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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

SOMATO-PSYCHOLOGICAL INDICANTS OF SCHIZOPHRENIA: A PARTIAL VALIDATION OF THE PENETRATION-BARRIER INDEX

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SOMATO-PSYCHOLOGICAL INDICANTS OF SCHIZOPHRENIA: A PARTIAL VALIDATION OF THE PENETRATION-BARRIER INDEX

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G. M. G.

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SOMATO-PSYCHOLOGICAL INDICANTS OF SCHIZOPHRENIA: A PARTIAL VALIDATION OF THE PENETRATION-BARRIER INDEX

CHAPTER I

INTRODUCTION

The purpose of this study was to analyze the relationship between the somato-psychological experiences of schizophrenic individuals and the Fisher and Cleveland (1958) Penetration-Barrier index. Thus, the following five questions had to be considered: (1) Why is somato-psychological experience important? (2) What is the relationship of schizophrenia to somato-psychological experience? (3) What methodologies have been employed in the study of somato-psychological experience? (4) What is the nature of the Penetration-Barrier index? (5) What relationships already have been discovered between the Penetration-Barrier index and somato-psychological variables?

The Physique and Personality

The idea that one's body is important for the establishment of personal identity is not a new one and

and has received considerable attention from theorists since the earliest times. The theory simply stated was that the human physique must shape some part of the direction of the behavior of man. As long ago as five centuries before Christ, Hippocrates described a dual classification of physique in man (habitus apoplecticus —short, muscular, strong; habitus phthisicus—thin, tall, and delicate). Hippocrates matched these body types to a set of human temperaments, and for him this described the nature of man.

In the 1920's, Ernest Kretschmer (1923) proposed the theory that tendencies toward certain forms of serious emotional disorder were associated with particular body types. Schizophrenics, according to Kretschmer, tend to be somewhat smaller and thinner than the average person.

Sheldon (1942) divided human body types on a seven-point scale along three basic dimensions: ectomorph, mesomorph, and endomorph. In his system of rating physique the ectomorph is thin, long-boned, poorly muscled, and delicate; the mesomorph is well-muscled, athletically built; the endomorph is heavy and fat. The early work of Sheldon and his associates was modified by a number of other researchers. Davidson et. al. (1957) studied seven-year-old children, Parnell (1957) studied college students and the Gluecks (1932) examined delinquents.

A great many studies of the relationship of constitution to personality, involving a wide variety of subjects, have been completed over the years, but the findings are not very convincing. A number of researchers have criticized the constitutional approach (Cameron and Magaret, 1951; Humphreys, 1956; Rees, 1961) on methodological and statistical grounds. In general, these criticisms point out that researchers have yet to find fully reliable and meaningful relationships between body types and social behavior. Theoretical hypotheses—ectomorphs have schizophrenic breakdowns at an earlier age than endomorphs; endomorphs are more susceptible to affective disorders, etc.—remain theoretical. To date the statistical evidence of a relationship between body constitution, per se, and behavior is slight and unreliable. The evidence that does exist could as easily be attributed to a variety of other possible variables.

The Body Image Hypothesis. Other theoretical formulations have been posited in an attempt to explain the relationship between the body and perceptual as well as personality organization. For example, the concept of body image refers to the body as a psychological experience, and focuses on the individual's feelings and attitudes toward his own body. This concept is concerned with the individual's subjective experiences with his body and the manner in which he has organized these experiences. The body image

overlaps the various usages of concepts like ego, self, and self concept (Fisher and Cleveland, 1958).

Psychoanalytic theory has placed particular emphasis on the importance of the body and the body ego. Freud believed that an individual's body played an important role in bringing about the formation of the ego and its differentiation from the id. Freud (1927) said, "The ego is first and foremost a body ego; it is not merely a surface entity but it is itself the projection of a surface" (p. 31). Fenichel (1945) states, "The sum of the mental representations of the body and its organs . . . constitutes the idea of 'I' and is of basic importance for further formation of the ego" (p. 31).

Freud (1927), Federn (1952), and Fenichel (1954) all emphasized that the individual's discovery of his own body plays a very special role in his discovery of reality. The primary motif of these theorists is that the body, by its capacity to experience both inner tension and stimulation from outside, is the main organ enabling the individual to work out the distinction between ego and non-ego. Reality, as an object of psychological experience, comes into existence through a developmental process whereby the individual progressively delineates, differentiates and bounds himself by detaching himself from an 'outside' which he is then able to relate to as an object.

The here-and-now experience of this external reality results from the fact that stimuli from the outside world are passing through a bodily ego boundary charged with a particular quality of sensation and bodily ego feeling. The continuing ability of the individual to relate to the outer world is dependent upon the maintenance of these boundaries. The outer world will remain evident only as long as the individual's bodily ego boundaries remain intact.

While the actual experience of reality may vary as the individual develops and matures, the conditions necessary for this experience of reality to occur at all never vary. "On these conditions, the separation and differentiation of the ego through the definition of its physical and psychological boundaries, depends the very existence, psychologically speaking, of the individual" (Des Lauriers, 1962, p. 122).

Similarly, Witkin (1965) maintains, "Formation of the body concept must accordingly be viewed in the context of the total stream of psychological growth, and its study may teach us a good deal about individual development and functioning" (p. 26). Wapner and Werner (1965) state, "First of all, we assume that there can be no perception of objects 'out there' without a bodily framework . . ." (p. 10). The theories of child development proposed by Gesell (1948) and Piaget (1963) also emphasize morphological and sensorimotor schemata in psychological and perceptual

processes.

An abundance of clinical and experimental observation testifies to the importance of body image boundaries. Both Rank (1929) and Jung (1926, 1931) theorized that individuals may seek security by converting their own bodies into a womb-like container. Reich (1949) expressed the view that people may react to conflict by "armoring" themselves and modeling their bodies after something with rigid surfaces. Finally, it is noted that a steadily mounting number of references to the concept of the body image boundary has appeared in the literature.

Shilder (1935) summarizes his work by concluding that the body image boundary is to a considerable degree molded by our interactions with others and to the extent that these interactions are faulty the body image will be inadequately developed. The body image boundary evolves gradually in the course of a learning process in which the individual experiences his body in manifold situations and also notes the varied reactions of others to it. Apparently, as he grows, he explores his body in many ways and comes to assign a hierarchy of values to its principal areas.

Wapner and Werner (1965) have suggested a boundary model to explain changes in size perception of the head when certain stimuli (e.g., touch) are applied to it. Fenichel (1945) has portrayed body boundary formation as

basic to the development of a sense of identity and adequate ego functioning. Kaufman and Helms (1958) also refer to boundary disturbances in delinquents. There is a large body of literature concerning body boundary disturbances associated with central neurological damage (Critchley, 1958; Head, 1911; and Simmel, 1956). Significant sex differences in the body image have also been discerned (Fisher, 1964; Fisher and Cleveland, 1958; Jourard and Remy, 1957; Jourard and Secord, 1953, 1954, 1955; Katcher and Levine, 1955; Shontz, 1963). These sex differences may relate to similar sex differences which have been noted in Rorschach responses (summarized in Zubin, et. al., 1965, pp. 386-388).

Schizophrenia and Body Image

Body image disturbances and dissolution of body boundaries are frequently associated with schizophrenic reactions (Arnhoff and Demianopoulos, 1964; Fisher and Seidner, 1963; Reitman and Cleveland, 1965; Schilder, 1935; Weckowicz and Sommer, 1960). For Example, Cleveland, et. al., (1962) have pointed to the possibility of interpreting certain unusual body size experiences in schizophrenics in terms of dissolution of body image boundaries. Goldfarb (1963) has concluded that schizophrenic children are deficient in their capacity to discriminate, locate, and give meaning and form to body perceptions. He concludes that this confusion in self differentiation includes

self-awareness in sexual terms as well. Such children have difficulty in consciously recognizing and assigning meaning and predictability to inner body processes even when these are rhythmically recurrent in daily life. The multitude of first person reports of the schizophrenic process is also suggestive of extreme body boundary dissolution. An example of such a first person report appears in Maher (1966):

> My eyesight had undergone another transformation and seemed linked in some way to my hearing. As great waves of blaring music poured into me, my vision became steadily clearer only to fade almost to blindness as the music descended into near silence. After some moments of listening, I contributed to the din in the room by beginning to scream at regular intervals.
>
> By the time I was admitted to the hospital I had reached a stage of "wakefulness" when the brilliance of light on a window sill or the colour of blue in the sky would be so important it could make me cry. I had very little ability to sort the relevant from the irrelevant. The filter had broken down . . . (pp. 309-310).

Loss of reality contact is one of the few aspects of schizophrenia on which there is overwhelming agreement, even within the predominently structural approach the psychoanalysts have taken in their explanations of the schizophrenic behavior disturbance. While the hypotheses raised by different individuals within the psychoanalytic school of thought are divergent in many respects, they all agree that there is severe impairment to ego functioning and that this impairment leads to behavioral manifestations which are called schizophrenic.

Federn (1952) made an important contribution to the understanding of schizophrenia when he theorized that schizophrenia was not a withdrawal of object cathexis but a hyper-cathexis of objects. It was not the loss of the love object but was rather the patient's ego which had lost the cathexis. He saw the ego of schizophrenics as impoverished, inadequately cathected, and unable to test reality. Federn introduced the concept of "ego boundaries" which were the center of perception of the "ego feeling". This feeling distinguished everything that was a part of the ego from everything that was not. In schizophrenia the poorly cathected ego boundary breaks down resulting in an inability to correctly perceive reality. This is exactly the point made by Bettelheim (1950) on the basis of extensive therapeutic efforts with schizophrenic children. He makes it clear that he considers integrity of body image a prerequisite to integrity of ego when he writes:

> A child who is insecure only about how he will stack up in general during the day is less disturbed than a child who is also worried about his body. It would seem that losing relative control over reality is a less far-reaching step in personal disintegration than losing control over one's body, which is more fundamental and therefore much more frightening. In brief, a child who has at least been able to establish control over his bodily functions is better off than a child who is not even adequate in that area (p. 106).

Angyal (1936), in describing the experience of the body-self in schizophrenia, listed the following five aspects

of the schizophrenic experience:

1. Body unity impaired (disconnection of parts; falling apart);

2. Body continuity impaired (Body an empty shell; not human);

3. Body dimensions changed (shrinking, flat, withering);

4. Body parts displaced (legs pulling into abdomen, eyes sinking into skull);

5. Body parts dead (hair falling out, skin dead, limbs wooden) (p. 98).

Similarly, a quarter of a century later, Fisher (1962) listed the following characteristics of the schizophrenic experience:

1. Body enlarged;

2. Body reduced;

3. Body changing;

4. Body openings blocked;

5. Body not part of the self;

6. Body contaminated;

7. Body boundaries shifting or lost;

8. Body skin sensations are unusual (p. 148).

Fenichel (1945) takes the position that body-image distortions of all varieties tend to be among the earliest forerunners of schizophrenic regression. Indeed, even the existential view (Kantor and Henon, 1966; Frankl, 1961) of the schizophrenic process is concerned with the fundamental breakdown of the self-image and body boundaries.

Des Lauriers' (1962, 1969) recent position best summarizes the theoretical conceptualization of the schizophrenic individual. For Des Lauriers, the schizophrenic patient is not someone who has withdrawn from the world and created a world of his own; he is essentially an individual who has lost the capacity to experience himself as real, separated, and differentiated from others, because of a severe diminution of narcissistic cathexis of his bodily boundaries. His total behavior would have to be understood, then, not as a defense against a threatening world, or an escape from unbearable experiences, but as a disorganized and frantic effort at discovering or rediscovering himself, at establishing the bounds and limits of his reality, and ultimately as an effort at creating the necessary conditions for a relationship to reality in which, alone, his real needs can be really gratified. The schizophrenic individual can not relate to reality because he does not experience himself as real, that is, bounded, finite, separated, and differentiated from what is not himself.

Hence, the schizophrenic individual is schizophrenic not because of this or that conflict but because those conditions necessary for the experience of reality have ceased to exist, that is, because the individual is no longer able to experience himself as real. He is no longer able to define his own physical and psychological boundaries.

Schizophrenia, Paranoid Type. However, in the case of schizophrenia, paranoid type, one would hypothesize an abnormally well-developed system of boundaries rather than a breakdown of boundaries (Buss, 1966). "Paranoid schizophrenic patients remain in better contact with the environment [than other forms of schizophrenia]" (Arieti, 1959, p. 459).

Theoretically, Reich (1949) made reference to the hard armoring of the paranoid character. Not only did he have in mind the psychological armoring of the paranoid character against the outer world, but he also referred to a literal physical rigidity of the paranoid individual. Fenichel (1945) also suggests the hardness in the nature of the paranoid patient when he refers to the "encapsulation" of the thinking and life style of the paranoid individual. Experimentally, Fisher and Cleveland (1958) found trends congruent with this line of reasoning.

Methodological Aspects

The methodology reported in the literature used to investigate the dimensions of the body image has been varied indeed. Studies have appeared of such diverse body image variables as body anxiety (Secord, 1953), body dissatisfaction (Jourard and Secord, 1955), concept of body size (Nash, 1951), plasticity of body scheme (Schneiderman,

1956), position of body in space (Witkin, et. al., 1954), preferred body proportions (Jourard and Secord, 1955), differentiation of values assigned to right and left body sides (Fisher, 1959), and gender designations of various body regions (Nash, 1958).

Measurement procedures have included the questionnaire (Hall, 1898), drawing of a person (Abel, 1953; Bender and Keeler, 1952; Machover, 1949), drawing of the inside of the body (Tait and Ascher, 1955), and self-ratings (Curran and Levine, 1942). Other techniques included the methods of unconscious self-confrontation developed by Wolff (1943); the double simultaneous stimulation procedures utilized by Bender (1952), Cohen (1953), and Owen (1955); the procedures involving schematic representation of body parts described by Katcher and Levin (1955); the aniseikonic-lens technique so successfully developed by Wittreich (1953); and the word-association methods worked out by Secord (1953).

Human Figure Drawings. Human figure drawings (Machover, 1949) proceeded on the hypothesis that the figure drawn is related to the individual who is drawing and is a projection of the body image, needs, and conflicts (Anderson and Anderson, 1951). The basic hypothesis underlying human figure drawing interpretation is the "body image" hypothesis, which states that when a person draws a human figure he draws a picture of himself as he views himself. Machover (1949) stated that:

> The human figure drawn by an individual who is directed to "draw a person" relates intimately to the impulses, anxieties, conflicts, and compensations characteristic of that individual. In some sense, the figure drawn is the person, and the paper corresponds to the environment (p. 35).

Hammer (1958) supported this view by expressing it through a quotation from Elbert Hubbard, who stated "When an artist paints a portrait, he paints two, himself and the sitter."

Several studies since 1956 (Centers & Centers, 1963; Schmidt & McGowan, 1959; Wysocki & Whitney, 1965) generally found that figure drawings by physically disabled and non-physically disabled subjects could be distinguished by trained and, in some instances, untrained judges.

An interesting and unusual manner of testing the body image hypothesis was carried out by Apfeldorf and Smith (1966) who matched photographs and figure drawings of their subjects. Judges were successfully able to match the subject's figure drawing and photograph significantly beyond chance at the .01 level.

Kamano (1960) tested the hypothesis that the figure drawing of a person is similar in meaning to his own self-concept. His subjects were 45 schizophrenic women who filled out a Semantic Differential Scale having 15 bipolar scales dealing with four concepts -- the figure drawn by the subject, the ideal self, the actual self, and the least-liked self. The results indicated that the subjects tended to draw a figure that approximated their actual self more

than their ideal or unfavorable self.

Burton and Sjoberg (1964) employed the Witkin Sophistication of Body Concept Scale in an attempt to differentiate the figure drawings of schizophrenics and nonschizophrenic controls. Although the mean difference in rating scores between the two groups was not significant, the authors concluded that the psychotic group tended to show a good deal of primitivization and loss of differentiation in their drawings.

Fisher (1959) related figure drawing performance to galvanic skin response (GSR) body gradients. His subjects were 34 men and 16 women. He obtained the GSR from the right and left arms, hands and fingers. The Draw-A-Person (DAP) tests produced by the subjects were measured for arm and leg size and scored for presence of Machover's (1949) body image disturbance signs (erasure, transparency, lack of body part, nose indicated by two dots, mouth only a line, one or more arms behind the back, nude or peculiar clothing, lack of breasts on the female, shading on the body, delimiting lines on the body, figure off balance, figure small, unusual shading of the crotch, opposite sex drawn first). Fisher also measured the height of the male and female figures. He found a significant relationship between GSR directionality and the body disturbance score. He split the group at the median of the body disturbance score, and found that those scoring below the median more

often had the highest amplitude of GSR responses on the right side or had equal amplitude on both sides. He also found that those who drew the male figure larger had the highest GSR response on the left side.

Craddick (1963) asked 23 male and 23 female fifth-grade children and 23 male and 23 female college students to draw a person, then asked them to draw a picture of themselves. He compared the two sets of drawings on size, sex of the drawing, position on the page, and the frequency of correct pairing of the drawings by a male and a female judge. On the basis of the results, he concluded that the body image hypothesis was confirmed.

Baldwin (1964) hypothesized that the body portion of the body image disintegrates as a function of severe emotional disturbance, and that this state is reflected in a person's human figure drawings. Machover (1951) reported that in the figure drawings of senile or severely disturbed persons the head is frequently all that is drawn. Baldwin (1964) tested this observation by computing the mean ratio of head to total height of figure drawings by 50 chronic schizophrenic females using 30 female employees as a control group. He found that the mean ratio of the head/body in human drawings of schizophrenics was significantly larger (39.17%) than that of normal figure drawings (25.23%). He also found that the schizophrenic group produced a significantly larger number of drawings showing only the head or

partial figures than did the normal group. Baldwin concluded, "The present study has made another small step in the direction of quantifying the macroscopic mass of microscopic variables emanating from a single sketch of the human figure" (p. 395).

Rorschach Psychodiagnostic Ink Blot Test. Of particular concern to this study are the measurement procedures using the Rorschach Psychodiagnostic Ink Blot Test first proposed by Fisher and Cleveland (1958) to investigate the body image dimension and since incorporated into the scoring criteria for the Holtzman Ink Blot technique (1961).

Fisher and Cleveland, like the theorists previously cited, believe that the process of separating one's body from the world is fundamental in the establishment of personal identity; therefore, the character of one's body image boundary should provide important information about adjustment strategies. The scoring system they devised to measure this body boundary dimension is based on the properties ascribed to peripheries of ink blot percepts. The basic assumption underlying Fisher and Cleveland's scoring system is that the matrix of body experience, referred to as the body image, affects perception of unstructured targets like Rorschach ink blots.

This basic assumption relating Rorschach perception with body experiences is not a new one and is congruent, certainly, with Hermann Rorschach's (1921) original

hypothesis. Ever since Rorschach (1921) published Psychodiagnostics, there has been speculation concerning the process underlying imaginative elaboration of inkblots. The laws of size constancy, form and color, which formalize most sensory data, may not apply to the same extent to the amorphous inkblots. Rorschach responses are, therefore, considered to be an intensified reflection of those subjective propensities, qualities, and needs of the observer. Rorschach himself suggested that one category of inkblot responses, (i.e., human figures perceived as moving) represented a projection of kinesthetic experiences. He theorized that movement attributed to an inkblot was stimulated by muscular sensations. A number of studies have appeared which directly or indirectly lend support to this view (Krus, Werner, and Wapner, 1953; Meltzoff and Litwin, 1956; Meltzoff, Singer and Korchin, 1953; Singer, Meltzoff and Goodman, 1952; Wapner and Werner, 1957; Witkin, Lewis, Hertzman, Machover, Meissner and Wapner, 1954; Franklin, 1963; Dessauer, 1966). These studies emphasize the finding that human movement responses elicited by inkblots represent projections of kinesthetic sensations. When specific body tonus patterns were induced in an individual, they affected his perception of ambiguous pictures and designs.

An elaboration of Rorschach's original hypothesis would indicate that the imaginative structuring of animal movement, inanimate movement, color, shading, and the other

content categories in inkblots is also influenced by body sensations. The possibility exists that when an individual is asked to react to highly unstructured stimulus materials, the background of sensations represented by his own body in the total perceptual field may intrude with sufficient force to impose some patterning of his responses. The fact that somatic background information can influence perception in this fashion is well documented by the work of Allison (1963); Eagle (1959); and Klein, Spence, Holt and Gourevitch (1958).

However, what is new about Fisher and Cleveland's work, and what the research aspects of this study were designed to test, is the objective scoring system which these two researchers have developed to relate body experience and ink blot perception. This being the case, it is therefore now necessary to examine in detail the ink blot scoring system of Fisher and Cleveland (Chapter I of this study), the empirical findings which relate these scores to personality variables (Chapter I of this study), and the rationale for a needed test of the body image — ink blot hypothesis (Chapter II of this study).

Fisher and Cleveland's Methods of Rorschach Scoring

In operational terms, Fisher and Cleveland (1958, pp. 58-71) have developed an inkblot index, devised to evaluate boundary definiteness of the body image, which was

found concomitant to the degree to which definite structure, substance, and surface qualities are assigned to inkblot images. The index, referred to as the "Barrier Score," equals the number of responses elicited by an inkblot series that are characterized by an emphasis upon the protective, containing, decorative, or covering functions of the periphery, e.g., cave with rocky walls, person covered with a blanket, woman in a fancy costume, mummy wrapped up, vase, etc. Boundary definiteness is equated with the number of Barrier responses produced.

A "Penetration Index" is also scored. It is based on a count of all inkblot responses which emphasize the destruction, evasion, or bypassing of the boundary, e.g., bullet piercing flesh, x-ray of body, rotting wood, soft material, building burning, etc. The higher the Penetration score, the less definite the body image boundary is considered to be. This score typically has a low and sometimes negative relation to the Barrier score.

Barrier Score.

1. Score all separate articles of clothing if worn by animals or birds. All clothing worn by people is scored. Examples of clothing being worn by someone that are scored as Barrier responses: woman in a high-necked dress, imp with a cap that has a tassel on it, person in a fancy costume, people with mittens or gloves, woman in a long nightdress, people with hoods, man with a crown, feet with fancy red socks, man in a coat with a lace collar, man with a cook's hat, man in a robe, man with chaps, man with high collar, woman in a dress, man with a coat on, man with a hat, etc.

The popular boots on card IV, and the bow tie on III are not scored as clothing because of the frequency with which they are given.

2. Score animal skins which are distinctive only if more than the head of the animal is given. The following is a list of such animals: alligator, badger, beaver, bobcat, coyote, crocodile, fox, goat, lion, lynx, mink, mole, peacock, seal, Siamese cat, skunk, tiger, walrus, weasel, wildcat, zebra.

Any animal skin (except bearskin on card IV) may be considered Barrier if unusual emphasis is placed on the textured, fuzzy, mottled, or striped character of the surface. Examples: fuzzy skin, skin with spots, skin with stripes, etc.

Included in this general covering category are all shelled creatures except crabs and lobsters. Crabs and lobsters are excluded because of their frequency of occurrence. Lobsters and crabs are scored only in the unusual instances in which the shell alone is seen. Examples of shelled creatures: snail, mussel, shrimp, clam, turtle, etc.

3. Score references to enclosed openings in the earth, i.e., valley, well, mine shaft, ravine, canal, etc.

4. Score references to unusual animal containers, i.e., bloated cat, udder, kangeroo, pregnant woman, etc.

5. Score references to overhanging or protective surfaces, i.e., umbrella, shield, dome, awning, etc.

6. Score references to things that are armored or much dependent on their own containing walls for protection, i.e., tank, battleship, rocket ship in space, armored car, man in armor, etc.

7. Score references to things being covered, surrounded, or concealed, i.e., bowl overgrown by a plant, man covered with a blanket, house surrounded by smoke, person hidden by something, log covered by moss, someone peeking out from behind a stone, person behind a tree, donkey with load covering his back, person caught between two stones, etc.

8. Score references to unusual container-like shapes, i.e., bagpipes, ferris wheel, throne, chair, etc.

9. Do not score masks or beards.

10. Do not score instruments which grasp or hold, i.e., pliers, tweezers, tongs, etc.

11. Score certain unique structures, i.e., buildings airplanes, rockets, tent, fort, igloo, quonset hut, arch, etc.

12. Additional general examples of Barrier responses: basket, bay, bell, book, book ends, bottle, bubble, cage, candleholder, cave, cocoon, cove, curtain, dancer with veil, frosting on cake, fuzzy poodle, globe, harbor, headdress, hedge along a walk, helmet, inlet, lake surrounded by land, land surrounded by water, mountain covered with snow, net, pot, river, screen, spoon, urn, wall, wallpaper, wig (pp. 59-61).

Each response is given a value of one in scoring any Rorschach record. Any one percept can be scored only once for "Barrier." The final score is equal to the total number of "Barrier" responses.

Penetration of Boundary Score.

1. Score all penetrations, disruptions or wearings away of the outer surfaces of things, i.e., bullet penetrating flesh, squashed bug, badly worn away animal skin, shell of a turtle that has been broken open, etc.

2. Score in terms of images that emphasize modes or channels for getting into the interior of things or for passing them from the interior outward to the exterior, i.e., vagina, anus, open mouth, an entrance, doorway, etc.

3. Score all things that are easily permeable or fragile, i.e., soft ball of cotton candy, mud you can step through, fleecy fluffy cloud, etc.

4. Score all references to the mouth being opened or being used for intake or expulsion, i.e., dog eating, dog yawning, man sticking tongue out, man vomiting, boy spitting, person with mouth open, animal drinking, etc.

5. Do not score references to the mouth for singing and talking.

6. Score all references to evading, bypassing or penetrating through the exterior to the interior, i.e., x-ray, body cut open, body as seen through a fluoroscope, autopsy, inside of the body, cross section of an organ, etc.

