1963

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THE RELATION AMONG LIGHT-DARK SHADING RORSCHACH RESPONSES OF CHILDREN, INTROPUNITIVE-EXTRAPUNITIVE BEHAVIOR, AND SEPARATION FROM PARENTS

By

BURTON SIEGEL

A DISSERTATION SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL OF LOYOLA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

June

1963
Burton Siegel was born in Chicago, Illinois, August 16, 1934.

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ACKNOWLEDGEMENTS

The author would like to express his sincerest appreciation to the members of his advisory board for the constructive comments they have offered. Special acknowledgement to Dr. Frank Kobler for the years of guidance and training he offered as major professor to the author.

Dr. Paul Dolinko and Dr. Harry Gunn were most generous in giving their time and doing the tedious work of judging. The author appreciates the fine advice and clarification in statistical methods offered by Mr. Georgas and Mr. Haley.

This project would have been impossible without the permission of Dr. Raymond Robertson, Superintendent of the Institute for Juvenile Research and Mrs. Frances Perce, Chief Psychologist. The latter's psychological and administrative skills enabled the project to be carried on efficiently and in strict accordance to the author's design.

Heartfelt thanks to the patient help, suggestions and encouragement of the author's wife who spent many a lonely month without relinquishing confidence.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. PURPOSE</td>
<td>1</td>
</tr>
<tr>
<td>Definitions and interpretations of shading responses -- hypotheses -- prediction of overt behavior -- phenomena of parental separation.</td>
<td></td>
</tr>
<tr>
<td>II. REVIEW OF THE LITERATURE</td>
<td>6</td>
</tr>
<tr>
<td>Theoretical aspects -- historical development -- overt behavior in relation to the Rorschach -- normative aspects -- author's theoretical position.</td>
<td></td>
</tr>
<tr>
<td>III. PROCEDURE</td>
<td>24</td>
</tr>
<tr>
<td>Description of subjects -- method of collecting and scoring data -- criteria and definitions.</td>
<td></td>
</tr>
<tr>
<td>IV. RESULTS AND DISCUSSION</td>
<td>29</td>
</tr>
<tr>
<td>Description of data -- significance of findings -- problems of agreement -- implications and questions raised by research.</td>
<td></td>
</tr>
<tr>
<td>V. SUMMARY AND SUGGESTIONS FOR FURTHER RESEARCH</td>
<td>36</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>39</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>42</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>DISTRIBUTION OF EXTRA-INTROPUNITIVE SUBJECTS REGARDING AGE</td>
<td>25</td>
</tr>
<tr>
<td>2.</td>
<td>DISTRIBUTION OF EXTRA-INTROPUNITIVE SUBJECTS REGARDING IQ CATEGORIES</td>
<td>26</td>
</tr>
</tbody>
</table>
CHAPTER I

PURPOSE

Rorschach shading responses are defined in several different ways though much overlap can be found. They are defined in terms of surface qualities, dimension, diffusion, specific nuances, and dysphoric content (Klopfer, 1954; Beck, 1961; Bohm, 1958; Piotrowski, 1957). While some normative data exist regarding shading responses for "essentially normal" children, there is little information concerning these responses in psychiatric populations. No studies could be found which utilized the following categorization of shading responses.

Shading responses are percepts which are determined by the various graduations in the achromatic and chromatic stimuli in the Rorschach blots. In this study these shading responses are divided into two major categories, namely, those shading percepts which are essentially seen in terms of lightness and those that are seen in terms of darkness. Furthermore, each of these responses is classified as having form or being without form. This schema is similar to Piotrowski (1957).

For the purpose of this research, shading is aligned with the usual interpretive hypotheses, that is, shading responses are indicators of anxiety (usually associated with affectional needs), depression, and represent "mood dampers" (Klopfer, 1954; Beck, 1961; Bohm, 1958; Piotrowski, 1957). More specifically, the purpose of his research is to evaluate
the following hypotheses in relation to a population of male children who were referred to a child guidance clinic.

1. Dark shading responses are associated with extra-punitive behavior such as fighting, stealing or other externally destructive acts. The dark shading response represents anxiety which has an immediate need for alleviation.

2. Light shading responses are associated with intropunitive behavior such as poor school achievement, somatic symptoms, and passivity. The light shading response represents anxiety which can be alleviated by a slower process and is more restricted to the subject being, consequently, less destructive to others.

3. Subjects who have been involved in a separation from one or both parents will produce more shading responses on the Rorschach than children who have not experienced separations.

4. Subjects who have experienced separation will produce more dark shading responses and be more extrapunitive than children who have not experienced separation from their parents.

5. Color responses and F +% are not associated with shading responses, intropunitive-extrapunitive behavior or separation experiences.

Because of their poorly developed impulse delay system, children seek relief from anxiety and depression more immediately than adults. Their mode of handling conflicts usually calls attention to them since their psychological structure has so many functions to perform which are necessary for growth that interference with these functions are apparent.
School problems (learning and/or behavior), psychosomatic symptoms, and general maladaptive destructive behavior are some of the means of conflict expressions. These are well represented in the children who are referred to a child guidance clinic such as the one from which the present research sample is drawn. Since it is their anxiety and depression which may be in part responsible for their behavior, shading responses (representing anxiety and depression) would be significant in the prediction of children's overt behavior from the Rorschach. Support for this assertion can be found in Piotrowski (1957) statement in which he maintains that shading responses "always refer to the mechanisms of control over the outward manifestations of emotions, including manifest anxiety" (p. 270). He adds that secondary controls are included in F+ and color responses. Little evidence of the effect on overt behavior of these secondary controls has been observed by the investigator in his experience with children's Rorschach, though this study will include a tabulation of these variables for the purpose of exploration.

Shading responses have some bearing on affectional needs which is especially emphasized by Klopfer (1954) though alluded to by others, such as Beck (1961) in his "texture" determinant. Klopfer (1954) notes that a significant and specified ratio-amount of shading responses suggests a "burnt child reaction which is an internal structural change related to some early traumatic incident in the development of affectional relationships. In other words, the development of affection can be disturbed by early emotional deprivation, either continued over a long
period of time or occurring acutely but conveying some important meaning to the developing person. This deprivation can be experienced by a child who has a hostile or indifferent parent or parents (or parent "figures") but it will be more striking under conditions of physical separations between the child and his parent(s). These separations are almost always meaningful if they occur before the age of 5 years, especially, if the separation is from the mother (Bowlby, 1960). Bowlby goes on to say that such separations commonly produce "affectionless" and anti-social characters.

