

AN ABSTRACT OF THE THESIS OF

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Title: A COMPARATIVE STUDY: EDGING ON THE BENDER-GESTALT TEST, THE

DRAW-A-PERSON TEST, AND THE MEMORY-FOR-DESIGNS TEST

Abstract approved: Cooper B. Holmes

A study on the consistency of edging was conducted using three selected drawing tests. Seventy-six college students were administered the Bender-Visual-Motor-Gestalt test, the Draw-A-Person test, and the Memory-For-Designs test. The test administration was purposely designed so that the order of the tests given was rotated from subject to subject. Twenty-eight edgers were found from this initial sample, and it was on these data the analysis was run. The Cochran's Q technique for nominal, dichotomized data was used for analysis in answering the question of a relationship between the three tests and possible consistency of edging performance. Results showed two significant values of Cochran's Q. At an alpha level of .05 with 2 degrees of freedom (interpreted the same as a chi square), both values were greater than

the required value of 5.991. Because of these results, the possibility of a significant relationship existing between the three tests and consistency of edging was rejected. While the large majority of edging occurred on the Draw-A-Person test, only a small amount of edging occurred on the Bender-Visual-Motor-Gestalt test and the Memory-For-Designs test. Edging was not consistent across all three tests.

A COMPARATIVE STUDY: EDGING ON THE
BENDER-GESTALT, THE DRAW-A-PERSON, AND THE MEMORY-FOR-DESIGNS TESTS


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CHAPTER 1

INTRODUCTION

Psychologists and psychiatrists have been evaluating their patients' figure drawings for years. This seems to be an avenue for the patient's repressed and suppressed unconscious feelings to be exposed. Many implications pertaining to personality characteristics and/or psychological diagnoses have been developed, thus, many types of drawing tests have evolved. It was the concern of this paper to compare results on selected tests and see if the different stimuli presented to the subject resulted in similar or dissimilar drawing styles regarding edging of figures.

Authors such as Bender (1938), Clawson (1962), Machover (1949), Pascal and Suttell (1949), and Urban (1963) have set the groundwork for clinicians to interpret patients' drawings. They have suggested methods which aid in determining whether persons have emotional and personality problems. The Bender-Visual-Motor-Gestalt test (Bender, 1938), the Draw-A-Person test (Machover, 1949; Urban, 1963), and the Memory-For-Designs test (Graham and Kendall, 1960) are the three drawing tests that will be studied in this project. These seem to be well established in their own manner, yet a comparison of drawing styles on the three was the focus of this study.

The characteristic used in analysis of drawing styles in this study is defined as placement of drawings on the edge of the paper, more

commonly referred to as "edging" (hereafter, subjects who edged their figures will be referred to as "edgers"). Edging of figures is where all the designs or at least a majority of them are drawn on the top, bottom, or sides of the sheet of paper. Only a small amount of research exists pertaining to edging on the three tests used in this study. Two of these tests present interpretations for the characteristic of edging. In her book, Machover (1949) refers to this characteristic as placement of figures. Lack of insight, unjustified optimism (conceitedness), and a feeling of insecure footing are interpretive characteristics of drawing the human figure to one side or another of the sheet of paper. Also, Machover suggested that the placement of figures seems to be less subject to conscious control and variability than other structural aspects of drawing. Urban (1963) in his catalogue on the Draw-A-Person test refers to this characteristic as placement of figure, as well. He infers from this style of drawing that it shows how a subject places himself relative to his environment. More specifically, a drawing on the bottom of the page reveals feelings of inadequacy, insecurity, and possibly some depressive symptoms. Drawing on the top of the page shows positive environment-orientation. The final record of interpretive analysis found for this project comes from the Bender-Gestalt test for children by Clawson (1962). She labels edging as page cohesion and regards this compression of figures into a small portion of the page as indicative of a person who tends to withdraw from his environment. The person feels threatened by his environment and has an excessive need to cling to someone or something.

Some recent literature by Holmes, Persinger, and Busenbark (1981)

revealed that edging does not show up significantly on Memory-For-Designs records. With this research in mind, the focus of the present study was primarily running comparison of three established psychological tests.

