing some encephalographic dream experiments here in my own laboratory with Dr. Karlis Osis and Mr. Douglas Dean, his assistant. Although I have never seen your husband, I knew in the dream he was present. He appeared to reproach me for not having written you, or kept in contact with you. He seemed to be searching for some manuscripts, and told me that you had some of his still unpublished. In the dream I promised to write to you. This happened last week, Wednesday, October 26. I had wanted to write you immediately, but the amount of work which I have had to undertake since my return from Europe quite recently, prevented me. This Sunday morning, October 30th, I had another dream in which Mr. Carington was very obviously present, and appeared to know that I had not written you. In the previous dream, he had mentioned Fraser Nicol as knowing something about his manuscripts, but in Sunday's dream he

was a little impatient with me for not having written you. He still seemed in the mood to collect all his papers. The dream was so exceedingly vivid, and when I described the personality of the entity to Fraser Nicol, he assured me that it was Whately Carington. I am, therefore, hurrying to write you to find out if all is well with you, and if you have manuscripts and papers of his that should have been published. This seems to be quite important to him.

I would appreciate hearing from you as soon as possible, and I do sincerely hope that you continue well, and that you have good news of your family.

Very sincerely yours,
Eileen J. Garrett

Through this correspondence Mrs. Garrett learned that Carington's widow was in fact in a very bad state. She was ill and in difficult financial circumstances. Mrs. Garrett arranged for her to be hospitalized, helped in straightening out her general affairs, and arranged for Carington's papers to be sent to the Foundation. Mrs. Garrett had not known of Fraser Nicol's close relationship with Whately Carington nor the fact that he was present at his death, but discovered both pieces of data through subsequent correspondence.

4:17 A.M. Fourth dream reported (the target was still the golden metallic Indian mask):

"This woman you must know, connected with this man, and she hasn't been well. Oh, yes, you can identify him, because this seemed to be very important. He must be very fond of abstract pictures or else it is the lady who has been, about whom he is worried, who paints. But in his office there are several abstracts, and one of them is fascinating because it is a kind of three-dimensional picture. You feel you have to go, there is a small door and then you feel the stairs are on the outside. *It has a Mexican look to it*, but you do feel it's very abstract. It has browns and dull reds in it. But he must be very fond of this type of art because there are several pictures and *there is one that looks as though it were a sunburst. There is a lot of yellow in it*, but they're not Picasso-like at all, and they're not Daliesque. They're nothing like that. They have a deep and nonobjective look to them. I am sure they mean something very real to him. I think he is very talented and I know in the dream *I was very struck by the three pictures. One Mexican-looking, one sunburst*, and then there was one which seemed to have two figures

and *their faces were slightly distorted as though they had just fallen down tired and were kind of sleeping*. I don't know how I found myself in his room—there was *something gold* or fine and the name Arthur. You talked of Arthur. You talked of Arthur to me. But surely he has the wonderful pictures. And surely he is going to get some relief about the lady whose condition troubles him so much. And all that, it seems to me, has to do with the throat, larynx, and that region of the body. I don't know, I wish I could re-identify him for you. What did I do after that? Oh, I go up there again where I could get a glimpse of San Remo Towers. But I was still on the wrong side of the park. I guess I never did get to the Planetarium because that seems to have gone altogether.” (S was asked, “Can you get back to sleep now?”) “Yes, if I can. Oh, dear me, I wonder why I didn't go to the Planetarium, how did I get mixed up in all your affairs?” (S was assured, “We'll talk about that in the morning.”) “O.K.”

5:50 A.M. Fifth dream reported:

“This had to do with *multiple colors of yellow* that went all the—they turned into little pieces of paper. And from little pieces of paper they became multiple tones. And finally I related them to the spectrum of color of Professor Heiss's in Freiburg. I once did all these color tones with him. And finally I was sitting down at a table going through all these different spectrums. You know, going through the whole color tones. Then quite suddenly I woke up. I don't know who I did them with—I didn't see any particular person. I seemed to be writing them down myself. They formed finally into a little book. That was all.” (S was told, “It's time to get up, it is close to 7 o'clock.”) “Oh, I'll get up.”

Comment: The possible correspondences to the target noted in the last two dreams are italicized. The references to the “sunburst,” the “Mexican-looking” picture, the “slightly distorted” face, and the “gold” and “yellow” seem especially pertinent in view of the golden Indian mask which served as the target.

EXPERIMENTAL SESSIONS WITH DR. LESTER GELB

Dr. Lester Gelb, a young psychoanalytic colleague of M.U., had three sessions in the Laboratory, two of which proved to be of considerable interest.

EXAMPLE 4.

S: Dr. Lester Gelb.

Date: July 20, 1967.

On this occasion M.U. (the agent) planned to use as target material freehand drawings, made after S went to sleep. Since A's associations appear to have been relevant, they will be presented along with the dreams of the subject. The sequence, taken from the original protocol, was as follows:

Agent

Subject

I slept from 12:15 to 2 A.M. Had no recall of dreams. Had the following presleep images: 1) Two dogs fighting over a piece of cloth. 2) Storming the barricades and trying to penetrate something. 3) The gait of a hemiplegic. 4) Trying to get a look inside a cube.

Also have the feeling of being very much en rapport with Dr. G., and thought with interest about his anticipatory dreams confirming my own feelings that he was ambivalent about having his dreams monitored in an experimental situation. I felt that he was more oriented to the experiment than I had anticipated.

First Awakening. Time: 2:40 A.M.

S awakened following a stage-one episode without clearcut REM. He was unable to recall anything other than being in a car or something involving cars.

Time: 2:55. I thought of putting something in the box that would shock him and cut through his armor. I thought of perhaps repeating the sex symbols used in a previous experiment with R.G.,

Agent

but possibly reversing their order. I then drew a rectangular box with an arrow projecting upright from the top (Figure 6) and wrote next to it, "The erect turgid phallus. Rigidity as applied to character structure—ankylosed psyche—the stiff joint—psychic crippling."

Subject

Second Awakening. Time: 3:20 A.M.

S's dream did not come through clearly as the recorder failed to work. He made some reference to the Mona Lisa and also some reference to A.

Time: 3:40 A.M. Feelings of disappointment and frustration. The Mona Lisa symbol made me go back and think of the circle as an enigmatic feminine symbol as well as representing feelings of frustration, helplessness and emptiness. I then drew a circle about a half-inch in diameter (Figure 7).

Third Awakening. Time: 3:53 A.M.

Third dream report:

"I feel as if I was sort of floating to sleep at the time. I had an image of a, oh, it wasn't really like a dream, *it was sort of like being on a round, like the bottom half of a large tube, such as if you would be going into the Holland Tunnel or something, sort of like a road. As I was traveling, there seemed to be people there but it didn't seem to be like a*

Agent

Subject

typical dream, sort of falling asleep. I caught an image and I was conscious of just having started to fall asleep. *I was on a road shaped like the curve of a trough.*

"Earlier as I was falling asleep before I turned around, *I had an image of something that's very positively shaped, like a door stop except it was upside down and there were several smooth round shapes, as if I was going through these passages, these round smooth shapes as I meant it only like a door stop, sort of like the fin of a car but it was upside down and it wasn't connected with the car, it was just like that.*"

Dr. Gelb added the following comments in reviewing this dream the next morning: "*I was going along a road and it seemed to be the lower half of a tube, just like the Holland Tunnel without the flat road. There wasn't too much to the dream; it wasn't disturbing, it wasn't an unstable kind of situation. It was a little bit like Coney Island but it didn't seem to have any danger, any thrill of danger, but seemed to be part of my attempt to drive into sleep. Actually, this road was pretty huge because the car we were in occupied a very small part of the curb.*" (S was asked, "When you first described it, you said it was several smooth shapes like . . .?") "*Oh, like a trough.*"

Agent

Time: 4:00 A.M. I now decided to go back to the arrow symbol and emphasize its shape and direction and linear quality—that is, its arrow-like features rather than its sexual ones. I drew an arrow pointing upwards about an inch long and made it look more like an arrow. It then occurred to me to emphasize this feature of it to draw a bow. I then drew a bow about 2 inches in height (Figure 8).

Time: 4:30 A.M. In order to emphasize the concern with shapes, I drew three angular shapes offering a sharp contrast with the references to roundness in the subject's previous dream (Figure 9).

Fourth Awakening. Time: 4:50 A.M.

Again, the dream did not come through clearly. It involved a scientist and a secret.

Time: 5 A.M. Felt frustrated by the difficulty in getting the tape-recorder to work. This time I drew an arrow inclining toward the right at an angle of about 30 degrees, thus altering its direction. I also drew further odd shapes (Figure 10).

Fifth Awakening. Time: 5:30 A.M.

Fifth dream report:

"No single dream, just things would sort of pass, images. I can't

Agent

Subject

recall any, although I recall feeling as if I was going from one small part of a dream where *Flo Bonime*² was tying a bow on Leah's belt or fixing the back of her belt and there seemed to be, I don't know, some friendly kind of relationship. That was one of the small dreams I had, one of several."

Dr. Gelb added the following comments in reviewing this dream the next morning: "That was one of a series of small little dreams. We were with the kids, saying good-bye when they were going to camp. And Flo and Leah seemed very friendly, this atmosphere seemed to be repeated by the symbolic act of Flo adjusting Leah's bow and her belt."

Sixth Awakening. Time: 6:30 A.M.

Sixth dream report:

"I had a number of dreams in sequence. But I don't remember them well. One was, we were standing around, some people were standing around, and they had in their hands canes shaped like sticks, used upside down, the curved part up. But they were shaped more like free form than plain hockey sticks. And in the dream were two of my wife's cousins, a married couple. We

² In view of the fact that any deletion of names might lessen the possible significance of the results, permission was obtained from the subject as well as the people referred to in the dream, to reproduce this material. The subject was analyzed by Dr. Walter Bonime. Flo Bonime is Dr. Bonime's wife and Leah is the subject's wife.

Agent

Subject

see them about twice a year and in the dream I was kind of indifferent to them or critical of them because of some opinions they had. And you made a comment, 'Why are you so critical?' And I had other dreams I can't recall; there was a series of them. You sort of woke me up after I had them. I mean you asked me about the dreams after they had gone on for some time in the past. As a matter of fact, *I remember waking up after the one with the hockey sticks* and wondering why you didn't ask me whether I had been dreaming. I went back to sleep. That's all I can think of."

Dr. Gelb added several comments in reviewing this dream the next morning. (He was asked, "You mentioned hockey sticks?") "Yes, I guess it was like a party, people were there and *they had canes, but very nicely shaped canes like hockey sticks, they weren't hockey sticks actually but about the same size, long, and the shape was very good for them.* Now I think I know . . . before I went to sleep I was thinking of the fact that Leah and I were invited to a banquet at the Waldorf given by this international society for the welfare of cripples, maybe that's why this came, and of course I don't like the idea of having to go formal and we were planning to go camping around the time but it seemed we were invited as

Agent

Subject

guests. . . . *The hockey sticks were not all exactly the same shape. It has to do with disability, at the same time in spite of the disabilities people get around pretty well.*"

At this point *S* was questioned about the "shapes" that he mentioned. *"They were not all the same shapes—there was a variety. It had to do with disabilities, but there were no real disabilities in the people in the dream. I was wondering why so many geometrical figures seemed to appear in my dreams."*

EXAMPLE 5.

S: Dr. Gelb.

Date: December 7, 1960.

The prepared target was a picture of a colored mosaic (Figure 11); violet is an especially prominent color in the mosaic. It was opened at 2:00 A.M. *S* had a total of eight dreaming episodes, two of which had suggestive references to the target. Three dreams had references to an incidental experience of M.U. and his wife. The sequence was as follows:

3:35 A.M. Fourth dream reported:

"I thought a little. I was dreaming of a conference, like instead of a conference it was like chamber music. Someone had a baton. I don't know who it was. And just now, as I was waking up, someone said something about the color violet. I was surprised about that. Also, I recall as I was going to sleep before you asked if there were any other images that I recalled. I was trying to relax and I thought of the color black and I visualized the surface which was like tar, and it had pebbles on it sprinkled on the surface as I was falling asleep. This one about the violets—that was as I woke up." (S was asked, "Anything else?") "No, I can't think of anything." (S was told, "O.K. Go back to sleep.")

4:05 A.M. *Fifth dream reported:*

"I can't recall anything specific." (*S* was asked, "Do you think you've been dreaming?") "I'm not sure, I just recall sort of thinking. I don't know if I was dreaming. I'm not sure. (*S* was asked, "Does anything come to your mind?") "Yes, my nose is running. I've got a cold and I'm wondering if I wasn't thinking *more about the orchestra leader* and something about *violets again*. Really, that must be a violin which I am playing now, practicing some. And this was I thought, I figure, after I woke up but I'm not sure. (*S* was told, "Go back to sleep.")

5:40 A.M. *Sixth dream reported:*

"*There was a group of singers. The director was to leave the group. It's kind of vague. He wanted to cut himself off from the group. He was walking back and forth.*"

6:55 A.M. *Eighth dream reported:*

"*Some music is involved. I don't have any distinct images. An accordion, no distinct images and yet I know I was dreaming but I don't recall the action.*"

Comment: The references in italics brought to mind an incident occurring in M.U.'s life the night before. Mrs. M.U. is a member of a choral group who in the several weeks preceding the experiment had had very intensive rehearsals in preparation for the annual Christmas concert. She had returned home last night following a rehearsal in a state of great distress. The conductor, dissatisfied with their performance, had for the first time become angry to the point of threatening to walk out. While it would not be unusual for *S*, who was fond of music, to incorporate a musical theme in his dream, it was of interest to see the way in which there was a gradual build-up in musical references in successive dreams up to the point where a scene is re-enacted which in its specifics seems more closely related to a recent day residue in the life of the agent than in the life of the subject. There was further reference by Dr. Gelb to the conductor and chorus in the discussion of the dream the following morning. When he was asked about these dreams he added, referring to the fourth dream report: "That was like a series of dreams. Like a seminar and then music."

A: "Did you say someone had a baton in the dream?"

S: "That was part of a series."

A: "Then you had another dream in which someone was directing?"

S: "Yes, it was like a chorus, but not a formal chorus. But the leader was kind of angry. I don't recall, there wasn't a lot of feeling in there but he was going to leave. I had the feeling this was my anger, my being annoyed and going to leave the situation. You know, being awakened."

Of the remaining subjects brought into the Laboratory, about half of them had dreams that were felt to be significant. The following examples are chosen from the latter group.

EXAMPLE 6.

S: M.U.

Date: December 21, 1960.

Mr. Dean was A for this session. He very much resembled M.U.'s father in body build, a point noted in M.U.'s pre-sleep thoughts. The target selected was a picture from "The Family of Man" album. Only one dream, the third of the night occurring at 5:45, appeared to be significant, not in relation to the chosen target, but to a recent meaningful life experience of A. The dream follows:

"I was listening to the *Kentucky Derby* being broadcast on the radio. I could hear all the excitement. And there was so much excitement I couldn't hear who the winner was. Somewhere in the room on a shelf in a container was a *check*. It was blank. I recall wondering what it was doing there."

On awakening in the morning there were further comments on the dream: "The important thing I forgot to mention was that it was as if I had been listening to the horse race all day long and then I didn't get the name of the winner. It seemed kind of silly that I should be listening all day and not know the name of the winner. But then I comforted myself with the thought that it was fun listening."

The following exchange occurring in the morning between Mr. Dean and M.U. is repeated verbatim as it leads into what appears to be certain dynamic cross-currents between A and S.

A: "I asked Jerry³ if in his reading at night or during the day

³ The technician monitoring the EEG record.

he had come across anything to do with the Kentucky Derby, horse races, or anything. He hadn't and I hadn't either. I had read *Scientific American*, other magazines, journals, all kinds of things. Nothing to do with horse races. Then finally I remembered that some friends of mine who live in Decatur, Illinois, yesterday left a note for me—for three or four years they have been inviting me to go there and see the Kentucky Derby and I have not yet gone."

S: "That's exactly the kind of stuff that Laura⁴ and I kept coming up with."

A: "They want to take me to both the Kentucky Derby and to the Indianapolis 500 Mile car race. Now you said 'cars' in one of your earlier dreams."

S: "That's right, and I didn't know where that came from. They were little cars."

A: "You said in the Kentucky Derby one, something about a check."

S: "Yes. Yes. *There was a check around in the apartment, and it didn't seem to fit; I didn't know what to do with it.*"

A: "Well, it so happens that their son has been convicted of passing bad checks."

S: "Now, isn't that interesting."

Comment: M.U. could not give any direct association to the blank check. The Kentucky Derby elicited an immediate association having to do with M.U.'s father. He had been a devotee of horse racing and whenever the opportunity arose he did witness the running of the Derby. On one of these occasions he became friendly with the Governor of the state and was awarded a document conferring upon him the title of Honorary Colonel. As noted above, the agent in body build did resemble M.U.'s father, who died in 1935. Perhaps this incidental fact operated as a kind of dynamic K-object mobilizing telepathically buried associative trends. These emerged as the imagery of the Derby and the check in M.U.'s mind paralleling the incidental day residue in A's mind concerning his friend who had invited him to the Derby and the friend's son who had been convicted of passing a bad check. There is no way of being sure of how these connections were made so that telepathic feedback from S to A might also have been at play in bringing back into focus A's memory of having

⁴ Reference to the earlier work with L.A.D. (Chapter I).

received a note from his friend the day before. One may also view this day residue in the mind of the agent as telepathically reinforcing the actual day residue based on *A*'s physical resemblance to M.U.'s father.

EXAMPLE 7.

S: Dr. L.Z., a dentist and friend of M.U.

Date: December 21, 1960.

On this occasion the formal target was the picture shown in Figure 12. It showed a monk squatting before what *A* initially took to be a square blue patch of stone. Later, on closer examination, this appeared to be a garden. Along one border there was a diamond-shaped pattern in the pavement. The target envelope, however, was not opened until 3:15 A.M. Prior to that time a small toy model of a yellow Citroen (Figure 13) was used by M.U. as the target. The sequences were as follows:

3:10 A.M. First dream reported:

A: "Have you been dreaming?"

S: "Yes, Yes. I have been looking at a small envelope. A small *yellow* envelope, and inside this envelope there was a message for me, but I could not open the envelope or in any way determine what its significance was to me. There were some instructions for me in the small *yellow* envelope, but I couldn't open them in time, or get to them in time."

A: "Anything else?"

S: "I saw the envelope on what seemed to be a silver or pewter tray lying in front of me and I felt myself reaching forward for it. It seems that I awoke, or was awakening before my hands could actually get to it. Now I can't seem to recall anything else about it."

A: "O.K. In your next dream you'll find out what's in the envelope. . . . Go back to sleep."

S: "All right."

3:15 A.M. Target envelope opened.

4:12 A.M. Second dream reported:

S: "Yes. Yes. I, ah, we have been on a road and the road was *yellow in color*, ah, where it stretched I don't know but nobody seemed

particularly anxious to find out and *it was a fairly pleasant drive*. It seemed that I and my companion, I don't know who else was with me, were seated in what seemed to be a front end of a *tractor-like vehicle*, or something of this sort. That's about it."

A: "Was there anything else to it?"

S: "No, I can't remember anything else."

A: "O.K., go back to sleep."

4:20 A.M. *Third dream reported:*

A: "Have you been dreaming?"

S: "Yes, yes. Approaching a *masonry wall, with the stones put together very, very neatly*. And someone else and I are seated in the cab of some large vehicle. There seemed to be a *tractor* coming up through this wall. And that's about all, *the wall is grey in color, and there are mortar clean stones*."

A: "Is there anything else?"

S: "No, I can't recall anything else."

A: "O.K., go back to sleep."

4:45 A.M. *Fourth dream reported:*

S: "A very small *diamond-shaped aperture, diamond-shaped in the wall*. Ah, its details drop away so quickly."

A: "Can you talk a bit more distinctly?"

S: "Yes, I said the details drop away so quickly, I can't remember anything else."

A: "Well, just give yourself a moment and try to recapture something." (Pause.) "Anything else come up?"