While it is not the separation per se which causes an emotional disturbance, the resulting attitudes of the child who has been exposed to this situation is in such a state as to render him more or less maladaptive. It is quite possible that a child can emerge from a separation experience without feeling that the particular figure who has left is important or meaningful to him. However, as Bowlby's (1960) research suggests, most children who have experienced early separation become socially maladaptive.

While some writers contend the prediction of overt behavior from the Rorschach has not been demonstrated, prediction of overt behavior is at least implicit in the role of a psychologist, especially a clinician. The by-product a goal of understanding psychological processes would be prediction, that is, given a set of variables and stimuli which have previously been evaluated experimentally, the end result would be known with some degree of probability. It is well understood by the investigator that the multiplicity of factors, casual or correlative, makes accurate prediction far from realization. The recent literature, for example, that
concerns behavioral prediction especially on atomistic levels, certainly warrants this assertion. However, prediction with such instruments as the Rorschach technique are made without "scientific" support yet are reasonably accurate when used by "experts". The usual rationale for this "validity" (or perhaps more accurately "reliability") is the complex intuitive combining of many variables including the experience of the "expert" psychodiagnostician. Recently, Piotrowski (1960) demonstrated the prediction of overt behavior was possible, though with our present state of knowledge with the Rorschach one had to consider the "components one by one, concentrating on those which have the greatest bearing on active guidance, control, and eventual suppression of potential behavior" (p. 63).
CHAPTER II

REVIEW OF THE LITERATURE

A. Theoretical aspects of shading responses.

One of the first leading researchers concerned with shading responses on the Rorschach was Binder (1937). Binder divides chiaroscuro responses into shading responses or (C) and genuine chiaroscuro responses or Ch. The (C) responses refer to a response emphasizing a number of individual discrete shadings. These responses are inversely proportional to the Ch responses as well as to the frequency of M. He indicates that F(C) is rare since the form implies high differentiation, thereby involving several single shadings, each used separately. The Ch responses refer to a diffuse total impression of the chiaroscuro values of the blots. The various limiting aspects of the shading plays no role and is ignored; the outline may receive attention which may be significant. Ch responses are inversely proportional to F(C) and color responses. Examples of the preceding response type might be: animal skin (card IV or VI); stormy clouds (VII); stormy mod (Card IV). These are FCh, ChF, and Ch respectively.

Interpreting the shading responses, Binder states that F(C) composed of darker shadings suggests depressive, anxious feelings which are near the surface. The F(C) composed of lighter shadings suggests the stimulation of gentle emotions in compliant, easy adapting individuals. The F(C) is an indicator of sensitivity (and over-sensitivity).
In contrast to color Binder states,

the light-dark shadings...do not usually impress us as single images, but blend indistinctly with one another: we are reminded of twilight, a moonlit landscape, or of mistiness. They create, therefore, a whole impression that arouses a diffuse whole emotion impregnating the psychic core of the personality; a so called mood that tends to have an euphoric mood when a general lightness predominates, and a dysphoric tone when darkness prevails (p. 37).

In relation to color responses, F (C) becomes more sharply defined. For example, F(C) in a record without color responses suggests "substitute contacts" in which the subject compensates for direct adaptation and empathy by intellectualizing and responding in a hesitant manner. F(C) greater than FC usually indicates over-sensitivity. F(C) with CF and C and few, if any, FC correlates with the over-sensitivity of the schizoid personality which is essentially a facade.

The C h responses are most frequent in psychopaths, next most frequent in neurotics, and least frequent in normals. These responses refer to basic feelings at the core of the personality. Control of these moods are good in FCh and inadequate or absent in ChF and Ch. In all these responses a dysphoric affect is frequently noted.

Binder also noted that "dark shock" which is defined as a failure to respond to the dark cards, especially IV, or inhibition or distortion of responses on those cards with dark shading as being part of phobias and pachathenias.
Bohm (1953), who agrees with Binder, adds that chiaroscuro responses ("genuine", in Binder's terminology) attenuates expression of affect. He relates these responses to a measure of anxiety and then further believes that anxiety is a very effective restrainer of affective discharge.

Klopfer (1938) introduced his own system of shading response symbols. While his system was more similar to Binder than to Beck, he felt that Binder's classification overlapped and allowed ambiguity in some areas. Klopfer's system was based on diffusion versus texture qualities. Fc, designated by Klopfer, was identical to Binder's F(C) with the exception that vista responses were not subsumed under this scoring category. The K responses representing diffusion was interpreted as free floating anxiety. FK representing vista was interpreted as free floating anxiety accompanied by a state of self consciousness. All FC responses represented the "touch-feeling" sensitivity to environment. It's purest form (c) indicated primitive needs for contact.

Klopfer (1942) also introduced "toned down shading effects" symbolized by K. Here the shading effects are not strong enough to become vista, but instead, they are formed into two-dimensional percepts. Examples of K responses are topographical maps and x-ray pictures. Klopfer modified and extended his interpretations of shading responses. They not only represented anxiety and awareness, but were said to be emotional "shock absorbers", outlets for emotional responses and intellectualizing efforts in order to alleviate the full impact of the anxiety.

Finally twelve categories of shading responses were established by
They range from shading giving the impression of surface or texture or c; diffusion or depth or K; and a three-dimensional expanse projected on a two-dimensional plane or k. The use of "black" as a response is included under the scoring of C' (which also includes "white" responses). He hypothesizes that c, "indicates an infantile, undifferentiated, crude need for affection of an essentially physical contact variety" (p. 271). The ability to gratify such a need is usually nil. Implying more differentiation, the cF is similar to the above, but there is more ego control and better potential for socialization. Often this need is not expressed but felt as a craving. Fc percepts "indicate an awareness of and acceptance of affectional needs experienced in terms of a desire of approval, belongingness, and response from others retaining a passive recipient flavor... (p. 273)". This could reflect deep empathetic relationships. However, excessive Fc's suggest that the need for affection plays an unduly important role in the subjects adjustment.

