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1965

# Test of an assumption: Personality diagnosis on the basis of photographs

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Test of an Assumption:  Personality Diagnosis on the

Basis of Photographs

By

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B.S. Brooklyn College, 1963

Presented in partial fulfillment of the requirements for the degree of

Master of Arts

MONTANA STATE UNIVERSITY

1965

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JUN 2 4 1965

Date

UMI Number: EP41068

UMI

Dissertation Publishing

UMI EP41068

ProQuest

2448

# Acknowledgement

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## Introduction

During the earlier part of this century, the question of whether or
not personality characteristics can be perceived in the basic structure of
the face was of interest among vocational psychologists as it pertained to
the accuracy of estimating intelligence from photographs (Anderson, 1921;
Laird & Remmers, 1924; Pintner, 1918; Pope, 1922). The general procedure
was to correlate the actual rankings of intelligence (as measured by academic
ability or standardized group intelligence tests) with rankings of apparent
intelligence as judged from photographs by experimentally naive Ss.

Although the experimental controls of these studies are not unques-
tionable, the conclusions reached were consistent and can be summed up as
stated by Laird & Remmers: "Individuals attempting to arrange the pictures
of 10 persons according to intelligence could have done as well with their
eyes closed..." (1924, p. 445). The coefficients of correlation between
true and judged intelligence in these studies ranged from -.63 to +.87 with
medians grouping around +.10 (significance levels are not given).

Hollingworth (1931) alone achieved differing results. The latter had
25 women ranked by 24 close acquaintances on 10 traits, and then averaged
these rankings for each trait. He then had 50 naive Ss rank photographs of
the women on the same traits. The combined rankings of all Ss were found to
correlate with the rankings of close acquaintances on five traits, (intel-
ligence, beauty, snobbishness, vulgarity, and refinement) with coefficients
above +.50. However, when this study was replicated by McCabe (1926) employing
better controls, the correlations dropped considerably, with the exception
of intelligence (+.40). Hull (1928) quite plausibly suggests that the

original rankings by acquaintances were probably influenced by physical appearance.

What is most interesting about McCabe's study and a similar earlier work by Hollingworth (1931) is that both found large agreements among the rankings made by naive judges. These coefficients in McCabe's study ranged from +.63 to +.91. "They show very clearly that whether there is any validity to character judgments based merely on photographs, there certainly is considerable unanimity in such impressions." (Hull, 1928, p. 118)

Interest in the validity of physiognomic expression was revived with the publication of the Szondi Test. This test is composed of 48 photographs divided into six sets of eight photos. Each set contains the picture of an institutionalized homosexual, sadist, epileptic, hysteric, catatonic, paranoic, depressive and manic. In the clinical use of the test, S is asked to select the two least and two most liked photographs from each set. The assumption is that S's choice of photos is reflective of his personality by virtue of a basic relationship between his personality and the personality of the patient represented in the photograph.

The basis of the relationship between photo and S is not agreed upon by those workers most vitally concerned with the test. Szondi (1952) claims that recessive genes are instrumental in the formation of mental illness and that these genes also influence physical appearance. It is a genetic similarity between the patient represented in the photograph and S that directs the choice of photos.

Deri (1949), who has been most instrumental in promoting the test in the U. S., does not accept Szondi's genetic theory. She feels that the

eight diagnostic categories of the test represent the eight factors that
compose the personality of all people. The choice of photographs by each
person is dependent upon the relative strengths of the various factors in
the personality.

Despite the differences in theoretical orientation, the assumption
common to both is that the psychological qualities of the patient are
expressed through the medium of the photograph and are perceived by $S$ as
he makes his choice. Research conclusions on this assumption have disagreed.
It has been found that $Ss$ react to specific pictures rather than to cate-
gories (Guertin, 1950), that degree of contraction of facial muscles is
more influential than diagnostic categories in distinguishing photos
(Wallen, 1951) and that some pictures are much more popular than others
(Szollosi, Lamphicar & Dost, 1951; Schubert, 1954).

A casual glance at the Szondi photographs suggests reasons for these
results. Szondi made no attempt to control for sex, age, or dress in the
photos. Some faces are smiling, others are sober; some look entirely
"foreign", still others appear to be quite agitated. In fact, there are
so many uncontrolled stimulus variables in the photographs that even if
physiognomic expression were present, it could easily be overshadowed.

Other researchers offer evidence to support the assumption of physi-
ognomic expression. Significantly above chance accuracy in diagnosing the
photographs was obtained from persons trained in dealing with institution-
alised patients (Dost & Szollosi, 1953; Fosberg, 1951), from untrained $Ss$
matching photos with descriptions of diagnosis (Dudek & Patterson, 1952),
from partially trained $Ss$ (Silverstein, 1957), and from both trained and

untrained Ss, with the former group yielding the better performance (Rabin, 1950a, 1950b).