As mentioned above, the major focus of this study was to compare the effect of stimulus properties of these tests and the resulting performance between them. The Bender-Visual-Motor-Gestalt test is composed of figures with curved lines as well as some straight-lined figures, while the Memory-For-Designs test consists of all straight-lined figures. Both of these tests have visual stimuli; that is, figures on cards that the subjects see. The Draw-A-Person test, on the other hand, has no stimulus, per se. Maybe that is an audio stimulus; yet, there is nothing to be seen or touched that might stimulate a drawing. Nonetheless, all three tests are drawing tests, and they require pencil and paper.

By name

Director used a stopwatch when administering the Memory-For-Designs
using the standard instructions.

The experimenter asked for volunteers from introductory ps

CHAPTER 2

METHOD

Subjects

From testing a sample group of seventy-six college students presently enrolled in an accredited institution of higher education in the State of Kansas, a group of twenty-eight was determined as edgers for this project. These subjects came from more than one institution for the purpose of getting enough project subjects. The total number of male subjects was 30 and that of female subjects was 46. Of the 28 edgers there were 11 males and 17 females.

Apparatus

The materials used in this project were the Bender-Visual-Motor-Gestalt test (Bender, 1938), the Draw-A-Person test (Machover, 1949; Urban, 1963), the Memory-For-Designs test (Graham and Kendall, 1960), blank sheets of white paper and number 2 leaded pencils. Also, the researcher used a stopwatch when administering the Memory-For-Designs test, according to the standard instructions.

Procedure

The experimenter asked for volunteers from introductory psychology classes to participate in a study involving three short tests. A time was then arranged between the subjects and researcher for testing.

In order to determine if a subject's drawing was classified as edging or not, a specific definition was used (see Appendices 1, 2, and 3).

When the figure(s) was drawn along the top, bottom, or sides of the sheet of paper, it was called edging. More specifically, all Bender-Visual-Motor-Gestalt test figures and Memory-For-Designs test figures were to be drawn in the top one-third of the page, the bottom one-third of the page or the side one-third such that no figure extended beyond the midpoint of the page (Holmes, Persinger, and Busenbark, 1981). In the case of the Draw-A-Person test, the whole of the figure needed to be drawn in the top, bottom, or side one-third of the page such that no part of the figure crossed the midpoint of the page.

The Bender-Visual-Motor-Gestalt test, the Draw-A-Person test, and the Memory-For-Designs test were administered individually, according to standard instructions for each test. The order of the tests was in a rotated sequence such that each subject received one of three sequences. Thirty minutes per subject was required for completion of the tests. When the figure or figures on any one of the tests were classified as edging, that particular test was included in the study, and the other two tests taken by the same subject were compared to that one.

Following test administration to each of the 28 subjects, all data were classified as edging or non-edging according to the criteria set forth in the appendices (see Appendices 1, 2, and 3). Analysis for this project used the Cochran's Q technique (Siegel, 1956). The alpha level of significance for this data was set at .05, with $k - 1$ degrees of freedom.

than the required level, also

CHAPTER 3

RESULTS

Of seventy-six subjects who were administered the Bender-Visual-Motor-Gestalt test, the Draw-A-Person test, and the Memory-For-Designs test, twenty-eight subjects were classified as edgers. It was this latter group of subjects whose results were analyzed and compared.

Using the Cochran's Q formula as presented by Siegel (1956), the analysis resulted in two significant values of Q . The results of the 28 edgers were recorded in two tables for the statistical procedure, thus two values were obtained. Interpretation of this technique is the same as a chi square (X^2) with degrees of freedom being $k - 1$ (where $k =$ the number of treatments or tests).

Table 1 organized the data regarding consistency of edging on the three specified tests used. At two degrees of freedom with the alpha level at .05, this value of Q ($Q_1 = 22.741$) is greater than the required 5.991 for significance.

Table 2 organized the data according to consistency or edging versus the order of tests given. Notice on this table that not all of the subjects received the same test first, second, and last according to the procedure set forth in this project. This value of Q ($Q_2 = 7.185$) is greater than the required 5.991, also.

