

AN ABSTRACT OF THE THESIS OF

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Title: Use of the Rorschach in Detecting Perceptual  
Differences Among Persons with Motor Disabilities

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The Rorschach inkblot test has been used with various populations. This thesis investigated outdated and inconclusive past research as well as new and unexplored areas. The areas under investigation were two factors within the Rorschach inkblot test, popular and cooperative movement responses. Past research has indicated an association between popular responses and movement responses with motor impaired individuals. There has, however, been no research done on motor disabled individuals and the newly added score of cooperative movement.

Thirty subjects who used wheelchairs or motorized scooters volunteered to take the test. The volunteers lived in Kansas and Texas and were from local colleges or rehabilitation centers. The scores of these participants were compared to the collected norms assessed by Exner.

The statistical procedure used was a chi square to detect differences in the frequencies of popular and cooperative movement responses between this score and the norms established by scores from Exner. The results indicated no significant differences between these two groups and Exner's norm groups. Because of the variability for diversity within the group tested, comparisons with past research should be made with caution. Investigation with a more controlled and homogenous group is recommended for future research.

USE OF THE RORSCHACH IN DETECTING  
PERCEPTUAL DIFFERENCES AMONG  
PERSONS WITH MOTOR DISABILITIES

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A Thesis

Presented To

the Division of Psychology and Special Education  
EMPORIA STATE UNIVERSITY

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science

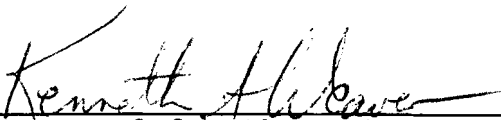
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by

Melissa K. Caldwell

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In memory of my mother, Shirley Caldwell, who taught me the value of faith, perseverance and dedication 10/25/92.

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## CHAPTER 1

## INTRODUCTION

According to the Dictionary of Psychology (Chaplin, 1985), the word projection means to attribute one's own traits, attitudes, or faults to others. The driving force behind the theoretical concept of projection is Freudian. It is through projection that an individual's unconscious level of personality can become more objectively evident.

Many analogies relate the human personality to various tangible concepts. A very well known analogy relates the dynamics of the personality with that of an iceberg (Hall & Lindzey, 1985). The tip of the iceberg relates to the conscious (that which is more easily seen) and the submerged part relates to the unconscious (i.e., the more substantive, hidden aspects of one's personality). It is in this relationship that the basis of projective tests are understood. Through this kind of testing, the submerged area (unconscious) can become more easily seen, while the tip (conscious) is bypassed. The iceberg is turned upside down, so to speak, exposing

more of its underside (unconscious).

The Rorschach inkblot test is a projective test that has been used for over 50 years to determine psychological diagnosis. With this test, one may tap into the underlying dynamics of an individual's personality. Many different versions for its scoring and interpretation have been developed. Exner's (1986) noteworthy standardized version is the most widely used, the first to be put on a computer program, and the scoring method utilized in this study.

Individuals project their mental perceptions through their responses to a neutral stimulus. During its long development and standardization, Rorschach interpretations have been collected on almost every population. Norms have been collected on almost all factors within the Rorschach test, and Exner has percentages allotted to what the "normal" mentally healthy individual's responses would be.

Using these collected norms, Exner developed his six constellations of deviancy based on specific reoccurring deviant responses and mental formations associated with various mental illnesses and diagnoses.



The total number of factors in each response determines whether a protocol is considered deviant enough to fulfill all the requirements of being positive for one or more of the constellations.

Researchers have begun to investigate the norms for projections from both the mentally deviant and the physically disabled individual. If one projects a different kind of perception corresponding to his or her differing mental disabilities, one should project a different kind of perception corresponding to his or her differing physical disabilities. This concept has been supported in past studies, indicating use of the Rorschach as an aid in deepening understanding of the physically disabled patient (Levi, 1956). Research has even offered possible constellation formation within this special group. The results of these studies have been multi-faceted and will be discussed later.