7. Score references to the body wall being broken, fractured, injured, and damaged, i.e., mashed bug, wounded man, person bleeding, wound, man stabbed, man's skin stripped off, etc.

8. Score references involving some kind of degeneration of surfaces, i.e., diseased skin, withering skin, withered leaf, deteriorating flesh, deformed animal, etc.

9. Score examples of openings in the earth that have no set boundaries or from which things are being expelled, i.e., bottomless abyss, geyser spurting out of ground, fountain shooting up, oil gusher coming in, etc.

10. Score all openings, i.e., anus, looking into throat, birth canal, nostril, doorway, rectum, entrance, vagina, window, etc.

11. Score references to things which are insubstantial and without palpable boundaries. Examples: cotton candy, ghost, shadow, soft mud, etc.

12. Score all references to transparency, i.e., transparent window, can see through dress, etc. (pp. 61-63).

Any one percept can be scored only once for "Penetration". In scoring any Rorschach record, total the number of responses falling into the above categories and give each response a value of one. Some responses may be scored both Barrier and Penetration, i.e., man with broken armor, broken vase, bombed battleship, etc., which have simultaneous connotations of protective or containing properties and also disrupted boundaries.

Index Norms. In order to control for the "response total problem", Rorschach Penetration and Barrier scores are based on a total of 25 responses. Three responses are required for cards I, II, III, VIII, and X; and two responses for the other five cards. Such a selection procedure is based upon Grayson's (1956) findings that certain cards elicit more responses than others, simply because of the structure of the inkblots.

Fisher and Cleveland (1958, pp. 68-70) found that neither of the body image scores is related to verbal productivity, verbal facility, or intellectual level. Norms, based on 200 normal college students, are: median Barrier score = 4 with range of 0 - 12; median Penetration score = 3 with range of 0 - 8; mean Barrier score = 4.1 with standard deviation of 2.1; mean Penetration score = 3.2 with standard deviation of 1.6 (Fisher and Cleveland, 1958, pp. 70-71). Interscorer reliability for evaluating Barrier and Penetration percepts cluster around the high .80's and low 90's (Fisher and Cleveland, 1958, pp. 63-64; Holtzman, et. al., 1961, pp. 102-106). Adequate test-retest reliability has been shown (Daston and McConnell, 1962).

Eigenbrode and Shipman (1960) have severely criticized the Barrier scores on a number of points. Even though Fisher and Cleveland (1958) have presented their scoring system, "the scoring rules, in detail, have not been published". The stability of scoring is also questioned

because of the small size of the modal Barrier score (4) and the wide range (0-12). Many of the major scoring categories seem arbitrary in regard to which Rorschach response fits which category. For example, when unusual animal skins are considered, a mink is scored, but a possum is not. The question is raised about whether or not certain body Barrier concepts are concomitant as Fisher and Cleveland maintain, e.g., "definite and protective," or, "container and defensive covering."

Mednick (1959), in his review of Fisher and Cleveland's Body Image and Personality (1958), has criticized the lack of research concerning the relationship between boundary scoring and more traditional Rorschach scoring. He also questions whether or not the newer scoring is needed at all. Mednick (1959) states,

> . . . it is extremely likely that a good many of the S's who were high on the Barrier score also gave many W responses. Since the number of W responses has been shown to be significantly and positively correlated to this same n-Achievement measure, it seems fairly certain that some part of the observed relationship between n-Achievement and the Barrier scores is attributable to the covariation of W and the Barrier score. . . . In fact it is possible that if the Barrier score were dropped from consideration and only W was used, the degree of relationship might even increase" (p. 277).

It seems reasonable that other relationships between boundary scoring and traditional Rorschach scoring might exist. For example, responses which are scored Penetration of boundary (e.g., soft ball of cotton candy, transparent window, can see through dress, x-ray picture) may also be scored K or k. Responses which receive F scores may also be scored Barrier. These and other possibilities exist which could elucidate both traditional Rorschach scoring and the body image concept.

Empirical Findings which Relate Rorschach Boundary Indices to Somato-Psychological Variables

Developmental Aspects. No systematic work has been undertaken to study body image boundary development using the Rorschach technique. Only one study exists to this investigator's knowledge which has positively linked the Rorschach Barrier score with indices of developmental maturity. Fish (1960) discovered significant correlations between ability to represent adult qualities in figure drawings and the Rorschach Barrier score with seven-year-olds. In light of studies conducted by researchers from Clark University which relate general perceptual development, perception of inkblots, and body image development as a process that progresses from lack of differentiation to greater differentiation and integration, this area of investigation deserves more study (Hemmendinger, 1960; Wapner,

1964; Wapner and Werner, 1957).

Response to Stress. Fisher and Cleveland (1958) found that individuals whose Rorschach percepts indicate definite body boundaries dealt relatively more efficiently with stress of body disablement than individuals who indicated indefinite body boundaries. Landan (1960) investigated forty paraplegic men with spinal cord injuries. Adjustment to disablement was evaluated by observational ratings and a sentence completion test. Landan found that the higher a patient's Barrier score as obtained by the Rorschach test, the better was his adjustment as defined by the above measures. No relationship was found between time duration of the disablement and the Barrier score. The Penetration score had only a chance relationship to the criteria.

McConnell and Daston (1961) considered responses of twenty-eight women to the stress occasioned by their own pregnancies. Each subject was given the Rorschach, the Osgood Semantic Differential Scales and a structured interview. The favorableness with which females viewed their pregnancies was found to be positively correlated with their Barrier scores. McConnell and Daston also found that the Barrier score did not shift after the birth, but that the Penetration score declined significantly. They interpreted the decline in Penetration score as indicating that women feel anxious about the vulnerability of their bodies while

they are pregnant, but that such anxiety declines after delivery. The fact that the Barrier score did not change significantly was consistent with other findings showing the Barrier score to be relatively independent of actual alterations in the body itself (Fisher and Cleveland, 1958).

Brodie (1959) used thirty males and thirty females in an attempt to evaluate the Barrier score as a predictor of response to induced laboratory stress of different types. Response to stress was examined in terms of the following criteria: self-blame versus other blame for failure at different tasks; emotional expressiveness; aggressiveness versus passivity; and tenacity in persevering at task goals. Results were somewhat inconsistent. Barrier scores were negatively correlated with emotional expressiveness under stress. High Barrier subjects were "impulsive" or "uninhibited". High Barrier subjects tended to be more tenacious in completing a hand steadiness task than low Barrier subjects. Other findings were difficult to interpret.

Davis (1960) investigated the relationship between Rorschach Barrier scores and physiological reactivity to stress. The Rorschach was given to 280 students in psychology classes and two groups were formed using the twenty-five highest and lowest Barrier scores. Then all fifty subjects were given math problems where failure was

emphasized. Physiological measures included GSR (exterior measure), muscle action potential (exterior measure), blood pressure (interior measure), and ballistio-cardiograph measures (interior measure). The results showed that the high Barrier group responded primarily in the exterior measures under stress while the low Barrier group responded in the interior measures. These results indicate that ability to adjust to stress is positively correlated with boundary definiteness.

Small Group Benavior. The degree to which individuals feel their bodies differentiated from the environment seems to be related to their style of interaction in small groups. In four studies reported by Fisher and Cleveland (1958), the Barrier score was positively related to spontaneous expressiveness, independence, promotion of group goals, warmth, and friendliness, and willingness to face hostility. Cleveland and Morton (1962) sought to cross-validate these findings by evaluating seventy patients in a group oriented therapy program. In the final week of a four-week period, subjects filled out a sociometric questionnaire requesting nominations of group members who had been characterized by certain behaviors, e.g., putting group's goals above individual goals, being warm and friendly, etc. Sociometric nominations were found to be related significantly to Barrier scores in a manner which supported earlier findings.

Fisher (1964b) evaluated the relationship between the Barrier score and judged behavioral patterns in a one-to-one interview situation. Body boundary was determined by the Rorschach technique. Behavioral style was evaluated by interviewers (seven Ph.D's and three M.D.'s) in a fifty minute interview with each of one hundred and seventy-five normal subjects. Each subject was rated according to his ease of communication, management of himself, and self identity (identified goals, values, etc.). Interviewers used their own experience as norms. A chi-square analysis revealed that the Barrier score was significantly related to all three behavioral styles. The high Barrier scores were related to high scores on each judged style, while low Barrier scores were associated with low ratings.

Psychophysiological Patterns. Among the first relationships noted by Fisher and Cleveland (1958) were that patients with rheumatoid arthritis, neurodermatitis, and conversion symptoms involving the musculature were characterized by higher Barrier and lower Penetration scores than patients with stomach ulcers or spastic colitis. Replications of these original findings have been reported (Cleveland and Fisher, 1960; Fisher and Cleveland, 1960). In addition, Fisher and Cleveland (1958) reported that arthritics were characterized by significantly lower heart rates (interior reactivity) and higher number of GSR responses (exterior reactivity) than ulcer patients under

similar stress conditions. However, Eigenbrode and Shipman (1960) failed to completely replicate the boundary distinction between psychosomatic patients with interior as opposed to exterior symptoms. In a later study, Cleveland, et. al., (1965) attempted to clarify the inconsistent findings which Eigenbrode and Shipman (1960) had found. The authors again concluded that a consistent picture does exist between body attitudes as measured by Rorschachs and somatic system formation.

Williams and Krasnoff (1964) tested three related hypotheses: (1) people whose physical symptoms involve the body exterior, such as arthritics, will perceive their body boundaries as being indefinite; (2) people whose symptoms involve the body interior will show unique physiological responses when compared with people whose symptoms involve the body exterior; (3) people who conceive their body boundaries as being firm will show unique physiological responses when compared with people who conceive their body boundaries as indefinite. Twenty male, peptic ulcer patients and twenty male arthritics were given the Rorschach; then, measures were taken of muscle activity, heart rate, and GSR under conditions of rest, psychological stress, and recovery and reassurance. The results were: (1) the arthritics gave significantly fewer Penetration responses on the Rorschach than the ulcer patients, in support of the first hypothesis. Arthritics tended to produce more Barrier responses than

ulcer patients, but the differences were not statistically significant; (2) the ulcer patients had significantly higher heart rates than the arthritics, which supported the second hypothesis; (3) the low Rorschach Barrier group had significantly higher heart rates under stress, and the high Rorschach Barrier group had significantly higher muscle activity scores under stress, which supported the third hypothesis.

Cassell (1965) hypothesized that people whose body awareness concentrates more on the exterior than the interior will experience relatively more exterior than interior symptoms when ill. He also hypothesized that those subjects who experience more exterior symptoms when ill will conceive their body boundaries as more definite. Rorschachs were administered to one hundred college students along with Cassell's (1964) Body Interior Awareness Scale. An appraisal of medical symptom localization was obtained by reviewing medical histories. The results confirmed Cassell's predictions.

Sex Differences. Cassell and Fisher (1963) investigated sex differences in the body boundary concept as related to skin response to histamine. The Rorschach was given to fifty-five male and forty-five female students. Barrier and Penetration scores were determined on a "blind" basis without prior knowledge of histamine response. In the female group, boundary scores were related significantly to the

histamine scores, but no such correlation was found among the males. The authors explained this sex difference by speculating that for females, more than for males, the body may be more important as a means of expression and communication.

Cassell (1964) found sex differences in the degree to which males and females conceive their boundaries as definite and the degree to which they are aware of the body interior. The Rorschach test and Cassell's Body Interior Awareness Scale were administered to 115 men and 70 women students. Men were more aware of their body interior and experienced their body boundaries as less definite than women. Fisher (1964c) also found that males have lower body Barrier scores than females. He speculated that, for women, body awareness is linked with the gastro-intestinal region. Fisher thus suggested that women have a clearer sexual identity than males who are more "oral" in character and therefore less mature than females.

In a series of studies designed to reveal the pattern of body sensations (interior versus exterior) as related to Rorschach boundary scores (Barrier versus Penetration), Fisher (1965) found no significant sex differences in the degree to which males and females focus on their body interior as contrasted to exterior in non-stressful situations. However, in a stressful situation (body threatened by unknown drug), there were significant sex differences in

the relationships between boundary scores and interior versus exterior sensations elicited by the placebo drug. The female Barrier scores showed no correlation with the body sensations, whereas the male Barrier scores were significantly correlated with body sensations. This result, in contrast to the above findings, would suggest men are more sensitive to their body boundary as related to Rorschach percepts than women.

Psychological Disturbance. The association of vague boundaries with schizophrenia has been for some time remarked upon by clinical observers, as was mentioned earlier. Fisher and Cleveland (1958) originally found the Barrier and Penetration scores could be used to discriminate schizophrenics, (low Barrier, high Penetration) from normals and neurotics (high Barrier, low Penetration). However, the Barrier and Penetration scores did not distinguish between normals and neurotics. Pursuing this line of research, Cleveland (1960) examined forty-five schizophrenics who had been administered the Rorschach upon admission to a mental hospital and again upon their discharge. Each patient was also rated by psychiatrists during the same testing session. Cleveland reported that patients rated as improved or well showed a significant decline in Penetration score. Similar findings have been discerned with the Holtzman inkblots (Holtzman, et. al., 1961; Reitman and Cleveland, 1964).

The Reitman and Cleveland (1964) study is particularly impressive. It involved an inkblot appraisal of body image alterations in neurotics and schizophrenics consequent upon sensory isolation. Twenty neurotics and twenty schizophrenics were exposed to sensory isolation conditions for four hours. In addition to the inkblot test, measures of tactile sensitivity and estimates of body size were obtained before and after isolation. A schizophrenic control group also received pre- and post-tests, but with isolation not intervening. No significant changes occurred in any of the scores for the control group from pre- to post-evaluation. There were significant changes in both experimental groups. Schizophrenics obtained, following isolation, higher Barrier and lower Penetration scores, increased tactile sensitivity, and decreased body size judgments. Neurotics obtained opposite results with decreased tactile sensitivity, and increased body size judgments. Reitman and Cleveland concluded that predictable relationships were demonstrated between changes in body image, in skin sensitivity, and in perception of body size of neurotic and schizophrenic subjects. These findings indicate that the inkblot index is sensitive to changes in functioning.

Body Image as Initiating Perception of Inkblots. Mednick (1949) and Wylie (1961) have questioned whether the Rorschach Barrier scores are not simply interesting inkblot

indices which may have little to do with how the individual experiences his body. These Rorschach scores may only reflect cognitive style variables describing how one deals with inkblots and they may not concomitantly reflect body image variables. In a recent review of their work, Fisher and Cleveland (1965) themselves state,

> Of course, the question arises whether or not boundary fluctuations represent initiating forces in change processes or whether they are subsidiary effects. Available information does not at this point permit a meaningful answer (p. 65).

In an earlier review, Fisher (1963) said, "Such criticisms cannot be easily dismissed" (p. 72). He added, however, that there are two main reasons to believe that Rorschach percepts are anchored in body phenomena: (1) because most of the previous research has found "solid correlations" between inkblot indices and body phenomena; (2) because no dependable relationships have been found between inkblot scores and other indices which have cognitive-style connotations, e.g., intelligence, verbal productivity, rigidity, authoritarianism.

Two further publications have been offered which attempt to demonstrate the body image, perceptual style hypothesis. Fisher and Fisher (1964) reasoned that if the Rorschach Barrier scores are anchored in body experience, a body sensation analogue should exist for boundary definiteness. The more definite one's boundaries, the more

perceptually prominent should be the boundary sectors of his body, i.e., skin and muscle; the less definite, the more prominent the interior sectors, i.e., stomach and heart. Working from this premise, Fisher and Cleveland conducted a series of studies to test such relationships.

In the first two studies, upon completion of the group Rorschach, subjects were given sheets of paper on which were listed the names of four body sectors or organs in the following order: skin, stomach, muscle, heart. When a signal was given, subjects were to focus their attention upon their bodies for five minutes. Each time a prominent sensation occurred in any of the four body areas listed, they were to place a check next to the appropriate part. Analysis of the data demonstrated the Rorschach Barrier score to be significantly related to the difference between exterior and interior sensations. The higher the Barrier score, the more exterior body sensations predominated over interior sensations.

In the second set of studies, the Rorschach Barrier scores were related to interior and exterior sensations reported by subjects in retrospective appraisal of their body reactions in past circumstances (anger, fear, success, tired, etc.). In both samples, it was found that higher Rorschach Barrier scores were related to sensations reported from the boundary regions of the body rather than from its interior, although significance was marginal in one sample.

In the third study, Rorschach Barrier scores were related to interior and exterior sensations experienced in a stressful context. Stress was induced by leading subjects to believe that their bodies were threatened by an unknown drug. They were given a placebo and told to report their sensations on a check list. Results indicated that for the male subjects, higher Barrier scores were related more to reported exterior sensations than to interior sensations. For the female subjects, however, only a chance relationship was found.

Fisher (1965) sought to provide more direct evidence that the matrix of body sensations which can be referred to as the body image affects an individual's perception of unstructured targets like inkblots. This hypothesis was translated into the specific prediction that the greater the prominence of a subject's stomach in his experience, the more likely he is to perceive themes relating to nutritive processes when asked to describe imaginatively a series of Rorschach inkblots. Two studies were reported in which stomach awareness was measured by means of a technique (Body Focus Questionnaire) which involved comparing stomach prominence with a series of other paired body sectors (arm, heart, head, etc.). The Rorschach protocols were scored blindly for nutritive themes (food, descriptions of eating or drinking, indirect oral activities, e.g., smoking, biting). A Chi-square analysis of the data indicated

support for the hypothesis. The higher a subject's stomach prominence score, the greater is the number of nutritive responses that he gives to inkblots. No comparisons were made in terms of the Barrier scores.

Summary

In this chapter, an overview was presented of the theory and research which relates perceptual organization of inkblots, as measured by the Fisher and Cleveland (1958) Penetration-Barrier index, and somato-psychological experience. Yet criticisms of such a view were expressed, both on theoretical grounds and on grounds of inadequate research methodology.

On theoretical grounds, it will be recalled that Mednick (1959) and Wylie (1961) have questioned whether or not Rorschach percepts are in any way a projection of how an individual experiences his body. These percepts may only reflect cognitive or perceptual style variables and they may not concomitantly reflect body image variables. Even if there is a relationship between perceptual style and body experience, the following question must be raised: Do body experiences represent initiating forces in inkblot organization, or are they only subsidiary effects to perceptual variables? Fisher and Cleveland (1965) themselves have stated,

> Of course, the question arises whether boundary fluctuations represent initiating forces in change processes or whether they are subsidiary effects. Available information does not, at this point, permit a meaningful answer (p. 65).

In reviewing the research which supports a relationship between body image and Rorschach variables, Fisher (1963) admitted that, "Such criticisms cannot be easily dismissed" (p. 72). He went on to add that there are two main reasons to believe that Rorschach percepts are anchored in body phenomena: (1) because most of the "empirical findings" discerned "solid correlations" between inkblot indices and body phenomena; (2) because no dependable relationships were found between inkblot scores and indices which have cognitive or perceptual style connotations, e.g., intelligence, verbal productivity, rigidity, and authoritarianism.

With respect to the last reason, it must be kept in mind that a postulate cannot be confirmed by nonconfirming evidence. The negative findings of relationships between cognitive or perceptual style indices and inkblot scores does not prove a positive relationship between inkblot scores and body image variables as initiating forces. The first reason requires a little more analysis. Indeed, an abundance of the "empirical findings" did reveal positive correlations between differential organization of Rorschach percepts and differential body experience. As Shontz (1965), Underwood (1956), and others have remarked, however, the fact that observations tend to occur together consistently

does not mean that one set of events causes the other. Since correlation or relationship is not cause, the results of previous studies which have used the "correlational method" in attempting to establish whether body image variables do represent initiating forces in perception of Rorschach inkblots or whether they are subsidiary effects, remain inconclusive.

Illustrations of the above "correlational criticism" can be discerned in those two studies which were proposed as "the most direct evidence" which supported the perceptual style, body image hypothesis. Fisher and Fisher (1964) found the Rorschach Barrier score to be significantly related to the difference between exterior body sensations (skin, muscle) and interior body sensations (stomach, heart). The higher the Barrier score, the more exterior body sensations predominated over interior sensations. In a later study, Fisher (1965) found a positive relationship between higher stomach awareness and higher number of nutritive themes ascribed to Rorschach inkblots. Both of these studies found positive correlations between differential body awareness and differential percept organization. However, no real distinction can be made between independent and dependent variables, even though it was inferred that body awareness influenced or initiated perceptual responses.

Since diagnosticians have placed so much emphasis on the Fisher and Cleveland (1958) Penetration-Barrier index,

it was important that more research be carried on in order to validate it. It was hoped that this study would contribute information as to the validity of the Penetration-Barrier index and add to the normative data which had already been collected.

CHAPTER II

STATEMENT OF THE PROBLEM

The present study was directed primarily to an experimental analysis of the postulated relationship between body experience and perceptual organization of Rorschach inkblots as measured by the Fisher and Cleveland (1958) Penetration-Barrier index. Specifically, the present investigation was an attempt to determine if body awareness can influence perception of Rorschach inkblots by producing increased awareness of the body in Experimental Groups and noting differential effects on percepts of Rorschach stimuli. This study thus emphasized direct control of the independent variable (body awareness) by experimentally manipulating it as it related to the dependent variable (Rorschach percepts as scored *via* the Fisher and Cleveland, 1958, index).

It was postulated that increased awareness of the external body will influence perception of Rorschach inkblots in the direction of greater Barrier scores and lesser Penetration scores as compared to Rorschach perceptions under conditions of increased awareness of the internal body. Such an experimentally demonstrated relationship would serve as a measure of the construct validity of the

Fisher and Cleveland (1958) Penetration-Barrier index. The construct validity of the Fisher and Cleveland (1958) scheme is concerned with the extent to which the index may be said to measure the theoretical construct, somato-psychological experience, previously discussed in Chapter I. Any data suggestive of the nature of the Fisher and Cleveland (1958) index and of the conditions affecting its manifestations are of concern in discussing its construct validity (Anastasi, 1969; Freeman, 1962; Lyman, 1963).

A subsidiary purpose of the present study was to provide concurrent validity (Anastasi, 1969; Freeman, 1962) for the Fisher and Cleveland (1958) Penetration-Barrier index by way of an investigation of the relationship between body experiences and drawings obtained *via* the Kinget (1952) technique. In Chapter I, an overview was presented both of the theory and of the research postulating a relationship between drawings and body image. As was noted, the studies cited confirmed such a relationship. Hence, if it could be shown that experimentally induced body awareness caused similar differential Penetration-Barrier score effects on both percepts of Rorschach stimuli as well as on Kinget drawings, then concurrent validity for the Fisher and Cleveland (1958) index would be demonstrated adequately. Specifically, it was postulated that increased awareness of the external body will influence Kinget productions in the direction of greater Barrier scores and lesser Penetration

scores as compared to Kinget productions under conditions of increased internal body awareness.

The Kinget Drawing Completion Test is a projective technique for the investigation of personality which seeks to provide an interpretative basis for drawings. It was designed partially in its origination by Sander (1928). Later, Wartegg (1934) modified the test materials into their present appearance and Kinget (1952) undertook to present an experimental rationale and objective scoring system for its use as a personality test.

The test itself consists of eight blanks printed on white paper each containing small signs or stimuli which serve as the basis of drawings the subject is asked to make within each blank. (See Appendix B for an actual test form). The only requirement is that the subject number his drawings in the order of completion, then label them in spaces provided.

There were several factors which were taken into consideration in the selection of the Kinget over other drawing tests. First, since the Kinget provides eight opportunities for the production of responses, it was felt that a greater magnitude of Penetration-Barrier scores could be obtained than if each subject were to produce only one drawing response. Second, the Kinget Drawing Completion Test takes a relatively short time to administer (the mean time for completion of the test by adults is twenty minutes),

and third, the administration of the test is simple.

Finally, the Kinget Drawing Completion Test has received relatively little notice in the literature due to the fact that the scoring system is comparatively complex and cumbersome. A supplementary aim of the present study was to adapt parts of a more familiar scoring system; i.e., that of the Rorschach Penetration-Barrier index, to the Kinget. It was believed that such a step would serve to help make the Kinget more useful.

A further refinement of the present study is the investigation of how differential body awareness affects perception of Rorschach ink blots by schizophrenic individuals. It will be recalled in Chapter I that numerous theoretical positions were presented relating schizophrenia to body image distortion (Federn, 1952; Bettelheim, 1950, Angyal, 1936; Fenichel, 1945; etc.). As was summarized by Des Lauriers (1962, 1969), it was proposed that the schizophrenic individual is no longer able to define his psychological boundaries.

Also presented in Chapter I was the observation that Rorschach protocols produced by schizophrenic individuals are significantly higher in Penetration scores than are protocols produced by normal individuals (Fisher and Cleveland, 1958; Holtzman, et. al., 1961). In addition, it was noted that schizophrenic patients rated as improved or well show a significant decline in Penetration score (Cleveland,

1960). Hence, it was postulated specifically that if a differential effect on schizophrenic individuals' perceptions of Rorschach inkblots due to body awareness would be demonstrated, and if this differential effect is in the direction of a lesser Penetration index, then a therapeutic rationale for dealing with schizophrenic individuals could be suggested.

A fourth aspect that was studied was a comparison by sex across body awareness conditions as measured by Rorschach responses and Kinget drawing productions. It will be recalled that, as stated in Chapter I, the "empirical findings" suggested certain sex differences regarding interior versus exterior body awareness and the manner in which Rorschach inkblots were organized. However, these findings were conflicting from different studies. The present investigation was an attempt to discern any sex differences in how body awareness may affect Rorschach responses and Kinget productions by utilizing the same experimental conditions for each sex.