S: "Yes, I know I was with someone else, I don't know who the other person was, and then we were traveling in what seemed to be *the cab of some very big vehicle*; we were running along, we were both running along, we were both standing upright along parallel to it, seemed to be a large wall, and we were traveling quite slowly, and we came to what seemed to be *a small diamond-shaped hole* in the wall and one of us remarked, 'Look at that!' and then I woke up."

A: "Anything else?"

S: "*The wall was grey, I can't seem to remember anything else*."

5:24 A.M. *Fifth dream reported:*

A: "Have you been dreaming?"

S: "What?"

A: "What was the dream?"

S: "Oh, ah, I just can't remember. Again *the figures of a diamond, a diamond shape* was in it. I can't remember anything more, I just can't."

Comment: Several phrases in the dream reports contain references to a yellow object, a road that was yellow in color, a pleasant drive, a tractor-like vehicle (the Citroen is noted for its "traction avant"), and a tractor coming through a wall. These were all suggestively related to the miniature target object of a yellow Citroen. Other phrases in the dreams correspond with the diamond-like shapes in the target picture.

The initial procedure was subsequently altered so as to facilitate an analytic-intuitive approach to the anticipation and identification of trends in the dream content of the last members of a sequential series of dreams occurring in a single evening. Some preliminary familiarity and rapport with S were established through questioning pertaining to S's motivation, discussion of the last remembered dream, and a statement of S's anticipated pre-sleep thoughts. No formal target material was prepared in advance. The plan was to utilize the preliminary interview material and the first two or three dream sequences to identify the predominant trends and significant preoccupations. The agent then concerned himself with the problem of introducing symbolism which was intuitively felt to be in line with the movement of the dream sequences, but which at the same time could, if incorporated into the dream, suggest a possible noninferential correlation.

An effort was made to identify psi factors as they might appear either through striking correlations between the anticipatory symbolism of the agent and the manifest content, or, at a more general level, where A appeared to significantly alter the identified trend of the dream.

The entire protocol for this session (as recorded by M.U.) will be presented in full to provide the background for the target drawings as they finally evolved.

EXAMPLE 8.

S: R.O.

A: M. Ullman.

Date: July 11, 1960.

Preliminary Comment: *S* was unknown to M.U. until a week before the experimental session, when he appeared at M.U.'s office for a screening interview. At that time the purpose of the experiment was explained to him and his own motivation was explored. He was the first *S* chosen under the new procedure, with no preliminary preparation of target material.

Preliminary Associative Data and Mood for M.U.: "My own mood was one of eagerness for the experiment in view of the success I had had last week when, as subject, I appeared to score some hits in the dreams I had relating to the agent's (Douglas Dean) associative data. There was also of course a good deal of uncertainty because the subject was almost a completely unknown quantity to me. I was eager to explore the new ideas concerning the altered procedure and felt more comfortable about our working in a medium that was better geared to our own style."

Preliminary Associative Data and Mood for R.O.: *S* presented himself at the offices of the Foundation promptly at 12:00 midnight. He appeared to be in some distress as a result of an incident which had occurred earlier that evening. While having supper at the home of a lady friend, a champagne cork popped directly in his eye, causing pain and blurring of vision for several hours. He spoke of his own motivation as one of curiosity and general interest in matters of this kind. "I'm interested in things like this especially. I'm interested in everything really. I've been under analysis now for one year." The patient was asked whether he had told his analyst that he was coming for the experiment and his reply was negative. When asked whether he had ever had any personal psi experiences, he replied, "I feel that uncanny things have happened many times. I feel as if I lead a charmed life. I firmly think there is something to it." He described the day he had as "smooth and busy." When asked if anything occurred that was upsetting, he replied, "Yes, it did. I brooded for a half hour over it. It had to do with the producer of a show. I had worked my ass off and got a four-column picture of the show and showed it to him. His only response was to complain that one of the actor's names was misspelled. I thought to myself, what the hell does this guy want?"

S was asked if he recalled any of his recent dreams. He replied, "There have been none that I have vividly remembered in several

weeks. One I discussed with the doctor but chucked out. It had to do with the duality of my sex life. I remember part of it. I was only with B. for two or three weeks. I was in a turmoil and had a fear of not working. Actually I had not been out of work since Labor Day. The last couple of days before the theater closed I was worrying about whether I would have another job." *S* described his dream:

"I was on a stage and I didn't know the material. It was an edition of "New Faces." I was a new face. I recognized some of the others. The spotlight hit me. I felt aghast. I couldn't remember the words of the song. I tried to find the stage manager to see if I was supposed to be in the show. At the same time there was supposed to be another job interview at three. I was all mixed up as to where I was supposed to be." *S* continued: "The analyst interpreted it as the conflict of two jobs being related to the duality of my sex life."

S was casually asked what he thought he might possibly have been thinking about as he fell asleep. He replied: "I usually think about the next day. Ordinarily I fall asleep within seconds." *S* was asked, "Is there anything special about tomorrow?" *S* replied, "There always is. I can never say I've caught up. I'm concerned with a number of people I have to contact tomorrow morning." The electrodes were attached and *S* went to bed at 1:00 A.M.

A's immediate associations were as follows: "The subject had revealed several significant facts about his personal life, including the fact that he was in analysis and had a bisexual conflict. He appeared to identify with my interest in psi phenomena and also appeared to have a need for recognition and some exhibitionistic qualities. I felt somewhat hesitant about assuming any medical responsibility in connection with his recent eye injury, although I did examine his eye and told him that there was no external sign of trauma." *A*'s further associations and *S*'s dreams follow:

Agent

I fell asleep from 1:10 to 2:10. Had a dream involving a box-like television set, and for some reason the words "saddle-stone" stuck in my mind. My own thoughts went back to a patient who was much like the subject, also bisexual with profound homo-

Subject

Agent

sexual conflict. The present subject also appears to have conflicting needs around exhibitionism. He is both driven to reveal himself and at the same time is fearful about having the spotlight on him. In this type of experiment the spotlight is actually on him, and yet in a sense he can remain unconscious of that fact.

First Awakening. Time: 2:10 A.M.

S could not recall a dream but stated that he had been dreaming. He did mention that just before falling asleep he had been thinking about music.

Second Awakening. Time: 2:40 A.M.

S first expressed uncertainty as to whether or not he had been dreaming but then recalled the following dream: "I went to bed with a female producer; also with a Negro actress. I saw a play. It was called 'The Legend of Lizzie.' It was about Lizzie Borden."

The patient referred to above spoke today about the bad temper and physical acts of violence in his own family, particularly of his mother toward his father; and also of his aunts. Patient also referred to his own physical attack upon his wife.

In the dream, the subject is apparently acting out derogatory attitudes toward women, a recall of the earlier episode this evening when opening the bottle of champagne for his female companion.

Agent

Mr. Lewin, the EEG technician, filled me in on the details of Lizzie Borden. "Lizzie Borden took an axe, gave her mother 40 whacks."

Sexuality in the case of both the patient and the subject appears to be a way of handling aggression toward the female. By having sex with the producer he brings it down to his own level and by having sex with the Negro actress he expresses his derogation.

Lizzie Borden is associated with an act of violence and matricide.

In the dream his hostility toward the producer in real life is acted out toward a woman producer he had known in the past.

Third Awakening. Time: 3:35 A.M.

S reported the following dream:
"I was in Provincetown with my friends Mary and Jack.⁵ It was very pleasant."

Apparently the aggressive episode is over. The subject dreams of friends and the affect is one of pleasantness.

At this point the subject appeared restless. He had not yet slept very much. He was disturbed by the air conditioner and it was turned off at 3:30 A.M. His behavior thus far reveals a passive acceptance of the entire situation.

⁵ Pseudonyms.

Subject

Agent

It is of interest that the names Mary and Jack are also the names of an actor and his wife that I was trying to recall this afternoon. Both the patient I had been thinking about and the man referred to in the subject's dream were bisexual and both had unstable marriages.

The subject is apparently concerned with a solution to the handling of his aggression in terms of an identification with this married couple.

I felt uncertain as to where the subject was going at this point. The following are some of the associations and imagery occurring to me at this time:

A Hamlet figure. To be or not to be . . . bloody hands. Dagger. T.V. box. Saddle-stone. Child. Acceptance as a child. F.A.O. Schwartz. Toys. Domination over women and derogation of them

Subject

Time: 3:50 A.M. *S* became restless and went to the bathroom. He was asked about his reference to Lizzie Borden. He said that the play had been put on last year and added, "I killed off my parents a long time ago." He was also asked to associate to Mary and Jack. He said they were friends who invited him to Provincetown. He complained of indigestion and was annoyed because this woman he had been with earlier had crab cakes for supper.

Agent

expressed sexually. Superior cooks. Dress. Hidden aggression toward men. Need to be acceptable to men. Fear and contempt for women.

Subject

Fourth Awakening. Time: 5:04 A.M.

S simply reported that he had been thinking about music and that it was an enjoyable feeling.

The subject appears to be ending up where he began, with a preoccupation with music. He seems to be undisturbed, as if his conflict has been successfully resolved.

At this point I drew a circle about 2½ centimeters in diameter (Figure 14) and next to it listed the following associations:

Zero
Ought
Nothing
Vacuum
Failure
Feature
Defeat
Empty

Fifth Awakening. Time: 5:15 A.M.

S reported the following dream: "It involved my sister and a banjo. She wouldn't teach me how to play. She and her husband were standing like in a Grant Wood painting, only they were using banjos instead of pitchforks. She's divorced now."

My reaction to the symbolism in

Agent

the dream was that the banjo represented a sexualization of the symbol of the circle, with the addition of a phallic symbol. The dream seemed to be expressing once again the superiority of the female and her ability to refuse him that which he desires. If this line of interpretation is correct, he appears to have shifted from an instrument of crude aggression to a musical or sexual instrument.

Subject

Sixth Awakening. Time: 5:35 A.M.

S recalled the following dream:
"I was thinking of M., a client, a comedian. It was just the image of his face—nothing happening."

I wondered why he thought of this comedian after what looked like a hit on the last target. I thought possibly because of his effort to reconstitute acceptance through a father-son situation in which he is doing something for the father. At any rate, the shift to a male figure with a different and more positive affective tone led me to draw as the next target an arrow extending upward about an inch and a quarter in length (Figure 15). Next to it the following associations were enumerated:

Looking up
Erection
Straight
Stiff
Ascending
Turgid

Agent

Subject

The above represented a conscious effort to sexualize the target in the direction of a phallus.

Seventh Awakening. Time: 5:55 A.M.

S reported the following dream: "I was with Al T.⁶ He is the principal dancer in a current show. He was dancing for me. He said, 'This is for you.' We were sitting at a bar. We were drinking. I went home with him, but I couldn't face his wife. I felt embarrassed for his wife."

Subject seems to have responded to the sexualized target.

Inquiry following awakening: The experiment was terminated following the last dream and the patient was asked to repeat his dreams and give his associations.

Pre-sleep preoccupation with music: "My analyst thought I had substituted an interest in music for 'cruising.'"

First dream report:

"The female producer was R.N. I hated her. In the dream I found her very attractive. The Negro actress? I don't know what to make of her. The 'Legend of Lizzie'? I know the actress but I can't imagine why I dreamed of it. Lizzie had a knife, not a hatchet."

Second dream report:

"The idea of Provincetown and of Mary and Jack was a pleasant little interlude. I like going to the beach."

Third dream report:

"This involved music, but I can't remember."

⁶ Pseudonym.

Fourth dream report:

"I like the banjo. I have been playing banjo records lately. My sister does not know how to play. In the dream they were suddenly standing stiff and rigid, with severe expressions on their faces. My sister does not play now, nor have I had anything to do with her for a long time."

Fifth dream report:

"M. was just fun. He's about 28, but he's really a child—he's really only about 12."

Sixth dream report:

"Al T.? I really never admitted my feelings about him. I worked on the show he was in. I really wanted to see Al. It's the most vivid dream that I had. He's been married ten years and has two children. We did go out a few times. There was quite a rapport. He told me he had been married for ten years and that his wife was used to his not coming home early. In the dream I went home with him. Actually, I was only in his home once and that was for an interview."

Comment: In the absence of a more detailed knowledge of S's own structure, it is possible only to speculate on whether or not there was any genuine dynamic interplay between S and A at a telepathic level. The first sharp correlation occurred at 5:15 A.M. in S's reference to the banjo; this occurred 11 minutes after a circle had been drawn as the first target picture. The second suggestive correlation occurred following the drawing of an arrow at 5:35 A.M. with the intent of having it represent a phallic impulse. The dream occurring 20 minutes later in which S is at a bar with a male dancer and where he feels embarrassed to face the dancer's wife, has distinct homosexual overtones.

EXAMPLE 9.

S: R.M., adult male.

Date: January 11, 1961.

The target selected is shown in Figure 16. Its envelope was opened at 11:45 P.M. One dream seemed to capture the stone-like quality of the picture. This occurred at 4:05 A.M.

A: "Have you been dreaming?"

S: "Just slightly. Hmm, still on the map, there, I guess, and *the narrowing of the column that's in the center of the room* in which I supposedly am sleeping. There is no column in this room *but there is a column in it each time I dream of it.*"

In his associations the following morning, after a question by M.U. about the dream in which the column was mentioned, S added the following comment:

"Oh, yes, that was in all those that involved this room. There was this square column in the center of the room. That was here at the foot of the bed, you know, a fairly heavy column, as you might get, say, at the Coliseum, you know, or in a parking garage or some such thing like that."

DISCUSSION

The experiments described served the purpose for which they were intended. They demonstrated that the application of the REM dream monitoring procedure to parapsychological research was technically feasible and sufficiently effective in bringing about presumptively telepathic inclusions into manifest dream content to warrant its further refinement and use. In addition to the interest generated by some of the more striking results, there was a sense of excitement at the possibility of bringing parapsychological research in step with the rapidly moving front of dream research in general.

The specific gains of this exploratory experience would be listed as follows:

1. The working hypothesis that the nocturnal preoccupation of A with target material would result in the target or aspects of it appearing in the manifest content of S's dream occurred with sufficient frequency to warrant more systematic investigation. This approach was designed to circumvent whatever impediments existed to the emergence of psi effects in the fully conscious state and to do this by exploiting the spontaneous and naturally recurring dissociated state of dreaming in the subject.

2. In considering the variety of Ss worked with, it was apparent that the degree of sensitivity varied considerably. Mrs. Garrett, at one pole, achieved a variety of significant responses ranging from a direct hit on the target to paranormally tinged references to both

A (M.U.) and a situation 3,000 miles away. At the opposite extreme were three *Ss* whose dreams showed no apparent paranormal sensitivity. Two of these were chosen because of their own negative attitude towards ESP. The third was a student of M.U. in a psychoanalytic program who had no intrinsic interest in the experiment but who wished to participate because he had not had any spontaneous dream recall during the first six months of his personal analysis. Most of the examples given in this chapter represent *Ss* showing an intermediate range of sensitivity. Even here it was apparent that some did considerably better than others. The important finding that emerges here is that future work need not center exclusively around known sensitives and that positive results could be expected over a broader *S* population. This is a fact presumably of considerable significance should other dream laboratories attempt a replication of our results.

3. Significant correspondences came about in a wide variety of ways, some of which appeared to be characteristic of the individual *S*. Mrs. Garrett came closest to a direct transposition of either the target picture or other paranormally perceived material into her dreams and associations. Dr. Gelb seemed to selectively focus on elements of the target, in the one case the form (Example 4), in the other case the color (Example 5). Correspondence at the level of texture is shown in Example 9. Symbolic transformation and dynamic interplay are best seen in Example 8. Indeed, the combination of an analytically-oriented approach to *S*'s dreams and the possibility of capturing dream sequences as they occur offer a unique opportunity for the study of interrelations between personality, symbol formation and psi effects. It may not be too much to hope that this kind of dynamic interplay, when refined and developed, could lead to a replicable nocturnal dialogue at a paranormal level.

Incidental contacts where *S* seemed to pick up aspects of events in *A*'s life not connected with the formal target came through in the case of Mrs. Garrett (Examples 2 and 3), Dr. Gelb (Example 5), M.U. (Example 6), and several others.

With this phase of the work behind us, it was now possible to turn our attention to the task of translating the basic experimental design into what, from a parapsychological standpoint, would be a sound procedure. The problems that would have to be overcome included:

1. The effective control of the physical conditions under which the experiment was carried out so as to eliminate all possibilities of any sensory cueing of the *S* to the nature of the target from anyone connected with the experiment.

2. The development of techniques for outside, independent judging of correlations between dream state and target material.

3. The application of appropriate statistical techniques to evaluate the work of the judges.

4. The need to discover gifted *S*s and the need to have the opportunity to work with them intensively over a period of time.

5. The need to replicate any favorable results both in our own laboratory and in as many outside laboratories as may be possible.

The establishment of the Dream Laboratory at the Maimonides Medical Center, several years after these exploratory studies were terminated, made it possible to move forward along these lines.