#### The Problem

Little research has been done on the motor impaired population's projection with the Rorschach Inkblot Test. Instead, physical illnesses, conversion

disorders, and various other illnesses have been examined with varying conclusions. Approximately 12 studies since 1927 have utilized the Rorschach with these populations. Most, however, were written in a language other than English and used a version of interpretation other than Exner's.

The purpose of this study was to compare Exner's percentage associated with the "normed" sample to the percentage associated with a sample of motor inhibited individuals (those individuals who are confined to a wheelchair or a motorized scooter) on the two factors within the test called "popularity" and "cooperative movement" (special score). It is believed and has been observed in past research (Belmont & Willner, 1964; Bona & Horn, 1969; Exner, 1990; Levi, 1953; Wapner & Werner, 1957) that within the motor impaired population, their perceptual and organizational abilities differ from the "normal" population's.

The combined total of all the test factors determines whether or not one or more of the six constellations of mental deviancy will check positive.

Therefore, it is easy to see how one or two factors that are considered deviant in comparison to Exner's collected norm could have such an impact for misdiagnosis as a positive on the constellations. This study may establish a referent for this special population within Exner's normed sample. If there is a difference in any collected norm versus the total from the motor impaired population, comparing the two for a baseline of normality should be done carefully.

#### Statement of Significance

As stated earlier, the research conducted with this population is very limited. This study could add more information to the already existing research and suggests future investigations with this special population. Since government aid, school funds, and other valuable resources are sometimes assigned in accordance with the results from this test, the findings in this study could create a need for further research, investigating possibly an updated "re-standardization" or an addendum that utilizes the differences found within this population.

## Review of Related Literature

In reviewing the literature, many limitations are placed on the availability of past research utilizing the Rorschach inkblot test and the physically impaired population. For example, research topics have included motor impairments and psychosomatic disorders as well. Some of the articles dated as far back as 45 years, some were in a language other than English, and some used a version of scoring and interpretation other than Exner's. Despite numerous efforts to identify a Rorschach profile uniquely associated with diagnosing psychosomatic as well as somatic conditions, most of the studies could not be replicated, thus labeling them as helpful but inconclusive.

This fact was not attributed to a weakness within the Rorschach test but rather to an inadequate conceptualization and categorization of disease (Bash, 1986). There are many factors within the Rorschach test itself that could have been examined for differences in perceptual and organizational abilities within this special population. It was after the

literature review that these factors were narrowed down to two--the populars and the special score of cooperative movement.

The popular score according to Exner represents very conventional answers and is a response that occurs at least once in every three records from the 7500 protocols used in collecting his norm sample. The norm percentage for populars varies for each card. The percentages for the norm collected in the non-patient protocols varies from 34% on card two to 94% on card eight. Interscorer reliability studies using this system show an agreement rate of 99% (Exner, 1986). In scoring populars using Exner's system, the response is coded either popular, or it is not. One study that supports a difference in the amount of populars found within the motor impaired population was done by Horn and Bona in 1969. They noted a decrease in the popular responses in the motor disabled population in comparison to the collected norm. An article by Birch and Diller (1959) also reported a low percentage of popular responses among cerebral damaged patients as reported by Piotrowski in 1937.

Although these studies were done over 20 years ago, and both were scored using systems other than Exner's, popular responses do appear to be an area of importance if Exner's norms are to be more realistic and comprehensive.

The cooperative movement coding is assigned to any movement response involving two or more objects in which there is clearly a positive or cooperative interaction (Exner, 1990). The positive interaction is unequivocal. Cooperative movement answers appear at least once in 80% of Exner's collected norm. Therefore, out of the 30 protocols to be given in this study, there should be approximately 1 cooperative answer in 24 of the protocols. Since cooperative movement is one of the latest special scores within Exner's system, the few studies available simply discuss what kind of people had more cooperative movement scores within their protocols. Exner noted cooperative movement answers appear to represent a form of projection related to an interpersonal style or interest.