A fifth aspect of the present investigation was an analysis of possible interaction effects between locus of awareness and sex on both the Rorschach and Kinget.

In order to determine the extent of the postulated relationships between body experience and the Penetration-Barrier index on both the Rorschach and Kinget tests as well as the extent of differential performance by sex, the

specific null hypotheses that were investigated in the present study were stated as follows:

1. There will be no significant difference in the Rorschach-Barrier scores of subjects caused by the somatic awareness conditions.

2. There will be no significant difference in the Rorschach-Barrier scores of male and female subjects.

3. There will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Rorschach-Barrier scores of the four different groups.

4. There will be no significant difference in the Rorschach-Penetration scores of subjects caused by the two somatic awareness conditions.

5. There will be no significant difference in the Rorschach-Penetration scores of male and female subjects.

6. There will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Rorschach-Penetration scores of the four different groups.

7. There will be no significant difference in the Kinget-Barrier scores of the subjects caused by the somatic awareness conditions.

8. There will be no significant difference in the Kinget-Barrier scores of male and female subjects.

9. There will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Kinget-Barrier scores of the four different groups.

10. There will be no significant difference in the Kinget-Penetration scores of the subjects caused by the two different somatic awareness conditions.

11. There will be no significant difference in the Kinget-Penetration scores of male and female subjects.

12. There will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Kinget-Penetration scores of the four different groups.

CHAPTER III

METHOD

Design

The design of this study was to increase differentially somatic awareness in two groups of patients with established diagnoses of non-paranoid schizophrenia in order to determine what effects this increased somatic awareness has on perceptual organization of Rorschach inkblots and on Kinget Drawing Completion Test productions. Differential experimental conditions were induced by two different methods. In one group, somatic awareness was induced in exterior body sectors and, in the other group, somatic awareness was induced in internal body sectors.

Equal numbers of both men and women were used in the experimental groups. A schematic representation of the two factors design may be found in Figure 1.

Subjects

Twenty-eight non-paranoid schizophrenic subjects participated in this study. Seven men and seven women were exposed to one somatic condition, and seven men and seven women were exposed to the other somatic condition. All subjects were hospitalized inpatients of a psychiatric

Figure 1

Design of the Study

		SOMATIZATION	
		Internal	External
SEX	Male	$\underline{S}_1$ $\underline{S}_2$ . . . $\underline{S}_7$	$\underline{S}_{15}$ $\underline{S}_{16}$ . . . $\underline{S}_{21}$
	Female	$\underline{S}_8$ $\underline{S}_9$ . . . $\underline{S}_{14}$	$\underline{S}_{22}$ $\underline{S}_{23}$ . . . $\underline{S}_{28}$

hospital.

Paranoid schizophrenic subjects were excluded specifically. As was pointed out in Chapter I, no nosologic agreement has been reached in the literature as to whether or not paranoid schizophrenia is indeed a form of schizophrenia (Bonner, 1951; Fraser Steele, 1948).

Subject Selection

Special care was exercised in the selection of subjects for this study because, as Bellak (1958), Jackson (1960), and Weiner (1966) have pointed out in their reviews of the schizophrenic syndrome, the psychodiagnostic label of schizophrenia is often assigned haphazardly. Bellak (1958, p. 147) refers to the "deplorable confusion" resulting from the tendency to consider mixed neuroses or even severe neuroses as forms of schizophrenia, in the absence of a thought disorder or a clearly psychotic disturbance of one or more ego functions. Penrose (1950) has demonstrated that the chances of being labeled schizophrenic increase in proportion to the length of hospital stay, regardless of initial diagnosis.

Several authors have noted the marked variability in schizophrenic diagnosis from country to country (Langfeldt, 1951), and the discrepancies in statistical reports from various mental hospitals (Bigelow, 1953; Reid and Finesinger, 1952). From the few papers dealing with the reliability of

diagnosis, variation between experienced clinicians is so great that comparisons between groups used by different investigators are subject to large error. For example, in one study, three psychiatrists agreed in only 20 per cent of their cases and had a majority agreement in only 48 per cent (Arnoff, 1954). Another study revealed that the widest disagreement occurred among the most experienced clinicians (Ash, 1949).

The major sources of confusion appear to be the different frames of reference in which the clinical syndrome of schizophrenia is reported and defined (Apter, 1954; Bleuler, 1954; Boyd, 1950; Finkelstein, 1953; Jenkins, 1952), and the fact that the operations by which the diagnosis is established are usually not made explicit (Bellak, 1958). Indeed, almost every paper describing an investigation into the etiology of schizophrenia starts out with "X" number of "schizophrenics", rarely described except for that loose and varying label.

In addition, the schizophrenic label has been used too freely in research. It appears that misdiagnosis is not only a plaything of state hospital psychiatrists. To be sure, concerning gross categorization of schizophrenia, Rabin, King, and Ehrmann (1955) and Lang and Buss (1965) indicate that much of the contradictions in the research literature in all lines of schizophrenic investigation may be the result of failure adequately to specify and control

various parameters of the subjects' disturbances.

Criteria for Selection

Absolute Criteria. These criteria were considered "absolute" in the sense that the subject had to meet each and every one of them for selection.

1. The subject must presently be an inpatient at a state psychiatric hospital. In addition, he must have been hospitalized for a minimum of one year. The reason for this criterion is that the main mistakes in diagnosis occur in the early stages of schizophrenis, Bellak (1958) reports that incorrect disgnosis ranges from 16 per cent to 50 per cent of such cases.

2. Both the present diagnosis and the initial diagnosis must be one of the following: [the code numbers are in accordance with the DSM II Classification System (American Psychiatric Association, 1963)]:

A. Schizophrenia, Simple Type (295.0);

B. Schizophrenia, Hebephrenic Type (295.1);

C. Schizophrenia, Catatonic Type (295.2); or

D. Schizophrenia, Chronic Undifferentiated Type (295.90).

In the introductory discussion to this section it was noted that a fundamental problem in the diagnosis of schizophrenia is one of definition. This criterion was considered "absolute", therefore, in an attempt both to

provide some consensual validation of the diagnosis and to eliminate such transitional diagnoses as schizophrenia, paranoid type; schizophrenia, schizo-affective type; and schizophrenia, childhood type (Bellack, 1958).

3. The patient must have been the subject of at least one staffing that, at a minimum, included the presence of both a clinical psychologist and a qualified psychiatrist and in which the present diagnosis was discussed and agreed upon. This criterion again was an attempt to provide consensual validation among qualified and knowledgable personnel of the schizophrenic diagnosis.

4. The subject must be between the ages of 18 and 60. The minimum age limit was a further attempt to eliminate a childhood schizophrenic label. The maximum age limit was an attempt to minimize organic aspects of the schizophrenic syndrome.

Supplementary Criteria. These four criteria were considered "supplementary" in the sense that at least two of the criteria must support a schizophrenic diagnosis for subject selection. Thus, these "supplementary" criteria represent an attempt to provide concurrent validity for the schizophrenic diagnosis. As Bellak (1958) notes,

> A number of different kinds of tests to supplement the clinical examination of the patient have been suggested to aid diagnosis in the field of schizophrenia. Unfortunately, however, many claims in this area are unsubstantiated. To date, the area of greatest promise is that of psychologic testing... (pp. 125-126).

The four psychological tests used as "supplementary" criteria and listed below were selected because they are all paper-and-pencil tests; they are all relatively easy to use; they all take relatively little time to administer; and they all may be administered in groups.

1. The MMPI (Hathaway and McKinley, 1951) was administered to each prospective subject. The resulting profiles then were placed with MMPI profiles of non-schizophrenic inpatients. Two Ph.D. clinical psychologists individually were asked to identify blindly those profiles which would confirm a schizophrenic diagnosis. Both selectors must agree individually that a particular profile confirms a schizophrenic diagnosis to satisfy this criterion.

2. The Shipley-Hartford Retreat Scale (1939) has many features which suggest its use as a quick screening criterion (see Appendix B for an actual test form). Not only is an IQ score obtained which is important in evaluating the Gorham Proverbs Test criterion discussed below, but the achieved Conceptual Quotient (CQ) score is indicative of schizophrenic intellectual patterns. According to Garfield (1957), a CQ score less than 90 is "suspicious".

Hence, the Shipley-Hartford was administered to each prospective subject. To satisfy this criterion, the resulting CQ scores must be below 90.

3. The Gorham Proverbs Test Best Answer Form (1958) was administered to each prospective subject (see Appendix

B for an actual test form).

Gorham (1956) reports that this technique can differentiate between schizophrenic and normal populations at well beyond the .001 level of confidence. The test yields an abstract (Ab) and a concrete (Co) score, and is scored by stencil. The abstract score is the total of best abstract responses on the 40 items of the test. The concrete score is the number of responses from among 20 selected by item analysis as especially suited to differentiate schizophrenics from normals (Gorham, 1956).

Based on IQ level (which was obtained in this study via the Shipley-Hartford Retreat Scale described above), Gorham (1956, 1963) reports guidelines for identifying schizophrenics. Hence, to satisfy this criterion, each prospective subject's scores were analyzed according to Gorham's published guidelines for confirmation of a schizophrenic diagnosis.

4. Whitaker's (1963) Schizophrenic Thought Index (STI) was administered to each prospective subject (see Appendix B for an actual test form). The STI measures the qualitative and quantitative extent of schizophrenic thought processes used by the individual. To satisfy this criterion, the prospective subject had to score at least six points on this index.

Materials

Subject Selection

1. Hospital case file including such information as length of hospitalization, initial and current diagnosis, staff conference notes, age, sex, biographical information, etc.;

2. Standard MMPI (Hathaway and McKinley, 1951) test booklet (Form 65-149TB) and answer sheet;

3. Shipley-Hartford Institute of Living Scale (see Appendix B);

4. Gorham Proverbs Test Best Answer Form booklet and answer sheet (see Appendix B);

5. Schizophrenic Thought Index booklet (see Appendix B).

Independent Experimental Conditions

The materials listed below for each of the two groups in this study were chosen largely through a subjective approach. They were chosen to focus attention differentially on internal body sectors and external body sectors. To induce internal somatic awareness, materials were selected to give the subject experiences of his nasal, oral, digestive, and cardiac body sectors. To induce external somatic awareness, materials were selected to give the

subject experiences of his neck, shoulder, arm, and leg muscles, and his skin.

1. For Internal Somatic Groups (both Sexes), the following materials were used to induce internal somatic awareness:

   A. Small cup of crushed ice to be swallowed completely;

   B. Bottle of liquid Bar-B-Q smoke to be smelled for one minute;

   C. Stethoscope to listen to own heart beat for one minute;

   D. Standard cup of boiling hot coffee to be swallowed completely.

2. For External Somatic Groups (both Sexes), the following materials were used to induce external somatic awareness:

   A. Phrase stating, "Hold both arms horizontally straight outward while sitting for one minute".

   B. A hand tub filled with a mixture of crushed ice and ice water and coarse paper towels. Both hands are to be immersed completely in this mixture and then dried with coarse paper towels.

   C. Phrase stating, "Hold both legs horizontally straight outward while sitting for

one minute".

D. Electric hand vibrator to vibrate neck, shoulders and both arms for one minute.

Dependent Experimental Conditions

1. For all subjects: The standard series of ten Rorschach cards.

2. For all subjects: The standard Kinget (1952) Drawing Completion Test Blank (see Appendix B for an actual form).

Dependent Measures

Scoring of the Rorschach

On the Rorschach, 25 responses were required of each subject (three responses for each of five cards: I, II, III, VIII, X; and two responses for each of the other five cards). This procedure is consistent with earlier methods of investigating Rorschach, body image variables (Fisher, 1965) and controls for response total (Grayson, 1956). All scoring was done on a blind basis with regard to groups.

Two dependent measures were scored on the Rorschach: Barrier and Penetration. Barrier and Penetration measures were scored according to Fisher and Cleveland's (1958, pp. 58-71) standard criteria (criteria also outlined in Chapter

I). All scored Rorschach protocols may be found in Appendix A.

Scoring of the Kinget

On the Kinget Drawing Completion Test, eight separate drawings were required of each subject. This procedure is consistent with the Kinget (1952) standardization. All scoring was done on a blind basis with regard to groups.

Two dependent measures are to be scored on the Kinget: Barrier and Penetration. Barrier and Penetration measures are to be scored according to Fisher and Cleveland's (1958, pp. 58-71) standard criteria (Criteria also outlined in Chapter I).

Procedure

The procedure first involved the selection of subjects. Hospital case files of current inpatients at a state psychiatric hospital were studied according to the absolute selection criteria already outlined in this chapter (e.g., length of hospitalization, initial and current diagnosis, type of staffing, age, etc.).

Those patients who were selected initially next were tested in small groups according to the supplementary selection criteria already outlined in this chapter (e.g., MMPI, Gorham Proverbs Test, Shipley-Hartford, and STI).

Those patients selected from this group then were randomly assigned to either of the two Somatic groups, External or Internal, as each subject appeared at the experimental room, until each of the two groups contained seven men and seven women.

The experimental procedure involved each subject being tested individually. Each subject was told the following:

> This is a research study. And the purpose of our research today is to study different aspects of personality. There are all types of personalities, of course, and we want to see how different types of people will experience certain situations.
>
> The first thing we are going to do, then, is have you experience certain situations that I will give to you. After you have been in the first situation long enough for you to experience what it is like, about one minute, we will go on to the next one.
>
> Do you have any questions? All right then, here is the first situation.

Then each subject underwent the appropriate experimental conditions, either Internal Somatic or External Somatic, as listed for each group under "Independent Experimental Conditions" in this chapter.

The Rorchach then was administered to each subject as described in this chapter under "Dependent Experimental Conditions". The standard Rorschach instructions were as follows:

> OK, now I am going to show you a series of cards with ink blots on them. You know what an

> ink blot is. If you were to spill some ink on a piece of paper and then fold it in half, and then open up the paper, you would have an ink blot. Well that's what I am going to show you: a series of cards with ink blots on them.
>
> Now people see all sorts of things in these ink blot pictures. Just tell me what you see, what it might be for you, what it makes you think of (Klopner & Davidson, 1962, pp. 27-28).

Following this, the Kinget Drawing Completion Test was administered to each subject as described in this chapter under "Dependent Experimental Conditions". The standard Kinget instructions were as follows:

> On this form you see eight squares. Each of the squares contains little signs. These signs have no special meaning; they merely represent parts of drawings which you are asked to make in each of the squares. You may draw whatever you like and you may start with the sign you like best. You need not follow the order in which the squares are arranged, but I should like you to number your drawings in the order in which you make them. You may work as long as you wish and you may use the eraser. Do not, however, turn the sheet. This white part must be the base of your drawings. Please don't forget to number the drawings (Kinget, 1952, pp. 28-29).

Following this, each subject was thanked and dismissed.

CHAPTER IV

RESULTS

Twenty-eight non-paranoid schizophrenic subjects were randomly divided into two groups of fourteen subjects each. Each group was given a different experimental treatment. The experimental conditions for Group I were intended to increase the subjects' awareness of their internal bodies. The experimental conditions for Group II were induced as an attempt to increase the subjects' awareness of their external bodies. Two measures were taken on each subject: a Barrier score and a Penetration score, as obtained *via* the *Rorschach Psychodiagnostic Test* and the Kinget *Drawing Completion Test*.

The individual results of the testing of the twenty-eight subjects used in this study are recorded in Appendix A for examination. Each subject's Rorschach protocol and the Penetration-Barrier score for each response is included. In addition, Tables 1, 2, 3, and 4 present these dependent measures in tabulated form with the corresponding means, variances, and standard deviations. These data were recorded onto punched cards and then analyzed using the 360-50 IBM computer and accompanying configuration at the Merrick Computer Center located on the north campus

TABLE 1

MEANS, VARIANCES AND STANDARD DEVIATIONS
FOR THE RORSCHACH PENETRATION SCORES

	Internal		External	
Male	Mean	11.10	Mean	4.57
	Variance	105.00	Variance	20.70
	Standard Dev.	10.25	Standard Dev.	4.55
Female	Mean	10.90	Mean	5.00
	Variance	50.90	Variance	74.00
	Standard Dev.	7.13	Standard Dev.	8.60

TABLE 2

MEANS, VARIANCES, AND STANDARD DEVIATIONS
FOR THE RORSCHACH BARRIER SCORES

	Internal		External	
Male	Mean	6.00	Mean	7.43
	Variance	12.00	Variance	23.70
	Standard Dev.	3.46	Standard Dev.	4.87
Female	Mean	4.71	Mean	9.00
	Variance	78.90	Variance	17.00
	Standard Dev.	8.88	Standard Dev.	4.12

TABLE 3

MEANS, VARIANCES, AND STANDARD DEVIATIONS
FOR THE KINGET PENETRATION SCORES

	Internal		External	
Male	Mean	2.14	Mean	0.29
	Variance	8.85	Variance	3.40
	Standard Dev.	2.97	Standard Dev.	1.84
Female	Mean	1.00	Mean	0.43
	Variance	8.00	Variance	1.70
	Standard Dev.	2.83	Standard Dev.	1.30

TABLE 4

MEANS, VARIANCES, AND STANDARD DEVIATIONS
FOR THE KINGET BARRIER SCORES

	Internal		External	
Male	Mean	2.14	Mean	1.71
	Variance	25.00	Variance	17.50
	Standard Dev.	5.00	Standard Dev.	4.18
Female	Mean	1.14	Mean	1.71
	Variance	6.90	Variance	13.40
	Standard Dev.	2.63	Standard Dev.	3.66

of the University of Oklahoma at Norman.

A test for homogeniety of variance of the groups involved was performed. Specifically, homogeniety of variance was found for the Rorschach Barrier scores, the Rorschach Penetration scores, the Kinget Barrier scores, and the Kinget Penetration scores. As can be seen from Table 5, the results of these tests indicated that when the ratio of the highest variance to the lowest variance was compared for each group, the resulting F values were all found to have a probability of greater than .05, thus confirming the assumption of the homogeniety of variance.

As a result of this confirmation of the homogeniety of variance for all four of the groups involved, the data were then analyzed using a 2-way Analysis of Variance (ANOVA) testing statistic. The particular statistical test used is one of several canned (pre-written) programs which have been developed, written, and published by the University of California Press, Berkeley, California (Dixon, 1969).

Tables 6, 7, 8, and 9 contain the results of these statistical analyses. The statistical results relevant to each of the twelve hypotheses are presented in order.

Hypothesis 1 stated that there will be no significant difference in the Rorschach Barrier scores of subjects caused by the somatic awareness conditions. Reference to Table 6 indicates that the Barrier scores as recorded on

TABLE 5

HOMOGENEITY OF VARIANCE TABLE FOR THE FOUR ANALYSIS OF VARIANCE TESTS PERFORMED

Test Number	Highest Variance	Lowest Variance	F	P
1. R_b	78.9	12.0	6.58	$> .05$
2. R_p	105.0	20.7	5.07	$> .05$
3. K_b	25.0	6.9	3.62	$> .05$
4. K_p	8.9	1.7	5.24	$> .05$

R_b = Rorschach Barrier scores

R_p = Rorschach Penetration scores

K_b = Kinget Barrier scores

K_p = Kinget Penetration scores

the Rorschach for the subjects of the internal stimulus condition were significantly lower than the analogous scores for the subjects of the external stimulus conditions beyond the .01 level ($F = 8.69$; d.f. 1, 24). Hence, hypothesis 1 was not supported.

Hypothesis 2 stated that there will be no significant difference in the Rorschach Barrier scores of male and female subjects. Reference to Table 6 indicates that the Barrier scores as recorded on the Rorschach for male subjects were not significantly different at the .05 level of probability than those scores recorded for the female subjects ($F = 0$; d.f. 1, 24; $p > .05$). Hence, hypothesis 2 was supported.

Hypothesis 3 stated that there will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Rorschach Barrier scores of the four different groups. Reference to Table 6 indicates that there was no significant interaction at the .05 level of probability between the two independent variables of Condition and Sex as reflected in the Rorschach Barrier scores of participating subjects ($F = 2.19$; d.f. 1, 24; $p > .05$). Hence, hypothesis 3 was supported.

Hypothesis 4 stated that there will be no significant difference in the Rorschach Penetration scores of subjects caused by the two somatic awareness conditions. Reference to Table 7 indicates that the Penetration scores

TABLE 6

RESULTS OF 2-WAY ANOVA ON RORSCHACH BARRIER SCORES FOR FOUR GROUPS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	P
SS_A	58	1	58	8.69	$< .01$
SS_B	0	1	0	0.0	$> .05$
SS_I	14	1	14	2.19	$> .05$
SS_W	160	24	6.67		
SS_T	232	27			

TABLE 7

RESULTS OF 2-WAY ANOVA ON RORSCHACH PENETRATION SCORES FOR FOUR GROUPS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	P
SS_A	271	1	271	23.16	$< .001$
SS_B	1	1	1	.09	$> .05$
SS_I	0	1	0	0.0	$> .05$
SS_W	280	24	11.7		
SS_T	552	27			

as recorded on the Rorschach for the subjects of the internal stimulus condition were significantly lower than the analogous scores for the subjects of the external stimulus conditions beyond the .001 level ($F = 23.16$; d.f. 1, 24). Hence, hypothesis 4 was not supported.

Hypothesis 5 stated that there will be no significant difference in the Rorschach Penetration scores of male and female subjects. Reference to Table 7 indicates that the Penetration scores as recorded on the Rorschach for male subjects were not significantly different at the .05 level of probability than those scores recorded for the female subjects ($F = .09$; d.f. 1, 24; $p > .05$). Hence, hypothesis 5 was supported.

Hypothesis 6 stated that there will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Rorschach Penetration scores of the four different groups. Reference to Table 7 indicates that there was no significant interaction at the .05 level of probability between the two independent variables of Condition and Sex as reflected in the Rorschach Penetration scores of participating subjects ($F = 0$; d.f. 1, 24; $p > .05$). Hence, hypothesis 6 was supported.

Hypothesis 7 stated that there will be no significant difference in the Kinget Barrier scores of the subjects caused by the somatic awareness conditions. Reference to Table 8 indicates that the Barrier scores as recorded on

the Kinget for the subjects of the internal stimulus condition were not significantly different at the .05 level of probability than the analogous scores recorded for the subjects of the external stimulus condition ($F = 0$; d.f. 1, 24; $p > .05$). Hence, hypothesis 7 was supported.

Hypothesis 8 stated that there will be no significant difference in the Kinget Barrier scores of male and female subjects. Reference to Table 8 indicates that the Barrier scores as recorded on the Kinget for male subjects were not significantly different at the .05 level of probability than those scores recorded for the female subjects ($F = .82$; d.f. 1, 24; $p > .05$). Hence, hypothesis 8 was supported.

Hypothesis 9 stated that there will be no significant interaction between the two independent variables of Condition and Sex as reflected in the Kinget Barrier scores of the four different groups. Reference to Table 8 indicates that there was no significant interaction at the .05 level of probability between the two independent variables of Condition and Sex as reflected in the Kinget Barrier scores of participating subjects ($F = 1.39$; d.f. 1, 24; $p > .05$). Hence, hypothesis 9 was supported.

Hypothesis 10 stated that there will be no significant difference in the Kinget Penetration scores of the subjects caused by the two different somatic awareness conditions. Reference to Table 9 indicates that the

TABLE 8

RESULTS OF 2-WAY ANOVA OF KINGET BARRIER SCORES FOR FOUR GROUPS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	P
SS_A	0.0	1	0.0	0.0	$> .05$
SS_B	1.9	1	1.9	0.82	$> .05$
SS_I	3.5	1	3.5	1.39	$> .05$
SS_W	60.6	24	2.52		
SS_T	66.0	27			

TABLE 9

RESULTS OF 2-WAY ANOVA ON KINGET PENETRATION SCORES FOR FOUR GROUPS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F	P
SS_A	10.36	1	10.36	11.26	$< .01$
SS_B	1.78	1	1.78	1.94	$> .05$
SS_I	2.86	1	2.86	3.11	$> .05$
SS_W	22.00	24	0.92		
SS_T	37.00	27			

Penetration scores as recorded on the Kinget for the subjects of the internal stimulus condition were significantly lower than the analogous scores for the subjects of the external stimulus conditions beyond the .01 level ($F = 11.26$; d.f. 1, 24). Hence, hypothesis 10 was not supported.

Hypothesis 11 stated that there will be no significant difference in the Kinget Penetration scores of male and female subjects. Reference to Table 9 indicates that the Penetration scores as recorded on the Kinget for male subjects were not significantly different at the .05 level of probability than those scores recorded for the female subjects ($F = 1.94$; d.f. 1, 24; $p > .05$). Hence, hypothesis 11 was supported.

Hypothesis 12 stated that there will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Kinget Penetration scores of the four different groups. Reference to Table 9 indicates that there was no significant interaction at the .05 level of probability between the two independent variables of Condition and Sex as reflected in the Kinget Penetration scores of participating subjects ($F = 3.11$; d.f. 1, 24; $p > .05$). Hence, hypothesis 12 was supported.