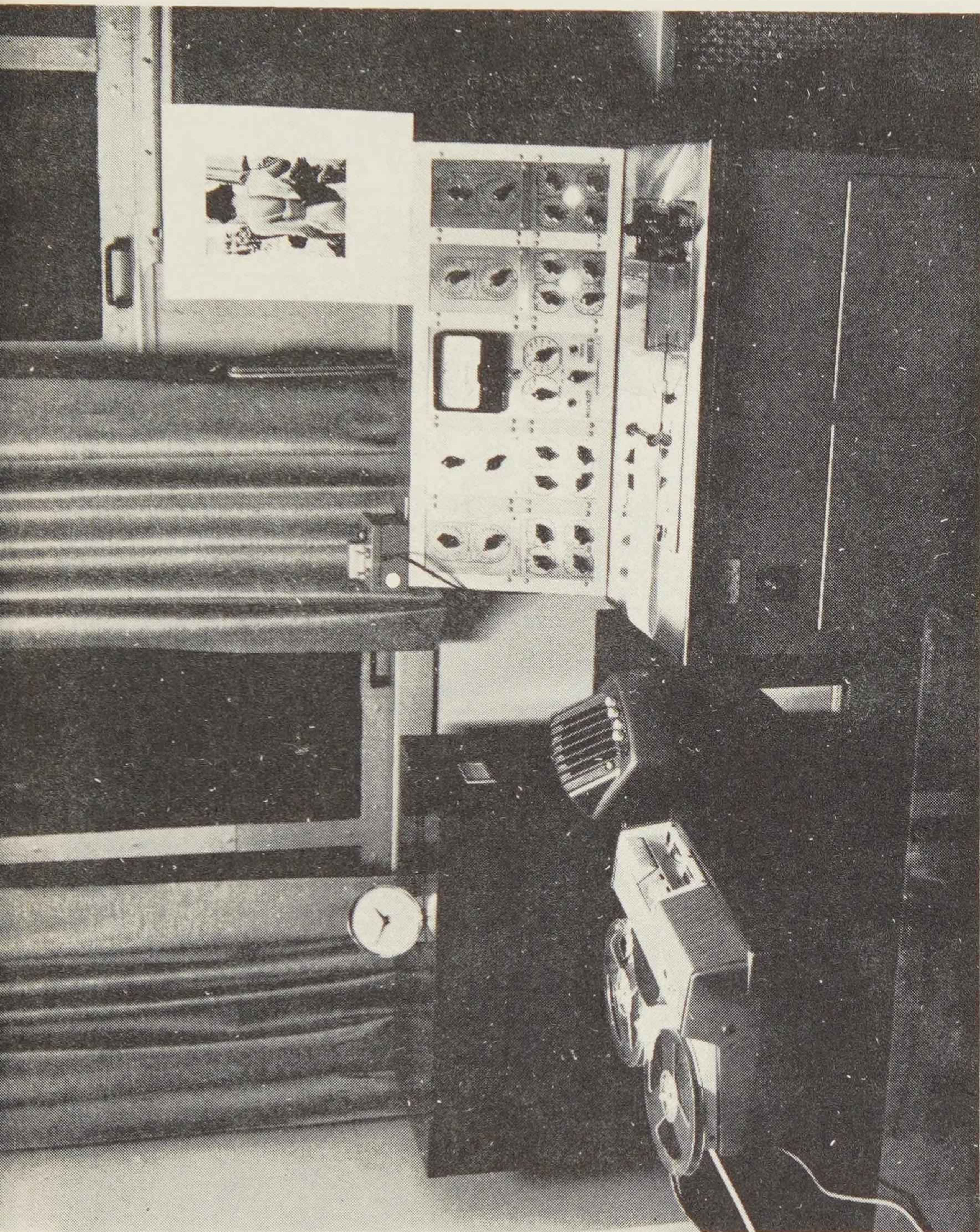


FIGURE 1

12^M

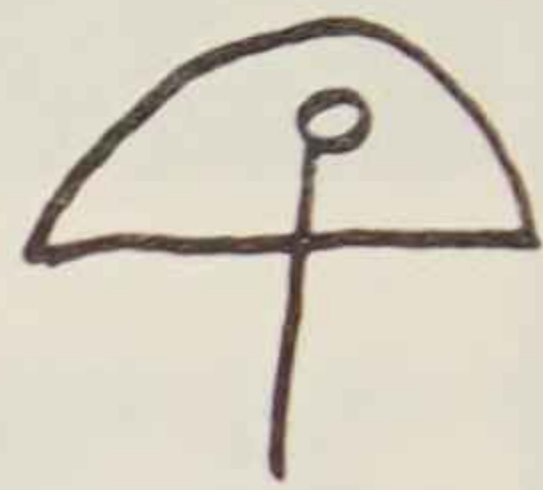
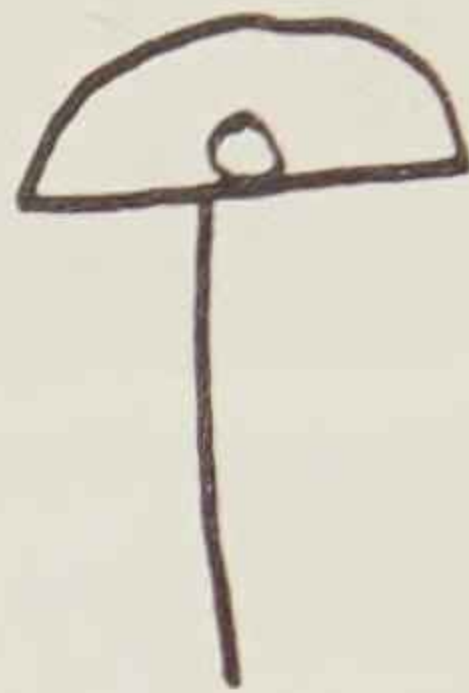
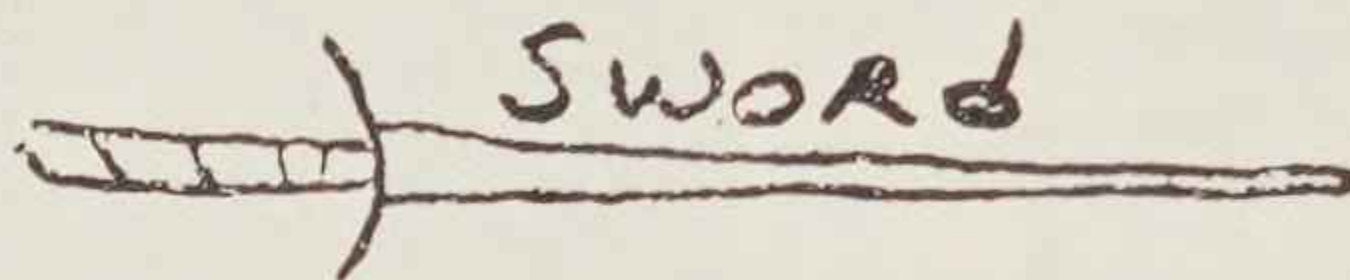
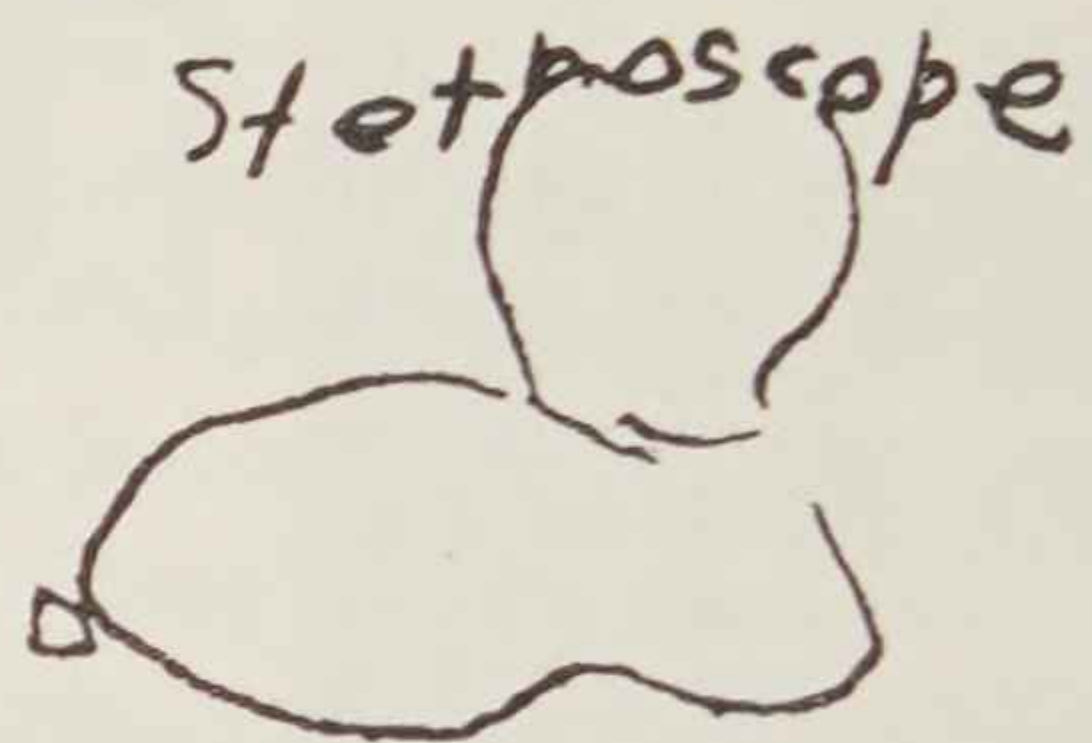


FIGURE 2

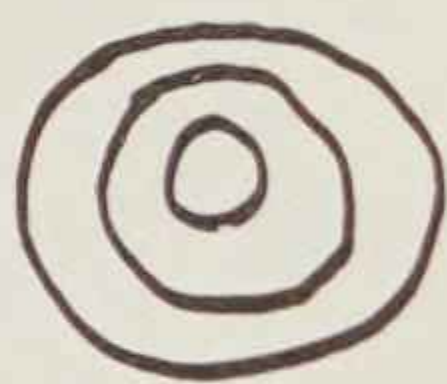


Sword



Stethoscope

FIGURE 3



BASIC
IMAGE



3 balloons



Beer



Arrow
and Target

FIGURE 4

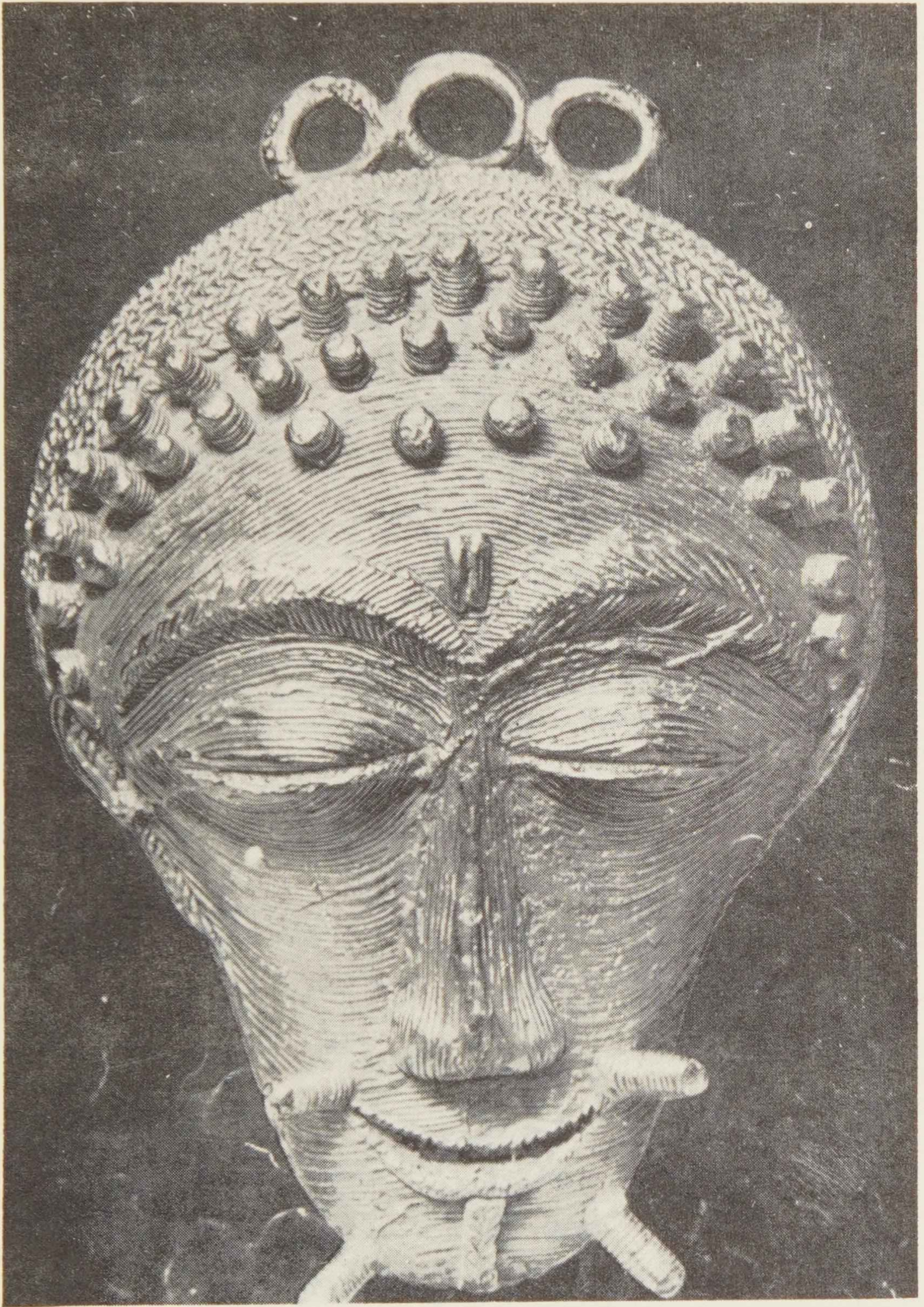
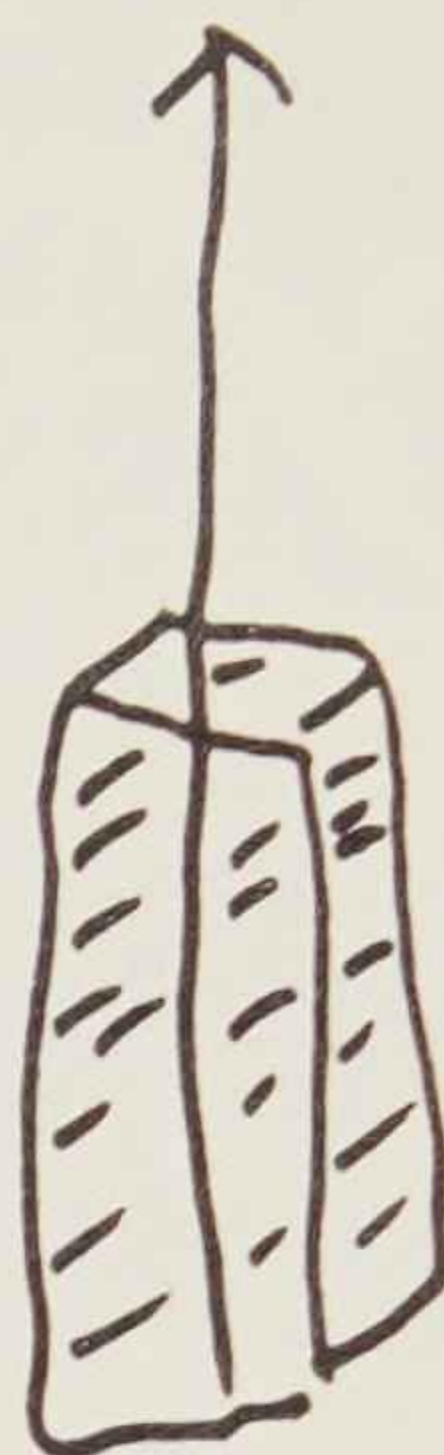