Klopfer's C' can reflect toned-down reactions to the environment (in the presence of color responses) or depressive elements. He discusses the phenomena of the "burnt child reaction" which is said to have occurred if the achromatic responses equal or are greater than twice the chromatic responses. In this situation the subject's, "...responsiveness to outside stimulation has been interfered with by some kind of traumatic experience and withdrawal has resulted. The implication is that the need for an affectional response from others is so great that the person is "inhibited and toned down in this overt reactions to others for fear of being hurt or repulsed. There is a resulting overcautiousness in emotional contacts"
Beck (1937, 1945) introduced two types of shading responses, FX and V. He did not accept Binder's classification because he felt they overlapped. FX represented flat gray responses where form predominated. He also followed the scoring system of Rorschach by adding YF and pure Y. In 1952, Beck recognized texture as a legitimate determinant and labeled it, T. FX represented an anergic state along with oppressive affect. Vista signified self-appraisal though of the type associated with feelings of inferiority. Texture represented a need for contact of a very infantile quality.

In Beck's (1961) scoring system, shading is represented by Y exclusively. He also scores T for texture responses and V for vista, though the latter two categories are not seen as a product of the shading values, at least as far as interpretation is concerned.

Ames et al (1957) in her study of children's Rorschach responses utilizes a system of shading scores proposed by Loosli which is ultimately derived from Binder. For them, F(C) refers to responses which are finely differentiated aspects of shading. The "Clob" category contains responses which are diffuse in character and based on the darkness of particular blots. According to Loosli (1948),

> All F(C), it seems to me, whether given with pleasure or not, is to be considered as a vigorous (and successful) reaction against the painful reaction provoked by the grey. If the grey were not perceived as such, F(C) would be impossible. But the elaboration of that perception is quite different from the Clob: instead of abandoning himself passively to the diffuse impression, the subject takes a more
active attitude. Rising above the initial of displeasure, he studies the blot more closely, distinguishes shadings, and usually succeeds in making very fine interpretations (p. 14).

Both Loosli (1948) and Ames (1957) utilize this interpretation of shading responses in their study of children. It is the only such theoretical formulation that is related to children's responses yet the formulations are quite similar to those ascribed to adults responses. While this may be quite valid, more research is needed to examine the value of "adult" interpretations for children's productions.

Piotrowski (1951) presents the most simplified scoring system for shading responses as well as the most specific interpretation of these responses. His main principle of classification is in terms of lightness and darkness. His Fc and c response refer to responses which are based on light shades of grey. His Fc' and c' scorings refer to responses based on dark or black color nuances of the blots. His reduction in categories is based on the contention that perceptual analysis is not a precise measurement to warrant more differentiation. The behavior associated with the Fc response is that of watchfulness, delay, restraint because the person giving these responses has a deep-seated need for alleviating anxiety by a decrease in overt-motor activity. On the other hand, the behavior associated with c' responses is that of impulsiveness, activity, and carelessness because the person giving these responses has a deep-seated need for removing anxiety and fears by an increase in overt activity. In discussing cR (the light shading responses) and c'R (the dark shading responses) he gives the following description.
The fundamental psychological difference between the cR and the c'R consists in the cR indicating a deep-seated need for alleviating anxiety by a decrease in overt behavior in those spheres of life which cause fears or anxiety, and the c'R indicating a deep-seated need for alleviating fears and anxiety by an increase in overt activity, particularly in those spheres of life which cause the fears and anxiety. The person with many cR becomes quieter in his general behavior as his anxiety rises. On the other hand, the more his anxiety rises, the more fond of risks, the more active, belligerent, and irreconcilable becomes the individual with many c'R... The c'R are prominent in antisocial psychopaths, epileptics, patients with head trauma, adolescents....(p. 262, 263)

Rorschach and Oberholzer (1942) related the shading responses to, "...the capacity for affective adaptability but (it) also indicates a cautious and hampered sort of adaptability." Rorschach did not develop his ideas on shading responses other than to imply their value, suggesting the need for more research.

Hertz (1940) in her discussion of shading responses essentially reviews and summarizes the earlier works of Rorschach, Binder, Beck, Klopfer and Piotrowski already alluded to in the study. She follows Binder's schema, but views the others (with the exception of Beck) as having viewpoints quite similar.

Both Hertz (1940) and Sarason (1954) in reviewing the literature and significance of the shading response remark about the low frequencies of shading within an individual record and the subsequent meagerness of data. Both agree that there appears to be evidence that shading responses are related to depression, anxiety and fear, yet the data upon which the evidence is based is not as sufficient as would be desirable.
B. Experimental Aspects

The Fc and cF response (Klopfer definition) was examined specifically by Ainsworth (1959). She assumed that these responses involved,

(a) the ability to discriminate differences in shading, (b) the interpretation of visual stimulus complex in terms of a tactual concept, (c) the formation of a texture concept in terms of the integration of the features of blot contour and shading, indicating that a person not only perceives texture but uses the variable of texture as a basis for organizing her experience in conceptual terms, and (d) spontaneous verbalization that shading was a determinant of the concept (p. 391).

In her experiment utilizing a population of 34 male university students, 40 psychotic male hospital patients and 40 non-psychotic hospital patients (20 male and 20 female), Ainsworth (1959) found that there was a relationship between Rorschach texture scores and texture sorting scores, but the correlations were low. The intraindividual variability was important in that normals exhibited more of this variability than did psychotics; likewise psychotics exhibited more of this variability than did non-psychotic hospitalized patients. This study did not discriminate among the shading variables. Relationship between the tactual Fc versus the non-tactual Fc and diffusion may have shed more light on personality correlates of shading responses. The correlation which she reports are not merely "low" but are insignificant.

Waller (1960) found that shading responses did not correlate with other indices of anxiety in a non-psychiatric population. Her rationale is significant in terms of its application to the present research. According
to her discussion, shading may be a general property of personality which indicates whether a person under stress will or will not react with anxiety. Thus shading responses are not correlated with the presence of anxiety, but rather the potential for this state under stressful conditions. The significance of this study is that it illustrates the need to be "operational" in defining the environment and its relation to anxiety. Thus, in an environment which reduces anxiety (or which in some way artificially affects it), the shading responses may only indicate potential for the overt expression of anxiety. Shading responses are not divided into "light" or "dark" aspects.