Summary of Results of Testing Hypotheses 1-12

Tables 6, 7, 8, and 9 contain the results of the four, 2-way ANOVAs needed to test hypotheses 1-12. The

results given in these tables can be summarized in the three following statements:

1. Null hypotheses 1, 4, 7, and 10 concerning the Barrier and Penetration scores of the subjects on the Rorschach and Kinget tests were all rejected <u>except</u> hypothesis 7 concerning the Kinget Barrier scores. (H_1: $F = 8.69$; $P < .01$. $H_4 F = 23.16$; $P < .001$ H_7: $F = 0.0$; $P > .05$. $H_{10} F = 11.26$; $P < .01$)

2. Null hypotheses 3, 6, 9, and 12 concerning the amount of interaction between the two independent variables of Conditions and Sex were <u>all</u> supported. (H_3: $F = 2.19$; $P > .05$. H_6: $F = 0.0$; $P > .05$. H_9: $F = 1.39$; $P > .05$. H_{12}: $F = 3.11$; $P > .05$)

A synthesis of all four tables would indicate that the two somatic awareness conditions of internal and external stimuli do make a difference in the Barrier and Penetration scores of non-paranoid schizophrenics as recorded on the Rorschach test. The two somatic awareness conditions of internal and external stimuli do make a difference only in the Penetration scores of non-paranoid schizophrenics as recorded on the Kinget test. However, the sex of the subjects made no significant difference in the Barrier and Penetration scores of the same subjects as recorded on the same instruments. Finally, the two independent variables of Condition (external and internal) and Sex did not have an interacting effect.

CHAPTER V

DISCUSSION

The research reported in this study was directed primarily to an experimental analysis of the postulated relationship between somato-psychological experience and perceptual organization of Rorschach ink blots as measured by the Fisher and Cleveland (1958) Penetration-Barrier index. Previous studies which have used correlational methods in attempting to establish whether body image variables represent initiating forces in perception of ink blots, or whether they are subsidiary effects to perceptual variables, remain inconclusive (Fisher & Cleveland, 1965, p. 65). Since correlation cannot be interpreted as causation, the fact that observations tend to occur together consistently does not mean that one set of events (body image variables) causes the other (perceptual variables).

Using an experimental methodology, the investigator attempted to determine if body image variables can influence ink blot perception by differentially increasing somatic awareness of experimental subjects and noting the differential effects on their percepts of Rorschach stimuli. Further refinements of this basic question were posed in terms of sex differences, of the schizophrenic process, and

of applying Fisher and Cleveland's Index to determine a Barrier and Penetration score from the Kinget Drawing Completion Test. The experimental methodology thus emphasized a more direct control over the independent variables (somato-psychological experiences) than previous attempts which merely correlated already existing somato-psychological experiences and Rorschach responses (e.g., Fisher & Fisher, 1964; Fisher, 1965).

As discussed in Chapter II, the research aspects of this study were directed primarily at answering the five following questions: (1) Can inducing differential somato-psychological awareness differentially influence perceptions of Rorschach ink blots? (2) Can inducing differential somato-psychological awareness differentially influence Kinget Drawing Completion Test productions? (3) What effect does somato-psychological awareness have on a schizophrenic individual's perceptions of body awareness? (4) What sex differences are there in Rorschach percept organization and in Kinget productions with regard to somato-psychological variables? (5) Are there any interaction effects between differential somato-psychological awareness and sex in either the Rorschach or Kinget tests?

With regard to the first question, analysis of the data revealed that differentially inducing somato-psychological experiences differentially affects perceptual organization of Rorschach ink blots for the Barrier and

Penetration scores in a manner which is entirely consistent. Penetration scores were highest in the Internal Somatic Groups and lowest in the External Somatic Groups. Barrier scores were highest in the External Somatic Groups when compared to the Internal Somatic Groups.

This validation study is unique to the area of research involving body image and Rorschach variables. It demonstrated that the Experimental Conditions did, in fact, directly influence Rorschach responses. To this writer's knowledge, no other study in this area of investigation has sought to provide such direct experimental evidence for this relationship.

On theoretical grounds, it will be recalled that Mednick (1959) and Wylie (1961) had questioned whether or not Rorschach percepts are in any way a projection of how an individual experiences his body. They contended that such percepts may only reflect cognitive or perceptual style variables and may not concomitantly reflect body image variables. Even those psychologists most steadfast in maintaining that a relationship does exist between perceptual style and body experience have admitted that available information does not yet answer the question: Do body experiences represent initiating forces in ink blot percepts, or are they only subsidiary efforts to perceptual variables (Fisher & Cleveland, 1965, p. 65)?

In the most basic conceptual sense, the major finding of this study that somato-psychological experiences can affect perceptual organization of Rorschach ink blots certainly mitigates against the skepticism of Mednick (1959) and Wylie (1961). Not only is there an effect, but also perceptual organization is differentially affected by different sectors of somatic experience, thus providing construct validity for the Fisher and Cleveland (1958) Penetration-Barrier index. Hence, the results of this investigation concur with related findings that inducing specific body tonus patterns affects perception of ambiguous pictures and designs (Allison, 1963; Eagel, 1959; Klien, et. al., 1958; Meltzoff & Litwin, 1956; Singer, 1960; Wapner Werner, 1957; Witkin, et. al., 1954; etc.). Attempting to maintain that cognitive and perceptual style variables are only represented in perception of ink blots without concomitant body image variables, as Mednick and Wylie do, is untenable in light of the present study.

With respect to the second question relating differential somato-psychological experience to Kinget Drawing Completion Test productions, analysis of the data revealed that only the Penetration scores varied significantly. As predicted, Penetration scores were highest in the Internal Somatic Groups and lowest in the External Somatic Groups. However, there was no significant difference between either experimental group and the Barrier scores on the Kinget.

Similarly, in comparing the Barrier score to the Penetration score on the Rorschach, it appeared that the Barrier score was somewhat more resistant to change ($p < .01$) than the Penetration score ($p < .001$).

The result of Barrier score stability is consistent with earlier findings that Barrier scores are relatively more independent of immediate somatic or environmental changes (Fisher & Cleveland, 1958; McConnell & Daston, 1961) than Penetration scores. The general finding of differential indexing of internal and external body experiences by the boundary scores is consistent with earlier "correlational studies" supporting such a view (e.g., Cassell, 1964, 1965; Cleveland, et. al., 1965; Davis, 1960; Fisher, 1965; Fisher & Fisher, 1964; Williams & Krasnoff, 1964; etc.).

Theoretically speaking, the Barrier score should be more stable and resistant to change than the Penetration score. If the process of separating one's body from the world is fundamental in the establishment of personal identity, then the body boundary would constitute that part of the individual most directly in contact with the real world. The interior of the body would be less available as a means of setting up a relationship to the external world. For this reason, one's body boundary would thus be more basic to personal identity and a more stable part of identity. For personal identity to remain stable, the boundary would have to be more resistant to change.

With regard to the third question concerning the effects of differential somato-psychological awareness in schizophrenic individuals, the results of this study demonstrate that differential body awareness does affect the perception of Rorschach ink blots by schizophrenic individuals. Specifically, the results of this study suggest that if a therapist can increase the schizophrenic patient's awareness of the patient's external body sectors, he will cause a significant decline in that patient's Penetration score. Since Cleveland (1960) reported that schizophrenic patients rated as "improved" or "well" also show a significant decline in Penetration score, a therapeutic rationale for dealing with schizophrenic individuals may be suggested.

As was proposed in Chapter I and summarized by Des Lauriers (1962, 1969), the schizophrenic individual is no longer able to define his psychological boundaries. In the schizophrenic reactions where there is a withdrawal or withholding from the external world, a disturbance of the body boundary would be an expected part of the process. If the schizophrenic reactions can be conceptualized as an intensified internal directing at the expense of external reality testing, then not only would the body boundary be disturbed, but also the body interior would become more important as a source of distorted identity and separation from the world. Related to the Rorschach Barrier and

Penetration indices, this abnormal process would mean a decrease in Barrier scores and increase in Penetration scores. Research has substantiated such changes in the Barrier indices (Fisher & Cleveland, 1958; Cleveland, 1960; Holtzman, et. al., 1961; Reitman & Cleveland, 1964).

Des Lauriers (1960), conceives of the schizophrenic patient as an individual who has lost the capacity to experience himself as real, separated, and differentiated from others. Thus, for Des Lauriers, the schizophrenic individual is schizophrenic not because of a particular conflict but because conditions necessary for the experience of reality have ceased to exist, i.e., the individual is no longer able to experience himself as real. He is no longer able to define his own physical and psychological boundaries.

Because of this theoretical framework, the method of psychotherapy developed by Des Lauriers (1960, 1962, 1969) in his work with schizophrenic individuals emphasizes the need for the therapist to help the schizophrenic individual establish the patient's body boundaries by focusing on the patient's experience of his bodily self as a physically finite and spatially separated entity. In his books, Des Lauriers (1963, 1969) supports his theoretical position with numerous clinical examples. This study lends experimental support to the Des Lauriers' rationale.

With regard to the fourth question concerning sex differences, this study found no significant sex differences

in Rorschach percept organization and in Kinget productions with reference to somato-psychological variables. The failure to show any differences between the two sexes fails to support studies conducted by Casselle and Fisher, 1963; Casselle, 1964; and Fisher, 1965. However, the differences in the nature of the research and the number and type of independent variables being manipulated could serve as explanations.

Studies by Casselle and Fisher (1963) and Fisher (1965) were both of a correlational nature. The results could not be interpreted as "cause-effect" relationships. The scores recorded for the twenty-eight subjects of this present study might well have shown a significant correlation. However, it was the intent of this investigator to show a cause-effect relationship by a manipulation of the independent variables of Locus Of Control and Sex as they affect the dependent measures recorded. The fact that such a manipulation is much more difficult and approximates true experimentation much more closely makes a significant difference much more difficult to obtain (Kerlinger, 1967).

The fifth question was concerned with possible interaction effects between differential somato-psychological awareness and sex on both the Rorschach and Kinget tests. No significant interaction effects were found.

Possible Extensions of the Body Image Perspective for Further Research

In view of the significant results found in this study between the body as an initiating force and perception of ink blots, further investigation which would systematically relate other ink blot response variables (e.g., color, shading, size of blot area utilized, and other determinants) to body image parameters appears justified. Mednick (1959) for one has called for such research. Fisher (1965), for example, offered a rationale for expecting a category like color response to be related to body sensations. Citing Schachtel's (1943) study theorizing that response to colors reflects affect states, Fisher found it difficult to conceive of any affect state apart from its body sensation manifestations.

Pursuing this line of approach, some speculations can be advanced. There may be a relationship between percepts which are scored Penetration of boundary (e.g., soft ball of cotton candy, transparent window, can see through dress, x-ray picture) and the Rorschach scorings K or k. Perhaps a relationship between the K and k scorings versus other determinant scores (F) might exist which would augment the Barrier and Penetration indices. The distinctions between internal-external, introversive-extroversive, and introverted-extroverted life style may also be related

to the personality style variables associated with the Barrier-Penetration indices. These and other possibilities exist which could elucidate both traditional Rorschach scoring and the body image concept.

Extensions of the body image perspective to other projective tests which have a place in psychological evaluation could prove profitable. The experimental consistencies between the Validation Study and Experiment Proper (with respect to similar outcome of body image effects on the Kinget test and the Rorschach) indicate that similar processes do occur between somatic variables and projective variables. As Fisher (1965) points out, the extension idea appears creditable in regard to the Thematic Apperception Test in view of Beigel's (1952) findings that TAT interpretations can be influenced by the position of the subject's body while he is organizing themes.

Conclusions

The present investigation offers support to that larger body of theory and research which postulates a central role to the body as the locus and matrix of personality organization (e.g., Fenichel, 1945; Freud, 1927; Gesell, 1948; Piaget, 1963; Rank, 1929; Reich, 1949; Schilder, 1935; Sheldon, 1942; Wapner & Werner, 1957, 1965; Witkin, 1954; etc.). Experimental results reported in this study have demonstrated that one's body can be the locus

of differential perception. Thus, creditability is offered for the proposition that how a person experiences his body affects his perceptual and life style in general. After all, no other perceptual object is simultaneously that which perceives, is perceived, and is part of the perceiver. No other object can so intimately stimulate itself internally, stimulate others as well, and be an object for others to stimulate. The body is unique in that it is subjectively its own identity and simultaneously mirrors its identity to itself and to the world.

CHAPTER VI

SUMMARY

This study was an attempt to determine the relationship of Rorschach Ink Blot percepts and Kinget productions to somato-psychological experiences of non-paranoid schizophrenic individuals. An extensive literature search indicated that further analysis was needed to determine the relationship between somato-psychological experiences of schizophrenic individuals and the Fisher and Cleveland (1958) Penetration-Barrier index. The general hypothesis of this study was that experimental manipulation of body awareness (the independent variable) should affect Rorschach percepts as scored via the Fisher and Cleveland index (the dependent variable). Specific predictions were made in the direction of greater Barrier scores and lesser Penetration scores with increased awareness of the external body as compared to increased awareness of the internal body. It was also predicted that demonstration of such an empirical relationship would be a measure of construct validity of the Fisher and Cleveland (1958) Penetration-Barrier index. The Kinget (1952) technique was used in order to provide an additional measure of the relationship between drawings and body image.

It was expected that the two dependent measures, Kinget responses and Rorschach responses, would be similar in their Penetration-Barrier score effects.

Specific null hypotheses were as follows:

1. There will be no significant difference in the Rorschach-Barrier scores of subjects caused by the somatic awareness conditions.

2. There will be no significant difference in the Rorschach-Barrier scores of male and female subjects.

3. There will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Rorschach-Barrier scores of the four different groups.

4. There will be no significant difference in the Rorschach-Penetration scores of subjects caused by the two somatic awareness conditions.

5. There will be no significant difference in the Rorschach-Penetration scores of male and female subjects.

6. There will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Rorschach-Penetration scores of the four different groups.

7. There will be no significant difference in the Kinget-Barrier scores of the subjects caused by the somatic awareness conditions.

8. There will be no significant difference in the Kinget-Barrier scores of male and female subjects.

9. There will be no significant interaction between the two independent variables of Conditions and Sex as reflected in the Kinget-Barrier scores of the four different groups.

10. There will be no significant difference in the Kinget-Penetration scores of the subjects caused by the two different somatic awareness conditions.

11. There will be no significant difference in the Kinget-Penetration scores of male and female subjects.

12. There will be no significant interaction between the independent variables of Conditions and Sex as reflected in the Kinget-Penetration scores of the four different groups.

The carefully screened subjects were twenty-eight non-paranoid schizophrenics, assigned to two somatic groups of fourteen each. Sex was equal across each group. The method involved the inducement of external somatic awareness by instructing subjects to perform such acts as holding their arms outward and parallel to the ground. Internal somatic awareness was induced by such acts as swallowing hot coffee.

An analysis of variance indicated that hypotheses 1, 4, and 10 were not supported and hypotheses 2, 3, 5, 6, 7, 8, 9, 11, and 12 were supported. The results generally

indicated that the two somatic awareness conditions of internal and external stimuli do make a difference in the Barrier and Penetration scores on the Rorschach and in the Penetration scores on the Kinget. These results provided construct validity for the Penetration-Barrier index. There was no significant main effect for sex nor any significant interaction effect for sex and internal/external somatic awareness.

The investigator concluded that the process of external or internal stimulation is an area of research which could yield results pertinent to the development of a therapeutic treatment technique for working with non-paranoid schizophrenics. Implications for further research also included suggestions for relating more traditional Rorschach parameters to the Penetration-Barrier index as well as relating the Penetration and Barrier scores to certain life styles such as introversion and extroversion. Additional applications of the Penetration-Barrier index for other projective tests such as the TAT was suggested.

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APPENDIX A

INDIVIDUAL RORSCHACH PROTOCOLS

Scoring Code:

NS	=	No score
Barrier	=	Barrier score
Penetration	=	Penetration score

Subject #1
Experimental Condition: Internal Somatic
Sex: Male
Age: 22
Diagnosis: Schizophrenic reaction, catatonic

Total Barrier Score: 7
Total Penetration Score: 14

		Response	Scoring
I.	1.	It looks like a butterfly, parts of the wings, looks like it has holes in it. Kind of looks like it has two feet, and the black line down the middle is in between. It is the whole thing. It is a dead butterfly or sometimes a live butterfly might have holes in it.	Penetration
	2.	A bat with wings, two feet and a tail, eyes. It also has holes in its wings.	Penetration
	3.	It might look like a broken leaf. It has holes in it. It fell from an oak tree. It is the whole thing.	
II.	1.	It looks like black clouds and the sun and in between it, and the light comes between it, and it is broken in the center where it is clear blue. Two black clouds on each side. And lightening the whole picture, the sun is flushing off the black clouds. The clouds are covering most of the sun.	Barrier/Penetration
	2.	Some kind of rock formations, all in different shapes, with a big hole right through it. Looks like a cliff with its break in the middle.	Penetration

Subject #1--Continued

		Response	Scoring
	3.	It looks like a ball of fire with red lightning and black clouds of smoke on the sides. The lightning is coming out of the black clouds. It looks like little red lightning in the black too.	Penetration
III.	1.	These are simple! OK, this looks like a man and he has his goggles on. Looks like he's got some kind of two things sticking out the side, feathers or something. He's wearing goggles and headdress. It looks like Indian feathers sticking out.	Barrier
	2.	It looks like two lightnings flickering, and the black clouds are on the sides. It's the whole thing, red is lightning, black is clouds, lightning is flashing and clouds are surrounding and lightaway, just half-way surrounded. I need a shave when I get back.	NS
	3.	Looks like fire coming out of a big round huge hole. Fire or smoke, big logs are being burned.	Penetration
IV.	1.	(Laughs). Well this looks like the jolly green giant except he's black. Looks like he is wearing boots, head has no eyes in it, arms. It's the whole thing. It looks like he does have eyes, they are all covered up by hair.	Barrier
	2.	And it looks like a big fire coming off big huge logs, and the fire is coming straight up and it is burning black. It is the whole thing.	Penetration

Subject #1--Continued

		Response	Scoring
V.	1.	And here we have a bat with two large feelers, two wings and feet. The whole thing, he is flying I guess, bats have feelers. No holes, completely two wings.	NS
	2.	It also might be a broken leaf. Broken off a tree, the whole thing, it is deathered [sic] and withered.	Penetration
VI.	1.	And this looks like a beaver that has been stretched out and skinned and put on a board. Quite a bit of fur on it and it is covering the board. It's the whole thing. Tail is head and head is tail.	Barrier/Penetration
	2.	It also looks like a skin of a bear that has been made into a rug. This doesn't have the tail.	NS
VII.	1.	And this reminds me of broken clouds again, and it has one black cloud here. Below and in between is clear blue sky. It's the whole thing. After a light shower, they could start breaking up.	Penetration
	2.	A whole bunch of skins of fur lying down below. They are flattened out, whole, looks like beaver or deer skins. They are flattened out. The shape and the color--brownish.	Barrier

Subject #1--Continued

		Response	Scoring
VIII.	1.	That looks like the color of a mountain peak, the different colors of it. That has a green forest on the sides of it going up to the peak, the top of it are covered with snow.	Barrier
	2.	An animal, both do. Some kind of wild animals, from the prehistoric age.	NS
	3.	Something like leaves, all different colors of leaves. Are alive in the fall of the year. But these have holes in them.	Penetration
IX.	1.	This could be forms of broken clouds, different colors of them. It's the whole thing.	Penetration
	2.	And if you are high enough, looks like the bottom of the ocean. Top there is river. The green is the ocean, the top is the river. The rivers are going into the ocean.	Penetration
X.	1.	And this looks like parts like linked together by channels or rivers. Looks like rivers connecting into oceans. Looks like small islands, the blue ones and the large ones could be one country. It's the whole thing.	NS
	2.	The sun is glowing off of clouds to make it different colors. The sun is sort of behind the clouds and only parts are showing.	Barrier
	3.	Or it could be different colors of the rainbow.	NS

Subject #2
Experimental Condition: Internal Somatic
Sex: Male
Age: 33
Diagnosis: Schizophrenic reaction, Chronic undifferentiated type

Total Barrier Score: 4
Total Penetration Score: 8

		Response	Scoring
I.	1.	Kind of looks like a mask in a way. Eyes, nose, a halloween pumpkin where they cut the eyes out. These are just holes, eyes have been cut out.	Penetration
	2.	Kind of like a butterfly. The whole thing. It is lit on a vine or a tree or a leaf.	NS
	3.	Bird wings in a way. The shape is like barn swallows. Cat got the bird and just left his wings.	Penetration
II.	1.	The red is blood. Blood is on a wall and it's running down.	Penetration
	2.	A fire, explosion. An explosion like on TV. Fire shoots out in all ways.	Penetration
	3.	Looks like a rabbit, in a way, his ears. He's running.	NS
III.	1.	Kinda looks like two men. Legs, arms, bent over dancing.	NS
	2.	A pair of lungs, person might have a chest like lungs. An x-ray blotch, negatives or positives. The shape, color puts me in mind of blood.	Penetration

Subject #2--Continued

		Response	Scoring
	3.	Kinda looks like blood in a way. The red looks like blood stain. Looks like somebody got hurt. Like on the table cloth blood blotches.	Penetration
IV.	1.	Looks like a stalk of corn. Looks like in a field, a bunch of stalks, the way they are lined up there.	NS
	2.	Head of a bee, or more like a miller. Feelers are not bothering nobody. Just sitting there.	NS
V.	1.	A butterfly. It's the whole thing. Wings, antennas, feelers can feel in the dark. It is in flight.	NS
	2.	A mouth of an alligator. Looks like it is trying to swallow something, might be a small animal like a wild pig.	Penetration
VI.	1.	Well, it looks like some kind of animal, in a way, whiskers, nose. Just the head, no body, just has whiskers. Not much of an animal. Some old farm dog.	NS
	2.	Across there looks like a school bell like they ring with their hands. Like they used in school for starting school.	Barrier
VII.	1.	Two cheerleaders cheering, if you turn it this way. Leg, dress, arms, can't see the head well. A short dress like them cheerleaders wear.	Barrier

Subject #2--Continued

		Response	Scoring
	2.	This kind of looks like a vase, this part in here. Like a flower vase.	Barrier
VIII.	1.	Trees in a jungle. Like jungle trees. Kinda like a spider web under the bush. Colored spiders' webs viewing it from a side of a hill looking up at it.	NS
	2.	Animals here in a way. Animals stalking. He is hungry and is stalking some small animal. He can't get to it yet.	NS
	3.	Imagine it about looks like a cow's head, horns and nose. A bull's head, nose and jaw. Not doing anything.	NS
IX.	1.	Vegetables, carrots here, radishes here. The color is round, like radishes, carrots, shape and color. Maybe in a grocery store laying on a counter being checked through the counter.	NS
	2.	A funny face, horns, nose, funny face. An eye, old devil horns, big old nose, kind of comical looking face. Puts my mind on my nieces and nephews. Just a drawing.	NS
X.	1.	This kind of looks like a bingi flipper (sling shot) like you shoot (he demonstrates). Niger flipper, shoot rocks and marbles with it.	NS
	2.	Big crabs here in the sea. In the ocean crawling around, I guess.	NS

Subject #2--Continued

	Response	Scoring
3.	Looks like a man's legs and arms. He's in a trap. Somebody's clamped upon him. Like a space man being squeezed to death. Got a space or diving suit on.	Barrier/Penetration

Subject #3
Experimental Condition: Internal Somatic
Sex: Male
Age: 27
Diagnosis: Schizophrenic, chronic undifferentiated type

Total Barrier Score: 5
Total Penetration Score: 15

		Response	Scoring
I.	1.	The inside looks like a beetle of some kind with wings. The main body right down. It's the whole thing. It looks like it has got one big eye. Got two protrusions to detect sound waves here.	NS
	2.	Looks like there might be a couple of men of Robin Hood's era facing each other with capes on, or Scottish men with capes on. They are alive.	Barrier
	3.	Looks like that's just one great big universal eye in there. It has this little white dot in there that would more or less signify a reflection of light. The light is shining on the eye making the reflection. It looks like it could turn down the focus on a lot of things too. Like food or perhaps danger.	NS
II.	1.	Hmm. Up here looks like a rock with a hole in the middle of it. Excluding the pink and this. Do you have to send those off or something?	Penetration
	2.	Sort of a monster face here in the back right up here. It looks somewhat like one of these science fiction movies like where an alien being tries to take over the world. What kind of musical instrument do you have down through the front of his forehead? He's got a small rift, got a rift on his chest too, and on top of his skull. The rift splits and goes into two pieces.	Penetration

Subject #3--Continued

		Response	Scoring
	3.	It also looks like two gorillas right there. Everything but the pink. From all appearances these gorillas have on some of these bath shower slippers with their hands forced against each other. The slippers are on their hands.	Barrier
III.	1.	You don't see that safety razor on your face do you? This looks like a couple of creatures, wolves standing on their hind legs like humans tearing a carcass apart. Excluding all the red.	Penetration
	2.	And it looks like there's a butterfly. The pink. Apparently flying.	NS
	3.	And these two big red ones must be part of the carcass they tore up. Looks like they might have been the thigh or the leg. The shape. The color could be blood on it.	Penetration
IV.	1.	Hmm, looks like a grizzly at least part of it does. Looks like it is carrying the horns from an old cow. Evidently an old bull. I saw something that I didn't see before, and it looks like it has got a massive head sticking down in here, the horns are here and are broken off. It's the whole thing. The shape, the head made it look like a grizzly.	Penetration
	2.	But then the way it is curled up in here, it looks like it is an object made out of metal. Either that or it is the hide of a gorilla. It is all one piece. Or probably just dried hide the way it curls up it all looks like it has sort of been torn up.	Penetration

Subject #3--Continued

		Response	Scoring
V.	1.	When do you get these tests back? A flying bat, a large one. Not the whole thing. He is obviously flying. His feet are sticking back. He looks kind of tore up. No color just the shape. It has got horns sticking up there. Never heard bat having horns, maybe it is their radar systems.	Penetration
	2.	These two objects here look like a woman's legs sticking out. Just shaped that way.	NS
VI.	1.	Oh, looks like a big ol' wolf rug. What made me think of the wolf skin was a head in here, looks like they washed off the front legs on him. It looks like the skull had been left intact. Evidently they left the spine on it. Probably a timber wolf. It's the whole thing.	Penetration
	2.	Looks like a couple of birds right there, robins probably. Those two projections right there look like they are just looking at each other. Maybe it snuck in there and grabbed some of that fresh meat in there under the spine.	Penetration
VII.	1.	I'm a writer, I do like to write maybe that's why I try harder. Hmm, this is goin' to sound silly from the minute you put it up there it looks like a couple of Indian kids with their feathers in their cap. Looks like they are just standing there watching each other. Looks like they got tails sticking out of there. Do you reckon one of those Indians, could be Chief Running Bear, might be him and his little squaw.	Barrier