FIGURE 5

FIGURE 6



TARGET 1

3^{no}

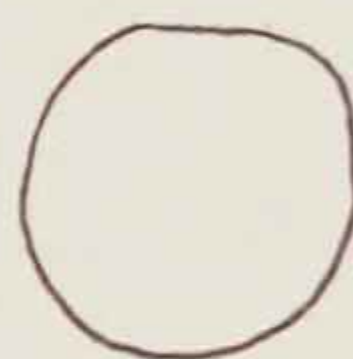


FIGURE 7

CIRCLE

4^{oo}



Bow

ARROW

FIGURE 8

430



ANGULAR SHAPES

FIGURE 9

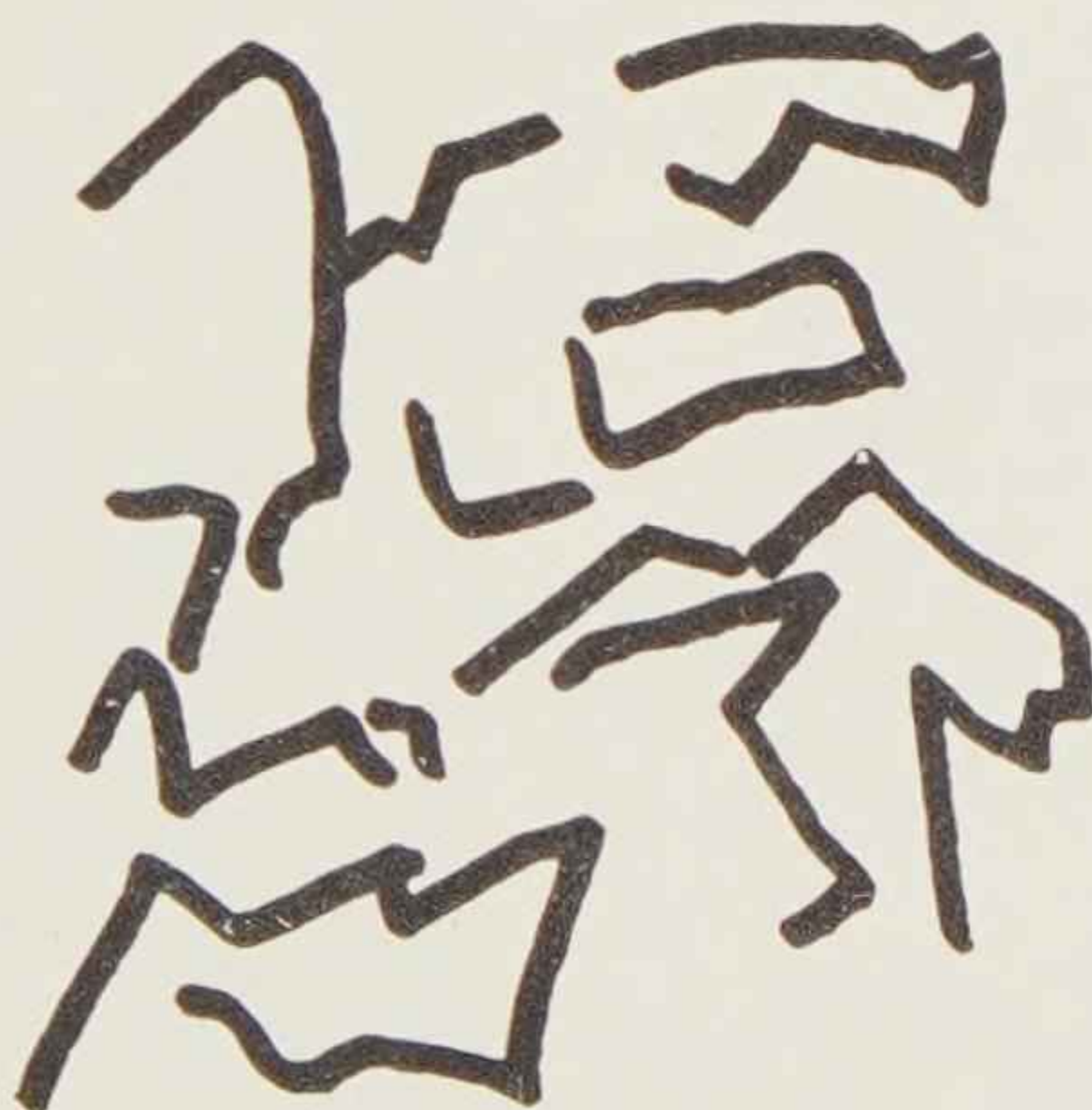


FIGURE 10



FIGURE 11



FIGURE 12

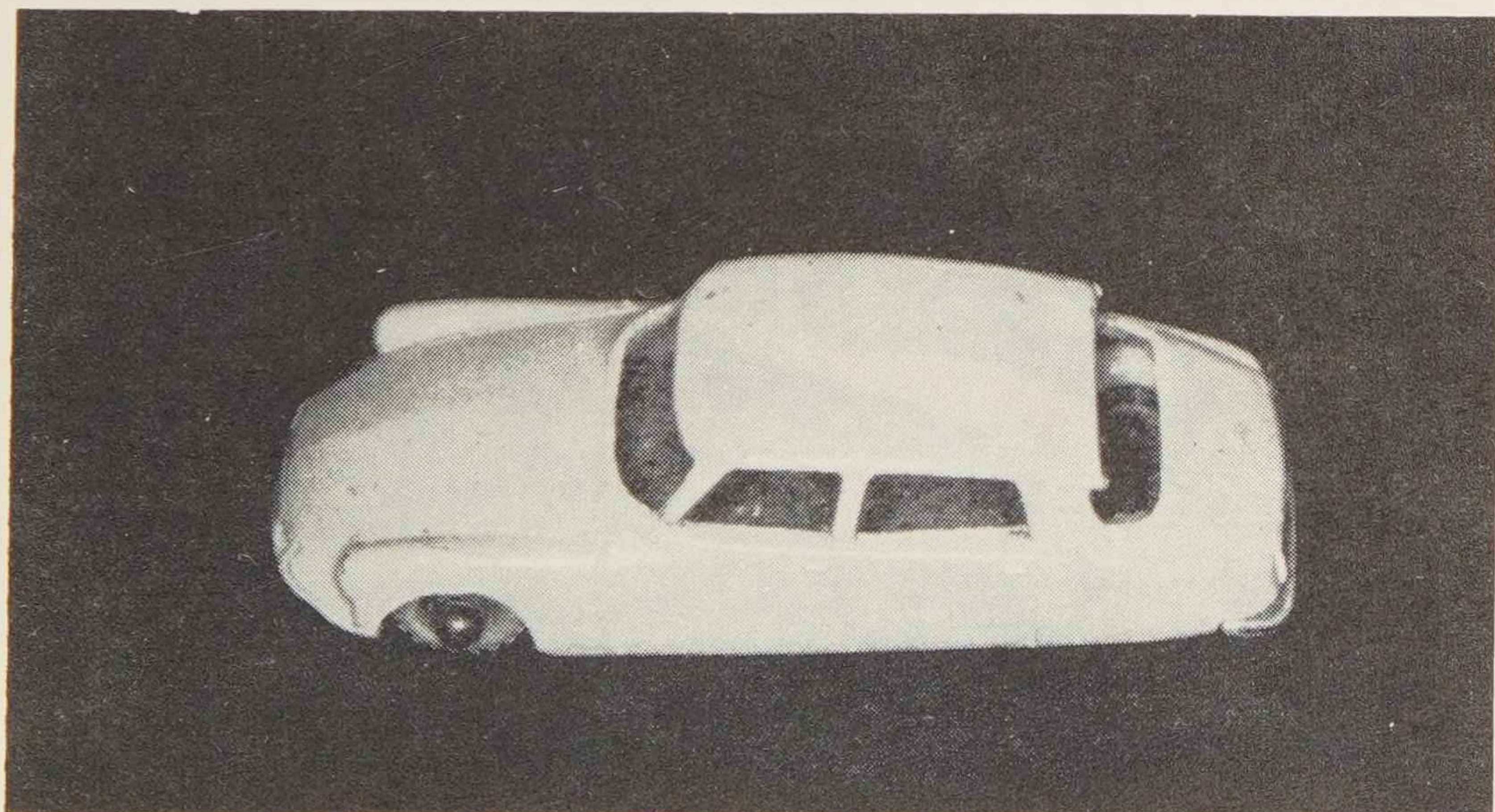
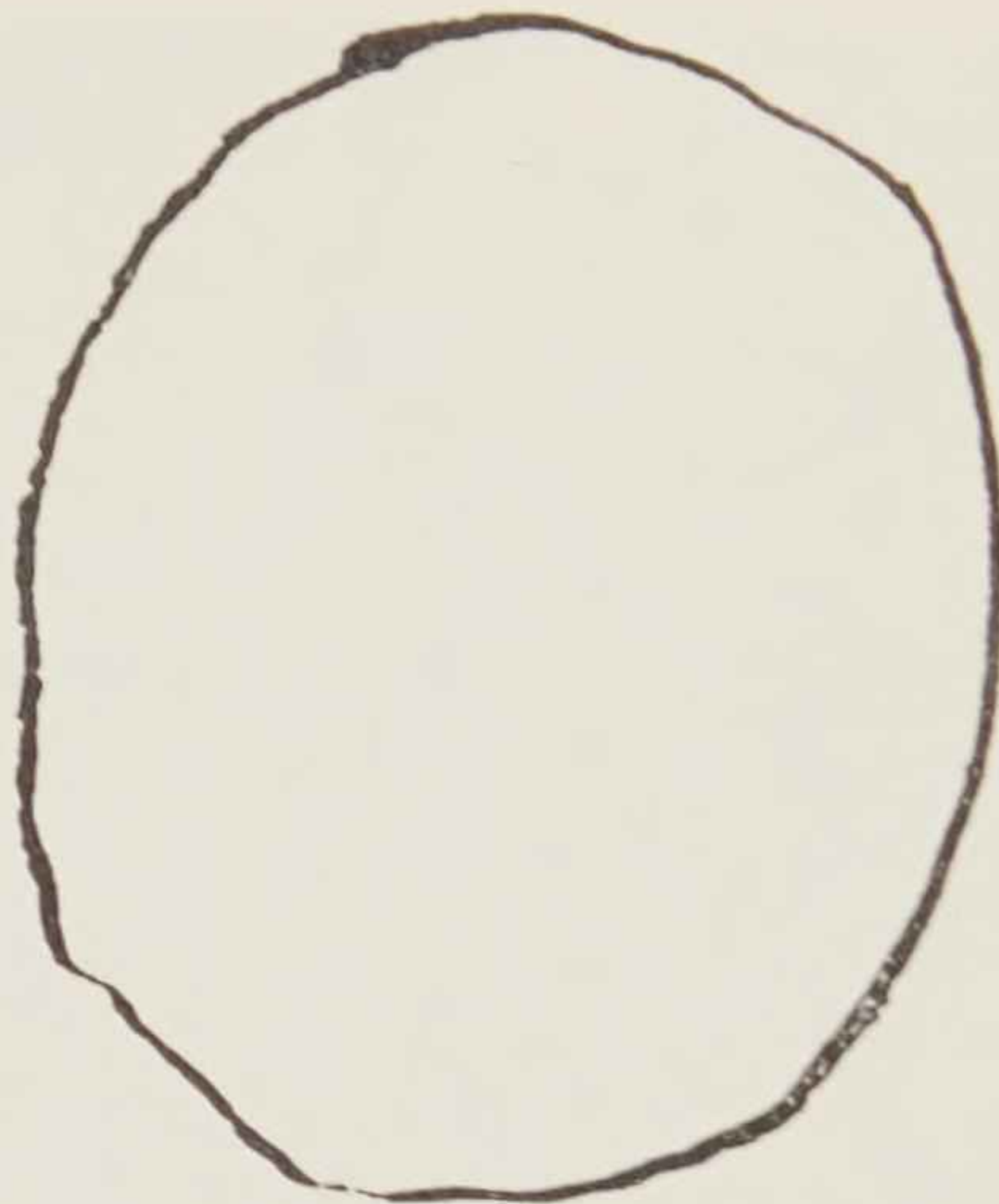


FIGURE 13

Zero
Ought
Nothing
Vacuum
Failure
Defeat
Empty



5 04

FIGURE 14

TARGET 2



Looking up
Erection
Straight
Stiff
Ascending
Turgid

5 35

The above represented a conscious effort to sexualize the target in the direction of a phallus

FIGURE 15

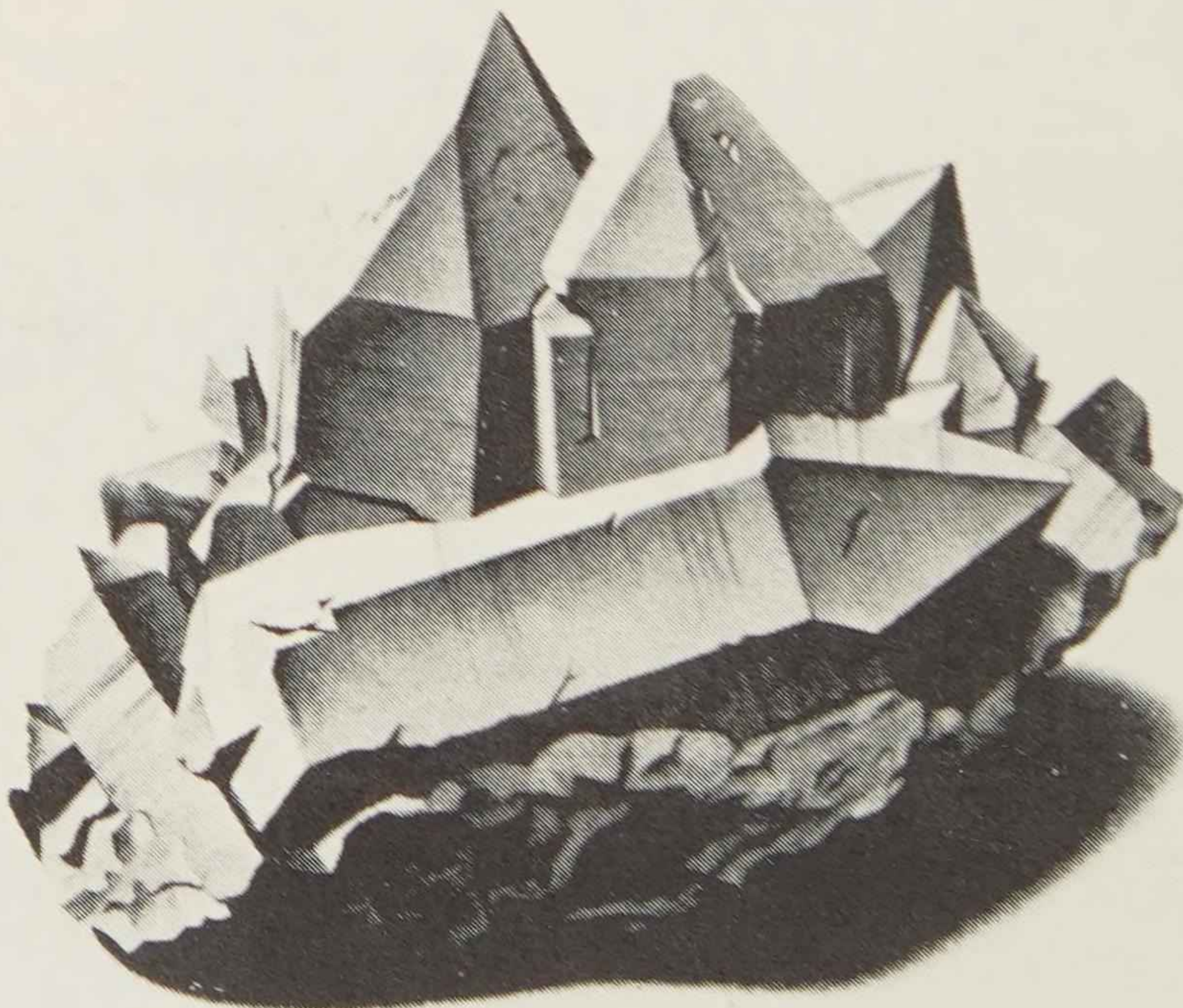


FIGURE 16

Chapter III

EXPERIMENTAL SERIES

In June, 1964, the first experimental series at the Maimonides Dream Laboratory was launched. This was to serve as a screening study for the identification of *Ss* who could be investigated in depth at a later date.

The study was designed to evaluate the possibility of telepathic transfer of information from an agent (*A*) to a sleeping subject (*S*). Specifically, the hypothesis stated that an *S*'s dream protocol for any given experimental night would reflect the influence of telepathy by the appearance in *S*'s dreams of correspondences to the target material viewed by *A*. To evaluate this hypothesis, each of twelve *Ss* and each of three outside judges independently ranked a pool of twelve targets for correspondence to each dream protocol. (All the dreams of a single night were considered as one dream protocol.) In addition, each judge rated his confidence in his rankings. These matching procedures were carried out for the dream material alone as well as for the dream material in combination with the *S*'s associations to it.

Confirmation of the hypothesis would require statistical demonstration that actual targets were significantly more often favorably ranked than expected by chance and that the confidence ratings of the ranks given the actual targets were significantly greater than those given the ranks of non-targets.

It was also decided to analyze the data on the basis of *A* differences. For this analysis, the scores of *Ss* working with the male *A* would be compared with the scores of those *Ss* working with the female *A*.

Twelve paid volunteers (seven male, five female) over the age of 21 served as *Ss* for the study. Individuals were selected who reported

that they were able to fall asleep easily, dream frequently, remember their dreams, and had positive attitudes toward the possibility of telepathy.

Twelve five-by-eight-inch prints of famous paintings were selected as experimental targets. Each print was used only once during the study. The targets were selected on the basis of simplicity and distinctness of detail so as to enhance recognition of any correspondence between dream content and pictorial content.

An eight-channel Model D Medcraft EEG was used to monitor Stage REM sleep and spontaneous electrical brain activity. All verbal communication between *S* and the experimenter (*E*) was mediated through an intercom system and recorded on tape.

During each experimental session, *S* slept in a darkened sleep room adjoining a monitoring room in which *E*, the EEG, and recording equipment were located. *E* operated the EEG and recording equipment while *A* concentrated on the target in the *A*'s room at the other end of the building, a distance of approximately 40 feet from *S*'s room. *A* sometimes monitored the EEG for a short period of time to relieve *E* but at no time did *A* awaken or speak to *S*.

When *S* was awakened by *E*, *A* was always in *A*'s room listening to *S*'s dream report over a loudspeaker. It was thought that this type of feedback would enable *A* to modify his associations to the target, if this was felt to be necessary. There was no microphone in *A*'s room so that conscious or unconscious verbal communication from *A* to *S* could not occur.

A male research assistant and a female research assistant alternated as *E* and *A*. Each served as *E* six times and each served as *A* six times.

Every *S* was tested individually on an assigned experimental night. *S* reported to the Dream Laboratory at least one hour prior to his normal bedtime but no later than 11:00 P.M. He met with *E* and *A*, was shown the monitoring room, and was taken to the sleep room. After *S* had prepared himself for bed, the electrodes were applied and questions concerning the procedure were answered. Once *S* was in bed, a descriptive statement was presented by *A* which read, in part:

During the night you will be awakened by the words, "Have you been dreaming?" or "Please tell me your dream." Do not wait for any further

instructions, but immediately begin to tell your dream in as much detail as you can. When you have told as much of the dream as is possible, there may be some additional questions. These will be asked over the intercom system. At various times during the night, I will be thinking about some target material, and will try to intrude this target into your dreams.

After the door to the sleep room was closed, *A* went to his room and, using a procedure based on a random number table, chose one of the envelopes containing a target. The remaining envelopes containing targets were filed again before the target for the night was inspected. *A* spent about 30 minutes associating to the target and writing down his associations. This procedure was repeated several times during the course of the night. At the conclusion of the experimental session, the target was replaced in its envelope and set aside in a different file so that it would not be re-used. *E* was never told a target's identity for any given experimental session.

S was awakened following ten minutes of Stage REM, except for the first REM period for which the time was five minutes. The awakening was carried out over the intercom by *E* who made the following inquiries:

Please tell me your dream or anything that was going through your mind when you were awakened.

Is there anything else? Think for a moment. Does anything else occur to you in conjunction with the dream? Does it remind you of anything? Please go back to sleep.

As soon as *S* was awakened in the morning, a postsleep interview was held over the intercom by *E*. *A* remained in his room during this interview, which was structured around a questionnaire which read, in part:

How many dreams do you think you had? What were they? What do they mean to you?

Was there anything different in these dreams or about these dreams as compared with your usual dreams, such as color, feeling the dream to be "real," or private symbolism?

Was there anything that you felt was trying to intrude on your dreams?

Here are the dreams as they came through. Will you feel free to tell me any additions or changes or associations that you may have to dream

number one, dream number two, and so forth, just to round out the record?

Upon the conclusion of this interview, *E* entered the sleep room, disconnected the electrodes, and gave *S* an envelope containing copies of the 12 potential targets. *S* was asked to rank them on a form, which was provided, in terms of their correspondence with his dreams. A rank of #1 was given to the target which *S* thought corresponded most closely to his dreams, a rank of #2 to the target which showed the next closest correspondence, etc. A rank of #12 was given to the target which showed the least correspondence. *E* left the room and did not return until the rankings had been completed by *S*. Following the judging procedure, *S* was paid, taken to breakfast, and dismissed.

Copies of the 12 potential targets were sent to three judges along with typed manuscripts of *S*'s dream reports and associative material. They were guided in the judging process by a statement which read, in part:

You are to consider that one of the 12 potential targets represents an event that has occurred while the subject was just going to sleep, or has occurred while the subject was in the sleeping state. You must further assume that the event has in fact influenced the dream either in a direct way or through some process of transformation. The task then becomes one of working from the dream back to the event that affected the dream. The number of events that we have to consider is limited to just the number of targets. Your ranks from #1 to #12 indicate the order of probability that the events associated with the various potential targets have been influencing factors; your scores from 1 to 5 indicate your confidence in the fact that that particular target was associated with the influencing event.

The actual steps in your judging are as follows: (1) Rank the targets against the dream protocol contained in Envelope I, giving the rank of #1 to that picture which comes closest to the dream content and the rank of #2 to that which comes next closest, etc., so that you will have 12 separate rankings, one for each target. (2) You will then take your rankings and spread them out on a scale of from 1 to 5. Thus, a picture given a rank of #1 may be represented as a palpable hit, so you may place this at position 1 on the scale. In such a case you might place the other pictures in between positions 4 and 5 showing that you have little or no confidence in them at all in terms of their being

the possible target. No two targets should be placed in exactly the same position, since we do not want ties. (3) The same ranking and scaling procedures will be repeated for the subject's associational material obtained in the post-sleep interview. For this second set of rankings you will use both the dreams (Envelope I) plus the associative material (Envelope II).

A four-page judging form followed the general instructions. The first page of the form was titled "Ranking of Individual Dreams, Without Associations." The instructions stated:

This worksheet is designed to aid you in the selection of the final target rankings. However, it need not be used in a mathematical way. It is quite permissible to accept a strong conviction about any one dream rather than to accept the content that appears to run through several dreams.

The three judges who followed this procedure were selected for their backgrounds in dream analysis and/or parapsychology. A fourth judge, selected on a similar basis, ranked and rated the material following a different procedure. Instead of comparing all 12 targets to each dream transcript (read one at a time), the fourth judge compared all 12 transcripts to each target picture (viewed one at a time).

The judges' ratings were converted to a score of between 1 and 100, using a ruler that had been divided into 100 units.

The means of the three judges' ranks and ratings were entered on twelve-by-twelve tables and subjected to two-way analysis of variance (for targets and nights) according to the Scheffé method,¹ a special analysis for unequal cell frequencies.

The rankings made by the 12 *Ss* were also subjected to two-way analysis of variance. In addition, the rankings were evaluated by binomial expansion, the ranks from #1 through #6 being referred to as "hits" and the ranks from #7 to #12 being referred to as "misses."

The data for the rankings and ratings of the mean scores for the three judges and for the rankings of the *Ss* were in the predicted direction but did not attain statistical significance. The ratings of the

¹ H. Scheffé, *The Analysis of Variance* (New York: John Wiley, 1959), Chapter 10.

fourth judge, who followed a reverse procedure, were significant at the 0.01 level but her rankings did not attain significance.

When the rankings were evaluated by the binomial expansion technique, the judges' results were in the predicted direction as each of the four judges produced eight "hits" and four "misses." The Ss' ranks included ten "hits" and two "misses"; this is significant at the 0.05 level (two-tailed test).

A clear difference between the two As was indicated. When the judges' ranks and ratings based on Ss' dreams (in combination with the associations to those dreams) were examined, the male A's Ss demonstrated significantly more favorable correspondences than did those Ss paired with the female A ($F_{1,120} = 5.08$, $p < 0.05$; $F_{1,120} = 6.47$, $p < 0.05$, respectively).

Thus, the most striking finding of the first experimental study involved the differences between As. In the case of Ss working with the male A, the ranks and ratings were higher than the ranks and ratings for Ss working with the female A. An inspection of the dream reports and associative material corroborated the superiority of a male A's Ss. In the descriptions that follow, some of the dream protocols have been abstracted to highlight the more apparent qualitative correspondences between dream protocols and target pictures.

The first of the male A's Ss was a female teacher. The randomly selected target was "Animals" by Tamayo. The painting depicts two dogs with flashing teeth eating pieces of meat. A huge black rock can be seen in the background. S's dream protocol mentioned a "black rock" and a banquet at which she was "chewing a piece of rib steak." A mean rank of 3.0 was assigned to this target by the judges on the basis of S's dreams and associational material.

The second of the male A's Ss was a male psychologist and the target was "Zapatistas" by Orozco. The painting depicts a group of Mexican revolutionaries with clouds and mountains in the background. The three judges assigned a mean rank of 1.7 to this target because of such correspondences as the following:

Excerpts from S's first dream:

"A storm. Rainstorm. It reminds me of traveling . . . approaching a rainstorm, thundercloud, rainy . . . a very distant scene. . . . For some reason, I get a feeling of memory, now, of New Mexico when I lived

there. There are a lot of *mountains around New Mexico, Indians, Pueblos*. Now my thoughts go to almost as though I were thinking of *another civilization.*”

Excerpts from S's fourth dream:

“. . . *They were trying to convince this woman that she should go in a particular direction to see something that was going on. Either they were shooting a picture . . . or there was a play or a stage production. . . . I think this particular part makes me think more of Los Angeles, like the early period of motion pictures, as though it was being filmed. . . . For some reason, I recall . . . a trip. When I was younger, I was in the Scouts, and I went to a camp one summer, and this comes back to mind. It was out in the country, by a river. A lot of activities took place there. . . . Oh, another thing in the dream that stood out, there was a great deal of noise in the dream. The noise was made by the activity.*”

Excerpts from S's fifth dream:

“For some reason I begin to think of—was it Lucky Strikes? I remember about the time *during the war* when they changed the color of their pack . . . and their slogan was, “Lucky Strike green *has gone to war.*””

Excerpts from S's associative material:

“For some reason, my first dream impressed me very much. . . . I lived in . . . Santa Fe . . . and *during the Fiesta a great many of the Indians come in with their wares. Oh . . . it seems like there were heavy clouds behind this. . . . Perhaps the coloring in New Mexico fits it, the mesa as it runs up the mountains. . . . Here it gets into this epic kind of thing . . . a DeMille super-type colossal production.*”

The male *A*'s third *S* was a female artist; the target was “The Sacred Fish” by Giorgio de Chirico. In the painting, two dead fish rest on a wooden slab which has been placed in front of a candle. *S* dreamed of death, of going swimming, of a wooden table, and of lighting a candle. She also had a dream about France and made repeated and pointed references to the word “poise,” the French word for “fish” being “poisson.” The judges assigned a mean rank of 2.7 to this target.