Factorial studies with the Rorschach determinants have revealed a separate factors of shading and vista (Geurtsma, 1962) though Holtzman (1961) found only shading to be a separate factor. Singer et al (1956) reported that shading and texture responses were found to be loaded or an emotional or affective experience factor. All three of the factorial studies utilized adult populations.

These studies, with the exception of Holtzman, did not report reliability information in regard to shading scorings. Holtzman utilized a different medium (The Holtzman Inkblot Technique) for his study which renders it non-comparable to Rorschach.

Levitt, (1957) in studying anxiety indices on the Rorschach for a clinic population of children, concluded that only the frequency of shading responses was correlated with anxiety, at least as measured by the Childrens Manifest Anxiety Scale. His population was composed of children seen at
the diagnostic level of a clinic, ages 8.08 to 13.25 years (mean: 10.70 years), IQ or 103.62 (mean) with an S.D. 16.61, and there were 30 boys and 9 females. This study considered most Rorschach variables yet found shading significant related to CMAS scores. The specific shading categories did not demonstrate this relationship, but Beck's scores were used which represent the most limited division of shading responses.

Traisman, (1957) in studying asthmatic children confirmed his hypothesis that asthmatic children produce less shading responses than normal children. The normal child produced a mean Fe of 2.27 and 2.78, male and female respectively. The asthmatic child produced a mean Fe of 1.35 and 1.21, male and female respectively. Differences in the C' and c category were not significant. This was a well designed study, though the question of the influence of R on shading responses was not considered. Perhaps the lowered Fe responses in the asthmatics were due to a lowered general responsiveness.

Ames (1959) who considered shading responses (clob or C') as a "danger sign" of emotional disturbance in children, found that this was not statistically significant in her cross-validation study of 50 disturbed boys whose age range was 6 to 12 years.

Applebaum and Holtzman (1962) noticed that color-shading responses, that is responses on the Rorschach which combine color and shading in one response, had a higher incidence in patients who committed suicide and the attempted suicide, than the controls. The study utilized adult patients (mean age 33; mean IQ 120) and compared them to a control sample of non-
suicidal psychiatric patients, Kansas Highway Patrolmen, female patients with thyroid dysfunction, psychiatric residents and college students. They found that prediction of suicide or attempted suicide was more accurate in a hospitalized psychiatric population than the base rate prediction of suicide in that population. However, in the control group, the number of false-positives exceeded the suicide rate of the general population. They theorized that the color-shading responses represent "articulating, discovering, and penetrating activity". Patients concerned with the appraisal of life, "...may turn the capacity to penetrate beyond the obvious toward an inquiry into their own existence, and the purpose of their own being. They may then ask what they want from life, whether and how they can get it and whether the struggle is worth it (p. 160)". The problem of significance was well recognized by the authors. Predicting on the basis of expected behavior was not accurate in the control group nor the psychiatric population.

The data on children's Rorschachs suggest the production of small amounts of shading. While the range of various shading responses are from 0 to 6 (approximately), the means or medians almost never approach 1.00. This may be a conspicuous feature of "essentially normal" children as is suggested by Levitt's (1957) study, described previously. Ledwith, (1959) in her excellent extensive study, using Klopfer's scoring principles, reports a range of 0 to 5 for all shading responses (e.g. K., FK, c, C'). Her medians are essentially 0, except for c which reaches a value of 1 in the 9 to 11 year old groups. Intelligence apparently is uncorrelated with shading responses as far as the 3 to 11 year old children which she has studied.
According to Beck, (1961) the total number of Y, YF, and FY are represented by means of .84 for 6-9 year old children and .58 for 10-13 year old children. Total V, VF, and FV are represented by means of .90 and 1.06 for the respective groups. These children are "essentially normal". The absence of median values is a minor criticism of this research.

Setze et al (1957) using Klopfer's coring criteria studied 6, 7, and 8 year old children. For the eight year olds (IQ is average), he reports a mean K value of .46, a mean K value of .01, a mean c value of .69, and a mean C' value of 1.03. This was one of the first studies utilizing children with average intelligence. The technique is similar to Ledwith's (1959).

In general, the studies dealing with "essentially normal" children have demonstrated that shading responses are meager (on group data, at least), that there are higher concentrations occurring in individual records, and the usual problem presents itself, that of different scoring systems with complex rationales. None of the studies have differentiated shading responses on the basis of darkness or blackness and lightness or grey nuances.

In predicting overt aggressive verbal behavior in a person population, Rader (1957) found that mutilation content and to a lesser extent, aggressive content on the Rorschach were found to be positively correlated with aggressive behavior. Gorlow (1952) study utilizing adolescents found the same correlation to exist between their behavior and anxiety and hostility content scores in the Rorschach. Elizur (1949), however, found a negative
correlation between the aforementioned variables.

Wolf (1957) tested out Phillips and Smith's (1953) hypothesis that anatomy responses are given by individuals who do not act out their destructive impulses. However Wolf, whose population consisted of 37 male veterans, found that anatomy responses do not differentiate between "Actors-out" and "Non actors-out". He noted that those subjects who acted out produce more hostile content. Unfortunately only the frequency of anatomy responses were considered and not the quality.

Sarason et al. (1958) investigated Rorschach performance of "high" and "low" anxious children. He found that "high anxious" subject rejected more cards, gave fewer responses and less aggressive content, and responded less to any aspect of color (including chromatic and achromatic shading). The high anxious subjects were confused with inhibited subjects and, therefore, represent questionable conclusions.

Bowlby (1952) describes the typical characteristic of children who have been deprived in infancy of parent figures, especially mothers when observed late in childhood as, forming

...superficial relationships; no real feeling--no capacity to care for people or to make true friends; an inaccessability, exasperating to those trying to help; no emotional response to situations where it is normal--a curious lack of concern; deceit and evasion; after pointless stealing; lack of concentration in school (p. 31).

Bender (1953) in her observation and treatment of children, offers the following rationale for aggressive tendencies.