Subject #3--Continued

		Response	Scoring
	2.	You wouldn't believe it. A baby pig's head right there. The snout mostly, are alive.	NS
VIII.	1.	Well, I am not sure what kind of animals the pink like, probably a lizard, a desert variety. Sounds sort of weird, don't it? Looks like they are trying to get some food. They are as fast as heck. This gila monster is really poisoness like a rattlesnake. The food is the green portion. It looks like a carcass of a critter. Right in here looks like a backbone. It is a carcass of a monster and it is cut open. They haven't bothered his head or arms. No color.	Barrier/Penetration
	2.	The orange, these look like it might be a creature from the unknown belonging to a spooky movie. Or on the other hand it could be the hind quarters of a beef. This is the leg, and this is the other. The shape, and this is the back side of the creature. It was cut all the way down through the belly.	Penetration
	3.	Looks like a skeleton more or less parts of it. It just got a couple of bones sticking up there.	NS
IX.	1.	Looks like a bagpipers. These two orange. They are blowing their bagpipes. Looks like they got dunce caps on, got the tip of the bagpipe in their mouth.	Barrier/Penetration

Subject #3--Continued

		Response	Scoring
	2.	These green objects look like stone or metal, hmm, actually it looks like metal. Looks like they did a little welding right in here, the metal had a little crack in it.	Penetration
X.	1.	Blue objects look like spiders. Cause spiders have so many legs.	NS
	2.	These grey objects or at least this one looks like a bug. Looks like it is eating on a carcass. Say, I'm going to have to get a drink, I'm real dried out.	Penetration
	3.	Looks like those blue spiders are getting ready to roast a wiener over this which is hot metal. Hot metal is the red color, bright red.	Penetration

Subject #4
Experimental Condition: Internal Somatic
Sex: Male
Age: 30
Diagnosis: Schizophrenic, chronic undifferentiated type

Total Barrier Score: 7
Total Penetration Score: 5

		Response	Scoring
I.	1.	Two witches on a frog, the frog is in the middle of it. It's the whole thing. The hoods, the hats. The frog's eyes are here. The hands, legs. Witches are holding onto something of the frogs, ain't doing anything--just holding onto the frog.	Barrier
	2.	Woman's legs. The back end, the calves. They are pointed there, the feet.	NS
	3.	A bell. It is shaped like a bell.	Barrier
II.	1.	A dog--two dogs. The ears and nose. It is sticking their noses up in the air. They ain't got no eyes. They are sticking their noses together.	NS
	2.	Thumbs. Pointed backwards like the thumb in a way. These are also wrists.	NS
	3.	A person's lungs. The shape, it is curved. Just the lungs. The line down the center. It is backbone, can see through the lungs.	Penetration
III.	1.	A bird. The heads, the feet. The birds stopped flying and are holding onto this thing. The tail and the feathers, not too many feathers, holding onto a backbone of a cow which probably died. They will just hold onto the backbone.	NS

Subject #4--Continued

		Response	Scoring
	2.	A bow tie. Both ribbons in the middle.	NS
	3.	A backbone. How much longer are we going to be? It has a middle to it. It has both sides to it.	NS
IV.	1.	Lungs. The shape of it, can't see through the lungs. Lungs of human being. No human being there, he's in the hospital.	NS
	2.	Shoes. Heals of work shoes. Good shoes in good shape.	Barrier
V.	1.	Bird. It's the whole thing. Two legs, wings, two ears, flying.	NS
	2.	A book. Opened up. It is black. It is opened up. It is a good book.	Barrier/Penetration
VI.	1.	Butterfly. Wings, head, two legs, flying.	NS
	2.	Carpet. It is spread out on the floor. It is fur--you've read about those fur carpets haven't you. Deer.	Barrier
VII.	1.	A book. A regular book. It has a middle to which it is opened. It has leaves, can't see the cover.	Barrier/Penetration
	2.	Two girls. Ears, nose, chest, looking at each other.	NS

Subject #4--Continued

		Response	Scoring
VIII.	1.	A tree, a cedar tree. Sides, middle, trunk, it is green and pretty too. Good size tree.	NS
	2.	Two rats. Holding onto the cedar tree. They got a tail. Just looking at the tree. Alive.	NS
	3.	A book. A primary book. It is pink and yellow. It has got a cover to it. There's another book up there, it is blue, it is open.	Barrier/Penetration
IX.	1.	A tire--a wheel. It is pink, it's got an anxyl [sic] got treads and truck tire. Looks like it wouldn't have a flat very much.	NS
	2.	Two Scottie dogs. They're green, got ears in front, and nose, legs.	NS
X.	1.	Spiders. Blue catching on to something too, mice, trying to kill them.	Penetration
	2.	Tree stump. It is black grass around. Looks like it is long, big, it is alive.	NS
	3.	A woman's hair. It is curled. It is green, it is curled. The woman ain't there.	NS

Subject #5
Experimental Condition: Internal Somatic
Sex: Male
Age: 39
Diagnosis: Schizophrenic, catatonic

Total Barrier Score: 6
Total Penetration Score: 8

		Response	Scoring
I.	1.	Looks like an ink blot to me. Kind of an image of a woman with her hands, two heads. Looks like she is standing there, looks like two heads, the hands raised up. Just standing there with her back toward me. She is naked.	NS
	2.	Reminds me of a devil out here. This won't be used against me, will it? I know there is a devil, hatred and hell, wings, head, feet. Looks like he might have a hand on the women. He is putting pressure on the woman. The devil is using his power.	NS
	3.	It could be a cloud form in that image. It's the whole thing, dark cloud forming a rain, the shape. Can see through it.	Penetration
II.	1.	Image of a man, put their hands together. Just hand of a man, the wee opening, the light of God coming through the hand.	Penetration
	2.	A couple of bears or dogs putting their nose together. Together looks like somethin' between these noses, with a block of wood between 'em. The whole bear is in good health.	NS
	3.	A pair of socks, these red things. Christmas socks. Kid hanging up sock hanging on the fireplace, nothing in the socks.	Barrier

Subject #5--Continued

		Response	Scoring
III.	1.	Bow tie. Just the shape.	NS
	2.	Looks like somethin' might be fallen here, don't know what. It could be somebody diving off a diving board doing a one-and-a-half.	NS
	3.	Woman's bust right here, image of a woman. The waist, two breasts, looks like she is wearing one-piece swim suit.	Barrier
IV.	1.	A picture of a lung, an x-ray picture. Spinal cord here, x-ray, shows the inside of a person's body.	Penetration
	2.	A monster you see on TV in the comics or cartoon. It's the whole thing. Nose and eyes, looks like getting ready to go to sleep, feet here, alive.	NS
V.	1.	Looks like a bat, kind of. It's the whole thing, wings, head, ears, feet, looks like he is flying. No color. When I was a teenager these bats flew down at me.	NS
	2.	Image of a man sleeping with his head propped up. Looks like he has a mustache, looks like he is sleeping away with his head on a pillow, just sleeping away. Looks like a picture drawn by a psychologist.	NS
VI.	1.	Looks like a road runner that has been hit, smashed over by a roller, like a coyote. Like one of his tricks didn't work.	Penetration

		Response	Scoring
	2.	Or fur skin of some animal like a coyote, or a blot of water drop. A space man wearing a suit or somethin'. Looks like a man walking around on the moon dressed up in a space suit, can't see through.	Barrier
VII.	1.	Two young girls looking at one another like twins. Pretty nice looking girls, nose and skin, head, neck like a movie. Singing a song enjoying theirselves.	NS
	2.	Looks like a zipper on a jacket. It could be anything like a piece of torn cloth. It is zipped past way. It is torn off the jacket.	Barrier/Penetration
VIII.	1.	It looks like it might be a vest of a man and image of shoulders. Looks like the way the man is built, only the arms have been tore off.	Barrier/Penetration
	2.	Might be a rat or somethin' on each side. Looks like they might be in a fight with a dog or cat.	NS
	3.	Waist of a human being of some sort. The waist of a woman cause hips come out and waist goes in.	NS
IX.	1.	A couple of stones down here. Rock, sand, rock. It is soft rock, looks like water has been running on it and it has been ate away by water.	Penetration
	2.	Tea kettle. Sitting on a stone handle where carry it by.	Barrier

		Response	Scoring
X.	1.	An octopus here. Kind of like the shape of some TV monster. It has got things going. No color. No movement. Alive. Just swimming around the water in good health.	NS
	2.	Light bulb. The wiring, can see inside of it. It is screwed into a wall. It is off. The light is shining through the window. It could be burned out.	Penetration
	3.	Pair of pliers. The handles, the shape, looks like they are closed together, the shape.	NS

Subject #6
Experimental Condition: Internal Somatic
Sex: Male
Age: 25
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 5
Total Penetration Score: 16

		Response	Scoring
I.	1.	Well, that looks like a pelvis of a human being, can see the vertebrae in between. The whole thing, and it is located in the posterior part of the body, a pelvis in a woman comes out through the pelvis, the head first. I see a spinal vertebrae in between where it is supposed to be located. And right down below it is the tail bone. Looks like an illustration of a pelvis, an x-ray.	Penetration
	2.	Looks like oil coming out splashing out from the top of a derrick from here to there. Got kleenix here, I got sinus trouble? Don't see the derrick whole, just the oil gushing out of the derrick. Just imagined the derrick, see the top of it, and the oil is coming out.	Penetration
	3.	Looks like a portion of a burnt up wooden structure, a little house or something that's about all I can think of. A corner of a room, the line down the center suggests it might be a corner of a room.	Penetration
II.	1.	This does look a little complicated but it looks like a road going uphill, a highway, this deal in the middle is going uphill, or the sides could be the hills cut in half for the highway. It looks like the highway is flat, where this line is it starts to go uphill. This down here is the cut-off	Penetration

		Response	Scoring
		dead end highway. Hills are cut in half like some builders cut the hills in half, scooped the dirt and the rock away.	
	2.	On each side of the horizon they are red or whatever it is. Cause it looks like the sun is going down and it shows half of it from a distance.	NS
	3.	And this is the grass in here that has turned black from being burnt.	Penetration
III.	1.	This looks like two guys pulling a package open--pulling the wrapping off of it. Seems sort of crazy but they seem to be staring at each other while they are doing it rather than at the package. Looks like they are getting ready to toss that package over an embankment like it was trash. The men have a projection just above their knee like it was their penis or something. Looks like an artist trying to draw a man in the wrong way. I'm an artist myself and I can do a better job than that. Heads are sort of egg shaped and their noses are not shaped right.	Penetration
	2.	And it seems as though the sun is shining straight down on them leaving a black shadow down on their backs. Sun is shining between them like it is about noon time when the sun is straight up in the sky. Black shadow on their backs.	NS
	3.	It looks like a valley with a small stream in it pouring down this a way. Walls in the valley and this is the stream. It is pouring down toward me.	Barrier

Subject #6--Continued

		Response	Scoring
IV.	1.	It looks like a mushroom cloud from a nuclear blast. It's the whole thing. Radioactive dust make the blast and here at the bottom is the center.	Penetration
	2.	It looks like a road going down to the desert at about dusk. It is a slightly made road like a trail where a jeep or truck could go. It is the whole thing. Desert and whole area, these grey spots look like desert about the time the sun goes down. Looks like sand shadows on the ground.	NS
V.	1.	It looks like a butterfly. These projections up here seem to foul me up though on anything else I might think of. The feelers on top. It's the whole thing. It is in flight with its wings spread, a black butterfly but I've never seen a completely black one before.	NS
	2.	It looks like black smoke coming out from the oil tank spreading out like there is some oil burning in the tank cause I don't see no tank just oil burning. It's the whole thing.	Penetration
VI.	1.	Sort of looks like a container that you make home-made ice cream out of. It's the whole thing except for deals on the side of a container. It is wooden for any kind of ice cream. Just seen the outside of it.	Barrier

Subject #6--Continued

		Response	Scoring
	2.	And it looks like a transmission with the shift going to the rear axle. It is cut off at the top so can't actually see rear axle. Same as the first one. It is the shape, it is factory made. It is going inside the rear end. I can see the rear axle and the shaft is going into the rear end using my imagination.	Penetration
VII.	1.	That looks like a partly clouded sky, therefore these is clouds starting to cover the sky. It's the whole thing. Can't see thru the clouds and it looks like they are dark and are heavy in the rain, can't see the rain though. Slow period of time the way the weather is. The clouds will cover the sky but not now.	NS
	2.	And this white looks like molten lava pouring out of a volcano with the sides looking like the sides of the volcano. Sides of the volcano. This is only a portion of the sides, not really full sides.	Barrier/Penetration
VIII.	1.	It looks like a cut-out view of a human being's insides like they have in biology book. They have these pictures where they turn 'em and each picture goes deeper into the body you know. Just the torso. It's the whole thing. And it also looks like an ovary in here and also the womb of a woman.	Penetration
	2.	This looks more like pack rats on each side tearing a piece of paper apart.	Penetration

Subject #6--Continued

		Response	Scoring
	3.	It looks like the insides of the intestines. It is different from #1. It's the whole thing I see. It is a cut-out view in a doctor's book. Looks like the end of the intestines are cut off too plus it is cut in half.	Penetration
IX.	1.	Shoot, I might flunk this. I never took this before. Oh you're writing that down eh? Let's see, it looks like this is really difficult one. This looks like the opening at the top of a volcano, with some lava pouring out--some molten melting stones, lava coming out.	Penetration
	2.	This looks like an airplane view of a highway going down between two green fields. I picture it as a highway going between or built between two green fields.	Penetration
X.	1.	This looks like a rocket ship getting ready to take off with the smoke coming out of both sides of the engines. It looks like a V-2 rocket that they are testing on the ground. Not sending it off but just testing the engines to see how many pounds thrust they got.	Barrier/Penetration
	2.	It looks like two men on each side trying to throw something down between two cliffs, a straight object. Toss the straight object into a pit like a bomb they are throwing. Looks like there is also a path going down into the pit at about a 45° angle. This might sound crazy to you but I don't care. I have wild vulgar and vivid imaginations	Penetration

	Response	Scoring
	but I had them in the past about a year ago when I had these vulgar imaginations but not any more.	
3.	This looks like an old road leading up to a new highway or a side road. Highway going up and over the hill. It connects together.	NS

Subject #7
Experimental Condition: Internal Somatic
Sex: Male
Age: 33
Diagnosis: Schizophrenia, hebephrenic type

Total Barrier Score: 8
Total Penetration Score: 12

		Response	Scoring
I.	1.	A butterfly, or a bug of some kind. The way it is shaped. These would be eyes or feelers. It is the whole thing.	NS
	2.	This reminds me of windows. It is a picture that has been drawn. The white areas, windows of a house. It is an opening for the window.	Penetration
	3.	Looks like a Halloween mask that you can see through. Those openings could be eyes, places to look behind (no mask is seen). It is just the opening, and this might have been cut.	Penetration
II.	1.	That is a different color. It still reminds me of a butterfly only a different type. It is the whole thing. The middle part could be its body.	NS
	2.	And this spot reminds me of a light bulb. The shape of it. These are like covers or a shade of a light bulb. The bulb is in it, or could all be a light bulb. No, it is just a bulb, no shade, and the light shines through it.	Penetration
	3.	It reminds me of a burnt piece of paper. You know how it turns black after it's been burnt. The blackness and the jagged edges. Looks like it's been burnt and fallen to pieces.	Penetration

Subject #7--Continued

		Response	Scoring
III.	1.	It reminds me of a ship when I first saw one of those ships with sails. Maybe from a story book. All but the red part. The rails have sails on them. The red is something that fell off or blew off, that is pieces of the sails. They could have been made out of cloth of some kind and blew off.	Penetration/Barrier
	2.	Reminds me of a vase of some kind, flower or gold-fish bowl. Opening at top of the water. The bowl--can see through the bowl, can put flowers or anything in it.	Penetration/Barrier
	3.	This part here looks like a bow tie, one of those ties that people wear.	NS
IV.	1.	Looks like a turtle's shell. The whole thing. It is the dark part which reminds me of a shell. The light part reminds me of legs that can be pulled in underneath. It has four of them.	Barrier
	2.	From these down here it looks like human feet, two of them, one on each side. The whole thing is human. Legs would have shoes on them, and top looks like a face, a human face. It looks like he's prepared for cold weather, like he's got something to protect it from the cold, like heavy hair or heavy clothing.	Barrier
V.	1.	Like a butterfly. Bot these pointed things up here. It's the whole thing.	NS
	2.	Has a resemblance of a leaf and it looks like the leaf might be getting crumbled up. By the edges.	Penetration

Subject #7--Continued

		Response	Scoring
VI.	1.	That reminds me of a flower or a plant growing. Like a cactus plant. I work in a greenhouse and the shape reminds me of that.	NS
	2.	Some kind of an instrument, like a violin. Some kind of a stringed instrument of some kind. It is the whole thing. The neck. This looks like pegs to tune it with.	NS
VII.	1.	The top of it reminds me of chunks of broken up ice that are just beginning to break up. Or something that is wearing away like water washing something away that's been at it for quite awhile. The way it is shaped, like water may be running through it and wearing it away a little at a time.	Penetration
	2.	The entrance of a gate being seen from a distance. Looks like poles on each side. The gate is in the middle where you'd go clear through.	Penetration
VIII.	1.	Reminds me of a pin of some kind which you would wear on your clothing. Like a badge of some kind. Just the part up here. Looks like a pin with a picture of a bird on it or symbol of some kind like an army pin. Like a picture of an eagle or boy scout pin looking at the front.	Barrier
	2.	This looks like an animal of some kind, like a rat or a bird of some sort just by itself.	NS

Subject #7--Continued

		Response	Scoring
	3.	And it kind of reminds me of an arrowhead, the way it is shaped. The point of one. Some kind of sharp edged thing. It looks like just the head itself, not the pole.	NS
IX.	1.	Reminds me of something with wings and this reminds me of pin feathers of a chicken. Reminds me of chicken feathers after they have been scalded and picked off. The green looks like wings after feathers have been picked off.	Penetration
	2.	It kind of looks like a lit candle in a dish with some sort of a stand. It is in it, and looks like it is lit. It looks like it is kind of melting some.	Penetration/Barrier
X.	1.	It looks like some kind of sea animals that's got in some water around a rock. Lot of legs, octopus can squeeze things with its legs, not now squeezing though. Rock could be a shell but it is a rock that is going under. The animals use it for a shelter or a hiding place.	Barrier
	2.	It reminds me of a bell, like a cow bell or the bell at the top of a church.	Barrier
	3.	And this reminds me of pieces of metal being heated. It has got jagged edges. The way it is shaped and the color. Blunt edge metal is being melted.	Penetration

Subject #8
Experimental Condition: Internal Somatic
Sex: Female
Age: 33
Diagnosis: Schizophrenia, chronic catatonic

Total Barrier Score: 3
Total Penetration Score: 13

		Response	Scoring
I.	1.	It makes me think of the map they show on the television when they talk about the weather. California, good map.	NS
	2.	The middle looks like a figure, a woman's figure, the large hips (laughs). This is my hands going up like this. Looks like a belt around the woman's chest, this looks like a woman's legs. She has her hands and arms over her head, puts me in mind of one of the aides I know.	Barrier
	3.	The round circles look like pennies. These two are in good order but this one ain't, looks like it is torn up.	Penetration
II.	1.	I don't know what to say about that one (laughs), this puts me in mind of people's eyes. One is closed and one is open, the eyes are winking, looking at people.	Barrier/Penetration
	2.	That reminds me of a map (laughs). She don't know what to tell him about that picture. A piece of a map, it is dark and has spots, it is tore apart.	Penetration
	3.	This puts me in mind of what they use at Christmas time to decorate the wall. Just the paper, not on the wall. It is torn in the middle.	Penetration

Subject #8--Continued

		Response	Scoring
III.	1.	These put me in mind of trees upside down. On a farm, if the picture were upside down it would make some sense.	NS
	2.	It puts me in mind of a zipper right in here. It is closed except where it is in the middle where it is broke.	Penetration
	3.	A bow or ribbon. The way it is put together.	NS
IV.	1.	A tree with lots of limbs, leaves hanging down. It's the whole thing, it looks like it has dead leaves. Part is dead and part is alive, covered with leaves.	Barrier/Penetration
	2.	My feet look like they are burning up.	Penetration
V.	1.	Rabbit ears. Sticking up in the air and they are black and white.	NS
	2.	It puts me in mind of a shadow. Because it is dark clouds in the sky, black clouds, dark clouds can't see through them.	NS
VI.	1.	An eagle. Has eyes open, just standing, is alive, in good shape.	NS
	2.	A nice long zipper. It is a wide zipper. It is closed but it is missing some teeth here.	Penetration
VII.	1.	A fire, puts me in mind of. All of it. It is white and looks like smoke is coming from it.	Penetration

Subject #8--Continued

		Response	Scoring
	2.	A bumble bee is being burned to death in the fire. A bumble bee. Smoke does not cover the fire. It is just coming out of it.	Penetration
VIII.	1.	Polar bears. Climbing up, holding their mouths open, looking for something to eat.	Penetration
	2.	Cushion. Puts me in mind of my sister-in-law's cushions which she has in her house. They are —got spots on 'em. They need to be cleaned.	NS
	3.	Oranges. Cause it is round and the color.	NS
IX.	1.	Fire. The color.	NS
	2.	Green leaves. The way they are shaped and the color. They been tore apart and the fire is getting to them.	Penetration
X.	1.	A wishbone of a chicken. Has two lines and round pieces that a wishbone has. Not the color. Just the wishbone, it is the one piece.	NS
	2.	A map, the whole thing except there. No color, like on television, the map of the states, the map is tore apart.	Penetration
	3.	This puts me in mind of a grasshopper. The grasshopper is standing still. It is blue, it is live, it is not torn up.	NS

Subject #9
Experimental Condition: Internal Somatic
Sex: Female
Age: 46
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 3
Total Penetration Score: 13

		Response	Scoring
I.	1.	A face mask. Like the heathens in countries wear, and some of the Negroes wear. These are the cheeks, it is a bad mask cause they are worn to honor fake gods. It is just laying idle ready for some of those heathens.	NS
	2.	An English walnut kernel, but it ain't shaped like that. A woman without any pants on. The center, it is shaped something like a woman without any pants on and the English walnut is a good nut to eat, half of the nut looks like an undressed woman and this here is the cracked shell but it hasn't been eaten yet.	Penetration
	3.	Birds setting there, possibly pheasants with long tails. Looks like they are setting down, the shape, the tails especially.	NS
II.	1.	That reminds me of two aged women struggling over their beliefs, each one believing that they themselves are right. Wearing pointed night caps. They have on dresses a little below the knees and dark colors in their garments.	Barrier
	2.	Got a hole like a donut. A hole in the ground for fence posts or hole in a cake.	Penetration

Subject #9--Continued

		Response	Scoring
	3.	Two friends clapping hands together, just rejoicing over something. Religious church people [garments not important].	NS
III.	1.	Heavens, two men trying to pull something apart and it did come apart, part way apart, but it is still attached.	Penetration
	2.	The center red spot looks like a butterfly. Two wings, just flew down to investigate the men, but the men will probably slap it away, it would probably kill it too. No, it's not dead now.	NS
	3.	These red spots look like an unborn child, reminds me of. Part way curled up shape, then they are alive but it is sickly baby since it ain't curled all the way up. Real babies have their knees curled all the way.	Penetration
IV.	1.	Clown's feet, but clowns aren't that color. Big feet with over-sized shoes on. Shoes are entirely too big for his feet. They're good for shoe but couldn't wear 'em all the time cause they are bad for his feet.	Barrier
	2.	A clown holding his arms out, looks like the clown don't have any pants on. Doesn't have any shorts on, looks like it is big enough, big enough to do lots of things, big enough to have babies and such. He is completely naked.	NS

Subject #9--Continued

		Response	Scoring
V.	1.	It could be a weiner that the dogs got ahold of and tore into a fragley piece. Just the wing part, it was torn up.	Penetration
	2.	Kind of long like a worm, it could be a crawling type of worm but of course a worm don't have these two things hanging down here. It is curled up like a dead worm, looks like something got ahold of it and tore it to pieces. Dead cause curled up.	Penetration
VI.	1.	(Laughing to herself.) Ocean, life shape, this part of the picture anyway. Wouldn't be any nuts that way. Center could be a grain of wheat. It is alive and they have things in the ocean, but these don't have beautiful colors like ocean life. The shape of it is all that resembles it. Has ridge down the center of it.	NS
	2.	A woman without any pants on. The center, the woman isn't anywhere, just here it has a crack in the center of it. It is a pretty wide crack and this white goes up into it.	Penetration
VII.	1.	That reminds me of two women with a night cap on and are in an argument and are pointing to each other. She is pointing to the thing she thinks is right. Have on night caps like my grandmother, a really wonderful person.	Barrier