Two sociometric studies cited by Exner consisted of peer nominations from 25 third year high school students and 35 college students. In both studies, a subject who had more than two cooperative movement responses was identified by their peers at a rate five times greater than other subjects as being the one who "Is the most fun to be with," "Is the easiest to be around," "Is a class leader," and "Is the most trustworthy." Conversely, the subjects who had no cooperative movement responses were identified by their peers as "Is the person I know the least about," "Is a person who does not seem to have many friends," and "Is a person I would probably not vote for a class office." Cooperative movement also appears to correlate with group therapy progress. Individuals with more cooperative movement responses had the greatest rate of quicker and more enduring patterns of recovery (Exner, 1990).

Since the cooperative movement score is a more specific kind of score in relation to movement, this research review also included the score of movement alone with reference to the motor inhibited individual.

Two studies have investigated the relation of motor performance to perceived movement in the Rorschach inkblots. The authors of these studies based their hypotheses on two independently-developed viewpoints. Rorschach (1942) believed increased perception of human movement in the inkblots was linked to decreased motor response and vice versa. In contrast, sensory-tonic theory (Wapner & Werner, 1957) held that when motor activity was inhibited or held constant, the motor response would be expressed through another avenue, for example, through increased perceptual activity. The ideas behind both of these theories led to the hypothesis that an inverse relationship exists between motor expression and the perception of movement (Belmont & Willner, 1964). Their follow-up investigations found motor activity and perceived movement are both too multidimensional in character to always support this inverse relationship.

Other research that offered supportive evidence for the differences within the physically impaired described how brain damage can cause a generalized



suppression of personality factors (Reitan, 1955).  
Many disabled individuals that showed maximum progress  
in rehabilitation portrayed a neurotic profile with  
outstanding features of superegos (Levi, 1953).

## CHAPTER 2

## METHOD

Participants

The target population is motor impaired individuals who use a wheelchair or a motorized scooter. The sample utilized in this study consisted of two groups. The first group consisted of 30 motor disabled individuals. The second group consisted of the standardized norm group according to Exner's studies on Rorschach testing (Exner, 1986).

Because of obvious limitations in the number of subjects within the motor disabled population, the subjects selected from this population were chosen by a non-random convenience sample procedure. Since many forms of motor disabilities exist, this study was limited to any motor impairment that required the use of a wheelchair or a scooter. Disabilities that required mechanical aids to facilitate walking (walkers, crutches or any other extension) were not considered in this study.

The sample of disabled individuals consisted of 15 men and 15 women who were enrolled in a college

and/or who were involved in a community advocacy program for the education and rehabilitation of citizens with handicaps. The participants were volunteers from both Texas and Kansas and were between the ages of 18 and 65. The comparison group consisted of 2500 non-patient individuals who Exner classified as the normative sample for the two factors under investigation in this study (cooperative movement and populars). The breakdown of men and women in the 2500 protocols gathered by Exner is not given. For practical purposes, this study will investigate gender under the assumption that the division between the two is equal.

According to Exner, varying percentages are allotted for the collected norm of populars per card. Out of 10 cards there is a possible 13 popular responses with the percentage of nonpatient reporting of these populars being from 34% to 94% (Exner, 1986). The data collected for each card were figured at a percentage for comparison to the standardized norm. In reference to the cooperative movement, Exner figured a collected norm of 1 in 80% of the total responses.

Therefore, there should be approximately 1 cooperative movement in 24 of the 30 protocols to fulfill the 80% statistic for this special score (Exner, 1990).

### Design

The research design utilized nominal data by categories on a descriptive level by categories. This study investigated the relationship between the differences in responses to the Rorschach by the normed population in comparison to the population with motor disabilities. Since the data were collected in the form of frequencies, it was interpreted on a categorical basis. The data frequencies for the disabled population were compared to the data frequencies that have been standardized and are considered the "norm" for the Exner version of scoring and interpretation.