In general it seems that the withdrawal of love increases aggressive tendencies in
children...The child who is deprived of love tries to get satisfaction from other sources and starts with his destructive search. He has learned, in addition, that the deprivation which he may receive as punishment is not so severe as he had feared. (p. 33)

Goldfarb (1943) studied children who spent all or part of their first three years in an isolating institution and compared these children with those who had always been cared for in foster homes. He noted that children who had been in foster homes showed anxiety and neurotic mechanisms of various types which were lacking in institutionalized children. Even when these children were placed in equivalent foster homes at three to four years of age, studies in adolescence revealed them to be generally retarded in behavior, intelligence and personality development. They were also less well adjusted to the demands of the community group, less capable in making practical judgments or forming normal human relationships. While this study is essentially descriptive, several variables are "measured" and statistical significance is established. The reliability of judgment was high, though no statistical figures were established.

In studying 6 year-old children, Douglas and Blomfield (1958) reported that maternal separation involving children being away from home produced more pathological symptoms than if the child remained home. If children were placed in hospital, frequency of nightmares, thumbsucking, nail biting (but not enuresis) was greater in children who were separated from their mother prior to the hospitalization than children who had not experienced separation prior to hospitalization.
Anacolic depressions were observed by Bakin (1949) in which he described children without maternal contact as exhibiting "no responsiveness, listlessness, unresponsive, failure to gain weight, no sucking habits, poor sleep, frequent stools, and relative immobility."

Significant object loss has been suggested as an important variable in disease processes including those not traditionally considered "psychosomatic", for example, rheumatoid arthritis, diabetes mellitus, hepatitis (Schmale 1958; Muslin and Pieper 1962).

In a study relating separation to breast cancer, Muslin and Pieper (1962) interviewed 20 patients who had been diagnosed as having malignant or benign tumors of the breast. They were not informed of the diagnosis but interviewed each patient blindly to get data referring to the patients' separation experiences. While this was essentially a pilot study, they described the difference in patients with benign and malignant tumors as the latter having a higher incidence of recent and early separation experiences. They define a significant object as, "...any entity, animate or inanimate, upon which the subject has a real or symbolic dependence. A significant object in this sense then is a means of dependency gratification, and a separation experience is a loss or threat of loss of such an object of gratification, which object may be real or symbolic, conscious or unconscious, external or internal" (p. 1). There is considerable subjective judgment in this research, though the agreement by 2 judges is unanimous. It is only a pilot study, however.
C. Comments

The review of the literature is evidence of the meager amount of data that are relative to the current study. The studies concerning adult population have been more numerous than those involving children, and they have been alluded to by the present writer in an effort to get some perspective of the relationship between Rorschach shading variables, overt behavior and separation experiences. The "theorizing" in the literature also emphasizes adults with little discussion concerning the interpretation of shading responses in a child's record. Exploratory aspects of this research will attempt to delineate the effects of separation from each parent on the child in terms of shading responses and overt behavior. The population, however, is not expected to have many mother-child separations since it is an outpatient clinic.

The very basic issue of the actual nature of the shading responses which renders them indicators of anxiety, depressional, affectional systems is open to conjecture. The author's theoretical framework (incorporating previous theorizing and research) assumes that shading nuances are symbolically identical to the central affective "tones" which have developed as a result of early (primary) interpersonal relationships (mother-father-child). They reflect, so to speak, physical contact, communication of feelings of affection and anger, modes of handling such experiences and the developing attitudes toward others subsequent to the primary relationship experiences.
While most people produce some light and/or dark shading responses, the quality and quantity varies. In adult Rorschach records the absence of shading responses can connote repressive defensives or well organized denial; in children's records repression is not so common nor is denial so well organized. Therefore children allow a "projective investigation" which can be quite revealing and specific unlike adults.

Perhaps shading responses reflect a cultural experience in which all people suffer some early loss of gratification, but none the less, many individuals make a successful adaptation either because or in spite of this less-than-expected nurturance. However an accentuated quantity or quality of shading responses indicates the overbearing influence of these early interpersonal experiences on the developing personality and its relationship to self and others.

Light shading responses represent the need for contact of an infantile variety in which the personality has received only partial satisfaction. Associations about others are generally pleasant, but the fear of losing the attention of others makes this personality anxious—both to please and change in order to preserve a relationship. Anger cannot be tolerated on a directly expressive basis since loss of the other person is quite possible under that circumstance. Therefore, the light shading "responder" can be quite self-destructive, should he become too angry. (As this person grows older, it is speculated that more hostility develops as a result of the ever increasing realization that he can't receive as much infantile affection as he wants). A certain amount of light shading responses are
desirable since affection has a constructive role in the relationships of mature people. It does signify anxiety in this area, but of the type that can encourage constructive relationships and introspective methods of problem solving.

Dark shading reflects a more traumatic state of affairs insofar as interpersonal relationships are concerned. Here the personality is pessimistic about gratification coming from the environment. Instead, he must aggressively seize what he needs for "survival" and cannot wait for it to come passively. This occurs either because waiting reminds the individual of earlier similar painful events and his aggression is so stimulated that he cannot control it or because he simply no longer believes that nurturant relationships exist. The general dysphoric nature of this personality yet the inability to tolerate or internalize psychological pain produces motoric activity aimed at relieving tension on a short goal basis. Anti-social and affectionless characteristics can become part of a personality so dominated. As in light shading responses, some dark shading responses are desirable for they reflect ready energy, the ability to react quickly, and some impulsivity. The amount of differentiated and undifferentiated shading responses as well as other variables in the Rorschach technique are necessary for the interpretation of a "total" personality, but this is not the goal of this discourse or research.
CHAPTER III

PROCEDURE

A. Subjects

The 33 subjects used in the present research were male children between the ages of 7 years-6 months and 13 years-6 months who were referred to a child guidance clinic (Institute for Juvenile Research) because of maladaptive behavior and who were not obviously mentally defective. In addition, the availability of information concerning intelligence, social history and current behavior ("presenting symptoms") was a necessary condition for being included in the sample.

Since intelligence information was needed only to group subjects within general classification, group tests were regarded as sufficient if they were administered within 18 months prior to the experiment. If intelligence testing was not available or beyond the 18 month period, the Wechsler intelligence Scale for Children was administered. There were 20 WISC's administered. The remaining 5s had the following tests, 5--Kuhlman-Anderson, 4--Stanford Binet (L-M), 2--California Mental Maturity, one each of Otis Quick Scoring and Primary Mental Abilities.