Table 1

Presence (x) or Absence (o) of Edging On the Bender-Gestalt, the Draw-A-Person, and the Memory-For-Designs Tests

Subject Number	TESTS ADMINISTERED		
	B-V-M-G	D-A-P	M-F-D
1.	o	x	o
2.	o	x	o
3.	x	x	o
4.	o	x	o
5.	o	x	o
6.	x	o	o
7.	o	x	o
8.	o	x	o
9.	o	x	x
10.	o	x	o
11.	o	x	o
12.	o	x	o
13.	o	x	o
14.	o	o	x
15.	o	x	o
16.	o	x	o
17.	x	x	o
18.	o	x	o
19.	x	x	x
20.	o	x	o
21.	o	o	x
22.	x	o	x
23.	o	o	x
24.	o	x	o
25.	o	x	o
26.	o	x	o
27.	o	x	o
28.	o	x	o
Total Edgers	5	23	6

Table 2

Presence (x) or Absence (o) of Edging According to Order of Test

Administration

Subject Number	TESTS ADMINISTERED IN ORDER		
	1st	2nd	3rd
1.	DAP x	MFD o	BG o
2.	BG o	DAP x	MFD o
3.	BG x	DAP x	MFD o
4.	BG o	DAP x	MFD o
5.	BG o	DAP x	MFD o
6.	MFD o	BG x	DAP o
7.	BG o	DAP x	MFD o
8.	MFD o	BG o	DAP x
9.	DAP x	MFD x	BG o
10.	BG o	DAP x	MFD o
11.	DAP x	MFD o	BG o
12.	MFD o	BG o	DAP x
13.	BG o	DAP x	MFD o
14.	DAP o	MFD x	BG o
15.	DAP x	MFD o	BG o
16.	DAP x	MFD o	BG o
17.	BG x	DAP x	MFD o
18.	BG o	DAP x	MFD o
19.	DAP x	MFD x	BG x
20.	BG o	DAP x	MFD o
21.	MFD x	DAP o	BG o
22.	MFD x	BG x	DAP o
23.	MFD x	BG o	DAP o
24.	DAP x	MFD o	BG o
25.	MFD o	BG o	DAP x
26.	BG o	DAP x	MFD o
27.	DAP x	BG o	MFD o
28.	BG o	MFD o	DAP x
Total Edgers	13	16	5

From these results, the decision was made to reject the null hypothesis (H_0). That is, there was a relationship between edging and the three tests used in this project, in that edging was frequent on the Draw-A-Person test and not the others. However, it must be noted that edging was not consistent; i.e., edging on one test was not significantly followed by edging on the other two tests. Specifically, the total edgers on the Draw-A-Person test was 23 out of 28 subjects, where 5 and 6 edgers total were found on the Bender-Visual-Motor-Gestalt test and the Memory-For-Designs test, respectively. Only one subject edged on all three tests, while only four subject edged on two tests. Order of presentation resulted in a significant Q value in that there was less edging on the third test; however, of significance to this study, edging was not dependent upon which test came first, second, or third. Thus, the overall conclusion from these results is that edging is not consistent and is not influenced by the order in which the tests are given.

CHAPTER 4

DISCUSSION

This study was designed to determine if a relationship existed between the results of the same subjects on three selected tests and the consistency of edging. Results showed that there is a significant finding for this sample of college students with regard to edging on the Draw-A-Person test, but not with consistency on all three tests.

More specifically, though, the researcher was seeking to determine if consistency of edging on the three specified tests would occur or not; the simple reason being that these tests are similar in style and purpose. All three of these tests are used widely in the practice of clinical psychology and very little seems to be known of their relationship. Thus, the primary purpose for this project was to examine the possibility of a consistency of performance with all three tests, namely edging of figure(s).

From this present study, it seems very evident that the subjects are not consistent on edging on all three tests. Rather, it is more probable that one will find edging on the Draw-A-Person test. Of the 28 edgers in this study, an unusually large number, 23, occurred on the Draw-A-Person test; whereas 5 and 6 were all that edged on the Bender-Visual-Motor-Gestalt test and the Memory-For-Designs test, respectively. The Draw-A-Person test resulted in more edging than did the other two

tests used in this project. Possibly, the lack of a definite stimulus in this test creates anxiety in the subject resulting in edging.

The significant relationship between these three tests seems to be the large number edging on one test, the Draw-A-Person test, and very little edging on the Bender-Visual-Motor-Gestalt test and the Memory-For-Designs test. There is an obvious difference between these tests and that is the human body or a human figure being drawn on one test where the other two tests require drawings of figures, more like inanimate figures. All three of these tests are being used in the mental health field for similar purposes of identifying emotional disorders, brain dysfunctioning and/or personality problems; yet, one test resulted in more edging than the other two. Herein lies a very important question. Is it possible that asking a patient to draw a human body would elicit more of this characteristic than asking that same subject to copy unusual figures? It seems to be a question yet unsolved.