The frequencies that were compared, both standardized and collected, were in the populars and cooperative movement scores of Rorschach scoring and interpretation. The popular responses are those responses deemed to be each card's norm according

to Exner. There are 13 popular responses in all, and from them one can detect the notion of conventional perception. Rorschach believed that in the average "normal" protocol, one in every three responses would be popular to the general population (Rorschach, 1923). Cooperative movement scores, the second element of investigation within this study, are scores that are assigned to any movement response involving two or more objects in which the interaction is clearly positive or cooperative (Exner, 1990). Both populars and cooperative movement scores are vital in determining the degree of severity and in providing indicators for different deviant constellations. Based on past research, personal observations and logic, the population with physical disabilities was expected to have more cooperative movement responses than the norm collected by Exner.

#### Procedure

The heads of the departments of disabled accommodations at two universities in Texas and Kansas and the directors of R.E.A.C.H. (Rehabilitation, Education, and Advocacy for Citizens with Handicaps)

in Texas were contacted for potential volunteers. Through each department head or director, a letter was sent to all eligible volunteers briefly explaining the need for volunteers. Each participant was not told the study's purpose but was informed that the research was for graduate thesis work, that it involved taking the Rorschach inkblot test, and that the results were confidential. The subjects were contacted and times of testing were set up at the convenience of the subject.

The tests were given individually by three different graduate students who had completed the course on the Rorschach Inkblot technique. The test was given and scored according to Exner's 1986 version of test scoring and interpretation. The only areas that were scored were the populars and the special score-cooperative movement. Since these two factors are both either-or in their scoring and do not necessitate judgment calls from the scorers, the same three graduate students also evaluated the presence or absence of these two factors. Exner's norm sample was the comparison group for this study. Since the

amount of populars determines whether a group of responses fall within "normality," the frequencies of these responses were investigated for validity. The reliability and validity for both of these chosen factors are very high due to the "absoluteness" in assessing their presence. In essence, however, it is the ultimate reliability and validity of the standardized group according to the norm collected by Exner that is under investigation in the population with disabilities.

#### Analysis

The two groups were compared to determine whether there was a difference in these two scores by using the chi square technique. Each group was compared to the normed group percentages according to Exner (1986). That is, the expected frequencies were obtained from Exner's norms for these responses.

The Cooperative movement was the total of all cooperative movements on all 10 cards that are compared between men and women. Again, the expected frequencies were determined from Exner's norms.

## CHAPTER 3

## RESULTS

The Rorschach inkblot test was given to a group of 30 motor disabled individuals. Two factors, the number of popular responses and the number of cooperative movement responses, were examined within each of the 30 protocols. The obtained frequencies were compared to Exner's percentages collected for the norm on these two factors.

Each of the ten cards or ink blots have their own popular response. Cards I, V, and X each have two popular responses. A total of 13 different popular responses are possible, and each of those 13 populars has a different percentage based on its frequency of occurrence. Since the data collected in the past on differences between gender and their rate of responses on populars was inconclusive and warranted further investigation (Exner, 1990), this study considered the differences and division to be equal. This division was the same division assumed by Exner in his original collection of the percentages for the norming that is still used today. The results



of this study found that in comparing each of the 13 popular responses collected from the motor disabled individuals to the norms for each of the 13 collected by Exner, no significant differences for the frequency of popular responses or between genders were found.

On Card 1, the males produced 2 out of 15 protocols with a popular butterfly response detail while the female population had 3 out of 15,  $\chi^2(1, N = 15) = .001, p > .05$ . For the popular response to the bat detail the male population had 4 out of 15 while the female population had 4 out of 15,  $\chi^2(1, N = 15) = .14, p > .05$ .

On Card 2, the males produced 1 out of 15 protocols with a popular response while the female population had 6 out of 15,  $\chi^2(1, N = 15) = 2.30, p > .05$ . On Card 3 the males produced 9 out of 15 protocols with a popular response while the female population had 5 out of 15,  $\chi^2(1, N = 15) = .76, p > .05$ . On Card 4, the males produced 5 out of 15 protocols with a popular response while the female population had 8 out of 15,  $\chi^2(1, N = 15) = .39, p > .05$ .