The mean age for the total sample was 9.89; the median, 9.725; and standard deviation 5.48. The mean I.Q. for the total sample was 97.53; the median, 96.03; and the standard deviation, 13.58. Tables 1 and 2 present these frequencies for age groups and I.Q. categories respectively.

24
<table>
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<tr>
<th>Behavior</th>
<th>7-5 to 9-5</th>
<th>9-6 to 11-5</th>
<th>11-6 to 13-5</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra-Punitive</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Intro-Punitive</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>13</td>
<td>5</td>
<td>33</td>
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</table>
### TABLE 2

DISTRIBUTION OF EXTRA-INTRO-PUNITIVE SUBJECTS REGARDING IQ CATEGORIES

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<th>90-109</th>
<th>110-119</th>
<th>120-129</th>
<th>N</th>
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<td>2</td>
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<tr>
<td>Intro-Punitive</td>
<td>1</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>20</td>
<td>7</td>
<td>3</td>
<td>33</td>
</tr>
</tbody>
</table>
B. Method of collecting, scoring data

First, the subjects were selected in accordance with the previously stated criteria by a person other than the examiner. Second, the child was seen by the examiner who administered the Rorschach technique without knowledge of social history or presenting behavioral symptoms. All subjects were seen by one examiner in order to hold examiner variability constant. Third, the Rorschach protocol was scored under the same "blind" conditions by the examiner. Fourth, behavior was judged and separation experiences were recorded according to the criteria described below. Finally, two psychologists (judges), in addition to the examiner, who have had several years experience with diagnostic studies of children have scored the Rorschach protocols according to the criteria below.

C. Criteria and definitions

Each judge was given a set of scoring instructions which encompassed the operational definition of interpunitive--extrapunitive behavior and shading responses. These definitions and criteria can be found in the appendix (I,II) or in Chapter 1. In addition to those variables, each judge scored F responses including their "plus" and "minus" aspects according to Beck (1961). Beck's rationale was used since his tables were specific and had been in use for over 20 years. Their use was intended to reduce the arbitrary judgments of F scorings. Color responses were scored in terms of FC, CF, and C and this rationale is similar to both Beck (1961) and Klopfer (1954), though is defined specifically in the scoring instructions (Appendix II).
From the social history data, each subject's separation from his mother or father as well as the pertinent conditions (death, hospitalization, desertion, divorce, placement, etc.) was tabulated. Specifically, separation was defined as a situation in which a child is physically separated from a parental figure for more than 3 months at any one time. The age of each separation and the figure from whom the child is separated was also recorded.

D. Comments

The subjects were accumulated on the basis of securing a sample in which there were no less than 16 members in each of the 2 overt behavior groupings i.e., extrapunitive, intropunitive. The cases were seen as they came in for their conventionally scheduled appointments and while several cases were disqualified for inadequate information, the final research sample included 33 members, 17 extrapunitive subjects and 16 intro punitive subjects.

The cautions and suggestions of Cronbach (1949) with regard to Rorschach data were carefully respected. As he points out, Rorschach data is often characterized by not being normally distributed nor are there equal intervals between the quantitative expressions of one score. In other words, the difference between 0 and 1 may not be the same as the difference between 2 and 3 or 7 and 8. This could be applied to any determinant, though shading responses would serve as an adequate sample. Therefore, significance was determined on the basis of medians and chi-square techniques or variations thereof as exemplified in the following chapter.
CHAPTER IV

RESULTS AND DISCUSSION

The intropunitive and extrapunitive group included 16 and 17 members respectively. The effect of the uneven sizes of the groups' relative total number of responses upon shading variables were not significant. Using chi square technique, no association was found between dark shading responses and total R. \( (X^2=0.050) \). Fisher's exact probability had to be used in testing out the association between light shading and total R since the "expected" values fell below 5. These variables yielded a Fisher's value of .0683 which was significant. There was no association between the intropunitive and extrapunitive group in relation to total R. Here the median test yielded a non-significant value of .229. The median test was used because the data consisted of a continuous variable (R) compared to a non-continuous variable (intropunitive and extrapunitive behavior). Therefore the size of each group and the total number of R did not skew the data concerning shading and the behavioral variables.

When the group was divided into groups of those Ss who experienced no separations \( (N=17) \) and those who experienced separations \( (N=16) \), total R was found to be associated with these variables. Chi-square techniques, utilizing medians yielded the following value 5.10, significant at the .05 level. Therefore, the group which experienced separations produced a greater number of R than the group who did not experience separations.
Separation and non-separation was not associated with intropunitive-extrapunitive categories, contrary to the original hypothetical prediction. This also demonstrates that the 4 sub-groups are not identical or similar. A significance test was not utilized since the cases were approximately equal in each of the four boxes of the chi square technique, i.e. 8,8,8,9.

With regard to the primary hypothesis of this research, that is, the production of dark shading responses by extrapunitive Ss and the production of light shading responses by intropunitive Ss, there was confirmation at the .05 level of confidence (Fisher's exact probability = .0514). However, the group which experienced separations as compared to the group which did not experience separations differed, but in the opposite direction of the hypothetical prediction. The "separated" group tended to produce more light shading responses and less dark shading responses than the "non-separated" group though this trend did not reach significance. (Fisher's exact probability = .0751).

Color responses in terms of the two categories, FC and FC+C, were found not to be associated with the intropunitive-extrapunitive behavioural groups (Fisher's exact probability = .2908) or the separated-nonseparated group (Fisher's exact probability = .1998). Color responses in terms of the previously mentioned categories were not found to be associated with light shading responses (Fisher's exact probability = .0893) or dark shading responses \( (X^2 = 373) \). \( F+\% \) was not associated with total \( R(X^2 = .646) \). However \( F+\% \) in relation to intropunitive-extrapunitive behaviour yield numbers too low to actually test out.
Judgments concerning intropunitive-extrapunitive classification were in 100% agreement by the three judges. The criteria for the inclusion of a shading responses required 100% agreement by these judges also. There were a total of 123 shading responses which were reduced by 5(4%) because of lack of agreement resulting in 118 useable shading responses. The judgment of color responses proved more variable than expected. The criteria for acceptance of a color response was agreement by at least 2 of 3 judges. Two factors entered into the selection of this criterion. First, the early 'training' responses appeared reliable, yet under experimental conditions, the agreement varied. Secondly, almost all color responses had at least 2 agreed judgments. Usually, the 2 same judges agreed, while the third judge frequently was least consistent.