Subject #9--Continued

		Response	Scoring
	2.	Looks like some of the crap that has been put on my plate to eat, it has the same frizzled edges of some of the food I don't like to eat, like ground meat all chopped up. It's the whole thing, all souped up. It gags me to even look at it.	Penetration
VIII.	1.	Hmm, my gosh, there long little pink spots could be bugs crawling up on something. These bugs don't have as many legs as they should. They lost them, a bird had them in its mouth and the bugs escaped but with fewer legs, the bird clamped down on them.	Penetration
	2.	A butterfly, the shape but it ain't colored like anything on earth. Just flying I suppose, it smells some flowers somewhere and it is on its journey to the flowers.	NS
	3.	Could be two common ordinary rocks that rock hounds found but it doesn't have anything interesting on it for the rock hounds. Don't have anything on them to interest anyone but I'd be interested in them.	NS
IX.	1.	Pink spots could be pink cotton candy like they have in carnivals. I missed out on all the cotton candy when I was a child. Has had a place that's lighter, looks like somethin's been eaten out of it.	Penetration
	2.	An Indian arrow head that had a chip knocked out of it.	Penetration

Subject #9--Continued

		Response	Scoring
X.	1.	Some kind of bugs with a lot of legs but they're not sticking out right. Looks like they are pulling out some of the cotton candy, pulling chunks out of it, to eat up from the little children, reminds me of my own starvation when I am a little child.	Penetration
	2.	Little animals, like mice. Must be eating something, some of the valuable food from people. Piece of asparagus, food that's long, a stick of black licorice, child are eating it up.	Penetration
	3.	Tongs to pick up something with, not necessarily ice tongs. Some people pick up hot coals with them.	NS

Subject #10
Experimental Condition: Internal Somatic
Sex: Female
Age: 18
Diagnosis: Schizophrenia, catatonic type

Total Barrier Score: 0
Total Penetration Score: 9

		Response	Scoring
I.	1.	Looks like a baby frog. It is not one-half green yet. It is a little bit deformed looks like.	Penetration
	2.	And two birds besides it. And the frog is a little bit deformed. Has two heads. And two fingers and I see four white dots on it. And I see black spots. I see a little white dot. A head; wings; just looking at each other. Blue jays. Only have one wing; they are deformed, too. The birds have one wing on it.	Penetration
	3.	I see two ears. If it was made a different way. It could be a star. The ray. It is shaped. It has four triangles on it. These two things over here remind me of it. The whole thing. Star has four points on it. Not made too well. Not a good star. It is not even. It is a solid star.	NS
II.	1.	I don't know about that. Could be. Looks like two baby doggies up here. The head kind of fat and have two legs and they have a tail. Looking at each other, and they have a leg that's up.	NS
	2.	It could be a butterfly. Looks like colored butterfly. Different wings on it. And this looks like a head.	NS
	3.	The black of it reminds me of a devil in a way. It is just black. Can't see the devil. It is too black.	NS

		Response	Scoring
III.	1.	Looks like two little doggies that has one leg and one foot on it, and one tail. Here are the nose and the eyes. Thin neck and little bitty eyes and tails. They are dark grey and they have one leg.	NS
	2.	Up here is two birdies flying. Bird that is flying. It has one wing and one leg. It could have been born with just one leg.	Penetration
	3.	That reminds me of a bow. Cause of the way it is made, and cause it is red. Kind of a darkish red.	NS
IV.	1.	Oh, golly, that reminds me of something - some kind of animal. It looks like it is little bit deformed cause the footsies goes up here. Two eyes, two feet, and two wings. Gee, man, this is a funny looking animal. The whole thing.	Penetration
	2.	When I see something black it reminds me of hell; really two of hell. This is grey here. Whole thing. It is a hot place to be. Boy, oh, Lord! Because it is black.	NS
V.	1.	Some kind of a butterfly. Two wings and two legs. Looks like it is made out of a triangle. See two humps on it. I see a line in between these. Whole thing. Just looking. It sure looks deformed. Has too many legs.	NS
	2.	It looks like a worm in a way. Oh, me, a nose and a mouth on it. Eyes and chin.	NS

Subject #10--Continued

		Response	Scoring
VI.	1.	Oh, this is a hard one. Two eyes, four wings on it I see. See four legs on it and two little dots on it. Two colors and this is black and this is a darker grey. Some kind of a weird animal. It has no name and it might find it out in the desert some place. This kind of animal. Whole thing. Don't know the name. It is dark, dark grey. The spine must be here. Two eyes and up here it has more wings up here too. Live animal.	NS
	2.	I see two eyes up here. Two white dots. Now look more like bumps on it. Must have been born with it.	NS
VII.	1.	Two bunny rabbits that are looking at each other. One ear on each one and a tail. A nose and a mouth. Has a nose and a mouth. Has an ear. They are alive.	NS
	2.	Looks like they are standing on some sand. This looks like a stick that is holding it up, and this must be mud down here. Sand with the stick in it. So the bunnies can stand on it. Must have put some mud in it to get the stick to stand. The stick is inside the mud.	Penetration
VIII.	1.	Oh, I like these colors. These two are animals. Two legs look like a coyotte and a tail. Looks mean. The legs, etc. Looks mean.	NS
	2.	This is some kind of a butterfly. It is two different colors. Has four wings--two on each side.	NS

Subject #10--Continued

		Response	Scoring
	3.	These here are all different colors. It could be part of a rainbow. Pink and orange together. And white is in between. Real pretty. Can see through it.	Penetration
IX.	1.	Oh, golly, light orange, green pale pink. Oh, Lordy. Cause it is big and round looks like a head. Head of a baby. It is live.	NS
	2.	I see two holes, two eyes here cause they are little holes. Can see through.	Penetration
X.	1.	A lot of color. Five different--blue, green, yellow, pink, orange, and grey. Two kind of worms. Kind of worm that eats up tomatoes. It is on the ground. It has something in its mouth--something blue.	Penetration
	2.	A tree trunk. Cause it is big. Has a straight line in it. Looks like a tree when leaves have come off, and it is beginning to die.	Penetration
	3.	Some kind of a worm over here. It is green. It has a nose and it is big. [Not squashed.]	NS

Subject #11
Experimental Condition: Internal Somatic
Sex: Female
Age: 38
Diagnosis: Schizophrenic reaction, catatonic type

Total Barrier Score: 7
Total Penetration Score: 12

		Response	Scoring
I.	1.	Looks like two men getting ready to shake hands. Don't know if they are men or women. No clothes originally. They're cossack's which they are wearing are torn.	Barrier/Penetration
	2.	This looks like a bell and they are getting ready to shake hands over the bell. It is the liberty bell.	Barrier
	3.	Looks like some ice that is frozen on some trophy. It is the whole thing. The trophy has holes in it.	Barrier/Penetration
II.	1.	I don't like to do this. Looks like blood on the top and bottom of the picture. Blood could be from chickens but don't see chicken.	Penetration
	2.	Looks like a piece of coal on each side. The black things. My mind is a blank. It is broken, the coal is into part of two pieces.	Penetration
	3.	This is shaped a little like a heart upside down. Human heart, from somebody that is dead. Cannot see the inside of it.	NS
III.	1.	All this needs is a little more black on it and it just would make a triangle, and here it is	NS

		Response	Scoring
		shaped like a football. The top of it isn't straight across. It has a bow on the top of it. But no line across the top of it. It is the same color on the inside of the triangle.	
	2.	People, not real live people, two people on each side. Not alive. A statue but right here the man is busted in two. The bottom is busted from the top.	Penetration
	3.	Some kind of an animal but they don't resemble an animal much. A dog laying on its back with its legs up in the air.	NS
IV.	1.	A little like a skunk. This is the tail. That is the only thing I can think of it. It is black. It is skunk's fur. It's been killed. It is in one piece. The way it's shaded. Looks like the fur was cut wrong. It is hanging down in a strip. It was hard to get off the skunk's body.	Barrier/Penetration
	2.	Could be some kind of toy for a child. Some kind of a rubber toy that you can stick in its mouth. It is the whole thing.	NS
V.	1.	It looks like part of a Christmas wreath. Not the top or bottom or sides, just any part of it. A piece of the wreath has been cut off. It is just a fourth of a circle.	Penetration

Subject #11--Continued

		Response	Scoring
	2.	Could be a piece of rock or sod off the ground from some place. It is the whole blot. It is a piece of sod from a field that has been plowed.	Penetration
VI.	1.	It looks like mounted fur on a beaver after it has been skinned and mounted. It has been trapped and skinned. My brother used to do that. It is the whole thing. The shape of it. About the color of it too.	Barrier
	2.	It almost looks like a zipper going down the center. It is closed in my opinion. Somebody cut the beaver skin and sewed a zipper in it.	Penetration
VII.	1.	It isn't very well balanced, therefore it is just a picture. Could be something from anatomy like part of a skeleton. Hip bones and part of the legs. It is the whole thing. Somebody took the top part of it somewhere else. The bone is hard.	NS
	2.	In the center of it, it looks like a lamp shade.	Barrier
VIII.	1.	I guess different colors, pink, orange, blue.	NS
	2.	Two rats climbing on each side of the picture.	NS
	3.	This reminds me of the bottom of an electric lamp, the orange and the pink do. It is shaped so it looks like it would be able to hold the lamp up.	NS

Subject #11--Continued

		Response	Scoring
IX.	1.	Like a sponge like you work with. It has been getting old and has been torn up a little. The green.	Penetration
	2.	Here I think of a duck's head. An eye, top of the head, just the shape.	NS
X.	1.	This looks like a test tube. The shape, long and narrow, muddy, dirty water in it.	Barrier/Penetration
	2.	The pink looks like smoke, like from a cigarette, colored smoke. The shape, can't feel it, like the wind, but can get your hand in between the smoke.	Penetration
	3.	This reminds me of a spider.	NS

Subject #12
Experimental Condition: Internal Somatic
Sex: Female
Age: 29
Diagnosis: Schizophrenia, chronic undifferentiated

Total Barrier Score: 4
Total Penetration Score: 6

		Response	Scoring
I.	1.	A bat, or it could be a butterfly. It's the whole thing. The way the wings are spread out and the feet and the head on top here and the front feet. Didn't look too much like a butterfly, more like a bat. It would be flying. Kind of a fat bat.	NS
	2.	It could be a map like of a piece of land. It's the whole thing. Land and water in here, looks like the ocean cause of the inlets and more than one inlet cause they are going up into the dark.	Barrier
	3.	A Halloween mask. Two eyes and the nose, mouth, ears. It is not on no one. Similar to a cat. It is in good shape. It is the whole thing.	NS
II.	1.	A butterfly. It is flying, it is colorful, and pink, alive.	NS
	2.	Or a map. Can't see where I saw that. (Rejects.)	NS
	3.	Or an animated animal drawing. Kind of like cartoons. It is the whole thing. It doesn't have its ears on it, so can't tell if it is a cat or a dog. Picture ain't complete cause the artist got lazy and quit drawing, animated, not real.	NS

		Response	Scoring
III.	1.	Drawing of a kitten, an unfinished drawing. Going by the size, don't have its head drawn. I guess whoever drew him wasn't finished with him.	NS
	2.	Or a mask. Same as kitten, it is different in that these has holes for the kids to see through. It is on the white.	Penetration
	3.	A bow. Can you name any part? I thought you meant the whole content. It is a red one.	NS
IV.	1.	A dog. Because of the kind of floppy ears and he'd have his back to you. A mut. On the top of his head it looks like fur, quite a bit of fur there. The top part up here, kind of looks like fur.	Barrier
	2.	An animated animal drawing. Cause of the feet like you draw on a clown and the animal could be walking. Something you draw for a child to look at, a nursery print or something like that. It's the whole thing. If that part in the center were off, it would like a gorilla with his arms stretched out like he would scare someone.	NS
V.	1.	A bat. And those could be ears, wings, feet, like to a duck flying, that could be horns. Looks like a drawing that's been folded and unfolded so both sides are alike. The whole except the horns. He would be flying or hanging or whatever they do. I believe their wings stay	NS

		Response	Scoring
		spread out when they hang or whatever they do. I've never seen a real one.	
	2.	Torn up butterfly like a moth that's got his wings part way nicked up, butterfly don't have feet. Its wings are all crumbled up whole.	Penetration
VI.	1.	Oh, I know it looks like a pelt--you know a pelt that's stretched out to dry. Looks like it has been skinned off of an animal and stretched. It is dried, stretched. Kind of smooth, whole, it could be a fox.	Barrier/Penetration
	2.	Or it could be a cartoon of a cat. Mainly I was going by the head part here because it is unreal, no similarity to a real cat. The hair of a cat, not too fuzzy.	NS
VII.	1.	What do you do with these, analyze them? A map or a tract of land. Going by the inlets again, something like an island in the ocean. It is an island cause it is not connected to any body of land with alot of inlets.	Barrier
	2.	Cloud kinda like. Cause of the color, can see through the cloud in a few places.	Penetration
VIII.	1.	A drawing of a clown. Square eyes, pink ears, forehead, mouth.	NS
	2.	These two look like flags. Kind of looks like they are flying a little bit cause of their shape. They're on a pole.	NS

		Response	Scoring
	3.	And this part down here looks like a butterfly. It looks like it could be flying. Looking at the outline.	NS
IX.	1.	This looks like a violin. This looks like where the strings would be and this is the openings, looks like they are cut there. I know violins have holes cut in them in certain places.	Penetration
	2.	Looks like an animated animal drawing of a kitten. Animated eyes, nose, ears, mouth like somethin' you draw for a baby. You know, a nursery picture, bright colors.	NS
X.	1.	Looks like somebody's got in a paint set and started spottin' it. Eyes, mustache, nose is kind of curled at the end, no face, just the eyes and mustache, the shape.	NS
	2.	Could be a crawdad. Just looks like pinchers of a crawdad but the rest of it don't look like a crawdad, cause of the little things sticking out.	NS
	3.	Those look like flowers, a bud, a rose beginning to bloom out. Beginning to come open. The outside leaves are beginning to come apart.	Penetration

Subject #13
Experimental Condition: Internal Somatic
Sex: Female
Age: 47
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 9
Total Penetration Score: 9

		Response	Scoring
I.	1.	Is that, looks like a bat. Just looks like a bat to me. It is the whole thing. I guess it is flying. It would be flying at night since they always come out at night.	NS
	2.	Is this side? Looks kind of like they might be witches. Heads with pointed hats. Don't exactly see a broom stick. With a black cloak on. They fly at night too, don't they?	Barrier
	3.	Is in the center like kind of like a small animal of some kind. You could dissect it and take it apart. It looks like it had been dissected. It looks like it had been split down here with feet, one out here and here is the tail.	Penetration
II.	1.	Oh, gee, well like a, I; OK (coughs). A couple of Arabs doing a dance and this is their turbans up here. There looks like turbans on their heads.	Barrier
	2.	Bear heads here. The bears look like they might have been fighting and this looks like blood in here. Wild bears are fighting. Looks like blood here splashed out from bear's mouth.	Penetration

		Response	Scoring
	3.	This white looks like a lamp. It looks light. Looks like white. Can see the light coming out of it. Can see the rays of light. Here is a globe. No shade.	Penetration
III.	1.	Oh, let's see. Spanish dancers. I don't know. It is kind of hard. Doing a Mexican hat dance. The thin legs with mannish pants and Spanish boots with high heels.	Barrier
	2.	A red bow right there. Don't know though. Like a bow tie.	NS
	3.	These two little things in here look like little bear cubs. Looks like they might be clinging to a rock or a surface of some kind. They climbed up a mountain ledge and are clinging to it trying to keep from falling.	NS
IV.	1.	Oh, let's see. Oh, golly. I don't know what that depicts. Well, that looks vaguely like it might be the head of an animal. Whole thing looks like an animal skin that's been skinned. Head and part of it that doesn't look like the whole skin. And just about one-half of the animal looks like it is curling under. Curling. Don't know what kind of an animal it would be. Just a partial skin.	Penetration
	2.	Faces. Nose, mouth. Laying down. Can't see body. Might have a cover over them.	Barrier

		Response	Scoring
V.	1.	That looks like kind of like a bat, too. There is a different kind. The other one is more of a webbed bat. It is the whole thing. He is flying. No color.	NS
	2.	There. Up here. Looks like kind of like a couple of fried chicken legs. Just the shape. Nobody has nibbled on them yet.	NS
VI.	1.	That looks like--well, let's see. That looks like a skin of an animal, wolf or coyote. Skin more like a coyote skin. That's about all I can see. Whole skin with head that has been skinned and laid out. The bottom just medium furry, not real. Kind of sleek like a coyote.	Barrier
	2.	These look like kind of a little old man with four arms like a voodoo image like the native tribes have. Some native tribes have voodoo gods. Head, whiskers, arms, cloak he was wearing.	Barrier
VII.	1.	Oh. Do dee doo. There looks like a couple of little pixies or dwarfs. They look like they are setting, but it looks like they are turned around here. And this is a thing on their hat.	NS
	2.	And then it looks like a little animal with a trunk. Looks like they are standing on their rear. Not like an elephant, but that's the only animal I know with a trunk. Same thing. Only the head is turned the right way. It looks like	NS

		Response	Scoring
		it is setting on the ledge like the pixies, but it is different. Head of animal is facing other way.	
VIII.	1.	How many of them are there? Oh, well. Can't tell all at once. This looks like a mountain lion or a wild animal. Looks like they are stalking prey. They don't have it now. They are on the mountain ledge.	NS
	2.	Well, this looks like it might be the inside of a butterfly. This is the vertebrae or some animal. The butterfly has been laid open, but they don't have as large a body, do they? With the membrane in through here with the backbone and the vertebrae.	Penetration
	3.	Voodoo bird or something. With beak, with eyes, and it's got its wings spread out here. Kind of a wooden image that some natives might worship.	NS
IX.	1.	I bet you think some of these are sure interesting! (Laughs) Well, let me see. I don't know. Can't make much out of these. These orange things look kind of like they might be a bird hunched over on a limb. Head and beak and feathers. Kind of perched on a limb. They look tranquil. Sleeping, eyes shut.	NS
	2.	And this way it looks like they might be creatures from outer space. Looks as though they are shooting ray guns at each other. Only other	Barrier/Penetration

		Response	Scoring
		way kind of little old men. Got pointed hats on. Can see with rays coming out.	
	3.	A face of a man with his mouth open. I don't know. He is looking up towards the sky. Like he might be in a boat; and he has hold of the tiller here.	Barrier/Penetration
X.	1.	Whew! Well, now let's see. These blue ones here kind of look like spiders. So do the black ones. These look like they might be spinning webs. The blue ones almost look like black widow spiders that are deadly. Alive and with pretty good shape. The blue spiders look like they are eating on a leaf, this green here.	Penetration
	2.	A couple of wooly worms. You know what I mean? They come out in the spring and summer. Look like they are nibbling on something here. A plant in the garden between them. They have kind of a fuzzy texture on the outside. Hence the name woolly.	Barrier/Penetration
	3.	Yellow things. Look kind of like they might be dogs. Kind of like a poodle. Look kind of like they are stretching on their hind legs. Look like have been clipped poodles after they have been clipped to the skin. Hair only on the feet.	Penetration

Subject #14
Experimental Condition: Internal Somatic
Sex: Female
Age: 41
Diagnosis: Schizophrenia, simple type

Total Barrier Score: 7
Total Penetration Score: 14

		Response	Scoring
I.	1.	Looks like your intestinal tract. An X-ray picture, can't see thru it, the shape.	Penetration
	2.	Looks like a mask. Mouth has something in it, a big tongue sticking straight up. Got a nose, not on anything, got the tongue sticking straight up to the nose.	Penetration
	3.	A woman's figure, without the head, clutched by two other people. Two men, maybe it's her feelings, maybe she don't feel like she got a head. they are hurting her with her feelings. They are straining her nerves.	NS
II.	1.	Looks like two clowns playing together, without their heads on, just see the hat. Made their face invisible, people can see through 'em, have hats on. I sure don't like it very much.	Barrier/Penetration
	2.	Two electric sparks making two men jump, shorting out. They have magic electric power which is coming out of their knees.	Penetration
	3.	Looks like a lamp light with the string hanging from it. Looks more like a butterfly now. Candle, it is on fire and it is held in a container, a candle holder.	Barrier/Penetration

Subject #14--Continued

		Response	Scoring
III.	1.	Looks like two men with their hands getting warmed over the fire. Looks like they are trying to be funny, they are drying themselves off too, over the fire. And they are looking at each other as though they are funny.	Barrier
	2.	Just two skeletons, looks like there's magic in the air. Wouldn't that be nice? Maybe they are darting off the table which you can't see and holding their shoes up, looks like shoes up over the fire.	NS
	3.	Another butterfly right there, you like butterflies? Wings, is alive, it is flying	NS
IV.	1.	That looks like an ape with a long tail. That's the way some people look when they are fat. It's the whole thing, must be sitting on a stump. Just holding her arms and legs up. It is a happy ape.	NS
	2.	Looks like paper peeling off the wall. The whole thing.	Penetration
V.	1.	That looks like a bat. It is flying, the wings and the head and the feet, the color.	NS
	2.	It could be a cloudy day I guess. When it gets kinda dark before the rain. It is storming clouds that black. It is the whole thing.	NS

Subject #14--Continued

		Response	Scoring
VI.	1.	I don't know, could be two pigs after they been killed hanging up on a piece of wood or old men. Skinned and drying.	Penetration
	2.	Looks like two people from another world hanging upside down. Looks like a man's head and are real short little people. They are not welcome and they are being tortured.	Penetration
VII.	1.	Oh, I got a stomach ache too. It looks like velvet pieces, scraps. Whole thing. This piece of scraps left from what was cut up. It is smooth, not fuzzy.	Penetration
	2.	The inside of your body but I never looked in it myself, ever look at your own body? One side and other side lower intestinal, an x-ray, looks like a blurred x-ray.	Penetration
VIII.	1.	That looks like a bunch of butterflies pinned up on a board. It's the whole thing. Can't see the board. It is covering the board, the board is white.	Barrier/Penetration
	2.	It looks like a dress model thing, with a dress on.	Barrier
	3.	The two muscrats hanging on to each arm. That they make coats out of. Looks like a big face with arms reaching out. Just playing.	NS

Subject #14--Continued

		Response	Scoring
IX.	1.	That looks like a fish pond with everything around it. I'm not very good at this. A bowl with flowers and things around it. Can see through the bowl to see fish.	Barrier/Penetration
	2.	This is a candle and these two guys got binoculars looking for something. The light is doused cause it is in the fish bowl. Might be gems, looking at something to shoot at each other.	NS
X.	1.	Looks like a picture that you might want to hang on the wall. That looks like two ladies in another kind of realm each hanging onto the drinking fountain. It's the whole thing, it is a picture of two ladies reaching for the water fountain. It looks like it is a perfume bottle. Looks like the cork is off.	Barrier/Penetration
	2.	Looks like two spiders after the two ladies and all the birds and the bees are having a fit. Hanging onto the two ladies' heads, hanging on for the feeling they could give to them. Birds and bees are just gawking.	NS
	3.	Candelabra that has been taken apart. Some of the candle things are off.	Penetration

Subject #15
Experimental Condition: External Somatic
Sex: Male
Age: 28
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 10
Total Penetration Score: 3

		Response	Scoring
I.	1.	Looks like a bug. Want me to see something else? Looks pretty mean. The head of him looks kind of mean looking. It just looks like the body. The legs aren't on there. (Why?) Just not there.	NS
	2.	Looks like two small hands. Them spots do. Looks like two hands in a glove like.	Barrier
	3.	Like something similar to a bat. The wings not all the way down. It is in flight. It is black.	NS
II.	1.	Looks like two gorillas to me. Two gorilla bodies. Without heads (where are they?) Not there. Looks like they both got their paw up against one another. Just the way they are shaped but not the red stuff. Gorilla legs. Big and black and hairy.	Barrier
	2.	Looks like it could be a couple of heads of a goat or a lamb or a cow or something'. With their noses together looks like a goat or a cow or a baby calf head. Just fanning one another.	NS

Subject #15--Continued

		Response	Scoring
	3.	The white part in there looks somethin' similar to a top or a float or a plunger. The outline (center white) a spinnin's top most like.	NS
III.	1.	Something similar to two monkeys. This is the head and this is the lower part. They are also facing one another and are bent one half way over.	NS
	2.	A log of wood. Right here both of 'em. The shape kind of all rotten and torn off.	Penetration
	3.	That red kind of looks like a butterfly in a way. The wings it had kind of a center to it in a way. Just the wings. No motion. It is perched.	NS
IV.	1.	Some of it looks like the inside of a cavern down under the ground. This area up through here. Both sides that look like a rock formation. Kind of rugged. It has rocks. Kind of rugged and hard. It is on the inside.	Barrier
	2.	The whole thing kind of looks like some kind of an insect or bug. It is just laying there. It is dark and hairy like it has a lot of hair.	Barrier
V.	1.	That looks somethin' similar to a bat. It is the whole thing. It just laying there with its wings out and its legs are showing. Same color as a bat.	NS

Subject #15--Continued

		Response	Scoring
	2.	This here kind of looks like the head of a long, big bird. Kind of an exaggerated beak. Kind of looks like two ot them there.	NS
VI.	1.	The head and the whiskers of a cat. (Laughs.) A cat's head with the whiskers sticking out. The head is just sticking out there. Looks like it could be wet hair on his head. It is kind of bunched together.	Barrier
	2.	The spinal cord of a human being. All up and down here looks like how you'd see it on an x-ray of the spinal cord.	Penetration
VII.	1.	Looks somethin' like an insect only it isn't the same in terms of the wings. Somethin' like a butterfly. This part in here just reminds me of the shape of a butterfly.	NS
	2.	The eyes of a hog. The nose of a hog. Right in here it kind of resembles. Teeth are showing. It is just there. The nose with the teeth and these light spots look like eyes.	NS
VIII.	1.	This kind of resembles a razor back hog or somethin'. These two things. They are kind of broad shaped like the body of a hog. They just look wild. Look like they are standing on three legs.	NS
	2.	This kind of resembles a butterfly. This is the body and this is the wings just laying there with his wings flat out. Looks alive.	NS