This better than chance diagnosis of the Szondi pictures is generally interpreted to mean that physiognomic expression in general is a cue to psychiatric diagnosis. However, as Sappenfield (1965) has pointed out, there is another equally logical explanation. In the selection of items to be included in the test, Szondi asked Ss to free associate to a large number of photos (Szondi, 1952, p. 24; Szondi, Webb, & Moser, 1959, pp. 10-12). It was on the basis of the appropriateness of the associations to these photos that the test photos were eventually selected. Szondi was looking for photographs that would stimulate associations that were representative of the relevant diagnosis. Therefore, it seems just as reasonable to accept these studies as evidence for the success of Szondi's selection procedure as to accept them as support for the assumption of physiognomic expression.

Working within this frame of reference, Sappenfield (1965) was able to demonstrate that a specific personality trait, masculinity-femininity (M-F), bore no relationship to the judgment of the trait through photographs. The Q sort distribution of photos on the basis of apparent M-F was found to be independent of the actual distribution of M-F as measured by the Terman-Miles Attitude-Interest Analysis Test. However, he did find a significant amount of agreement among Ss as to perceived M-F, even though this perception was inaccurate.

Because of the biased selection and inadequate standardization of the stimulus materials employed in prior research, it was felt that the hypothesis

of physiognomic expression had never been adequately tested. If this
hypothesis is tenable, it was predicted that personality diagnoses from an
unbiased, standardized set of photographs would be accurate at beyond
chance frequency. (Hypothesis I)

It was felt that the procedure would give the hypothesis of physiogno-
mic expression ample opportunity of demonstrating itself. However, it was
believed that Hypothesis I would not be supported in that diagnostic accuracy
would not differ from chance. If this proved to be the case, it was alter-
nately hypothesized that there would be a significant amount of consistency
(stereotypy) among Ss as to the assignment of diagnoses to photographs.
(Hypothesis II)

## Method

Materials. Ten facial photographs each of institutionalized paranoid
schizophrenics, epileptics, criminals and 10 photographs of normals were
used as the stimulus material.

Selection of Persons to be Photographed. All of the male patients
born between 1906-1924 on the Montana State Hospital records as of June 30,
1964 and diagnosed as paranoid schizophrenics were listed. From these 50
names, 30 were selected by means of a table of random numbers. Two of these
patients were unavailable and one had a mustache, leaving 27 paranoid schiz-
ophrenics who were photographed. The case records of these patients were
then reviewed. Nine of these had previously been diagnosed one or more
times as other than paranoid schizophrenics and one had a history of seizures.
These people were rejected. Ten patients were then selected by means of a
table of random numbers from the remaining 17.

All 18 male patients born between 1904-1924 on the Montana State Hospital roles as of June 30, 1964 and diagnosed as chronic brain syndrome associated with convulsive disorder, both with psychotic reaction and without qualifying phrase, were listed. Two of these patients were unavailable. The remaining 16 were photographed. The case records of these patients were then reviewed. Six patients whose case records suggested exogenous cause of convulsions were rejected.

The case records of all male convicted murderers and assaultists detained at Montana State Prison were reviewed. All white murderers and persons convicted of assault with a deadly weapon born between 1906-1924 were selected. Four of these 14 men refused to cooperate leaving seven murderers and three assaultists who were photographed.

All 62 patients on the roles of the Northern Pacific General Hospital as of March 9, 1965 were listed. The 17 male patients between the ages of 41 and 59 inclusive were contacted the following day. Five of these had been discharged that morning, two refused to cooperate and three were otherwise unavailable. The remaining 7 were photographed.

All 38 male patients born between 1906-1924, on the Helena VA Hospital records as of March 29, 1965 and with non-psychiatric disorders, were listed. Four refusals, many recent discharges and many non-ambulatory patients left eight patients available to be photographed. From the 15 photographs obtained from the two general hospitals, 10 were selected by means of a table of random numbers.

Table I shows the mean age and mean length of institutionalization for the four groups of subjects who were used in the final selection of photo-

graphs. Although the differences in mean ages among the four groups are not large, it was impossible to control the length of institutionalization. Quantity and type of medication were also beyond experimental control.

_Photographs_. All photographs were taken with a Yashica Lynx-1000 camera mounted on a tri-pod. The height of the camera was adjusted so that the lens was eye level with each subject when seated. The exposure was constant at 1/60 second at f/5.6 and Kodak Verichrome Pan Plus X film was used. The light source was a Sylvania A61 clear flash bulb in a flash-holder mounted on the camera. A double thickness of white handkerchief was placed over the flash reflector to soften the shadows. As the photographs were taken in different rooms, a white sheet was stretched over the rear wall to provide a uniform background. Blankets or shades over the windows were used to cut down outside light. The distance from the sheet to the back of the subjects' chair was 60 in., while the distance from the camera lens to the subjects' face was 30 in.