The male *A*'s fourth *S* was a male chemical engineer; the target

was Gauguin's "Still Life with Three Puppies." In the painting, the puppies are lapping water from a pan which is behind three blue goblets. *S* dreamed of water, of "dark blue bottles," and of "a couple of dogs making a noise." The judges assigned a mean rank of 5.3 to this target.

The male *A*'s fifth *S* was a female secretary; Gauguin's "The Moon and the Earth" was the randomly selected art print. It depicts a nude dark-skinned girl by a stream of water. The judges assigned a mean rank of 5.0; the following excerpts illustrate the type of target-protocol correspondences detected:

Excerpts from S's second dream:

"I was in a bathing suit . . . doing the dream experiment in the bathtub full of water, and we were finishing, and we had to get up out of the wet bathtub, out of the water . . . and we were dripping wet. . . . They showed a clothesline where you could hang your bathing suit. . . ."

Excerpts from S's fifth dream:

"We're in church and somebody introduces a girl who is a dancing girl . . . and she comes over and she says, 'Oh, I want to get a tan.' She's very fair. And I'm yelling to her to stay in the sun instead of running in and out all the time. . . ."

Excerpts from S's associative material:

". . . She wanted to get a tan. And I said, 'Well, stay out in the sun; it takes time to get a tan.' And she said, 'No,' she wanted a quick tan, and . . . I said to her, 'Look, your shoulders are tan. If you take your time, you can get the rest of you tan.'"

The male *A*'s sixth *S* was a female model; Rousseau's "The Sleeping Gypsy" was randomly selected as the target. It depicts a lion hovering over a sleeping figure in a desert. *S* dreamed that she was home "and there was a little cat in the room . . . and my mother . . . was sleeping." The judges assigned a mean rank of 8.3 to this target.

Although the judges assigned lower ranks and ratings to most of the female *A*'s *S*s, several of the correspondences between dreams and targets were rather striking. For example, the female *A*'s fifth *S* was a female graduate student in sociology; Chagall's "Green Violonist" was the target. In the foreground is a man playing a

violin while a dog is in the background. *S* dreamed of a dog "barking in a field" and later surmised, "I wonder if the target could have to do with a tune or something to do with music?" A mean rank of 4.7 was assigned by the judges.

Although the *S*s in this study were in each case aware of which staff member would act as *A*, on two occasions there was an indication that telepathic contact occurred between *S* and *E*. These instances cannot be taken into account statistically, but may assist in the development of further hypotheses.

On the experimental night of July 7, 1964, the female *A* was in the *A*'s room while the male *A* served as *E* and handled the routine experimental duties. At 5:50 A.M., following a dream report by *S*, *E* began to read the July 10th issue of *Life* magazine. The *E* read two stories before *S* began another dream period. These stories were titled, "Topless Swimsuits: The Seminude Look Creates a Big Stir," and "MacArthur's Reminiscences: Part V." The following dream report was given by the subject at 6:50 A.M.:

"In a park, and we were talking about two busts—women's busts—bust of Cleopatra and bust of Apollonius (*sic*; perhaps the subject meant Aphrodite as Apollonius was a man). And we were arguing about that. . . ."

There is an obvious connection between the topless bathing suit article and the dream report. In addition, page 60 depicts two ancient statues; the captions read:

This pottery statue of a Minotan goddess wears a costume fashionable among high-born ladies in Crete 3,500 years ago. The waist is as waspish as those of Edwardian belles, the eyes painted and the breasts dramatically bare—a symbol of fertility. In her hands she holds a pair of sacred snakes.

Chalk statue of Greek priestess from about 600 B.C. shows the customary dress of upper-class women, who felt that the bare bosom gave them added grace and did not detract at all from their modesty. It has many characteristics of earlier Egyptian culture, where the bare bosom was also the vogue.

A comparison of the dream report and the captions yields an interesting parallel between "Apollonius" and "Minoan goddess" on the one hand, and between "Cleopatra" and early "Egyptian culture"

on the other. A "Greek priestess" is also mentioned in the caption.

S's dream report also contained the following statement:

"... And a friend of mine was explaining to me that he wanted to go—that he had to—on several travels, but it was like in a fairyland story, and in one of his travels he wanted to go to the Island of Gulliver, and people told him . . . 'Oh, you will be terribly lonely, remember the story. . . . That island is so lonely far away in the Pacific. . . .'"

E asked *S*, "Does anything else occur to you in conjunction with the dream?" *S* replied, in part:

"But what was strange in the dream, when we were arguing about us going to the Island of Lilliput, I knew definitely where it was. It was far away in the ocean, probably the Pacific, I don't know. And everybody that was arguing, of course knows that . . . Gulliver existed and was a big giant, and that the reason that this trip of Gulliver to this island would only last two hours, for some reason, since anybody who would go there would automatically be as huge as Gulliver, and so he would not need much time to travel. He would be very big over there, and the travel would go in a jiffy—very fast. And he could observe a tremendous lot. It would be like years, but the isolation would last only two hours."

The latter part of *S*'s dream report strongly resembled the MacArthur memoirs as they appeared in the magazine article. The dream elements of loneliness, the Pacific, travel, and Gulliver are reflected in the following pictorial captions from the article:

Emaciated and exhausted, their arms bound, U.S. captives of Bataan waited to start infamous Death March (p. 72).

High over New Guinea, MacArthur stands by machine-gun belt as he watches parachute drop near Lae (p. 73).

MacArthur's brilliant thrusts toward the Philippines leapfrogged past Japanese strong points, cut them off and left large forces to starve and waste away from disease (p. 77).

With Brig. General Carlos Romulo (glasses), MacArthur returns to Philippines, wading ashore at Leyte. (Page 82; MacArthur is much taller in stature—"as huge as Gulliver"—in comparison to his Filipino aide and other Orientals.)

This *S*, incidentally, received the least favorable scores from the judges. Very little of his dream content resembled the actual target, Van Gogh's "The Starry Night." On the other hand, the resemblance of his dream report to the two magazine articles is remarkable.

In view of the resemblance between the dream report of *S* and the magazine articles read by *E*, *S* was queried by *E* in the morning. *S* stated that he (1) did not habitually read *Life* magazine, (2) had not read the July 10th issue of *Life* magazine, (3) had never heard of the topless bathing suit.

One other incident, also involving the male *A*, deserves to be mentioned. Although there was a designated target for each experimental night, on one occasion there was an indication that telepathic contact between *S* and *A* centered around non-target material.

On the experimental night of August 7, 1964, when Rousseau's "The Sleeping Gypsy" was the target, the male *A* spent some time reading from a psychology text with the intent of preparing some material for a class to be held the following day. The material concerned the "double alternation problem," the simplest of reasoning problems that can be applied to animals. The double alternation problem requires an animal to make a series of turns in the sequence: "right, right-left, left." The importance of this kind of sequence is to eliminate body cues, since on one turn a "right" precedes a "right," while on the next turn a "right" precedes a "left," etc. Two complete pages in the text are devoted to this problem. The dream report began at 3:07 A.M. at which time the male agent was reading the last paragraph on page 483. The report of *S*, in part, follows:

"For some reason I was thinking about the words *right* and *left side* mean when people use it in reference to the human body. Like what, exactly, is a right side or a left side? This sort of sounds strange, but when we say east or west—you know—we're talking about a direction that's sort of predetermined, that has all kinds of things to do with very carefully worked-out things. But when you talk about right and left sides of people or things, what the hell does the word *right* and *left* mean? I don't know. I got sort of involved with that. I don't know what the dream means."

The references to "right" and "left" resemble the material contained in the psychology text. What is not immediately apparent is the similarity between the textual material and the subject's reference

to "side" and "body." The "right, right-left, left" sequence is designed to eliminate body cues which the animals utilize in other maze tests. On this experimental night, very little target material appeared in *S*'s dreams and the judges assigned a mean rank of 8.3—the male *A*'s only *S* to score a "miss" rather than a "hit."

As a result of these two incidents, it was decided to prohibit both *E* and *A* from reading extraneous material during future experimental sessions.

THE FIRST ERWIN STUDY

Another experimental study was undertaken which involved Dr. William Erwin, a psychologist who had worked with the male *A* during the screening study. Dr. Erwin's dreams contained several striking correspondences to the target picture and had received more favorable scores from the judges than those of any other *S* in the screening study. He was paired with the same *A* who had worked with him originally. Statistical confirmation of the telepathic effect was expected in the form already described.

A pool of 12 art prints was created for the study by *A* and *E*. Although a total of 12 nights had been anticipated, *S* became ill and was subsequently indisposed for several months. It was decided to analyze data from the seven nights which had been completed rather than wait an indefinite period before resuming. This decision was made by a staff member (M.U.) who had not examined the data and who had no preconceived ideas in reference to *S*'s target-protocol correspondences.

S was awakened toward the estimated end of each dream period, as indicated by the EEG, and an inquiry was conducted by *E* similar to that previously described. During the post-sleep interview, conducted by *E* over the intercom, additional questions were asked. Following the interview, *E* entered the sleep room to disconnect and detach the electrodes.

Copies of the seven potential targets were sent to the judges along with typed transcripts of *S*'s dream reports and associative material. Their instructions were similar to those used previously. Identical instructions were sent to *S*, who ranked and rated the material. Instructions involved ranking and rating each dream protocol (taken one at a time) against all seven targets. A fourth judge,

in a supplementary analysis, ranked and rated each target picture (taken one at a time) against all seven dream protocols.

Ranks and ratings for the judges and for *S* were subjected separately to two-way analysis of variance and according to the Scheffé method. For the three main judges, the means of each rank and rating were entered on the matrix.

Analysis of the three judges' ranking data indicated that the actual targets were ranked significantly more favorably than expected by chance, whether that ranking was executed on the basis of the dream material alone or on the dreams in combination with *S*'s associations to them ($F_{1,35} = 8.30$, $p < 0.01$; $F_{1,35} = 18.14$, $p < 0.001$, respectively).

The three judges indicated, by their ratings, significantly greater confidence in the ranks they gave the actual targets than in those they gave the non-targets, both when these ranks were given without the associative material and when they were given with the associative material included ($F_{1,35} = 5.50$, $p < 0.05$; $F_{1,35} = 10.86$, $p < 0.01$, respectively).

S's rankings and his confidence ratings for his ranks achieved significance only when these judgments were executed on the basis of the dreams combined with the associative data. Actual targets were ranked more favorably at the 0.05 level of significance ($F_{1,35} = 4.41$) and rated more favorably at the 0.01 level of significance ($F_{1,35} = 8.19$). The ranks and ratings for the dreams alone approached significance but did not attain it.

The fourth judge's ranks (which were based on a reading of the dreams and the associative material) attained statistical significance ($F_{1,35} = 15.54$, $p < 0.001$) as did her ratings ($F_{1,35} = 13.07$, $p < 0.001$).

On the first experimental night, "Bedtime" by Keane was the randomly selected target. It shows a girl with long, dark hair. Her eyes, and those of the three poodles she is holding, have exaggerated pupils and stare out at the viewer. *S*'s dreams seemed to center around the staring, searching, looking aspect of the eyes. The judges gave this target a mean rank of 3.7 on the basis of both dreams and associations.

On the second night, the target was "The Yellow Rabbi" by Chagall. It depicts an elderly rabbi sitting at a table with a book before him. *S*'s dream reports involved elderly gentlemen and "an

Anglican minister or priest." This target was given a mean rank of 1.0 by the three judges.

The target for the third night was Dali's "The Sacrament of the Last Supper." It portrays Christ at the center of a table surrounded by his 12 disciples. A glass of wine and a loaf of bread are on the table while a fishing boat can be seen in the distance. *S* dreamed about the "Christmas season" and fishermen, stating in the post-sleep interview, "The fisherman dream makes me think of the Mediterranean area, perhaps even some sort of Biblical time. Right now my associations are of the fish and the loaf, or even the feeding of the multitudes. . . ." This target was given a mean rank of 1.3 by the judges.

The target for the fourth experimental night was Degas' "The Dancing School." It depicts a dance class in progress; girls in white ballet costumes stand in dance poses while others are adjusting their garments. *S* dreamed of "a class," "a school," and "one little girl that was trying to dance with me." The mean rank assigned by the judges was 1.3.

The target on the fifth night was Chagall's "Paris From a Window," which depicts a man observing the Paris skyline from a window. The picture is very colorful and contains such unusual elements as a cat with a human face, a chair from which flowers are sprouting, and several men flying through the air. This target was given a mean rank of 1.0 by the judges.

Excerpts from S's second dream period:

"Well, I was dreaming of bees. I guess it was bees. Sort of bees flying around flowers."

Excerpts from S's third dream period:

"The last thing I was dreaming about was a little boy in a jewelry store. And I was walking through it, and he was saying to the other one, 'Leave him alone, they just like to look. . . .' Earlier . . . I was walking. For some reason, I say *French Quarter*. . . . And I was walking through different departments in a department store . . . talking with a group of Shriners that were having a convention. *They had on a hat that looked more like a French policeman's hat. You know the French. . . . I said French Quarter earlier, but I was using that to get a feel . . . of an early village of some sort. . . . It would be some sort of a blend of this romantic type of architecture—buildings, village, quaint.*"

Excerpts from S's fifth dream period:

" . . . The memory I remember is a man, once again walking through *one of these villages, these towns*. It would definitely be in the early nineteenth century. *Attire. French attire*. And he would be walking through one of these towns as though he . . . were walking up the side of a hill above other layers of the town."

Excerpts from S's associative material:

"*The thing that stands out is the dream where I described the village. . . . It's a festive thing . . . the Mardi Gras-ish type. . . . Well, the area must be—I mean, just basing it on the costumes and all—the nineteenth century. Early nineteenth century. And in the—either the Italian or French or Spanish area. . . . A town of this area. . . . It would be of the . . . of this village type. . . . Houses very close together covering the hills.*"

"The Persistence of Memory" by Dali was the target for the sixth night. In the desert-like foreground of the painting, there are several limp, distorted, twisted watches. *S* stated that his dreams were "a series of rather distorted . . . a continuous distorted, a distorted, a distortion of a lot of sights and sounds." The mean rank assigned by the judges was 2.3.

The target randomly selected on the seventh, and final experimental night, was Cezanne's "Apples and Oranges." It depicts a pitcher, a plate, and a bowl containing fruit. *S* dreamed about "earthenware," "pottery," and someone "eating something from a tree." A mean rank of 4.0 was assigned by the judges.

It is noteworthy that there were striking correspondences between the dream transcript and the target for each of the seven experimental nights as well as for the two nights in the pilot study. In two cases, these correspondences were so striking that the three judges assigned a mean rank of 1.0 to the actual target. In no case was the mean rank below 4.0; the lowest possible rank would have been 7.0.

THE SECOND ERWIN STUDY

Two years after the initial study with Dr. Erwin, he was again available as an *S* for an experimental study. The staff member who had served as *A* in the previous study was also available for the

attempted replication. The same three outside judges offered their services to evaluate the material. An eight-night series was planned by the Dream Laboratory staff.

It was again hypothesized that *S*'s dream transcript for any given experimental night would reflect the influence of telepathic communication with *A*. The target selection was made by a team of four staff members who were never present on any of the experimental nights. As a result, the range of possible pictures used was unknown to *S*, to *A*, or to the *Es* who monitored the equipment during each session.

In the initial series, the nightly log of *A* indicated that he had spontaneously dramatized or acted out some of the scenes depicted in the target picture. In order to facilitate this, as well as to more deeply involve the *A* in the theme and mood of the target picture, a fourth staff member prepared a series of objects relating to each of the target pictures. These objects taken in conjunction with the picture would, it was hoped, involve *A* in a multisensory involvement with the target through his physical contact with the objects selected as well as with their use as props in acting out aspects of the target picture. *S* was not informed of the presence of the multisensory materials. However, he knew from previous experience that the target material would be prints of famous paintings.

S slept in the Dream Laboratory on non-consecutive nights. As soon as *S* was in bed, *A* entered an office and selected a single digit from a table of random numbers. At this point he was given a key by one of the *Es*. Taking the key he went to an attaché case, unlocked it, and counted down through the stack of target envelopes until he reached the number of the randomly selected digit. If the random number was larger than the number of targets remaining in the pool, *S* went through the pool a second time until he found an envelope matching the order of the randomly chosen number. Once the target had been selected, the appropriate box of multisensory materials was located. Still under the observation of an *E*, *A* placed the remaining targets back into the attaché case and locked it, taking the target materials to his room.

Upon arriving in the agent's room, *A* opened the target envelope and the box of multisensory materials. He spent the remainder of the night in this room which adjoined a washroom that *A* was permitted to use.

During the night the *Es* monitored *S*'s sleep and elicited a verbal report following each REM period. Specifically, *S* was asked:

Please tell me what has been going through your mind. (Pause.)

Is there anything else? (Pause.)

Was there any color? (Pause.) Thank you. Please go back to sleep.

Following *S*'s final awakening, toward the end of each experimental session, an *E* conducted a post-sleep interview with *S* in order to obtain additional associational material. At this time *S* was also asked to make a guess as to what he thought the target for that night might have been. Specifically, *S* was asked:

How do you feel? (Pause.) How many dreams do you think you had? (Pause.)

Do you remember your first dream report? (Pause.) Can you elaborate on it? (Pause.) What feeling or mood accompanied the dream? (Pause.) What thoughts or memories does the dream bring to mind? (Pause.)

Do you remember your second dream report, etc.?

Were there any elements in your night's dreams which did not seem to make much sense in terms of your personal life? (Pause.) Which ones? (Pause.)

Please make a guess as to what you think the target may have been. (Pause.) Thank you. I'll be right in to take off the electrodes.

After the post-sleep interview was concluded, a secretarial assistant mailed the tape to a transcriber who typed a transcript of the night's verbal reports and interview. *S* was dismissed until the following experimental session. *A* resealed the envelopes and the box containing the multisensory materials. The used materials were filed away until the conclusion of the entire experimental series.

After the transcripts for all eight experimental nights had been collected and transcribed, three outside judges rated each of the eight target materials against each of the eight transcripts. The judges worked blind and independently, using slides of the target and the multisensory materials.

The 64 possible target-transcript combinations were submitted to each judge in a different random order. Eight combinations were

judged at a time; following the completion of each set of eight, the judge mailed the ratings to the Dream Laboratory and started another set. The statement that was sent to each judge read, in part:

1. Locate the target and the transcript which match the numeral and the letter on the first group of judging forms. Fill in the blanks titled "subject," "judge," and "date." You will notice that three sheets are stapled together in each group.

2. Using the front page of the first group of judging forms, read the dreams on the transcript and color in the space that represents, in your judgment, the correspondence with the target material. This judging is done on the basis of the *dreams alone*.

3. Using the middle page of the first group of judging forms, read the post-sleep interview and color in the space that represents, in your judgment, the correspondence with the target material. This is done on the basis of the *entire transcript*.

4. Using the back page of the first group of judging forms, reread the summary and color in the space that represents, in your judgment, the correspondence with the target material. This judging is done on the basis of the *summary alone*.

5. Proceed to the second group of judging forms and repeat the process. When you have finished a set of eight forms return them, by mail, to the Dream Laboratory.

The actual judging forms included the directive, "Color the space that represents, in your judgment, the correspondence between target material and protocol content." The judge colored in the space on a 100-point scale. The rectangle colored in was converted to a raw score by a clerical assistant. The three judges' raw scores were averaged and the mean for each target-protocol pair was placed in a cell on an analysis of variance matrix. This judging procedure represented a slight deviation from the previous procedures as a Latin square analysis of variance technique was used instead of the Scheffé technique.

A number of special precautions were taken in this study to insure that no possible sensory cues bearing on the target could in any way reach *S*. The two rooms used to house *S* and *A* were at opposite sides of the building, were 98 feet apart, and were separated by three doors and two hallways.

A remained in the room for the entire night, with the exception

of visits to the adjoining washroom. *S* remained in the sleep room for the entire night. Communication from *A* to *S* or from *A* to the *Es* was impossible, due to the one-way communication system.

The range of target material was known only to the four staff members who had prepared it. None of the staff members came into contact with *S* until the end of the experimental series.