Before any more is written or implied from this research, it is necessary to bring to mind some possible variables that may have influenced these results. It ought to be noted that the population from which this subject sample was drawn is that of present college students. Possibly, a different type of subject would affect the results; for example, psychiatric patients may be more or less consistent regarding edging. Also, the number of subjects, were it increased, might possibly provide a different understanding of these tests. Maybe the present researcher came across subjects that experience some form of instability in their present circumstances that could have influenced their performance in a psychological test setting. Maybe, the lack of a stimulus in the

Draw-A-Person testing creates anxiety for the subject resulting in edging. The lack of a stimulus vs. the presence of a stimulus in a testing situation is a question worth considering, as well.

The administration of the tests was specifically designed so that each subject would receive a different sequence of tests (there were three sequences). Further studies on the order of presentation perhaps could show a difference in results. For example, although, there are no data to suggest it, giving the Memory-For-Designs test first might affect consistency of edging on the three tests.

The most surprising finding in this project was the lack of consistency. There was only one subject out of 28 whose edging occurred on all three tests. Evidently, the stimuli on the Draw-A-Person test results in edging, while edging did not seem to occur as frequently on the other two tests. Possibly, consistency of edging does not exist on these drawing tests. Edging may occur on individual tests; yet, not occur simultaneously with the other two tests of similar style.

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HORIZONTAL AND VERTICAL CURVES OF THE CHRYSLER-DESIGNER STUDIES

Horizontal Axon

- curve 1- 1000
- curve 2- 2000
- curve 3- 3000
- curve 4- 4000
- curve 5- 5000
- curve 6- 6000
- curve 7- 7000
- curve 8- 8000

APPENDICES

- curve 1- 1000
- curve 2- 2000
- curve 3- 3000
- curve 4- 4000
- curve 5- 5000
- curve 6- 6000
- curve 7- 7000
- curve 8- 8000

Figure

Figure

Chrysler-Designer Studies

APPENDIX 1

HORIZONTAL AND VERTICAL AXES OF THE
MEMORY-FOR-DESIGNS FIGURES

Horizontal Axes*

Figure 1- 38mm

Figure 2- 35mm

Figure 3- 20mm

Figure 4- 39mm

Figure 5- 14mm

Figure 6- 38mm

Figure 7- 26mm

Figure 8- 40mm

Figure 9- 58mm

Figure 10- 35mm

Figure 11- 31mm

Figure 12- 25mm

Figure 13- 38mm

Figure 14- 19mm

Figure 15- 64mm

Vertical Axes*

Figure 1- 33mm

Figure 2- 35mm

Figure 3- 33mm

Figure 4- 38mm

Figure 5- 50mm

Figure 6- 38mm

Figure 7- 41mm

Figure 8- 33mm

Figure 9- 13mm

Figure 10- 38mm

Figure 11- 32mm

Figure 12- 53mm

Figure 13- 20mm

Figure 14- 38mm

Figure 15- 20mm

*To obtain reductions, multiply by .75.
(Persinger, 1978)

APPENDIX 2

HORIZONTAL AND VERTICAL AXES OF THE
BENDER-GESTALT FIGURES

Horizontal Axes*

Figure A - 5mm
Figure 1 - 13mm
Figure 2 - 13.5mm
Figure 3 - 4.5mm
Figure 4 - 4.5mm

Figure 5 - 3.5mm
Figure 6 - 12.5mm
Figure 7 - 3.5mm
Figure 8 - 7.5mm

Vertical Axes*

Figure A - 3mm
Figure 1 - 0.5mm
Figure 2 - 1mm
Figure 3 - 3mm
Figure 4 - 4.5mm

Figure 5 - 4mm
Figure 6 - 7mm
Figure 7 - 5mm
Figure 8 - 1.5mm

*To obtain reduction multiply by .75.
(Persinger, 1978)

APPENDIX 3

MEASUREMENTS FOR THE
DRAW-A-PERSON FIGURES

Average Size* - Seven (7) inches

Average Size* - Seventeen (17) mm.

Midpoint of Sheet

4 $\frac{1}{4}$ " from either side and

5 $\frac{1}{2}$ " from the top or bottom.

Area of Edging

2 $\frac{1}{2}$ " from either side to side edge.

3 $\frac{1}{2}$ " from top side to top edge.

3 $\frac{1}{2}$ " from bottom side to bottom edge.

* (Urban, 1963)