On Card 5, the males produced 7 out of 15 protocols with a popular response to the bat detail while the female population had 3 out of 15,  $\chi^2(1, N = 15) = .87, p > .05$ . For the popular response to the butterfly detail, the male population reported 6 out of 15 while the female population had 8 out of 15,  $\chi^2(1, N = 15) = .14, p > .05$ .

On Card 6, the males produced 2 out of 15 protocols with a popular response while the female population had 7 out of 15,  $\chi^2(1, N = 15) = 2.11, p > .05$ . On Card 7, the males produced 7 out of 15 protocols with a popular response while the female population had 4 out of 15,  $\chi^2(1, N = 15) = .51, p > .05$ . On card 8, the males produced 12 out of 15 protocols with a popular response while the female population had 11 out of 15,  $\chi^2(1, N = 15) = .02, p > .05$ .

On Card 9, the males produced 1 out of 15 protocols with a popular response while the female population had 1 out of 15,  $\chi^2(1, N = 15) = .001, p > .05$ . On card 10, the males, produced 1 out of 15 protocols with a popular response to the spider

detail while the female population had 2 out of 15,  $\chi^2(1, N = 15) = .27, p > .05$ . On the same card, the male population had 6 out of 15 protocols with a popular response to the crab detail while the female population had 5 out of 15,  $\chi^2(1, N = 15) = .05, p > .05$ .

Breaking each cooperative answer down per card is not possible; therefore, only the total number of protocols containing at least one cooperative movement response was compared. According to Exner (1990), cooperative answers appear at least once in almost 80% of the normative sample. In the motor-disabled sample of 30 individuals, this equated to one cooperative movement response in at least 24 of the protocols. The data, however, showed that there were only 17 protocols with at least one cooperative movement response and that the results were not significant at the .05 level. The male population had 10 out of 15 protocols with at least one cooperative movement response while the female population had 7 out of 15,  $\chi^2(1, N = 15) = .31, p > .05$ .

## CHAPTER 4

## DISCUSSION

This study hypothesized fewer popular responses and more cooperative movement responses within the Rorschach inkblot test results of individuals with motor disabilities in comparison to Exner's collected norms. The two areas chosen in this study were based on outdated and sometimes inconclusive past research and theories. The hypothesized findings were not supported, as the observed frequencies were not significantly different than the established norms. Individuals with motor disabilities did not give significantly different responses than did the norm group in reference to the two variables studied here. Of course, differences might possibly be shown on other more subtle scores, but the present study can shed no specific light on this possibility.

The present results indicate the Rorschach scores examined here are not diagnostically significant in assessing persons with motor disabilities. In relation to past research, it should be noted the results from this study are not in agreement with Belmont

and Willner (1964), Bona and Horn (1969), Rorschach (1942), and Wapner and Werner's theory (1957). These results do not disprove any past research but do reveal the need for more defined research. This study limited its sample to those individuals who necessitated the use of a wheelchair or a motorized scooter within their daily living. For research to be more applicable to this special population, a more defined limitation should be the sample (i.e., only individuals who are motor disabled because of spinal injuries).

The sample for this study consisted of many differing limitations. It included people with arthritis, cerebral palsy, spinal injuries, muscular sclerosis, osteoporosis and other disabilities. Such varying neurological and muscular differences and the effects they each may have on one's body could be significant enough to keep the sample from being sufficiently homogenous to detect significant differences. It should also be noted that because of small cell size on several of the chi squares (less than 5), the Yates' correction could have been an overcompensation creating insignificant results. Results from a larger cell size without Yates' correction could result in a different outcome.

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## APPENDIX



## APPENDIX A

## INFORMED CONSENT DOCUMENT

The Department/Division of Psychology and Special Education supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subjected to reprimand or any other form of reproach.

This study will involve taking the Rorschach inkblot test. It will take between 30 minutes and an hour to complete. There should be no discomfort involved in taking the test. If there is any kind of discomfort during the test, however, you should inform the examiner. There are no risks involved in taking this test. The test will be scored and discussed anonymously to ensure confidentiality.

"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I understand the potential risks involved and I assume the voluntarily. I likewise understand that I can withdraw from the study at any time without being subject to reproach."

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