Judging was undertaken by three judges, none of whom came in contact with *S* or *A* until the end of the experimental series. All of the judging forms were sent through the mail. This aspect of the procedure was handled by a secretarial assistant who had not been present during any of the experimental sessions.

The precautions taken during the experimental procedure reflect improvements made over the first study done with *S*. For the first study, the target pool was selected by *A* and *E*. Due to a limited staff there was only one *E*. Therefore, *A* emerged from his room at one point during the night to monitor *S*'s dreams while *E* rested. Even so, *A* never spoke to *S* on the intercom; the awakening procedure was always handled by *E*. In the first study, *S* became ill on the eighth experimental night and was hospitalized for three months. In the second study, all eight nights were completed.

Results from the first study were subjected to an analysis of variance technique suggested by Scheffé. For the second study with *S*, a more conservative technique was utilized consisting of a Latin square analysis of variance. For the latter procedure, the three judges received different randomizations of the 64 possible target-protocol combinations. They worked on sets of eight combinations at a time, mailing each set back to the Dream Laboratory upon its completion.

A Latin square analysis of variance technique was employed to compare the ratings of the eight critical pairs (i.e., the actual target-protocol combinations for each experimental night) with the 56 non-critical pairs. Means of the three judges' ratings were entered in the matrix.

The experimental hypothesis had been made on the basis of correspondences between the targets and the entire protocol for each night. On this basis, an *F* of 6.43 was obtained which is significant at $p < 0.001$ with 7 and 21 degrees of freedom. Therefore, the telepathy hypothesis was confirmed and the results of the previous study were replicated.

Judgings on the basis of dreams alone were also statistically

significant ($F_{7,21} = 2.65$, $p < 0.05$) as were the judgments on the basis of *S*'s guess for the night ($F_{7,21} = 4.96$, $p < 0.005$). It will be noted that the highest level of significance was reached when the entire protocol was utilized in the judging process.

A criticism of the previous study centered around the allegation that dreams are so ambiguous that just about any picture would correspond in some way to a dream transcript. This argument can be effectively countered by pointing out that the judges worked blind and that they matched each of the eight targets against each of the eight transcripts.

A further check on this allegation was made. A fourth judge was given copies of the eight transcripts of the second study as well as the seven targets used for the first study, the eight targets used for the second study, and a target used for a pilot session with *S*. Before the fourth judge attempted the 128 ratings, eight target-protocol combinations were randomly assigned using the eight "control" targets. Upon completion of the judging procedure, ratings for the "correct" and the "control" target-protocol combinations were placed in separate analysis of variance matrices and inspected, utilizing the Scheffé technique. The "correct" target-protocol combinations received higher ratings from the fourth judge than did all other combinations on the matrix ($F_{8,64} = 8.11$, $p < 0.01$). The "control" combinations did not produce statistically significant data ($F_{8,64} = -0.71$). Therefore, the allegation that significant results can be obtained from chance target-protocol combinations was not demonstrated.

The first target picture randomly selected was Daumier's "The Barrel Organ" which portrays a number of French villagers singing hymns around a small organ. The multisensory material consisted of a Protestant hymnal. *S* dreamed of "someone playing a guitar" and "a French woman."

Hiroshige's "Downpour at Shono" was the second target picture; it portrays a Japanese man with an umbrella attempting to escape a driving rain. The multisensory materials included a toy Japanese umbrella and the instructions to *A* to take a shower. *S* dreamed about walking in the rain and about "an Oriental man."

On the third experimental night, "Portrait of Jahangir as a Young Prince" by Bichitr was selected; it depicts an elegantly dressed young man from India looking at himself in a hand mirror. He

wears a flowing gown and beads; the multisensory materials were beads from India.

Excerpts from S's first dream report:

"First of all, there are three movie cameras. . . . *I was . . . looking at these movie cameras. . . .*"

Excerpts from S's second dream report:

". . . It seems very distant and it had something to do with streets. . . . The word 'street scene' itself makes me think of *a festival in . . . costume. . . .*"

Excerpts from S's seventh dream report:

". . . There were a lot of women around and *they were . . . showing off*. I mean by that they were, well, *they were showing off. . . . They would go through skits*, and one time they asked me to . . . be chairman as *they went through these skits. And they would go through these skits . . . and in the dream their costumes would change. . . . They would go through all sorts of colorful movements and all colorful actions*, and things like that. . . . *They might have had flowing dresses. Some of them did have flowing dresses, I think. Sort of gossamer things. . . .*"

Excerpts from S's associative material:

". . . In a way, they were bidding for my attention. . . . I've never experienced anything quite like it before. *It had a certain playful quality about it, but that doesn't remind me of anything unless you think of a movie extravaganza. . . . The last dream . . . was a court scene, like the French court. Like the DuBarry, Madame Pompadour period. High headdresses, the stockings, and buckled shoes. That was unusual.*"

Bellow's "Both Members of the Club" was used on the fourth experimental night. It pictures a boxing match and the multisensory material was a boxing glove. *S dreamed about "competition," "something that is depicting power," "violence, destructiveness, aggressiveness," and ocean waves which "picked up a car and slammed it into another car."*

On the fifth night, a photograph of the Major Pelham exhibit from the Richmond, Va., Civil War Centennial display served as the target in addition to a box of toy soldiers. *S reported dreaming about "a canteen," a "military band," a "military campaign," and "soldiers."*

Beckmann's "The Descent from the Cross" was selected on the sixth night of the study. This crucifixion scene was accompanied by a crucifix, a small wooden cross, a picture of Jesus, and instructions to "nail" Jesus to the cross (with thumb tacks) and color his wounds red (with a felt-tipped pen). *S* dreamed about a ceremony in which he attempted to escape from a native tribe which planned to sacrifice him to the gods, concluding "I would say the sacrifice . . . would be more like the primitive trying to destroy the civilized."

The seventh target randomly chosen was Katz's "Interior of the Synagogue," a painting of a Jewish temple. The multisensory materials included candles, matches, a candleholder, and a button decorated with Hebrew script. Among the dream reports was one in which *S* specifically mentioned "something about a synagogue" and a "rabbi."

The final experimental night utilized "Advice to a Young Artist" by Daumier, which portrays an older man looking at a painting done by a neophyte whom he is counseling. The box of multisensory materials contained water colors, a brush, a canvas, and the instructions to paint the target picture on the canvas. *S* dreamed of several artists (e.g., Klee, Van Gogh) and a portrait "of someone who is some sort of an authority. . . ."

This study endeavored to test the telepathy hypothesis with the same *S*, *A*, and judges who had been involved in a previous experimental series. The results were a direct replication of the previous study and, as they were 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.

A STUDY ON TARGET AND NON-TARGET NIGHTS

The female secretary who had worked with the male *A* in the screening study was selected for a further experimental series on the basis of the rather direct correspondences between her dream protocol and the target picture.

It was hypothesized that *S*'s dream protocol for any given experimental night would reflect the influence of telepathic communication with *A*. This influence would be evidenced by the appearance, in *S*'s dreams and associative material, of images used by *A* on that night. As an equal number of non-target nights were planned, it was hypothesized that material from these nights would

not include aspects of targets which were randomly assigned once the experimental series had been concluded.

Miss Theresa Grayeb, a secretary at the Maimonides Medical Center, served as *S* for the study and worked with a male *A* who was a research assistant at the laboratory.

A pool of 10 prints of famous paintings was created by two staff members who were absent during the actual experimental sessions.

Three laboratory staff members rotated as *E*, two of the three being present on every experimental night. *S*'s sleep was monitored on the EEG on 16 non-successive nights; her dreams and associative material were recorded on tape.

Once *S* was in bed, *A* selected a number from a random number table and located the target envelope matching that number. *A* was observed by one of the *Es* while going through this procedure.

A took this envelope to his room and opened it. If the envelope was empty, he left the Dream Laboratory (unknown to the *Es*) and spent the night in another part of Maimonides Medical Center. If the envelope contained a target picture, he attempted to telepathically influence *S*'s dreams. On the following day, he replaced the target in the envelope, taped the envelope shut, and returned it to a special file. If the envelope was empty, it was also resealed. *S* did not know that non-target nights were included in this experimental series. Other than the inclusion of non-target nights, the procedure resembled that followed in the previous study.

Three outside judges assigned both ranks and ratings to the data. In so doing, they followed a procedure similar to that utilized in the previous study, except that all 16 protocols were judged against the 8 randomly selected target pictures.

S followed an identical procedure to that of the judges. Each of the 16 protocols, taken one at a time, was ranked and rated against all eight targets.

Following the completion of the judging procedure, Dr. Michael F. Capobianco, one of the project's statistical consultants, made random assignments of the eight targets to the non-target nights.

Ranks and ratings for the judges and for *S* were subjected separately to two-way analysis of variance according to the Scheffé method. Once again, the means of the three judges' scores were entered on the matrix.

Statistically significant results were not obtained. The judges' ranks (with associative material) for the target nights produced non-significant data ($F_{1,48} = -0.13$) as did the judges ratings ($F_{1,48} = 0.08$). The judges' ranks and ratings were not significant for the non-target nights ($F_{1,48} = 0.67$; $F_{1,48} = -0.11$, respectively).

S's data were in the expected direction; however, neither ranks nor ratings (with associative material) produced significant results for target nights ($F_{1,48} = 0.47$; $F_{1,48} = 0.53$), or for non-target nights ($F_{1,48} = 0.19$; $F_{1,48} = 0.90$). The hypothesis of this study was not confirmed.

The target nights for this study, randomly determined, included sessions 2, 4, 5, 10, 12, 14, 15, and 16. Only a few of these sessions produced striking target-protocol correspondences. For example, Goya's "Apple Thieves" was the first experimental target; it depicts several young boys stealing apples from a tree. *S* dreamed about "moral values" and about "talking over issues and values."

Boller's "Hanukkah Candelabrum" was the third experimental target; the golden candelabrum has a large stone inset at its base. *S* dreamed about being in church, about "colored granite," and about "those stones that sparkle."

As the fifth experimental target, De Chirico's "The Uncertainty of the Poet" was randomly selected. On the target, a bunch of yellow bananas rests beside the nude statue of a headless woman in the middle of a street. *S* stated, "I was comparing two writers or authors and their style. . . ." *S* also reported, "I have a song going around in my head. . . . I saw a play the other night. One of the songs from that. . . ."

An inspection of *S*'s dream transcripts suggests that motivational factors may have accounted for the absence of a significant telepathic effect. *S*'s first attempt was remarkably successful as were two additional pilot sessions. Once the experimental series began, her dream reports became shorter and her verbal comments became defensive. A conscious or unconscious resistance to telepathic "intrusion" may have become operational, thus diluting the paranormal material which had previously been noted to such a marked degree. The non-significant results of this experimental series stimulated the laboratory to inaugurate projects which investigated the motivational and psychodynamic aspects of the telepathic process during sleep.

Chapter IV

FURTHER EXPLORATIONS

A second screening study was designed in an attempt to locate *Ss* who would be suitable for more intensive study. Statistical confirmation of the telepathy hypothesis was expected in the form already described for the previous experimental series.

Twelve paid volunteers (six male, six female) over the age of 21 served as *Ss* for this study. Twelve art reproductions were selected as targets by a staff member who was never present when the *Ss* arrived at the laboratory. The range of targets was unknown to the two *As*, who also alternated as *Es*. Each *S* was tested individually on an assigned experimental night, following the basic procedures implemented for previous studies.

Copies of the 12 targets were sent to the judges along with typed protocols of the 12 *Ss*' dream reports and associational material. Instructions were similar to those used in the first experimental series. Three judges ranked and rated each protocol, one at a time, against all 12 targets. One judge ranked and rated each target, one at a time, against all 12 dream protocols. *S* ranking and rating was also accomplished.

The judges' and *Ss*' ranks and ratings were subjected to two-way analysis of variance according to the Scheffé method. "Hits" and "misses" were evaluated by the binomial expansion technique. The hypotheses of this study were not confirmed. For neither *Ss* nor judges were the correct target-protocol combinations given more favorable ranks or ratings than other target-protocol combinations. A differences did not emerge as they had for the first experimental series.

The *Ss*' ranks produced nine "hits" and three "misses." The first three judges' ranks produced six "hits" and six "misses" while

the fourth judge's ranks resulted in nine "hits" and three "misses." None of these distributions were statistically significant.

None of the ratings attained statistical significance. All the results were in the predicted direction and those coming closest to significance were produced by the fourth judge ($F_{1,20} = 2.21$).

Despite the fact that this study did not yield statistically significant results, several of the nights were marked by striking correspondences between dream reports and the targets used. The first *S* was a female writer who worked with the male *A*. Her randomly chosen target was "The Rock Crystal Easter Egg" by Fabergé. Her most vivid dream was of "two huge heads" described as "eggish." *S* reported, "They were very eggish because the men were bald."

The second *S* was a female graduate student in psychology. She worked with the male *A*; her target was Chagall's "The Gates of the Cemetery." One of her dreams involved people who were wearing "this black material" and who "slept in plain black shifts." She remarked that her dreams were usually vivid and colorful, but on this occasion "these that I remember were all gray and dark." In another dream, people "were standing very solemnly . . . in some sort of mystical, religious kind of way."

The third *S* worked with the female *A*. A male artist, his target was "Dempsey and Firpo," one of Bellows' celebrated boxing paintings. *S* dreamed of "Madison Square Garden and a boxing fight."

The tenth *S* was a female psychologist who worked with the female *A*; Sheets' "Mystic Night" was the target. "Mystic Night" depicts several female figures performing a night-time ritual in a wooded area. A greenish-blue color pervades the entire picture; mountains covered with grass and foliage can be seen in the background.

Excerpts from S's second dream report:

"Driving in the country . . . I see *lots of mountains and trees. . . . The mountains are like those up near Bear Mountain and it's very, very green.*"

Excerpts from S's fourth dream report:

"It's in Vermont in the springtime. . . . *There's sort of a huge crowd of these students out in this kind of grassy—you know—parking place, trees. And they have like this huge band of grass that they leave free*

between the two groups like in No Man's Land. . . . *What strikes me most about the whole thing was the trees, again, and the greenery and the country.*"

Excerpts from S's associative material:

"The blue—this kind of sky blue color and foliage—I mean, *there was so much greenery and country atmosphere throughout. I remember the greens and blue being terribly bright. . . . I have the feeling that it's some sort of maybe like a jungle scene or something with very lush foliage. I also have this feeling that . . . there's some sort of primitive aspect to whatever was in that target. I can almost see it as some sort of tribal ritual in a jungle.*"

S was a male educational research worker. His second dream report concerned a high school classmate he had not seen for several years:

"And there was a friend of mine, Danny Schier, who I haven't seen for about 20 years—oh, I guess well over 20 years—and he was in the dream. He was being set up for the next experiment."

The subject again referred to his friend during the post-sleep interview:

"And I remember there was a chap that I hadn't seen for about 20 years or so—I guess more than that—by the name of Danny Schier, who was being set up for the next experiment and he's having stuff applied to him. . . ."

Four days later, S wrote the laboratory staff the following letter:

This is to inform you that, as "predicted" in my dream of last Friday night, I met a friend of mine named Danny Schier.

I was in a restaurant rather out of the area where I usually eat. I was sitting with an acquaintance and had just told him of the dream and that I had not seen Danny for about 20 years, since high school. I had been saying that since Danny seemed to have no integral part in my dream, I expected to meet him momentarily. We got up to leave and there, standing in the line near the doorway was Danny. (I had been seated facing away from the door.)

I tapped him on the arm and informed my friend that this was the fellow I had just told him about. Danny recalled that we had met in

passing at Lewisohn Stadium some time since high school, but I do not remember the incident. I haven't been there for many years, anyhow. If there is any more that I can tell you about it, please let me know.

Several months after this incident, a staff member (S.K.) was lecturing in Huntington, N.Y. A member of the audience came up after the lecture and introduced himself. He had been the subject's friend in the restaurant scene and corroborated the story of the encounter with Danny Schier in every detail. This incident could not be evaluated statistically but demonstrates the possibility that precognition, or other forms of ESP beside telepathy, may enter into a controlled experiment which attempts to study only one aspect of the total psi process.

A STUDY WITH A FEMALE PSYCHOLOGIST

A female psychologist was selected from the screening study for an eight-night study. A male staff member served as *A*. Procedures were again designed to investigate the hypothesis that telepathic transfer of information from an *A* to a sleeping *S* could be experimentally demonstrated. The procedure resembled that followed for the other studies.

Upon completion of the study, copies of the eight randomly selected targets were sent to *S* and to three judges for the scoring of target-protocol correspondences. *S*'s ratings and the means of the judges' ratings were each subjected to two-way analysis of variance according to the Scheffé method.

The hypotheses of this study were not confirmed. For neither *S* nor the judges were the correct target-protocol combinations given significantly more favorable ratings than other target-protocol combinations. *S*'s ratings ($F_{1,48} = 2.52$) were better than those of the judges ($F_{1,48} = 0.01$), but in neither case were the data statistically significant.

Several striking target-protocol correspondences occurred during this series; for example, the target on the second night was "The Duelers" by Goya; the painting depicts two Spaniards, one of whom has just made a fatal thrust into the other's abdomen.

Excerpts from S's second dream report:

"I'm in the office of a man who is sort of waiting for this woman

to arrive. He's actually . . . talking about her in the sense that *the venom and anger that I experience in him is reserved for her . . . and he has this thing that's like a bullwhip . . . and he hits the wall with the whip and makes it crack and hears how well it's snapping, and then thinks of a woman.*"

Excerpts from S's seventh dream report:

"I was at a rally of a sort with Black Muslims . . . and *they were really raging*, and all of a sudden some doors from an auditorium opened and out came Elijah Mohammed and a bunch of his followers and he had this huge flaming torch with which to set some more stuff on fire, and *I got very scared.*"

Excerpts from S's associative material:

"There was something very impotent about this man's rage. . . . It wasn't a bullwhip that he had, it was really like a cat o'nine tails, now that I think of it. . . . I don't know if I'm right offhand, but I just had a feeling that it had its origins . . . in Spain. . . . It was a very frightening experience. I was coming out of this subway, actually, and seeing all these city litter baskets blazing, and then seeing Elijah Mohammed and some of his henchmen coming out of a building carrying this huge torch, going to set some more fires, and it was like a *real chaos scene*. . . . It's really an unusual dream . . . *the terrorism, that same kind of lack of control, I guess, that seemed to me to be the case of the guy with the whip too. There's such . . . wide open anger and hostility and acting out in it. . . . It's some sort of conflagration, either symbolically or realistically . . . something rather violent.*"

Chagall's "The Drinker" was the fourth randomly selected target; it depicts a white-faced man with black-outlined eyes drinking from a bottle.

Excerpts from S's second dream report:

"I don't know whether it's related to the dream that I had, but right now *there's a commercial song that's going through my mind—it's about a beer. About Ballantine Beer. The words are, 'Why is Ballantine Beer like an opening night,' a race that finishes neck and neck? . . .*"

Excerpts from S's third dream report:

"I had been in a restaurant next door eating . . . and in this

restaurant there was a separate section that was *a bar*, and in the dream I was at this place a number of different nights. The dream seemed to have some sort of time dimension because there was *a bartender*, a short fellow. There was another guy there, and the first night *they sent over a drink for me*. . . . This girl wanted them to go or something. . . . She had loads of *makeup* on, and *lots of black eye, eye shadow, and black eye pencil lining her eyes, and black eyebrows, and her lips were black too*. . . . That whole *bar* business and the restaurant and the booth are like a place that I was at in Massachusetts."

Excerpts from S's associative material:

"I remembered as I tried to go back to sleep that Ballantine commercial song. . . . I had left out one part of it which now seems to me very important in view of the night's dreaming. The end of the song is that, 'There's more spirit to it,' and that's why the beer is supposed to be so great. And I remembered thinking about a movie . . . 'Juliet of the Spirits. . . .'"

A photograph by Cussons, May, and Company was the target for the seventh night. Titled "The Public Gaol, Williamsburg, Virginia," it depicts stocks and a pillory in the foreground. In the background is the gaol or jail; a guide is about to take a group of visitors on an inspection tour.

Excerpts from S's second dream report:

"The map that I was looking at was very unusual. It wasn't quite a subway map, but there were *lots of bars* running through it."