Subject #15--Continued

		Response	Scoring
	3.	The whole thing reminds me of a Chinaman's hat on his head.	Barrier
IX.	1.	The head of a little boy with messy hair. Down at the bottom looks like Dennis the Menice. The hair looks messed up also the shape.	Barrier
	2.	The outline of a new shore. Kind of rugged with inlets. Like along the Atlantic Coast. Looks like New England. It is jagged in and out with the ocean gets into the land and back and forth.	Penetration
X.	1.	Kind of reminds me of spiders this and that both. They just look like hairy spiders to me. Have a lot of hair on them. No motion. Just sitting still.	Barrier
	2.	And this kind of reminds me of the shape of Old England Coastal area. I've seen maps of England and it's got a coastal area something like this. The jaggedness of this. In and out in here kind of jagged. Just the shape.	Barrier
	3.	Two keys. It looks like two keys pointing together.	NS

Subject #16
Experimental Condition: External Somatic
Sex: Male
Age: 67
Diagnosis: Schizophrenia, catatonic withdrawn

Total Barrier Score: 5
Total Penetration: 4

		Response	Scoring
I.	1.	A precipice. A valley. The Mississippi Valley. Precipice over the valley.	Barrier
	2.	Some paint.	NS
	3.	Marshmallow--roasting.	Penetration
II.	1.	A water shooter pistol. Gun. A water automatic. Automatic. A water shooter. Just a water shooter and that is all.	NS
	2.	Some figs or prunes. It is a dark tan with some grey.	NS
	3.	Some cherries or strawberries or sugar beets.	NS
III.	1.	A bird's nest. A nest of birds.	Barrier
	2.	Cherries and strawberries.	NS
	3.	A sock for shoe shining. I don't know.	Barrier
IV.	1.	A black jacket or coat.	Barrier
	2.	A lit match or candle and wax candle with the wick black. The candle is burning.	Penetration

Subject #16--Continued

		Response	Scoring
V.	1.	Some black licorice and jelly beans. Like candy. They heat the sugar and licorice by the stove.	NS
	2.	A mark. A black mark.	
VI.	1.	Cotton candy. Carnival. It is strawberry or cherry.	Penetration
	2.	A jack. A trunk jack.	NS
VII.	1.	"Easy off" oven cleaner in Bonner Springs, Kansas, and their office.	NS
	2.	A blackbird or a white bird or a blue bird.	NS
VIII.	1.	Red pin cherries like berries. Tree with green leaves and pin cherries on it.	NS
	2.	Some brown syrup. Butterscotch. Sugary syrup.	NS
	3.	Orange. The core of an orange and orange peeling.	NS
IX.	1.	A jello cake or	NS
	2.	The plate is stained with jelly.	Barrier
X.	1.	A post hole digger.	NS
	2.	Some red. A broken egg.	Penetration
	3.	Green lettuce and blue huckleberries.	NS

Subject #17
Experimental Condition: External Somatic
Sex: Male
Age: 43
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 6
Total Penetration Score: 3

		Response	Scoring
I.	1.	That looks like a butterfly. It is the whole thing. The butterfly, he hangs around in flowers, but not in the picture. The wings and body, the eyes are here sticking out. Looks like he is just stretched out and flying.	NS
	2.	And it sort of reminds me of one of these bats. Sort of in here. Bats got their little legs sticking out, and these wings. Bat doesn't have as much wings as the butterfly. It is just flying.	NS
	3.	Body right here. Looks like a bumble bee. See, it has these little stripes commin' around all over the body, these little yellow stripes covering the body. It is flying.	Barrier
II.	1.	That looks like something in a skeleton picture like a hip bone. It is on the hip on the skeleton. I saw a skeleton before. Looks like an x-ray picture of a skeleton but just the picture.	Penetration
	2.	And right up through there looks like it might be the parts of a woman's private. Looks like when it is closed and this looks like the jaws of it on each side closed, it has a little center right there divided from the other parts.	Barrier

		Response	Scoring
	3.	That looks like a head, a great big head like one one of those big ol' vultures. A bird head or a snake head or something like that. It looks like a snake head and these look like wings or the side. Don't see them no more, find them in Africa, now in Iran. Looks like he's flying.	NS
III.	1.	That looks like a skeleton. See one skeleton that looks like hips of a skeleton on each side. A cartoonist's skeleton that's painted.	NS
	2.	This looks like a bow tie to me. Looks like it is all ready to put on your shirt. It is all tied. Just the shape.	NS
	3.	This would be two ears right here and this looks like a cat's face, a cartoonist's cat face. A cat's face not doing anything, just a picture.	NS
IV.	1.	Well, let me see, that looks like an x-ray picture, some kind of x-ray picture. All over would be the back or the chest or something like that. Looks like a skeleton of an x-ray.	Penetration
	2.	That right over there looks like a private of a woman but maybe that's all my mind. Cause this little center is here and that on the outside looks like the edge of a woman's private.	NS
V.	1.	That looks like a butterfly. It is the whole thing. Without these horns or ears here it just looks like a butterfly flying.	NS

		Response	Scoring
	2.	A bat. That looks like the legs over there. There's the wings right here. There's the head. I guess that's the ears. That's all. It's the whole thing. Well, he's looking like a rat in the face. He don't have feathers on his wings. He's just solid skin. Bat is flying. Just looks like he is flying.	NS
VI.	1.	Well, that looks like clouds. Over here on each side, just dark clouds getting ready to rain. Can't see through them. Can't see the rain just a cloud hanging.	NS
	2.	And that looks like a snake's head up there. He's just crawlin' along but it is too straight, ought to be in a circle of some kind. Some snakes is real dangerous, some have poison enough to kill you.	NS
VII.	1.	Looks like a cloud. It's the whole thing. Looks like clouds, looks like they is just hanging in the sky. Can't see through them.	NS
	2.	Cow horns up there. Looks like they is on the head of a cow sticking out. Picture don't look like a cow's head but it looks like it is on the side of the head that these is on.	NS
VIII.	1.	That looks like a bone, right up in there. That looks like an x-ray picture of where it would be the ribs. Little ribs, little jiggots sticking right out. Looks like the backbone, just an x-ray picture.	Penetration

Subject #17--Continued

		Response	Scoring
	2.	And this here looks like rats climbing up on that side with their legs, and here is the head. Climbing up on the side of a wall or something. Here is the tail, legs crawling up on the side.	Barrier
	3.	That right in there looks like hip bones of a man's skeleton picture. Looks like the bone of a man that's laying back there. Just a picture.	NS
IX.	1.	That's the same thing as the other. That looks like a bone right up in the center there. Just a picture of a bone.	NS
	2.	And it looks like an electric light, the thing in the center, a bulb, looks like the light would be on, just a solid light bulb.	Barrier
X.	1.	These look like spiders. These outsprings here and it is solid in here, and them look like legs here. Yeah, these ain't got no opening. Looks like it is hard.	Barrier
	2.	Horse shoe. Looks like it is thrown over this thing here and it is around it here. This is the stake and the horseshoe is around it.	Barrier
	3.	That looks like a bone of the spine. This looks like the spine and these two springs here look like where it starts to be ribs on the sides. Just the bone.	NS

Subject #18
Experimental Condition: External Somatic
Sex: Male
Age: 19
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 5
Total Penetration: 4

		Response	Scoring
I.	1.	I'm supposed to tell you what it reminds me of? Looks like some kind of a bug like a butterfly. The whole thing. When they are flapping their wings before they take off. He is alive	NS
	2.	A window with light coming through it; but I don't believe it is a window though. Light is coming through a glass.	Penetration
	3.	Looks like two hands up on top of it. One on each side. Looks like they got gloves on. Must be winter time or they wouldn't have gloves on.	Barrier
II.	1.	Hmm. One that looks like some kind of. Don't know exactly. Some kind of bug. The head of a bug. Might be a bat. Looks like he got some eyes right in here. Looks like it is alive. It could be taking off.	NS
	2.	Well, I see some red dots there. It could be kind of a cloudy day. Those are grey clouds. It could be a foggy day. Can't see through it. It is too dark cause of colors there.	NS

		Response	Scoring
	3.	Don't know what that red is down there. It could be the leg of a chicken on the top. Not the whole thing. Just that one part. It could be a rooster with one leg tucked up behind the other. It has red feathers like a rooster, or a parakeet. It looks like it is in motion. It is alive. Looks like he has quite a few feathers. Looks like he is perched up there on a roosting whodinge [sic].	Barrier
III.	1.	It could be a head of something. Can't really make it out. Head of wolf. They have kind of pointed noses. You know. Just setting up there getting ready to howl. Just the head.	NS
	2.	This down here could be the skeleton part of your ribs. It looks like it could be an x-ray of it. I used to see them at school. When we had hygiene, I'd see them.	Penetration
	3.	Looks like a couple of wolves or something stuck in that little part of this picture. Put onto. Looks like it could be sticking into his heart. The wolf there.	Penetration
IV.	1.	Looks like a dog's mouth. Forehead, nose, and mouth can also see his forehead and his hair come over his forehead. It covers up his forehead. Looks like the mouth is closed.	NS
	2.	Looks like some horns in there in the picture. Just looks like a steer's horns when he puts his head down and starts coming after you.	NS

		Response	Scoring
V.	1.	Could be two legs of something in here. Top is darker part; lighter is bottom. Dog's two legs. Legs stretched out.	NS
	2.	Looks like an arm in there that has been squeezed at one end. In here is narrower as compared to in here. Looks like two skinny legs. Don't look mangled. Looks like a horse's legs are supposed to look. They're two kind of legs though.	NS
VI.	1.	Looks like it could be a butterfly. Looks like it is flying up.	NS
	2.	Looks like a frog's bottom or a toad's. Like when you turn it upside down. The stomach part. Just laying there. He's in pretty good shape.	
VII.	1.	How am I doing? Part of a butterfly in there. Looks like it is flying off.	NS
	2.	Some clouds. In both sides. Looks like it is going to rain. Can't see through it.	NS
VIII.	1.	You remind me of a friend of mine. He smokes cigars like you. Looks like some kind of rat. I believe it might be. In fact, there is two of them, I think. It shouldn't be red though. It looks like it is going in for its kill. Looks like he is hunting for it.	NS

		Response	Scoring
	2.	It could be from a distance. It looks like it could be trees, lakes. Looks like it could be two peaks. There from a distance. Trees on a mountain's side and lakes surrounded by trees. Trees and lakes are on the mountain.	Barrier
IX.	1.	It could be stitches there. Looks like when you cut your arm badly enough and you need to take stitches in them.	Penetration
	2.	There's some red color and a shade of green and there's that orange. Just different color. Just the colors.	NS
X.	1.	Looks like there could be a couple spiders in there. In there in the blue shade. Kind of long legs. There they could be crawling up some kind of a wall. Kind of a steep grade.	Barrier
	2.	Might be a fat woman. There in a yellow shade. Got a big belly. Most of these patients up here that are women; the majority of them are fat--pot bellied, you know. Just the shape like this girl I knew. Looks like she is wearing slacks.	Barrier
	3.	Or it could be a steer in there the long horns. In the shade it has white long horns, and it looks like it is going up a grade.	NS

Subject #19
Experimental Condition: External Somatic
Sex: Male
Age: 28
Diagnosis: Schizophrenic reaction, chronic undifferentiated type

Total Barrier Score: 7
Total Penetration Score: 3

		Response	Scoring
I.	1.	Looks like a coyote. It is the whole thing. Two eyes, wide mouth, ears, just the head. Or it could be a dog.	Barrier
	2.	Looks like a donkey here. Ears, tail, legs. The way the ink is smeared.	NS
	3.	Halloween mask. Eyes, mouth are here.	NS
II.	1.	I'd say it looks like a couple of dogs with their noses together. Nose, head, ears, the shape only shows the upper part of their body.	NS
	2.	I don't know what them red things are up there. Maybe this red thing is a butterfly. Looks like one of those dried out ones. Maybe the skin--just the skin of it. It's red.	Penetration
	3.	Can't figure it out, especially the top red things. May be some sort of bug. Sort of like a slug except they're red and there ain't no red slugs. White on the bottom and narrower at the top.	NS
III.	1.	Looks like two men. Head, body and legs. Looks like they're picking up something, bowling balls. They are wearing black suits. Maybe they're butlers. Looks like they're black.	Barrier

Subject #19--Continued

		Response	Scoring
	2.	Two red ostriches. Long neck, little head, and big body.	NS
	3.	Red butterfly. It's got two wings and joined in the middle.	NS
IV.	1.	Looks like a bat, a kind that flies in caves. Whole thing. It is black though I never saw a bat. I don't actually see no cave, just see the bat itself.	NS
	2.	These two things look like boots. Head, toe, instep, a working boot.	Barrier
V.	1.	I'd say it's a black butterfly. The shape of it. But I don't think butterflies are black. It is the whole thing.	NS
	2.	Maybe it's a black bug of some kind, maybe a fly.	NS
VI.	1.	That's a cat or maybe it's a lion skin stretched out before the fireplace or something. It is just the skin and it was left with the head. The head is flat too.	Barrier
	2.	A round castle and a hill. A lighthouse on an island maybe. It is round like them old fashioned towers. Looks like there's a hill right there.	Barrier
VII.	1.	Looks like a couple of bunny rabbits. Looking at it this way they're eating something or trying to get something to eat. Young, floppy ears, eyes, nose, tail, not real rabbits cause don't have legs.	Penetration

Subject #19--Continued

		Response	Scoring
	2.	Don't know what this black thing is. Maybe it's a chair. Rabbits are leaning on it. Don't really look like a chair, but that's what I called it.	Barrier
VIII.	1.	A butterfly. Its got the center part of it, and the wings are pretty wide. It's the different colors.	NS
	2.	And a couple of red rats. Eye, nose, chin, and forelegs. Out for a walk maybe getting ready to eat.	NS
	3.	Maybe some sort of insect with different colors. The center part of it anyway. Maybe it's two different insects. Some weird sort of insect like in horror movies that they feed and grow with nuclear energy. Might be joined with the other one.	NS
IX.	1.	I'd say it is some sort of reptile, maybe a snake skin. It is farfetched, the design. It is dead, it is flat and wide, I'd say it has been made into a skin.	Barrier
	2.	Or three different insects with different colors. Maybe something you find in the sea or ocean. Red, green and yellow, or some kind of plant life at the bottom of the ocean. Maybe a seahorse or a sponge or something. Maybe a plant.	NS

Subject #19--Continued

		Response	Scoring
X.	1.	I'd say it is two blue spiders. Looks like its got a lot of legs.	NS
	2.	Green insect. And the two blue spiders are eating something green, a bug. It is being eaten by a spider.	Penetration
	3.	And the black thing looks like a head of an insect that's dead or one of them bugs of some kind. Head, nose, rest of it, aren't there, just aren't there. Cause the rest of it is a different color.	NS

Subject #20
Experimental Condition: External Somatic
Sex: Male
Age: 47
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 8
Total Penetration Score: 7

		Response	Scoring
I.	1.	Put on my glasses, can I pick it up? Looks like a spider, the center part. That's about all I see. Some purple. The head of a spider, the shape of the head getting ready to bite somethin', the jaws are open, the shape, black spider.	Penetration
	2.	The side pieces might represent mountains or somethin'. Mountain peaks, haven't you ever looked at pictures and seen the shape of mountains like that? Like around the Grand Canyon with those peaks sticking up.	NS
	3.	Holes might represent the sky or somethin'. Like four of them. Clear, blue sky. Haven't you ever looked through dark clouds in the sky, the clear spots through 'em? Spots are through the clouds.	Penetration
II.	1.	Well, I don't know, that center piece might look like a diamond, that center black piece. The diamond is not set in anything. Equal proportion, square cut, design, diamond shape, just the outline. You have seen pictures in a book, haven't you?	NS
	2.	The red might be a woman's monthly. All the red blotches. Ever look on a pad and see what a pad looks like? No specific shape, splotched and spread out.	Penetration

		Response	Scoring
	3.	The center, top center might be some kind of water nozzle. The center hole up through there, there is an opening up through the middle, nothing coming out of it, a black opening up through it.	Penetration
III.	1.	Might look like two of these special dogs staring at each other. The red. Don't know what it would be. Poodles with long legs here and the head, the shape, no fur, just staring at one another.	NS
	2.	The bottom side, pieces might look like a woman's high heeled shoes. Heel and the toe there.	Barrier
	3.	The center red piece might be two ovaries of a woman. You've seen pictures, dark red with a connecting link between 'em, just a picture.	Penetration
IV.	1.	Bottom center looks like some kind of an insect, the head of an insect of some kind. The antenna deals sticking out there. Ever seen pictures of 'em? Or actually looked at 'em? Just a picture. Black, most insect pictures look like that. Not cut off.	NS
	2.	The skin of an animal of some kind if you turn it up like that. Whole animal rug skinned, how jagged they look, the outline, lot of fur on it. See how it is changing colors? It is not cut evenly. It is just the back.	Barrier/Penetration

		Response	Scoring
V.	1.	Butterfly going backwards, got his head at the wrong end or somethin'. Wings, this down here should be the head end, that is the feeder part, the whole thing, just take off the end pieces. The head is just at the wrong end. A monarch butterfly shaped as such.	NS
	2.	Two biggest arms, looks like dog's legs. I don't see too much else in that. Can see the claw out there and the muscle, a joint in there somewhere. Just the general shape of it.	NS
VI.	1.	That top up there looks like an animal of some kind, like a mink or somethin'. The head of a mink I seen picture, the shape. It is dark like a mink, not the fur.	Barrier
	2.	Upside down looks like it might be a pair of balls sticking up there. The shape of 'em.	NS
VII.	1.	Out that center thing there it looks like just a bunch of clouds. The whole thing. Just look at the sky and you can see all different shapes and sizes, depth perception. The different shades can see through the clouds. Thin spots there.	Penetration
	2.	Boot hill of Italy, a pair of them. It is shaped like the lower end of Italy. It is surrounded by water.	Barrier
VIII.	1.	A pair of animals up there, one on each side, looks like a ground hog head, don't know what kind. The shape of an animal. I've seen	NS

		Response	Scoring
		pictures, pink animals. No fur on it particularly.	
	2.	Red and orange deal there maybe looks like a liver. The way it looks now it looks more like a butterfly. Two portions of a liver, not out, just the natural shape, liver is always red.	NS
	3.	The top peak might look like a mosquito snout. The shape of his snout before he sticks his stinger out. The portion that bites.	NS
IX.	1.	Bottom orange deal looks like an island somewhere, a pair of islands somewhere. This part is a peninsula, an island in the Carribian. This is the windward side and this the lea side. Just the shape and the color contrast, dark here, different altitudes. Surrounded by water.	Barrier
	2.	That center white might look like a woman's body. I can't figure anything out of that red. The waistline here, the arms sticking here and the skirt here.	Barrier
X.	1.	That red looks like a country somewheres, might be over in Asia. I don't know. The shoreline, the jagged Malay Peninsula, only place I know of with a peninsula like that, the outline. One side is jagged with the other side the beach side of it.	NS
	2.	Two brown ones, might be an island over there in the Mediterranian. Out in Corsica both islands are set apart. Just the shape of it. Only island I know of that is shaped like that.	Barrier

	Response	Scoring
3.	The two green might be an island over in the Pacific somewhere. The Pacific is green, got two different shades of green, maybe one side has more trees than the other side. Island is only thing you can find in the Pacific.	Barrier

Subject #21
Experimental Condition: External Somatic
Sex: Male
Age: 31
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 10
Total Penetration Score: 7

		Response	Scoring
I.	1.	Looks like a pharmacy house. The struting columns are here and a straight division between the two. The whole thing looks like there could be drugs in any one of these holes. The holes are supporting and balancing the two sides.	Barrier
	2.	An oak tree. Its branches or limbs and leaves. And here is the beginning, and the end. And here is the main part of it. Leaves just jut out from the tree. It is in the inside cut-a-way vein of a tree.	Penetration
	3.	A halloween mask or costume or dance. Kind you'd fit over your eyes with a map around it. Looks like you'd be trying to fool somebody. I see it as black and white.	Barrier
II.	1.	Looks like two icicles. Because they are red popscicles come in double and one usually flavored in colors and they have an extension of wood.	NS
	2.	A butterfly. Two butterflies. Looks like a common moth variety butterfly and that one looks like a bat variety butterfly cause it is flying in a circular pattern. The whole picture looks like they are moving, pushing all steam ahead.	NS

Subject #21--Continued

		Response	Scoring
III.	1.	Looks like a hammer, anvil, and stirrup of an ear operation. The parts of the tympany of an ear. That represents the inner ear. A cochlea.	Penetration
	2.	A zombi bat. The ears of the bat are here. This looks like the wings. It appears to be alive just hovering over an object. May be a wall. It is on it. It is in perpetual motion.	NS
	3.	A butterfly. It seems to have several parts, head, wing, and body. Two of them. They seem to be just like statues hovering over the grass. Black butterflies.	NS
IV.	1.	Looks like a gopher to me. Looks like the stretched skin of a gopher. The skin--the whole thing. It is stretched out. No motion in that. Looks like a deskinned gopher. I see the whole gopher.	Penetration
	2.	A rug. A rug on a floor. A black rug. It is covering the floor. It seems to be covering an object. I can't see any movement at all.	Barrier
V.	1.	That does look like a bat to me. A vampire bat. A blood sucker bat. It looks like he is flying hundreds of miles above everything. The whole thing. Not sucking man.	NS
	2.	A grasshopper. That is the middle, feet, head, and wings. The whole thing. It seems to be flying.	NS

Subject #21--Continued

		Response	Scoring
VI.	1.	That looks like a bridge. I guess a highway. Just a solid line and this is the bridge under water on either side. It looks like two posts from each side. I can see the railings. The bridge is covered with a canopy. Water is under the bridge.	Barrier
	2.	A cat. A big cat. The whole thing. The cat's whiskers like just like an alley cat or a common cat. Looks like a specimen of a cat. Looks like it is both alive and dead. Its whiskers are here. Face and ear whiskers make it look like a dissected cat and here is the brain on the body of a cat.	Penetration/Barrier
VII.	1.	That looks like a painting. The whole thing. Looks like a painting done by a professional painter. Looks like a painting of an island. Looks like several disconnected masses. Three objects, a chain of islands, three islands and the crater in the middle.	NS
	2.	It looks like a Model "T" touring car. The whole thing. Coil box fenders and aprons. It appears to be motorless. It is just a collection of parts just piled together.	NS
	3.	Looks like a laboratory specimen in a vase or a jar. Whole somethin' like a butterfly. Looks like two species formed together. Don't see the jar.	NS

Subject #21--Continued

		Response	Scoring
VIII.	1.	That looks like to me like a cut-a-way from a biological specimen. The whole thing does. Don't know the name. A cut-a-way of a leaf. Exposed parts of this leaf are cut right in the middle.	Penetration
	2.	Looks like a clown's mask. Looks like two patches over an eye.	Barrier
	3.	It looks like a hot dog sandwich. Two buns here. What is in the middle is the hot dog, mayonnaise and catsup are on it.	Barrier/Penetration
IX.	1.	That looks like a well with moss on the bottom. That looks like the plunger in the well. There is water in the well. Plunger is raising and lowering the vacuum of the water looks like a cavern well. The moss is just clinging on the side of the well.	Barrier/Penetration
	2.	A valentine card. A greeting; a light message. "How is the spring?" A get well greeting card. And it is this color.	NS
X.	1.	That looks like a weasel. Because of its fur. Looks like the sides of an animal or a rodent and they are pushing that up. This represents fur to me.	Barrier
	2.	An airplane. This is the wing and this is the superstructure. These two things are blood. I see colors on the side of an airplane.	Barrier

	Response	Scoring
	Yellow. It is up in the air. Here are the controls of the airplane.	
3.	A coral rock. Cause of the green and the coral. It would be an anemone. It looks like a cray fish. Part of its underbelly is showing and part of its top.	NS

Subject #22
Experimental Condition: External Somatic
Sex: Female
Age: 46
Diagnosis: Schizophrenic, simple type

Total Barrier Score: 7
Total Penetration Score: 0

		Response	Scoring
I.	1.	I see a bat with dark and light spots with two wings and a center. It's body with two wings is what I see. It is the whole thing. The center. I see some black spots on it and its stomach is white.	NS
	2.	It could be a witch with wings and the head and arms. Those little things could be its arms. It has a dark, black face. It's the whole thing.	NS
	3.	It could be a woman dressed up in a gown with an outfit that has some kind of decoration on it. It has sleeves that come out.	Barrier
II.	1.	Well, I see a butterfly with wings and a head and two eyes and a red tail or decoration for the butterfly. Are those two red things up above just on the butterfly. It's a pretty cold wing with black, grey, and red. It's the whole thing. The decoration. It is just a picture, and they decorated the picture with some red globs.	NS
	2.	Some kind of an animal. Could be a worm with pretty coloring with black, grey, and red. Could be any number of kinds of animals but it is just one. It is the whole thing. It is a funny shape. Somebody painted a worm peculiarly.	NS

Subject #22--Continued

		Response	Scoring
	3.	Could be a fly magnified to exaggerate how a fly looks with wings and a head and a tail. It is the whole thing. Red and just painted decorations.	NS
III.	1.	I see two men with a bow tie in the center. It is a picture, a caricature of modern man. It is a modern man. They have on tuxedos.	Barrier
	2.	I see two poodles (why do I always see animals?) with a volleyball. Each of them has a volleyball with a bow tie in the center for the poodles. Poodles have sharp pointed noses. The men could be rolling volleyballs too. Poodles are black and not wearing bow ties. All looking at the bow tie.	NS
	3.	Might be a butterfly there in the center.	NS
IV.	1.	A bat with wings and a tail bone and a peculiarly shaped head. Looks like a bear's head. It's the whole thing. The bone is covered with skin.	NS
	2.	Could be a gorilla with arms out here and legs. Black fuzzy gorilla like it had fur on it.	Barrier
V.	1.	A moth or a miller of some kind that has wings on it, two prongs or feelers that protrude. It could be a small bat. It's an animal. Might be a butterfly. It's the whole thing.	NS
	2.	Could be a fancy airplane with wings and a body. Fancy cause it has zig-zaggy wings. It's the whole thing and it's flying. Can't see inside of it.	Barrier

Subject #22--Continued

		Response	Scoring
VI.	1.	I see a miller, an animal or a moth, not a man, a head, two eyes, a long neck, a body down the center and two wings protruding out. It could have a bow tie around its neck. It is wearing a bow tie.	Barrier
	2.	Could be a fancy snake with a body, a pretty snake. It has wings but a snake couldn't have wings. It just has a peculiar looking body to it. It has skin, black head and neck and grey and black body.	NS
VII.	1.	Clouds or formation of clouds, rain clouds. They are funny rain or snow clouds in the sky. They are dark like storm clouds, can't see through them.	NS
	2.	Deep sea fish with a face and a tail. Three on each side, this sea fish of some kind. They are moving around and are swimming and are moving towards each other.	NS
VIII.	1.	It is a beautiful Japanese print of some kind. The whole thing, the color. A piece of material.	NS
	2.	A butterfly with blue body with pink wings and tail with orange mixed in.	NS
	3.	It could be a sail boat mast that's colored beautifully and it is reflecting the sun's rays that are making it look like a rainbow. It's the whole thing. Reflecting the sun's rays.	Barrier

Subject #22--Continued

		Response	Scoring
IX.	1.	Butterfly definitely with orange, green, and pink wings. It is a beautiful butterfly with very slim, straight body and large wings and a green small head.	NS
	2.	Could be a fancy worm, straight body and sort of fangs stick out. This green and gold could be part of the worm coloring, snakes. It's beautiful. The worm is just the center part.	Barrier
X.	1.	Yellow are rose buds. This is green part of stem of a rose.	NS
	2.	And these yellow here are fish.	NS
	3.	And this green is a worm.	