There were 73 color responses. At least two judges agreed on 72 of these responses thereby forming the experimental sample. Of these 72 responses, 14 were not in complete agreement by the 3 judges. Of these 14 responses, 9 disagreements were by the same judge. F+ was also variable among the three judges. Although Beck's tables were used, there was obviously too much room for variability perhaps because it is based on specifically verbalized content. F+ was determined for each record on the basis of the mean score of the three judges. While the variability between 3 judges reached a different of 20% at times, the usual difference was approximately 5-10% (in 91% of the F+ responses) with at least 2 judges commonly being in close agreement. The difference between any 2 judges was less than 6% in 81% of the responses. The lack of specificity and variability in definition of F+ reported in the literature probably accounts for difficulty in obtaining greater
reliability.

Shading responses were scored in terms of differentiation under "light" and "dark" categories. That is, Fc, c, Fc' and c" categories were considered. However, there were only 3 c responses (all within the extrapunitive group, incidently) which were not sufficient to warrant special treatment. There were 8 c' responses (4 extrapunitive, 4 intropunitive), too small to examine further. This suggests that undifferentiated shading responses are infrequently given by children and while in an individual record they may be quite significant, group data do not suggest possible interpretation. One problem that may give rise to this lowered undifferentiated shading responsiveness is its necessary verbal aspect which may exceed a child's capacity. Perception of undifferentiated diffusion and texture is not easily ascertained by verbal methods with respect to children.

The Ss were also described in terms of experiencing separations. Although each separation which a subject experienced was tabulated in terms of age and principal figure involved, such discrimination proved unrevealing. Of the 16 Ss who experienced separation, 12 experienced separation from their fathers, 3 experienced separation from both their father and their mother, and only one experienced separation from his mother exclusively. Thus separations are essentially in terms of the child's separation from fathers. Since these children were selected from an outpatient clinic, it is not surprising that the physical presence of the mother is not altered. Generally, separation from mother results in institutional placement of a child since the physical intactness of a family is so dependent upon the
mother figure. All the separations occurred below the age of 6 (inclusive), so there was no opportunity to examine the effects of separation in the formative years as compared to those after age 5.

Light shading was hypothesized as being associated with intropunitive behavior and dark shading was hypothesized as being associated with extrapunitive behavior. This hypothesis was confirmed at the .05 level of confidence. Therefore behavior restricted to the organism such as sadness, day dreaming, poor school achievement, etc. were associated with light shading responses. Conversely, behavior directed away from the organism, that is, fighting, stealing or in some way destroying the property or person of others were associated with dark shading. These behaviors can also be distinguished by the absence (light shading) of aggressive motoric activity and the presence (dark shading) of aggressive motoric activity. If it is true that shading represents anxiety (as alluded to by many writers already mentioned in the first two chapters), then light and dark shading further discriminates the form in which this anxiety is manifested in overt behavior.

Color and F+& have also been considered indicators of control over overt behavior. However, the current study fails to confirm an association between FC, CF+C and intropunitive-extrapunitive behavior. There is a tendency, though, for the extrapunitive group to produce more color responses than the intropunitive group. Speculatively, color may represent the quantity and/or quality of emotional energy, while the shading responses represent the controls which determine the expression of this energy.

F+&, likewise did not appear to be predictive of intropunitive-extrapunitive behavior. However the data was too meager to express in terms of
significance/non-significance. There is a tendency for the intropunitive group to give a higher F+\% in the middle range, while the F+\% is depressed in this range for the extrapunitive group. Furthermore, the extrapunitive group demonstrated a tendency toward both extremes along the F+\% continuum. There, the extrapunitive group is characterized by having a high or low F+\% while the intropunitive group is characterized by a more consistent middle range of F+\% production. F+\% representing conscious control may be subject to transformations on the level of overt behavior. Thus the high or low F+\% represents either over control (which is too anachronistic to be successful for a very long period) or under control (labile) which has little to offer in the way of controls.

Color responses and shading have also been compared in order to examine a possible association. As reported earlier, shading is acknowledged by many studies to be a distinct factor unrelated to color, yet the aspect of "lightness" and "darkness" had not been explored in relation to color. In the present study, there is no significant association between the color categories (FC, CF+C) and the separate light and dark shading categories. (Fisher's exact probability=.0893 and X^2=.373 respectively).

It was hypothesized that children who experienced separation would manifest extrapunitive behavior while children who did not experience separations would manifest intropunitive behavior. This hypothesis was not confirmed. It was also hypothesized that children who experienced separation would produce more dark responses and children who experienced no separation would produce more light responses. This hypothesis was not confirmed, but
the converse, that is, Ss with separations tended to produce more light responses and Ss without separation produced more dark responses. From this trend one would expect children who experienced no separations to be extrapunitive, while children who had experienced separation would be intropunitive. But separations were not associated with extrapunitive-intropunitive behavior. This suggests that shading responses may be representative of more than one personality factor. These shading responses in relation to separations may represent additional dynamics than when applied to overt behavior. The fact that total R is associated with separations-nonseparation further confounds the issue. Those Ss who experienced separations produce greater R than those Ss who did not experience separations. But R is not associated with shading responses and cannot be held responsible for their proportion. Perhaps the greatest significance of this problem is the suggestion of at least two distinct dynamic aspects to shading responses as well as the question pertaining to the nature of "father" separations.
CHAPTER V

SUMMARY AND SUGGESTIONS FOR FURTHER RESEARCH

A. Summary

Rorschach shading responses were dichotomized into two categories, "light" and "dark". Each of these two categories were hypothesized to be related to overt behavior and to separation experiences of children.

Light shading was hypothesized to be associated with intropunitive behavior such as daydreaming, poor school achievement, and depression. Dark shading was hypothesized to be associated with extrapunitive behavior such as fighting, stealing and destroying property. Children who experienced separation from their parents for a period of at least 3 months were hypothesized to give more dark shading responses than children who had not experienced separation; the latter were expected to produce more light shading responses.

F+%, and color responses in terms of FC and CF+C were also evaluated since they are often thought of in terms of control over overt behavior.