Excerpts from S's fourth dream report:

"I remember sitting at the window and looking out, and this whole building on the corner which had been a bank for part of the time, was *all boarded up*. . . . It was *like the property was condemned*, and they were going to be tearing all this down to build something new."

Excerpts from S's fifth dream report:

"At the time of the dream, there's a woman demanding *shock treatment*. . . . And there's some sort of operating going on which involves ships from South American countries. I'm not sure what they're carrying, whether it's guns or *some sort of contraband*."

Excerpts from S's associative material:

"There was a revolution going on some place, but I had the feeling that the involvement was not so much political in the end as it was *some sort of black marketeering*. . . . Those lines in that map actually were in color. . . . In that waiting room thing, with that woman bellowing about shock treatment . . . and the part earlier with the *property that was condemned, I remember the building being boarded up* and recognizable colors."

Several months after the conclusion of the study, S wrote the following letter to one of the staff members (S.K.) giving her impressions of the experiment:

As I've reread the set of transcripts I first read for judging and then reviewed when you first sent them (how many months ago), I've had a number of thoughts which seem quite relevant. I think my reluctance to get my "subjective" report on paper has much to do with what I now "hear" in the transcripts of my dream protocols—namely, a clear sense of unwillingness to allow the ESP experience to develop and a resentment at what unconsciously I had experienced as an intrusion (the dream reporting and even being a subject). In reading the very long dream of the first night and then again the eighth night, these feelings seem quite striking and intense. It wasn't until this weekend and this rereading that I became aware of what seems to have been going on throughout the experiment. I remember—at the time of judging—that I felt the eight nights were nothing like that first night I'd spent before I started working (with "Mystic Night" as the target) or the experience I had as an agent. With the exception of the second, fourth, and seventh nights, there was little of the intense and vivid conviction of an ESP experience that I'd felt before participating in this experimental series.

Reflecting from this distance in time and space on what was going on in my life at the time of the experiment, I can begin to see that the whole ESP involvement then was a great threat to my equilibrium. At the same time it is clear too that I couldn't have allowed myself the open awareness that was needed. I was, at that time, too much concerned with being "open" psychologically. It is obvious now that I was far from open—with myself, with you, and with Monte about the experiment and certainly in my dreaming and responding during the experiment. I suspect, too, that my tardiness in writing a subjective report has had something to do with being still reluctant to acknowledge these feelings. Partly I suppose the reluctance has to do with what seems to

me to be an admission that I was then engaged in "sabotaging" the experiment. Still, that's the impression I now have as I read through the dream reports. I hear my own fear of losing control (having an ESP experience or, more generally, allowing an impact from another person) and of being "exposed." Though I then laughed and kidded about being called "a witch" (I think my skepticism about ESP became very personalized), for me to have such experiences then would have been, and I guess was, very disrupting. In this new light, I really wonder what was happening on the second, fourth and seventh nights that made my control over myself either unnecessary or else ineffective. I wonder, too, what the data from me and from the judges look like for those nights.¹ Let me give you my recollections of those nights. They were the most vivid and impelling experiences of the lot and the ones I'd remembered and intended to write about even before rereading the protocols.

The violence, anger and rage in the dreams during the second night (when "The Duelers" was the target) were unique in my dream experience—more so than anything in the dreaming of all the other nights during the experiment. I have no recollections of any such dreams in my ordinary experience. In the second REM period awakening, I stated, "It's not quite a dream again. It's like a thought theme. . . . A projection of myself, I think, having to do with the influence I would have over my own behavior with the sense—as if my own behavior is in response to some external direction."

I wonder whether the impact of the pictures on Sol² might have made it more difficult for me to screen out his "sending." I seem to have been concerned throughout the night with themes that seem related. Following REM period number four, I recalled ". . . sinking further and further into a drowsing state—and then my contact lenses started to bother me. . . . I started to take them out but I didn't have a guard for them. . . ." I underlined the word "contact" as it may have indicated a feeling of closeness to the agent.

I said that I was "feeling close to Sol" but also had "thoughts" about a "need to be alone." The concern about "not being forced" in "making decisions" shows my ambivalence. The intrusion in the seventh REM dream period (seemingly the most telepathic) of something about "prisms" which "could be oriented to restrict my eyes" is significant as were my interview comments about having trouble putting the lenses "in the container."

¹ S and the judges rated these three nights more favorably than they rated the other five nights.

² Sol Feldstein, a staff psychologist, served as A for this study.

I also recall that on the morning after this night I had the kind of conviction of having had ESP that I had felt with the "Mystic Night" target.

On the fourth night, when "The Drinker" was used, I remember the very vivid feeling that something was going on vis-à-vis you, Stan. It was when I couldn't fall asleep after the second awakening. I kept turning toward the control room when usually I slept facing the opposite wall. Then, too, there was a really extreme feeling of *tension*. In telling you of these feelings I remarked about feeling "spooked." This was the night you were doing some statistics and then when you stopped I was able to go back to sleep.

I'm also struck in rereading the transcript of the double meaning of "spirit" throughout. "Spirit" means "alcohol" (in terms of the target picture) but I also talked about a "kooky psychic friend of 'Juliet of the Spirits.'" Also, my many references to "craziness" and "peculiarity" seem related not only to the target but to my own sense of "craziness" in having an ESP experience. Also there were many "fleeting" parts of dreams I couldn't remember. Just as in the second night, there is throughout the protocol the indication of experiencing ESP or communication (even to my reference back to the "Mystic Night" target and experience) and the attempts to ward it off as frightening.

Having gotten this far, I begin to think about the fact that this target, like the one on the second night, is a very provocative one. It is very unusual in its content and has a violent theme. Could it be the content as well as the possibility of Sol's associations to it that overwhelmed my attempt to ward off its impact on me? Or, too, might this be more generally true about targets in your studies—that really *strong* target themes—violent, bizarre, emotionally stimulating themes—have a greater chance of getting through to a subject who's trying to ward off the agent's impact?

The seventh night in some ways was the most exciting night for me. When I finally saw the targets I was astonished. In the fourth REM period dream my picture of my sister and her friends, as well as the house and outdoors scene was *exactly* that of the Williamsburg target picture. I was standing at the corner where the "visitors" are on the right side of the picture, and looking out towards the field behind them! When I saw the target pictures I really felt *spooked* with that!

I noticed during my rereading that all my dream reports have a "near miss" quality—as though to disguise the ESP impact for me. The dream about the map of Brooklyn and Manhattan with so much emphasis on the "connecting lines" and "waterways between" could have been a reference to the *Williamsburg Bridge* connecting Brooklyn and

Manhattan. Yet I never actually mentioned "Williamsburg Bridge" in the interview. The same seems true about the "*shock* treatment" as a veiled reference to *stock* treatment.

The many references to cigarettes here seem also connected to Virginia as the home of most tobacco companies. In seeing the target and recognizing the scene as the one in my dream I was struck by the many references through the night to two dimensions versus three dimensions.

Again, on this night as on the other two, my recollections now and my statements through the night and the interview all point up the vivid and intense experience. I seem on the seventh night much less guarded in reporting and much less concerned about the impact than I had been on the second and fourth nights.

I am also struck by the fact that Sol's hypothesis about the appearance of "communication symbols" as indicative of telepathy seems to hold up in each of these three nights. All three dream reports contain very clear, positive references to *good* communication.

What seems most important in reviewing all my notes in this letter is the importance of using really *potent* target material. Clearly with subjects who aren't afraid of telepathy this may be relatively unimportant. Still, with an "ordinary," or—more so—with a "defending" subject, the more unusual and potent the target material the less likely it is to be kept out.

A STUDY WITH A MALE PSYCHOLOGIST

The emphasis placed by *S* on psychodynamic factors and her relationship with *A* led to the design of a study in which *S* was allowed to select his own *A* for each of eight experimental nights. *S* was a male psychologist who had successfully incorporated target elements into his dreams when he served as *S* in a telepathy study at another laboratory.³

It was hypothesized that *S*'s dream transcript for any given experimental night would reflect the influence of a telepathic communication with *A*. This influence would be evidenced by the ap-

³ C. Hall, "Experiments with Telepathically Influenced Dreams," *Zeitschrift für Parapsychologie und Grenzgebiete der Psychologie*, 10 (1967): 18-47. This report represents the first published attempt to replicate the telepathy studies inaugurated at Maimonides. The data were statistically significant and the author concluded "that it is possible to influence dreams telepathically even under artificial experimental circumstances."

pearance, in *S*'s dreams and associative material, of aspects of the target used by *A* on that night. The targets were postcard-size prints of famous paintings. One of the Dream Laboratory staff members examined over 200 art prints from New York museums and from art books, selecting 72 that combined simplicity, emotional content, and vivid colors—the characteristics which appeared to typify successful telepathy target pictures in previous experimental sessions at the Dream Laboratory. He divided the 72 pictures into nine target pools. Each pool contained eight art prints.

S slept in the Dream Laboratory on eight non-consecutive nights. There were nine target pools in case dream reports could not be elicited on one experimental night. In that event, a different pool would have had to be used for the "make-up" night. *S* was allowed to choose any member from the Maimonides staff he desired as *A*. For the first two nights of the study, a female psychologist served as *A*. A psychiatrist (M.U.) served as *A* on the third experimental night. A female psychiatric social worker served as *A* on the remaining nights of the study. *S* and *A* engaged in informal conversation while the electrodes were being attached by an *E*.

Immediately after *S* went to bed, *A* entered an office and selected a single digit from a table of random numbers. This was done by pointing to a line of numerals, adding each digit in the line, and again adding the digits until a one digit number was obtained.

A then counted down through the stack of target pools until he reached the number previously obtained. At this point, *A* returned to the random number table and selected another single digit by the same method. *A* opened the envelope and counted down through the stack of smaller envelopes containing individual targets.

If the obtained digit was larger than the number of envelopes in one or both of the stacks, *A* returned to the first envelope in the stack and kept counting until the proper number was reached. *A* gave the code letter on the envelope containing the target pool to an *E* so that a duplicate pool could be located for *S* judging in the morning.

Upon arriving in his room, *A* opened the envelope containing the target picture. He was encouraged to write down his associations, to visualize the picture, to concentrate upon it, and to treat it in any other manner which would make its contents a dynamic part of his conscious processes. Once this was done, there was no way

the *A* could communicate with *E* or with *S* without leaving his room and breaching the conditions of the experiment.

During the night, the *Es* monitored *S*'s sleep in order to detect Stage REM. At the onset of REM activity, *E* signalled *A* by means of a one-way buzzer to awaken and to concentrate on the target. After ten minutes of Stage REM, *E* awakened *S* by means of a two-way intercom, and elicited a verbal report. These reports, as well as *S*'s associations to them, were tape-recorded and subsequently transcribed. Following *S*'s final awakening, toward the end of each experimental session, an *E* conducted a post-sleep interview with *S* in order to obtain additional associational material. At this time, *S* was also asked to make a guess as to what he thought the target for that night might have been.

After the conclusion of the post-sleep interview, a secretarial assistant mailed the tape to a transcriber who typed a transcript of the night's verbal reports and interview. These transcripts were used by an outside judge for a supplementary evaluation.

An interview in depth with a psychiatrist (M.U.) followed each experimental session. The interview centered around the dreams and associational material of *S* as well as around *A*'s associations to the target. Whenever possible, *A* was present for the interview.

The main evaluation of data for this study was accomplished by utilization of *S* ranking and rating, using the procedure characterizing earlier studies.

The eight transcripts were sent to an outside judge, along with copies of the eight target pictures, for evaluation of target-protocol correspondences. He was instructed to make three judgments of ratings for each target-protocol 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.

The results of *S* ranking were assessed by the binomial method. When the ranks were inspected, there were eight "hits" and no "misses." This distribution was significant at the 0.004 level.

The ratings by *S* were assessed by the Mann-Whitney *U* test.⁴ The ratings for the correct targets were compared to the ratings for all other targets. The ratings for the correct targets were significantly

⁴ S. Siegel, *Nonparametric Statistics for the Behavioral Sciences* (New York: McGraw-Hill, 1956).

higher than the other ratings. For the dreams alone, the data were significant at the 0.003 level; for the entire protocol, the data were also significant at the 0.003 level.

The results of the judge's evaluation were assessed for direct hits (i.e., rank #1) by the binomial method (e.g., $p = 1/8$). Five direct hits were obtained when the judge used the dream reports alone; this distribution is significant at the 0.001 level. When the entire transcript was used by the judge, five direct correspondences were obtained; this is significant at the 0.001 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 0.0001 level.

An analysis of the motivational factors that came into focus during the psychoanalytic interview suggested that the telepathic effect was strongest in those dreams dominated by sexual and/or aggressive content.

The target randomly selected by *A* for the first night was "The Discovery of America, by Christopher Columbus" by Dali. The painting depicts the young Columbus in a dream sequence about his future voyage across the Atlantic; a church and a large number of priests figure prominently in the picture. *S* dreamed of "a big Mass," a church, and "Atlantic City or Atlantic Beach or something."

For the second experimental night, *A* randomly selected "The Wine Taster" by Vermeer. The painting depicts a man holding a bottle while a woman is drinking a glass of wine. *S* reported dreaming about being "over at a friend's house, and . . . I was taking a pill. . . . 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."

A randomly selected Rousseau's "The Repast of the Lion" for the following session. The picture shows a lion biting into the flesh of a smaller animal. *S* dreamed of "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. . . . The teeth were there, and they had been sort of fighting. . . . It's almost as though blood could be dripping from their teeth and just real frank, raw aggression. . . ."

On the fourth night, *A* randomly selected "Kathak Dancing Girls" as the target. Executed by an unknown Indian artist, the paint-

ing portrays two girls in bright, striped costumes, dancing in a meadow. *S*'s protocol included a reference to "striped black and yellow bees. . . . Everything seemed to be striped about them. . . . It was some foreign country."

The fifth experimental night employed De Chirico's "The Enigma of Fate." The randomly selected target shows a tall, brick, chimney-like structure in conjunction with a large red hand. *S* stated, "It had something to do with a giant. . . . You told me to push this button up at the top of the stairs, and I did it. And I remember pushing and my finger being wet."

On the sixth experimental night, *A* randomly selected Cezanne's "Trees and Houses" as the target. The picture portrays a white house and a number of stark barren trees; there are no people in the painting.

Excerpts from S's first dream report:

"All I could remember is it was *something about a house*. . . .
All I can remember is seeing a house. . . ."

Excerpts from S's fourth dream report:

"*There was a house. It was a model house like you would use if you were building a home yourself and had little partitions that could be moved about and you could see how the room would look. . . . There were no people involved and nothing going on but this rearranging of the interior structure of it.*"

Excerpts from S's sixth dream report:

"There was no color, no movement. . . . It's been a very poor yield. *It may be a great yield if there's a target picture in there that's a lonely shack sitting on a hillside* . . . then we've been doing tremendous. . . ."

Excerpts from S's seventh dream report:

". . . *There was a telephone pole*. . . . It was an all dirt road. . . . There were a lot of ruts around. . . ."

Excerpts from S's associative material:

". . . It was either the best night we've ever had or the worst night. . . . The dreams were fragments, were just brief, momentary things . . . nothing in the way of action. . . . There was *the house image* and then—bzz—it was gone."

For the seventh experimental night, *A* randomly chose Levine's "Gangster Funeral." This picture portrays a dead gangster in his coffin. A police officer stands by as the last respects are paid. *S* dreamed about a dead mouse and the "security police," noting, "I think the association very clearly is Monte (M.U.) as security police."

A randomly selected Bichitr's "Man with Arrows and Companions" on the final night. 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. *S* reported, ". . . Straight 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. . . . Somewhere in the picture rope imagery appears in a very prominent or conspicuous way."

Hall⁵ 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. Thus, the success of this attempt to influence dreams from a distance is extremely provocative in view of the difficulty 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 "stripes" (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 into drinking water (Night 2), changing of aggression by a lion into an aggressive act committed by puppies (Night 3), reporting striped bees rather than girls in striped costumes (Night 4), visualizing a finger rather than a hand (Night 5), changing a

⁵ C. Hall, *The Meaning of Dreams* (New York: McGraw-Hill, 1966).

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 the judge 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.

Chapter V

SOME THOUGHTS ON THE NATURE OF THE NOCTURNAL PARANORMAL DIALOGUE

The experimental odyssey described in the preceding chapters followed upon an interest in the possibility of the paranormal inclusion of events occurring at a distance into manifest dream content as initially observed in the clinical setting and in anecdotal reports. The job of replication has begun, with encouraging results.^{1 2} Thus, the weight of the evidence generated thus far from both the informal and the formal studies supports the hypothesis that the dreaming state favors the occurrence of psi phenomena.

Criticisms and Remedies

We are far from having exploited all the possibilities and advantages of the approach described. The new REM monitoring techniques have initiated a real breakthrough in our knowledge of the intricacies of the sleep-waking cycle. We are firmly convinced that it will prove as seminal an influence for parapsychological research. Much of what we have been involved in thus far has been devoted to the development of a single basic design. In the formal experiments reported, for example, the clinical and dynamic dimensions have been by-passed in favor of the quantitative assessment of correspondences at a manifest content level. In some respects this was doing it the hard way first as it tended to minimize any potentially facilitating effect that could come from a more selective structuring of the subject-agent relationship, as well as from a deliberate concern with more affectively charged target material. Based on the earlier exploratory work it was felt that the paranormal yield would be powerful enough to show up despite these limiting features. Further-

¹ C. Hall, *op. cit.*, 1967.

² G. Globus *et al.*, "An Appraisal of Telepathic Communication in Dreams" (abstract), *Psychophysiology*, 4 (1968): 365.

more, it was our hope that, in using this simplified and less selective approach, we would be freer to solve some of the basic methodological problems in the judging. Success at this level hopefully could insure easier replication in other laboratories than might have been the case if we had limited ourselves to work with gifted sensitives. Since the latter are not easy to come by, we have in a sense struck a compromise by using a screening experiment to help us find a gifted subject.

The design as it developed has taken into account the objections raised to the earlier work. One study (Chapter III), for example, included nights in which a target with no agent was used both to assess the influence of the agent and, in the event that positive results ensued, to seek further into any possible bias arising in connection with the target chosen for a given night. The suggestion was also made to have targets not used in an experiment judged and compared with the results of the actual targets. This was done with the second Erwin study (Chapter III).

A second set of objections pertained to our choice of statistical procedures. These have been, in the main, answered by our shift to the exclusive use of rating procedure (as in the second Erwin study, Chapter III) to avoid the problems associated with a forced choice by the judges when a ranking procedure is used.

There are two other objections that are not so much objections as indications for future research. These relate to structuring the subject-agent relationship along lines of closer affective ties and working with more meaningful target material. Both lines of investigation are currently under way, beginning with the study reported in Chapter IV. Our future plans are to work with subject-agent teams that include relationships based on marriage, friendship and genetic ties. In view of the recent electroencephalographic report of alpha concordance,³ we are particularly interested in working with identical twins. We are also moving in the direction of developing techniques designed to involve more effectively the agent with the target. We have been doing this by means of what we have designated as a multisensory approach (see Chapter III). The target material is so prepared that more than one sensory modality is needed for the agent to fully respond to it in all its aspects. Thus the agent may,

³ T. D. Duane and T. Behrendt, "Extrasensory Electroencephalographic Induction between Identical Twins," *Science*, 150 (1965): 367.

when appropriate to the nature of the target, be involved in examining texture, sensing odor, hearing relevant sound accompaniment or, in some cases, even acting out a scene suggested by the target itself.

Another path currently being explored is that of seeking to refine the judging process to enable the judges to more readily identify the salient passages in the dream protocol. The dream report is broken down into units of meaning (i.e., phrases or sentences encompassing an identifiable idea), classifying these units into categories based on a content analysis, and then seeking to assess any possible relationship between these categories and psi content.

Finally we are concerned with the task of tailoring our experiment to the unique and dynamic features of dreaming. We made a start in this direction in the experiment in which we explored by means of analytically related interviews with both the subject and the agent, on the post-experimental morning, the associative context in which the dreams developed, the motivational themes exposed and the way in which these factors articulated with any paranormal effects noted in the dreams (Chapter IV).

ORGANIZING CONCEPTS

Implicit theoretical notions and ideas underly any experimental approach. In what is to follow, an attempt is made to make some of these general organizing concepts more explicit.