Subject #23
Experimental Condition: External Somatic
Sex: Female
Age: 61
Diagnosis: Schizophrenia, chronic undifferentiated type

Total Barrier Score: 4
Total Penetration Score: 3

		Response	Scoring
I.	1.	Looks like a bird or a bat. I don't know what. Wings. An eagle. It is just stationary. I hear my voice! Here are the wings. It is ready to fly.	NS
	2.	A liver, or kidneys I suppose. Those are kidneys. I have x-ray eyes, but that is just kidneys.	NS
	3.	A bell. Right in here.	Barrier
II.	1.	Looks like the same sort of picture, doesn't it? Oh, my God! Looks like two bears doesn't it? Holding something up in the air. A cigar, eye, ears, and nose.	NS
	2.	It looks like a lamp, that white part.	Barrier
	3.	A milk bottle up in there.	Barrier
III.	1.	Who drew these pictures, do you know? Birds of some kind. Beak and head standing there like statues have a white spot on the back of their rectum.	Penetration
	2.	A bowl of some kind. Right here.	Barrier
	3.	A porch or archway between two victories.	NS

Subject #23--Continued

		Response	Scoring
IV.	1.	How can they draw such pictures as that? I don't know what that looks like I'm sure. Are you sure you are righteous and decent? Ears. Hollow ears, an opening in the ears. It belongs there. It is the opening.	Penetration
	2.	Feet--distorted legs of some kind, not a true picture. Feet don't have such large toe. This looks like a foot. It is part red.	NS
V.	1.	A small bird with big wings. It's the whole thing. He is keeping people at peace with themselves.	NS
	2.	Horn. Here on either side of the head.	NS
VI.	1.	I can't say. Looks like my asshole. My, that's vulgar! I'm just angry.	Penetration
	2.	Wings on it. I guess a bird. Two sets of wings. These two are going outward and these two are going down at a slant.	NS
VII.	1.	I don't know what you'd call that. A wolf. Holding something up. Don't know what it is.	NS
	2.	Bat.	
VIII.	1.	Pretty colors. Butterfly. Holding up the two rats.	NS

Subject #23--Continued

		Response	Scoring
	2.	Rats. Two pink rats. Modernistic design instead of old fashioned. Hanging onto something.	NS
	3.	Don't know what you'd call it? A flag pole. More like a pole than anything. No flag there.	NS
IX.	1.	My, but you think you're smart, don't you? Who taught you all that smartness? L-O-V-E, that's what it ought to be. I am trying to be kind.	NS
	2.	A butterfly. Do you hear what my husband is saying? Just a picture.	NS
X.	1.	I don't know what you mean, My God. Looks like a narcissus flower. Because I have some in my back yard, yellow like those. Looks not quite true. Just a picture.	NS
	2.	Looks like a cigar. Looks like kidneys maybe. Shape, no color.	NS
	3.	A spider. Makes a distortion (no movement). Just the shape (no color).	NS

Subject #24
Experimental Condition: External Somatic
Sex: Female
Age: 56
Diagnosis: Schizophrenia, chronic simple type

Total Barrier Score: 15
Total Penetration Score: 9

		Response	Scoring
I.	1.	Now that's a woman's body but somethin's happened to her head. Looks like she has been cut in two. Looks like she has been cut in two. She has clothes on. Some kind of a grey and black dress. It could be wool or silk or cotton.	Barrier/Penetration
	2.	These sides of it. The head kind of looks like a man's head, don't believe it is an animal, looks like a man. The heads are kind of pushed back. Can see woman's navel, she has on clothes though she is facing me, but the man has got something attached to his seat. He has some kind of a cap or something on his head. He's got clothes on too. Big muscles on his arms. Looks like pupils of his eyes over his body, colored black stuff.	Barrier
	3.	A tail on the man, couldn't be though. Maybe they just attached it on this tassel at the end, the back of it, and got their feet right up to this woman's body.	NS
II.	1.	Oh, now what is this? It looks like a couple of men, two heads with red paint on them, eyes and mouth, and some kind of a hat, stocking cap on their head and all	Barrier

Subject #24--Continued

		Response	Scoring
		their clothes and got their hands pushed together. Got some red paint on their spines. Either two men or two animals, got feet pushed together.	
	2.	Looks like these two lines have been cut in two. Or maybe just placed like that.	Penetration
	3.	Something that tells about the weather, a thermometer. A barometer. It is tall, some kind of instrument, the glass, and red paint on it.	Barrier
III.	1.	These must be animals, they got their seats cut in two. They got something run around their necks, some sort of material. They are holding something in their hands. Aren't put together, couldn't be the waist, got something on their knees, got some flesh and bones on their knees. Some kind of grey material wrapped around necks and thyroid material.	Barrier/Penetration
	2.	Looks like a bow tie. Or two animals with their heads together to make a bow tie.	NS
	3.	This looks like a bird trying to fly, something attached to their heads and necks, the back of the head, a cord or wire. Some kind of a turtle something, got their feet hidden, could be a plume.	Barrier

		Response	Scoring
IV.	1.	That is a, looks like an animal, looks like a man's eyes, here eyelids, eyelashes but got all fur on him. Head and arms and hands. His arms and hands and elbow are real shinny. Something on top of his head. Some kind of a knife. They have taken something out of him for sure. Got some fur wrapped around his forehead down to the privates of his body. All of this stuff goes around him. Has shoes on. It's the whole thing.	Barrier/Penetration
	2.	On his shoulder blade looks like a face to his head. A statue or a live face, lips, eyelids, eyes and the back of their head and neck.	NS
V.	1.	Looks like a rabbit but this looks like a man's head, eyeballs. Rabbit. It's the whole thing. Ears. Looks like they wouldn't let his body stay together, put alot of skin around his arms, looks like they wouldn't let him have any substance for his body to keep in one piece.	Barrier
	2.	A little bit like a rabbit with the ears and tail but it looks like a man, got all his arms. Looks like put two other bodies on top of him and here's his arm pits. Got some ears, mouth. Looks like his feet are kind of damaged.	Penetration
VI.	1.	Oh, goodness gracious sakes alive. Got a head on it, eyes on it, wings cut here. This must be an animal, a bear or hippopotamus of some kind. Cut this one in two. From the head	Barrier/Penetration

		Response	Scoring
		down. Got some whiskers on it too. Got some wings and I was trying to make him fly. Front legs look like they're in pretty good shape but the back legs don't look so good, not so much wool and skin on them. The animals are mounted together. Looks like they got some clothes around their wings, some kind of material. Two of them upside down, cut them in two and got them hanging. Looks like it is either cut in two or two placed together but it looks like they have been cut in two. Kind of thick fur up here, feathers and clothing material wrapped around it.	
	2.	A man has got something all dumped over its mouth,with two pieces of white substances in the middle of him, must be to his hips rather than to his middle. Maybe it is his bones couldn't be part of his lungs or any other organs on his hips could they? What is dumped over is material. It's the whole thing. The bones are just placed on him.	Barrier
VII.	1.	Looks like a couple of women with noses, chin and mouth and they've got something attached to the back of their heads. Looks like they've been out in the snow, the rain or sunshine. Got black stuff all over their breasts. Looks like they been cut in two. Don't see any feet. The black stuff has been put around them and they been cut in two.	Barrier/Penetration

		Response	Scoring
	2.	Instrument to put them together, a thermometer or something. Might have some glass on it and some wood around it. The black stuff, glass, is in the middle and wood around the edges. Looks like material around the feet of it.	Barrier
VIII.	1.	Oh, this is some kind of colored thing. Some kind of a man's head, an old man with pointed stuff on top of his head, arms and hands got 'em out. Got grey blue stuff on muscles of wrist and hands in it. He looks kind of old. It is wrinkled two bones stuck on top of his head. He is alive.	NS
	2.	And this looks like two blue pillows. Two of them tied to put a piece of wood in the middle of it.	Penetration
	3.	Looks like a limb, a branch of a tree. It might have some glass on it.	NS
IX.	1.	This looks like a couple of deers, way their horns and head and ears and nostrils, mouth. Horns, ears, noses, pointed noses. Looks like they tried to put a foot by their eyes. Their horns are not distinguished.	NS
	2.	And this green stuff, whatever that is must be an animal, two more out here putting his paws up to his mouth. Head, ears, nose, eyes, lap. Trying to put its paws up here on his nose, body, legs, tail. Kind of looks like its head has been damaged.	Penetration

		Response	Scoring
X.	1.	Must be a some kind of a barometer. It looks like it has all the glass in the center is the quotation. Got some kind of foundation or fountain for it of wood.	Barrier
	2.	A couple of animals not birds, no wings, got tails and head, don't look like rats, got some kind of leaves coming out of the tops of the heads. Got the noses all pushed up right at the sides of it. Got some wool, grey wool on it.	Barrier
	3.	Some kind of a statue or artificial body something of is not even alive, got pink stuff with great big feet. This blue stuff looks like a horse head with no body. Could be a cat statue or a man. Got clothes on, wrapped around him. It is not a naked body.	Barrier

Subject #25
Experimental Conditions: External Somatic
Sex: Female
Age: 56
Diagnosis: Schizophrenic reaction, chronic undifferentiated type

Total Barrier Score: 3
Total Penetration Score: 5

		Response	Scoring
I.	1.	It is a map, is what it looks like to me. It is the whole thing, a map of a state, Oklahoma.	NS
	2.	It looks like dirt. It looks like you can plant some things there. They've shoved dirt in and planted something in it. Shoved the dirt in the ground.	Penetration
	3.	Looks like some seeds, you plant, like in a garden.	NS
II.	1.	Looks like somebody's legs and arms is all it looks like to me.	NS
	2.	In the middle looks like some tunnel straight up and down. Looks like they dig a big hole and cover it up. Looks like kind of dug in the dirt and pushed it back.	Penetration
	3.	These here look like somebody's legs.	NS
III.	1.	Looks like a bow or ribbon like you tie around a wreath. It is not tied, it is just the bow.	NS
	2.	This looks like a heart. Heart of an animal more than of a person.	NS

		Response	Scoring
	3.	Looks like dirt dug into it to plant things like the other one. It looks like you kind of planted something there in a way. It looks like a hole there.	Penetration
IV.	1.	This one looks like trees, green trees, pine trees which grow up out of the ground. It looks like some blooms on them--some pine cones, sone cones on the trees.	Barrier
	2.	This looks like an organ in the body, certain ones. Looks more like a heart in a way. Looks more like a heart. It is part of the body.	NS
V.	1.	Looks like somebody's legs.	NS
	2.	It is these two things, looks like they planted something, seeds or something. Like that--they dug a hole and planted seeds and they blossomed into flowers. It looks like something is kind of sprouting. On the edge.	
VI.	1.	Looks like this one is upside down. It still looks like plants. Looks like they got something growing on them. Looks like they planted something on these two things and they grew out.	NS
	2.	This looks like a map.	NS

		Response	Scoring
VII.	1.	These look like roots. Like they was planted straight down--planted in the dirt. Dug down and planted something and they grew.	NS
	2.	These look like legs, women's or men's.	NS
VIII.	1.	Looks like, can't tell. Like organs, the heart. It is like in biology, they cut out the piece of the heart and put it on a board.	NS
	2.	Looks like a line here and somebody's hanging out clothes. Clothes for the laundry.	Barrier
	3.	And these here look like bears, an animal you know. Just drew a picture of a bear.	NS
IX.	1.	This looks different, more like bones. Looks like they dug down into the ground and dug these bones out--like in a cemetery.	NS
	2.	And this looks like a map. Like the state of Florida. Looks like a beach, like the waves are coming in, blowing back on the beach, the waves are washing up on the sand. People are on the sand.	Penetration
X.	1.	Looks like a map. It is a map of an island like Italy. The water is white.	Barrier
	2.	This looks like a spider or some kind of bug.	NS

Subject #25--Continued

	Response	Scoring
3.	And these two look like they've planted something like pine trees and they've grown up. No cones on these.	NS

Subject #26
Experimental Condition: External Somatic
Sex: Female
Age: 28
Diagnosis: Schizophrenic reaction, chronic undifferentiated type

Total Barrier Score: 8
Total Penetration Score: 10

		Response	Scoring
I.	1.	Some kind of an animal or butterfly. A bat. A bird. A big, not an ape, but big bird. A big eagle. It is the outer surface of the body of the animal. It is the whole thing. It has bones all over in its body. There is fur on top of it. There are openings in the body which should be sewn up. Plenty of fur on it.	Barrier/Penetration
	2.	A squirrel, the structure of it. It has great big legs, it has fat on its legs, it ain't skinny. It is fat. It could be crawlin' up the tree. Quite a bit of fur on it.	Barrier
	3.	It could be two birds. The head and the beak, mouths are open up to get some water to drink. Looks like they are sitting in their nest.	Penetration
II.	1.	Looks like a fox, a big ol' wolf, gee I don't know what else. That looks like part of its organs, blood, looks like somebody just killed it and the blood is seeping out but gauze is over it, just like my ankle. It looks like fur is on the fox. Only one but it is cut open.	Barrier/Penetration
	2.	Looks like a big bird. I take the blood off the bird. It has two beaks, a mouth, it is	Penetration

		Response	Scoring
		cut apart, not many feathers.	
	3.	Looks like some men sitting up here. Looks like they are sitting on their legs, have their arms out. They have a gown over them.	Barrier
III.	1.	Two penguins, the shape of their bodies, looks like they are starting to dance. Looks like they have claws on their feet; they could be lovin' each other. Could be a human being. The tails it has, and feet, they have a big fuzzy feet, look like they have house slippers on.	Barrier
	2.	Looks like monkeys just sitting up there doing nothing. They could be eatin' a banana, holding their arms up. Should have littler legs and a long tail, not eating and just holding bananas. Not too much fur.	NS
	3.	Could be little deers standing there or laying down. No head, it ain't on the picture. He is standing on one leg it looks like.	NS
IV.	1.	Looks like part of a big bear, sort of big animal. It could be walkin' or out in the water. It is the whole thing. Big claws and big legs, big thighs. He is stretching out. His body is cut open and it has some openings in its body. Quite a bit of fur on the bear. Has to be warm in the cold. He is from the wilderness. It should be sewed up.	Barrier/Penetration

		Response	Scoring
	2.	It could be a big butterfly. A great big huge monster butterfly. This could be a baby butterfly up here along with it.	NS
V.	1.	It could be a great big spider, or it could be, looks like it has legs. He could be all kinds of colors. It is cut in half, like a picture.	Penetration
	2.	It looks like the outer surface of the picture of a big dog down below, with the hind legs. It can yelp and can cry. It is dark brown. It could be more than one dog. It looks like it is just laying there.	NS
VI.	1.	A big chicken with the beak and the feathers sticking out. Quite a few feathers.	Barrier
	2.	It also looks like a snake with its back bone. It could be crawlin'. It has different colors. It is cut open.	Penetration
VII.	1.	Them looks like a little lamb, that's fur. It looks like it has a tail on it, which is sticking up. And it looks like the body is sticking up, lamb fur, two eyes and a nose. It is in good shape.	Barrier
	2.	The face of a man and a woman. Nose and mouth and forehead, skull.	NS
VIII.	1.	That looks like a rat crawling up. There looks like it is coughing, two hands, and this is the backbone. It has a long tail and long legs.	NS

		Response	Scoring
	2.	And this must be the blood, glands, stomach inner surface of the human being. This could be the muscle of a leg, see how it comes down there.	Penetration
	3.	An ape's big arm right there. Or a man and woman's big hands. Looks like the rat is holding onto the hands. An ape cause it has big skull.	NS
IX.	1.	Looks like your lungs. Cause yellowish cells. It is just lungs.	NS
	2.	Looks like the gums inside your mouth. The inner lining around it on the edges. Blood's oozing, could be inside the mouth, could be decayed gums.	Penetration
X.	1.	Looks like a big spider crawling. Looks like it is touching. The legs, can't see the head but it is there. No color. He is standing up.	NS
	2.	Has something to do with the lining of the throat. Something you put in your throat and squeeze it inside of your throat with it. It is being pushed down into the throat.	Penetration
	3.	And that looks like two small cows with tails. They are standing. These look like they are holding onto that thing, just leaning up against it.	NS

Subject #27
Experimental Condition: External Somatic
Sex: Female
Age: 38
Diagnosis: Schizophrenic reaction, catatonic type

Total Barrier Score: 11
Total Penetration Score: 3

		Response	Scoring
I.	1.	Halloween. It looks like a false face. It's the whole thing. It is in good shape, the eyes, looks like a mouth too.	NS
	2.	Stomach. The shape, nothing cut.	NS
	3.	Sun. It is shining through here.	Penetration
II.	1.	Minnesota Avenue. Looks like it is going up and down. No separation. Looks like it is together. It is white.	NS
	2.	Drinking faucet. Cause I was thirsty, water is coming out of the faucet.	Penetration
	3.	Lips. Maybe cause it's got nothing there, closed lips, the shape.	NS
III.	1.	Halloween again. All over red and black. Dressing up wearing costumes, all over is a mask.	Barrier
	2.	Legs. Has a shoe on it.	Barrier
	3.	Skirt. The shape of it. Looks like it is black and red.	Barrier

Subject #27--Continued

		Response	Scoring
IV.	1.	Shoes. Toe and heel, the shape, a pair of shoes.	Barrier
	2.	Looks like a monkey. Just looking, has a lot of fur. All over his body. Not cut up.	Barrier
V.	1.	A woman, it looks like. Looks like she is in perfect condition. Mom, she is standing up, a nose, eyes, looks like her hair is curled up, looks like she is about to dance.	NS
	2.	Looks like a costume. It is black, something hanging on a hanger.	Barrier
VI.	1.	Looks like a bug. All over, a black bug. It is alive--standing still.	NS
	2.	Looks like a butterfly. Just still, those wings mostly.	NS
VII.	1.	Ain't no moon. It is just dark but no moon there.	NS
	2.	Looks like two dolls. Looks like a face too. Looks like hair too, goin' up a neck. Looking at each other ready to comb hair. Looks like it is fixed up, hands, maybe have grey ribbons in their hair.	Barrier
VIII.	1.	That looks like colors. It might be a body. Looks like all of the body. Looks like hands. It is not cut.	NS

Subject #27--Continued

		Response	Scoring
	2.	Looks like a possum. Just standing still.	NS
	3.	Looks like a corset. The shape, no color.	Barrier
IX.	1.	That looks like an ice cream cone. Cause it is pink. Looks like it has a dip on it. Just the dip which is not melting.	NS
	2.	It could be a false face. Looks like it is orange with blurred green like a mask.	Barrier
X.	1.	That looks like a picture of a woman. She looks like she has eyelashes, looks like her hair is combed up, looks like cheeks. Just her face, she has a lot of hair. She is just looking--hair looks like it is braided.	Barrier
	2.	Shrimp. Cause it is pink. They look good enough to eat. It has shells. Looks like they are hard.	Barrier
	3.	Looks like somebody blowin' a trumpet. Looks like a little doll. It is a blue trumpet. I can see the nose, looks like she is really blowing it.	Penetration

Subject #28
Experimental Condition: External Somatic
Sex: Female
Age: 27
Diagnosis: Schizophrenic reaction, chronic undifferentiated type

Total Barrier Score: 10
Total Penetration Score: 5

		Response	Scoring
I.	1.	Bat. It seems as though it is trying to escape. Maybe it caught on fire. His wings are damaged here and he is trying to make a getaway.	Penetration
	2.	A baseball stadium, wire and fences. Around the center it is all stacked up. People are sitting all around. It is also covered before the game with a sheet to keep it from getting wet. It is raining.	Barrier
	3.	The saddle of a horse. It is lapped over a horse. It is more of a fence, like he is trying to learn him to ride a horse, so it is stretched over the fence.	Barrier
II.	1.	Could remind me of a sewage pipe down the middle. Like on Fifth Avenue in New York. Where people come around and dropped alot of things around it. It is an open sewage pipe.	Penetration
	2.	Clown's costume for the Fourth of July Ball. It is the complete thing, seems like it is bright red orange, mostly the colors for the Fourth.	Barrier
	3.	Could be clippers that you cut grass with and thorn bushes. Not clipping anything now, just reaching up to the sky. Maybe they is laid down right now.	NS

		Response	Scoring
III.	1.	A couple of dogs on the playground playing in circles. Looks like poodle dogs. They are furry around the edge of the pictures.	Barrier
	2.	A couple of dancers. Like on the Ed Sullivan Show, could be bowing down. Have costumes on, like French costumes on, man on one side, lady on the other.	Barrier
	3.	Could be people doing grocery shopping down by the market place displaying fruit. This bow here and shingles over here, the orange.	NS
IV.	1.	Reminds me of an ape jumping over a play toy. It is the whole thing. He is jumping over, the colors, smoky grey, and dark, his eyes. The way he is all spread out over the toy. He is covering the toy, some of it. The toy is a small seat which you sit on.	Barrier
	2.	A glacier, like they have an Iceland. It is laying flat, the different small icy parts with different ices on it. It consists of ices only.	NS
V.	1.	It could be the sky. Different dark spots in the summer months about six or seven o'clock. It is the whole thing except these ends. Reminds you of a curtain. It could be a curtain also but it is the sky after the sun has gone down, just the light.	NS

Subject #28--Continued

		Response	Scoring
	2.	It could remind me of a bunny dressed up with a costume. Like he is hopping along. The costume is on his back; it could be a cape.	Barrier
VI.	1.	A chicken back if you cut it up. The chicken is cut up. You know, like a cut up chicken back, maybe you haven't seen too many of them.	Penetration
	2.	It could remind me of a cross. Like in holy communion like they have up on stage. It just does down like this. It resembles the cross we have every Sunday on stage.	NS
VII.	1.	A snow storm below zero weather. Clouds, it's the whole, the complete thing, the fluffiness, the snow has been thrown around below or thrown by kids. It is frozen into ice. It is all stuck together.	NS
	2.	Two people on a trapeze. They are balancing themselves on a trapeze. Trying to meet up together.	NS
VIII.	1.	Looks like the bones of an animal. The vertebrae, the back bones, the whole thing in the bottom of the ocean, the color, and can see the spinal cord, and the small bones in and out, not a skeleton, an animal vertebrate like we used to say in biology class. It is alive.	NS

		Response	Scoring
	2.	Reminds me of a rocket taking off for the moon. It is laying down. The grey part is smoke coming out of it.	Barrier/Penetration
	3.	Could remind me of rats on the side of it. Searching for food. Two rats crawling up there. Walking up on a limb, way they are built.	NS
IX.	1.	Looks like an explosion. The way it is thrown out on the side, and the sparkly pink.	Penetration
	2.	A little clown with glasses on. Has on a hat and paint on his face.	Barrier
X.	1.	Dancers doing the square dance. Have costumes on. Seems as though they are at a ball. The fluffiness of the red and looks like grey hats.	Barrier
	2.	Looks like spiders. The feet with a thousand legs hanging out trying to get to the dance.	NS
	3.	Yellow flowers. Trying to bloom out. The flowers are trying to get to the dirt to live a little longer.	NS

APPENDIX B

KINGET DRAWING COMPLETION TEST BLANK
SHIPLEY-HARTFORD RETREAT SCALE
SCHIZOPHRENIC THOUGHT INDEX
GORHAM PROVERBS TEST

PLEASE NOTE:

Appendix B, pages 219-226, "Kinget Drawing Completion Test Blank", "Shipley-Hartford Retreat Scale", © 1939 by The Institute of Living , "Schizophrenic Thought Index", and "Gorhams Proverbs Test", © 1956 by Psychological Test Specialists, not microfilmed at request of author. Available for consultation at The University of Oklahoma Library in Norman, Oklahoma

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