Male children between the ages of 7 years-6 months and 13 years-6 months who were referred to a child guidance clinic because of mal-adaptive behavior and who were not obviously mentally defective were used in the current research sample. Thirty-three Ss met this criteria resulting in a median age of 9 years-9 months, and a median I.Q. of 96.03. The children were examined blindly, that is without the knowledge of behavior or past history. There were 16 intropunitive Ss, 17 extrapunitive Ss.
In the same sample, there were 16 children who experienced separation from their parents and 17 who did not experience separation. Total R was not associated with the intropunitive-extrapunitive groups not was total R associated with the light-dark shading. However total R was associated to the separation-nonseparation groups.

The hypothesis which related light shading to intropunitive behavior and dark shading to extrapunitive behavior was confirmed at the .001 level of confidence. Separation experiences were not found to be associated with light shading or dark shading responses. Color was not found to be associated with overt behavior or shading responses. F+\% data were not sufficient to examine in terms of significance tests, but there was a trend for the extrapunitive groups to have both high and low F+\%, while the intropunitive group was within the middle range F+\%. Attempts were made to offer some explanation of various findings that went counter to the hypothetical predictions. Aspects of finger discrimination within each category were discussed along with the problem of judgment reliability.

B. Suggestions for future research

The current research suggests many questions and hypotheses. Further classifications of overt behavior into more specific categories than extrapunitive-intropunitive behavior might be revealing. Somatic symptoms, physical disease, social destructiveness and suicide are some aspects of a continuum upon which shading responses may be associated. Populations can be varied to explore the effect of sex and age.

The effect of separation from parents upon personality in relation to
shading and behavioral aspects cited in the current research ought to be further explored. While the current study has shed some light on the question of the often disregarded aspect of "father separations", more information concerning "mother separations" should be obtained. The multi-effect of separations in relation to shading responses also needs more clarification.

A general principle of examining new variables in an old technique has proven productive as exemplified by this research. Dark-light shading factors could not be obtained from the usual protocol in which the examiner "did not look" for the presence of such an aspect. The necessity for new variations seems needed even if it only teaches the diagnostician or researcher to look for that which is unknown or previously undefined.

Finally, it is obvious that this study should be replicated with another sample and an increase in the number of judges to ascertain the "true" value of the findings. The writer hopes the reader is encouraged to explore further the implications, both positive and negative, of the current research.


APPENDIX I

Instructions for scoring Extrapunitive-Intropunitive behavior.

The following behavioral dichotomy refers to "presenting symptoms" or "reasons for referral to the clinic". Please judge then according to the following criteria and check the appropriate box on the attached record sheet. Write any comments you may have next to the case to which they pertain.

EXTRAPUNITIVE Behavior: Presenting symptoms contain actions which are aggressive and destructive toward the environment such as fighting, stealing, injuring others, destroying the property of others and suicidal attempts.

INTROPUNITIVE Behavior: Presenting symptoms contain maladaptive actions which are restricted to the Subject and do not contain any "extrapunitive" elements. Examples of this category are, poor school achievement, somatic symptoms - complaints, stubbornness, lying, withdrawn, and/or emotionally isolated behavior, and crying.
APPENDIX II

RORSCHACH SCORING INSTRUCTIONS

Each protocol is to be scored in terms of the following categories of determinants: Shading, Color, and Form (F+/F-). The shading responses are not scored in a conventional manner but according to the experimenter's criteria described below. Color and form responses are scored in the conventional manner, that is, according to Klopfer (1) and/or Beck (2), though the F+, F- scorings follow Beck (2). Score each response on the tabulation sheet giving the Card number, response number, and remarks, if any.

Shading responses are defined as those percepts which are determined by the various achromatic and/or chromatic gradations in the Rorschach stimuli. These percepts are divided into two main categories on the basis of their total impact, that is, whether they are light or dark in shading. Each of these categories are further subdivided as to the presence or absence of form. The following are the specific scoring criteria along with examples:

SCORE SHADING RESPONSES: CRITERIA AND EXAMPLES

Fc Light shading, form dominant. The percepts contain the quality of lightness and the form is definite. Vista or three-dimensional percepts as well as transparencies are scored in this classification unless otherwise indicated. Examples: "Light furry rug, bear", "a woman with a transparent dress".

c Light shading, form disregarded or indefinite. The percepts contain the quality of lightness but the form is not used or vague. Examples: "fluffy light cloud", "light colored fur", "blue spongy material, the light coloring".

Fc' Dark shading, form dominant. The percepts contain the quality of darkness or black and the form is definite. X-rays are included in this scoring unless otherwise indicated. Examples: "black bat", "X-ray of chest", "a snake with a black stripe on its back", "a dark bearskin".

c' Dark shading, form disregarded or indefinite. The percepts contain the quality of darkness but the shape is not used or is vague. Examples: "It's dirt, dark", "a thunder cloud, the greys", "dark smoke".

In scoring shading responses, note these additional comments. Score shading responses independently of other determinants, that is, a
response is scored for shading even though it is combined with another determinant and/or may be secondary to it. Score only what the subject verbalizes. If a subject verbalizes "light and dark" with equal emphasis as responsible for the percept, place this under the appropriate light shading category. However, if a response cannot be scored under one shading category, note this on the tabulation sheet (remark column). Do not score "Additional Responses", i.e. those that appear in inquiry.

Color responses are scored in the usual manner, that is, according to Klopfer (1) and Beck (2). FC is scored when a percept combines color with definite form. CF is scored when the percept combines color with semidefinite form. C is scored when the form is disregarded entirely.

Form responses or F are those percept in which the shape or contour of the blot is the determining cue and where there is no other determinant. Form, like Color, is scored in the usual manner. However each F scoring should include a + or - according to Beck's findings (2, page 130ff). Score +, - for pure F responses only.

## APPENDIX III

### DISTRIBUTION OF VARIABLES ACCORDING TO SUBJECTS

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<th>Ss</th>
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<th>FC</th>
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45
APPROVAL SHEET

The dissertation submitted by Burton Siegel has been read and approved by five members of the Department of Psychology.

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the dissertation is now given final approval with reference to content, form, and mechanical accuracy.

The dissertation is therefore accepted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy.

June 4, 1963

Frank G. Kolber
Signature of adviser