The Concept of Vigilance

The central core of our research, namely, the relationship of psi to dreaming, offers laboratory support for the hypothesis, well known empirically, that dissociated states favor the appearance of psi effects. Since, at this point, we are unable to determine precisely what psi is, perhaps it may prove helpful to scrutinize the dreaming process more closely. Ullman, in a series of papers,⁴ developed a concept of dreaming as a state of vigilance and attempted to account for the phenomenal aspects of dreaming on the basis of the needs of the sleeping human organism. This view was summarized in his

⁴ M. Ullman, "Physiological Determinants of the Dream," *J. Nerv. Ment. Dis.*, 124 (1956): 45-48. "Dreams and Arousal," *Amer. J. Psychother.*, 12 (1958): 671-690. "The Adaptive Significance of the Dream," *J. Nerv. Ment. Dis.*, 129 (1959): 144-149. "Dreaming, Altered States of Consciousness and the Problem of Vigilance," *J. Nerv. Ment. Dis.*, 133 (1961): 529-535.

Presidential Address⁵ to the Parapsychological Association; excerpts from it follow:

"The sleeping subject appears to go through repetitive cycles of heightened vigilance manifested along both physiological and psychological dimensions. The dreaming experience may, in fact, be regarded as the subjective reflection of a vigilance operation. Beginning with an affective residue re-experienced at the onset of paradoxical or activated sleep, there is a heightened focal attention to the significant recent event responsible for this affective residue. This leads the dreamer into a longitudinal exploration of relevant past data and movement toward the resolution of any resulting psychological dysequilibrium, either by summoning up defenses or by the creative utilization of positive resources and growth potential. At any rate, there is movement toward a new affective tone which may or may not exert a further arousal effect sufficient to bring the sleeping subject to full awakening. The orientation of the sleeping subject is not primarily to his own past, but to the kind of immediate future situation to which he may awaken. We have become so used to thinking of dreams as disposing of past unfinished business in order to allow sleep to continue that it is hard for many to rotate their psychological position a full 180°, to bring it into line with a view of the REM state as one of activation, arousal, and vigilance, oriented primarily to the present and future, rather than the past. I think it is of some importance to emphasize to what extent our way of looking at dreams has been in terms of their backward focus. This, of course, has been the contribution of the psychoanalysts and has been remarkably useful clinically, but it may have left us with a warped and somewhat erroneous view of dreaming. In some instances this has already become evident as a consequence of our new knowledge of the physiology of sleep and dreams. We can no longer tie the dream to the tail of unfinished instinctual business (not that we ever could, in my opinion). Dreaming is beginning to shape up more and more as a complicated metaphorical act pregnant with statements concerning the dreamer's own future and resolvable by a final unitary behavioral act in the form of either continued sleep or full arousal. The precognitive factor, so dramatically called to our attention by Dunne, may represent more than an incidental freak occurrence. It

⁵ M. Ullman, "A Nocturnal Approach to Psi," *Proceedings of the 1966 Annual Convention of the Parapsychological Association*.

may be an extension under certain circumstances of the basic orientation of the dream to the dreamer's own immediate future. Dunne intimated that if we set our minds to it we would be able to identify future elements as well as past elements in the dream experience. The means are now at hand to put these ideas to the test."

Since an effective orientation to the future can only be built upon the past and, at that, a past that accurately reflects experience, it is not surprising that the dream deals with the past in a very special way. In the dream the past becomes polarized around a very specific experiential area much as if a powerful beam, extending through the life history of the dreamer, captured and held in its path only those items having relevance to a current equilibrium-disturbing situation.

Certain implications follow from this view as well as from what we now know about dreaming. We possess a built-in, biologically regulated mechanism that periodically, throughout the night, initiates a state of high cortical activation, experienced subjectively as dream consciousness. This is associated with what some investigators⁶ believe to be the deepest state of sleep and is accompanied by bursts of rapid conjugate eye movements that are not too dissimilar to the scanning movements of waking life. At a physiological level these phenomena are observable in lower animals. They are not only initiated at birth (or possibly before) but are seen in their greatest duration during the early years of life. Furthermore, when there is experimental deprivation of the normally occurring REM state, there is a tendency to compensate for this by increased time spent in the REM state on subsequent recovery nights. These states tend to endure for a longer period towards the morning and, for reasons which are still obscure, once they are over they tend to be rapidly obliterated from memory.

When we link psi to dreaming we are linking it to a body of new physiological information, any or all of which might have heuristic implications for future research. Some of the questions arising out of this linkage at a physiological level are as follows:

1. One of the obvious leads, of course, would be to design animal experiments so as to attempt to program a psi effect in relation to the regularly recurrent REM state. There is the added advantage that the various phases of the sleep-waking cycle can be

⁶ R. Hernández-Peón, "The Nature of Sleep and Dreams," in *Enzymes and Mental Health*, eds. G. J. Martin and B. Kisel (New York: Lippincott, 1966).

chemically and electrically altered in animals in a way that would not be possible for humans.

2. We might, in the light of what we know about the ontogenesis of the REM state, focus more research upon the young child and even the infant.

3. There are a number of ways in which our own experiments could and should be redesigned to provide more information concerning the paranormal potential of the REM state. This would involve us in a comparative study of early and late REM periods, REM versus non-REM periods, and an examination of the possible relevance of the number of rapid eye movements per dreaming episode. The possible significance of slow eye movements and other motor phenomena of sleep (dream talking, walking, etc.) could also be investigated. These studies might even be refined to include among the variables to be studied some of the chemical changes occurring during the REM state.

We have now offered two supporting theses, each of which warrants a new look at dreaming. The first is the establishment of the link between psi and dreaming. The second is the postulated link of dreaming to vigilance operations as suggested by the physiological evidence of a high state of cortical activation and arousal. The formal characteristics, as well as the content, of dream consciousness, have been analyzed from this point of view in the reports referred to previously. What concerns us here is the validity of including within the vigilance notion of dreaming the existence of paranormal search operations complementing the internal scanning of past experiential data. Scanning of the latter type selectively links past experience to current issues which, in one way or another, have a certain vigilance potential, i.e., a problematic, unsolved quality, not infrequently associated with anxiety. The telescoping of temporal and spatial relations makes it possible for a temporally extended issue (an issue experienced in the present but with its roots in the past) to be seen "all at once" in its entirety. A kind of confrontation occurs between the individual and a segment of his own being experienced in a novel and hence in a vigilance arousing way. The fact that this occurs in the form of a moving series of visual metaphors adds to the presentational, dramatic, and confrontational aspects of the experience. The fact that dreams are so inexorably accurate in the rigor and honesty with which feelings are dealt with can be

thought of in terms of the need for any effective vigilance or search operation to be "on target."

The connection of psi to dreaming links it not only to a range of specific physiological events worthy of future investigation, but to unique psychological events as well, some or all of which may likewise provide experimental leads. As helpful as the psychoanalytic formulations have been on the subject of psi and dreaming, they have also unfortunately involved the risk of foreclosing too early on the many remaining mysteries of dreaming and hence involved the risk of creating the deceptively reassuring impression that understanding the unconscious dynamics provided the key to everything. The two psychological features to be further discussed are the investment in dream consciousness in the use of metaphor and the fact of dream consciousness as a dissociated state of being.

Psi and Metaphor

Metaphor connotes the concept of "bearing over" or bridging. In the dreaming state a body of data culled from the past and the anticipated future, as well as the present, is brought to bear on an issue, a problem or a conflict precipitated by a recent event, and is organized and presented as a series of moving, visual metaphors. The translation into metaphor, however, is neither simple nor superficial but, rather, is shaped by feelings connected with basic motivational trends touched off as the internal scanning process gets underway. The net effect is to bring about an implacable kind of self-confrontation on issues of immediate relevance to the individual. This is the aspect of dreaming of greatest importance to parapsychological research. The development and resolution pursued by the dreamer in his dream once the confrontation is established tax the range and extent of his existing characterologic strengths and weaknesses. This feature of the dream bears more promise for the psychoanalyst than for the psychical researcher. Viewed in this context the metaphor is a bridging device rooted at one pole in the new facets of a current issue as they become increasingly revealed, and rooted at the other in the impact made upon the dreamer of the richness, aptness and dramatic effect of the metaphor itself.

The importance for parapsychological purposes of a full understanding of this process lies in the fact that, aside from certain exceptional circumstances, such as the rare gifts of a powerful sensi-

tive (Chapter II, Examples 1, 2, 3), most of the psi effects are linked to metaphors in the dream in precisely the same manner that other bits of experience are. There is an initial reduction of the experience to concrete terms, an expression of this at a sensory and visual level, and an elaboration of the presenting imagery as there is further clustering of temporally isolated but emotionally relevant past experience. When the examples given in the text are reviewed in this light, it can be seen that the paranormal effects appear to ride in on the crest of metaphors expressing sex, aggression and power, frustration, separation, etc. Some examples follow:

In both instances where the circle was used as the target (Chapter II, Examples 4 and 8), there were strong sexual allusions in the resulting imagery. This was also the case where the obtuse angles (Chapter II, Example 4) and the arrow (Chapter II, Examples 4 and 8) were drawn. A random rock arrangement (Chapter II, Example 9) emerged in the dream as a powerfully phallic symbol.

Other themes touched on problems of aggression (Chapter III, "Zapatistas"), separation (Chapter IV, "Kathak Dancing Girls"), loss of control (Chapter I, Example 8), escape (Chapter III, "Descent from the Cross"), and anger (Chapter IV, "The Duelers").

Some of these considerations may be of help in the experimental approach to both ends of the psi transmission system. At the receiving end the judging process would have to accommodate itself to the recognition and translation of metaphor. In terms of target selection greater care would have to be accorded the metaphor potential of the target, i.e., the ease with which it would lend itself to metaphorical expression. In the formal experiments the choice of works of art as the target material was, of course, a step in this direction, although not by conscious design. The selection, however, could be subjected to much greater refinement so that specific types of metaphorical appeal can be generated in the target population. Furthermore, the possibility exists, at least theoretically, of working within an arrangement of target metaphor range and potential that is congruent with the presenting motivational trends of the subject.

Psi and Dissociation

There is general agreement that psi effects are either not part of the commonplace world, or, at least, not easily detectable as such except under special and relatively rare circumstances. They catch us off guard in moments of relaxation, distraction and fantasy, or

appear spontaneously in induced or self-induced trance states. In general they seem to have a predilection for what are loosely described as dissociated states. We have classified dreaming among the most important of these because of its universal character, its functional nature, and the regularly patterned way in which it forms part of our existence.

The term dissociation connotes an enduring pattern of behavior along motor, sensory or cognitive lines, existing outside of and apart from full conscious volition and awareness. This definition can be used in a broad or narrow sense, depending on the phenomena under scrutiny. In its broadest application, the concept of dissociation can be applied to the split between controlled and uncontrollable behavior that characterizes all psychopathology. Under these circumstances behavior occurs that is dissociated in the sense of being divorced from effective conscious control. If it is appreciated in consciousness at all, it is so in a one-sided, distorted and inaccurate way so that its full nature is not revealed, effective control is not possible, and unintended, painful and sometimes disastrous consequences ensue. Perhaps genetic factors play a role in predisposing the individual to one or another type of dissociative reaction from birth on, if we include among such reactions the major psychiatric syndromes of schizophrenia, manic-depressive psychosis, as well as hysteria and the obsessive compulsive disorders.

In contrast to what may be referred to as the major or intrinsic dissociated states alluded to above, our immediate interest lies elsewhere, namely, with the myriad of transitory, functional, reversible and often evanescent dissociated states all of us encounter from time to time while awake and inevitably experience while asleep. In the waking state these range from temporary lapses to highly organized trance states.

Both groupings of dissociative phenomena share certain features which manifest themselves in a temporally extended or chronic fashion in the intrinsic states, and in a temporally condensed or acute fashion in the transitory states. In the first place, the existence of any dissociated state creates an area of vulnerability in the individual proportional in extent to the range and intensity of the dissociated state itself. Put another way, to the extent that autonomy over behavior is suspended or surrendered, the individual is less able to cope with any demands of the external world impinging upon that

particular set of behavioral responses. There are a number of ways of solving this problem. In the case of the chronic dissociated states, they involve a variety of neurotic operations designed to maintain the self structure through denial and concealment of the problem. In the functional or acute dissociated states, the same compensatory process may occur, as, for example, the rationalizations of the hypnotic subject struggling with post-hypnotic commands. On the other hand, the compensatory mechanisms may take the form of a creative thrust in the direction of establishing new relations with the outside world or exposing new sources of strength from within.

Until either of these constructive solutions are found and established, the period of vulnerability is, at the same time, a period of anxiety, uncertainty, and dependency. It is, in effect, a period of heightened vigilance. In the case of psychopathology, this aspect of the situation predominates. The constructive solutions are either lacking or too weak to offset the disorganizing impact of any enduring state of vulnerability.

The vigilant state is modified in a conditional way when neurotic compensatory mechanisms are evoked, and unconditionally when constructive or creative solutions are found that serve to diminish the vulnerable areas by growth and change. Much of psychiatric symptomatology can be interpreted in accord with this vigilance hypothesis, notably the presence of anxiety and sensitivity to hurt as well as some of the more characterologically embedded patterns such as suspiciousness, phobic responses and impulsivity.

If our assumption is correct that psi effects are facilitated by states of heightened vigilance, we can now deal with this relationship more comprehensively in the light of our discussion of dissociated states. Psi would become a meaningful component of such states by offering a third way of coping with the vulnerability and the dependency that come into being once any segment of our own social behavior escapes conscious control. Under circumstances where neurotic mechanisms fail or are not available (the absence of an interpersonal solution to the dependency problem) or where no solution is available from within, in terms of untapped potential (the absence of an intrapersonal solution to the dependency problem), the solution may occur by extending the range of outside supporting resources in the form of objects, events or people reached through the operation of psi. We are, in effect, postulating an enforced rather

than a capricious or fortuitous relationship between psi and dissociation. It would also follow that under certain circumstances the most appropriate solution to the vulnerability-dependency problem is a psi mediated contact with an external event. Carried one step further, in dissociated states such as dreaming, where the circumstances actually involve a state of physiological de-afferentation, the individual may be limited to two rather than three strategies. He can so restructure his past experience as to bring into focus new relations, and hence new possibilities of change and growth, or he can attempt to restore his equilibrium through psi apprehended knowledge of, and response to, an appropriate and immediately relevant situation occurring at a distance. Again, given the circumstances, the psi channel may be the strategy of choice.

The Dynamism of Psi Linkage

To recapitulate the argument as it has developed thus far:

1. Dissociated states, by virtue of the impairment, absence, abdication or ineffectuality of conscious control, create a state of potential or real vulnerability, commensurate in degree with the extent and depth of the dissociated state itself and the circumstances under which it occurs.

2. The existence of a vulnerable state is incompatible with psychological homeostasis. The resulting dysequilibrium brings about a shift toward a dependency state, the latter defined as a forced reliance on others or the self.

3. The resolution of the dependency state can take place by means of three main recuperative strategies.

- a) Neurotic or maladaptive responses may be involved toward others as well as the self. When successful, these solve the problem by making dependency an entrenched way of life.

- b) Healthy strategies based on the mobilization of compensatory creative capacities arising out of exchanges with others or through the development of potential within the self.

- c) A strategy based on psi contact with a person, object or event occurring at a distance but capable of selectively articulating with the specific needs and motivational patterns operating at the time.

4. The nature of the dissociative process, i.e., the surrender of conscious control and the resultant dysequilibrium, creates a state of heightened vigilance.

5. A psi strategy becomes available whenever a dissociated and vigilant state occurs.

6. The choice of strategy involved in resolving the dependency is dictated by the prevailing circumstances.

7. Psi may be regarded as a necessary component of the dissociated state, either as a potential resource should other strategies fail, or as an actual resource when the specific circumstances preclude a solution by any other means.

8. There are several unique features to dreaming as a dissociated state that may potentiate the operation of a psi factor. There is functional closure of the motor and sensory channels to the external milieu, thus negating the possibilities of an interpersonal strategy. Furthermore, the total transformation of consciousness into a concrete sensory mode and the relatively minor role accorded the discursive mode pose additional limits to the availability of strategies contingent upon social intercourse.

The Paranormal Nocturnal Dialogue

Can we further define the conditions under which a psi strategy is involved? Mention was made earlier (Chapter II) of the possible relevance of Carington's hypothesis concerning the importance of shared K-objects or ideas as facilitating, by means of associative processes, psi contact with the target. A number of such shared ideas and objects are part of the experimental setting itself and include the idea of the experiment and the physical surroundings in which the experiment takes place. These may be classified as Contextual K-objects or ideas. In addition to these and, in all likelihood far more important, are what might be called Dynamic K-objects or ideas. In addition to the quality of being shared, the Dynamic K-object or idea expresses a feeling, need, or affectively charged preoccupation mutually relevant at the time to both subject and agent. The experimenter (D.D.) himself (Chapter II, Example 6) was part of a shared Contextual K-object, but his physique and body build served (unwittingly) for both subject and agent as a Dynamic K-object in so far as it set up a charged transferential relationship between subject and agent. This was important enough to be reflected in the dream, and to include a striking psi effect linked to an analagous associative context and transferential response in the agent toward the family that had extended the invitation. An interactional model somewhat as follows may be postulated:

M.U. (Subject)

D.D. (Agent)

Contextual K-object

Idea of the experiment

Physical surroundings

Agent himself

Dynamic K-object

Physique of agent

Operation of

Institutional transference factors

Striving for success

Need for success

interaction

Transfential response

Directed at agent

Based on relationship with father

Favorite son complex

Push toward accomplishment

Kentucky Derby

Gambling

Stigma

interaction

Activation of associative context
involving

Family from Decatur

Their wayward son

Kentucky Derby

Bum check

interaction

Dream: Kentucky Derby

Excitement about winning

Blank check

The dotted lines indicate potentially interactive exchanges, paving the way to the final psi effect—a check that was not any good, blank in the one case, fraudulent in the other. The latter, as part of the associative context of the agent, was available as an apt visual metaphor expressing problematic aspects of the subject's relationship to his own father related to issues of gambling. Viewed as a developmental sequence, the exchanges move from a reality level (remiscences of M.U. concerning his father evoked by D.D.) to an unconscious sharing of a common associative context (common motivational and transference patterns linked to a family problem and the Kentucky Derby) to a psi exchange of a more specific nature (the inclusion of the check in the dream).

We have defined two characteristics of a Dynamic K-object, the first, its link to currently operating needs and feelings in both subject and agent, and, second, its suitability for inclusion in the visual metaphors of the subject's dream. These considerations have emerged out of a retrospective analysis of some aspects of the data presented. As a final point we wish to propose a way in which they could be incorporated into an experimental design. The general problem we face is how to raise the target item to a psi threshold level linking the metaphor to an appropriate target item.

Supposing, for the sake of argument, the subject's first dream of the night is taken as the starting point for the development of an appropriate Dynamic K-object. The dream is obviously significant for the subject. The task of the agent would be to identify the theme of the dream and the element or elements that most pointedly express the theme. He would now repeat the same process with the prepared target (picture or life event); first identify the theme and then select the element most clearly expressing the theme. Having gone this far, can he now link the element representing the dream and that representing the target and work toward the creation of a metaphor which he, the agent, experiences as meaningful? In the example given above, let us suppose that the Kentucky Derby dream was the first dream of the night. Let us further suppose that the agent, in responding to it, felt it to be of interest but wished to see if he could go for an even more striking psi effect. Stimulated by the subject's dream, he now turns toward the memory of his friends and their invitation to the Derby and decides to use this as the associative context for developing the target. Using the procedure

outlined above he might select the horse race as the most apt metaphor to express his own state of being, namely, his desperate urging of the subject on to a winning result. He has constructed the metaphor by selecting the "Kentucky Derby" element from the subject's dream, as the key element in that dream as well as the key element in the fragment of his own life experience upon which he is focusing. The final task is linking the metaphor to an appropriate target item. In this case he could do it very easily by assigning a particular number to the winning horse and having this represent the actual target for the next dream.

We are ending with an unanswered question which is, perhaps, understandable in a situation where what we have is only the very early scent and the promise of exciting things to follow.

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