Upon entering the room, the subject was seated and a tan colored cloth was wrapped around his shoulders. Glasses were removed when necessary. The subject was asked to put a calm, relaxed expression on his face and to look straight at the lens as the photograph was taken.

In order to make certain that each subjects' face could be used in the final selection pool, several photographs of the same subject were often taken. One photograph of each subject was randomly selected from those available.

The film was processed by a professional business firm. After the 40 desired photographs were selected, 1 1/4 in. x 1 3/4 in. photo-copies of

each of the original 35mm. negatives were made. These copies were retouched so as to eliminate photographic imperfections in the negative. Fifteen contact prints, each measuring 1 3/4 in. x 2 1/4 in., including a 1/4 in. white border, were made from each photo-copy. These prints showed a full face head and shoulder view of the subject.

Each set of 40 photographs was randomly assigned a number from 1 to 40, and that number was typed on the back of each photograph. The photographs were distributed so as to make 15 sets of the 40 different faces. Each set was placed in sequence from 1 to 40 and then sealed in a small manilla envelope.

Subjects. One hundred Diplomates in Clinical Psychology of the American Board of Examiners in Professional Psychology with Ph.D. degrees were randomly selected from the 1225 listed in the 1964 edition of the American Psychological Association Directory. Individually typed letters were mailed to these people (see Appendix) asking their cooperation in a research project involving judgments of some facial photographs. A stamped return post card was enclosed which allowed $S$ to indicate whether or not he was able to participate. Of the seventy-nine post cards returned, 53 indicated willingness to participate. Eight of the 53 willing $Ss$ were randomly eliminated and a set of materials was mailed to the remaining 45 $Ss$. Forty-one record forms were returned correctly filled out. One of these $Ss$ was randomly eliminated, leaving 40 $Ss$ who constituted Group I.

In order to compose Group II, the names of all 165 faculty members in all departments except psychology, sociology, anthropology, and education, with a title of assistant professor or higher were taken from the Faculty

and _Administration_ list at Montana State University. Fifty of these names were randomly selected, of which four did not have Doctor's degrees and were therefore eliminated. Of the remaining 46, four refused to participate and two were unavailable.

_Procedure._ Each set of materials mailed to the clinical psychologists consisted of an individually typed cover letter and a four page booklet held together with a paper clip (see Appendix), a stamped return envelope, and the photographs in a separate manilla envelope. The cover letter thanked S for participating, pointed out that the instructions were written so that the identical task could be given to people with no training in psychology, and asked him to return the completed record form and the photographs at his earliest convenience.

The booklet consisted of a page each of (1) instructions, (2) descriptions of the four categories, (3) sorting chart, and (4) record form. The instructions told S that this was a research project attempting to determine if personality characteristics can be perceived in the basic structure of the face. The subject was asked to look through the photographs, read the descriptions of the four categories, and then to place each photograph in the category it looked as if it belonged in on the sorting chart. When all 40 photographs were sorted, he was asked to fill in the record form.

The descriptions of the four categories were as follows:

Normals: Patients in a general medical hospital who are suffering from such ailments as heart disease, broken arms, broken legs, gall stones, etc., and are not known to exhibit any psychological abnormalities.

Criminals: Penitentiary inmates convicted of violent and aggressive

crimes such as premeditated murder or assault with a deadly weapon.

Epileptics: Patients committed to a psychiatric hospital who are suffering from idiopathic grand mal epilepsy (severe epileptic seizures not due to external injury). Five of these patients are also psychotic. Epileptics have often been found to display certain emotional character-istics such as eccentricity, irritability, inflexibility, quarrelsomeness, frequent emotional outbursts and tend to have shallow emotional relation-ships.

Paranoid Schizophrenics: Patients committed to a psychiatric hospital who are diagnosed as paranoid schizophrenics. These people are character-ized by fantastical, unrealistic thinking, false beliefs that they are being persecuted and/or that they are exceptional people such as Napoleon or Christ, and they frequently see people or hear voices that are not act-ually there. They are often unpredictable, hostile, and aggressive.

The sorting chart contained four printed rectangles with the names of one of the four categories printed under each. The record form contained the names of the four categories with a row of ten squares next to each name. When all the photographs had been sorted, the instructions asked S to fill in the record form by placing the 10 numbers of each category (printed on the back of the photograph) in the 10 squares provided for that category.

All members of the faculty group were contacted in their offices on the Montana State University campus. They were asked to participate in a research project involving judgments of some facial photographs. Depending upon the convenience of S, the task was performed at either the initial

contact or at a later appointment. Whenever S indicated his preference to
keep the materials until he had time available to complete the task, he
was allowed to do so. Three Ss did this.

All faculty Ss were given the four page booklet and the photographs
in the manilla envelope. They were told that the instructions were on the
first page of the booklet. The experimenter then waited outside the office
until S indicated he had completed the task. Questions pertaining to the
mechanical aspects of the task only were answered. No further information
was given either about the photographs or the descriptions of the cate-
gories.

### Results

It can be seen from Table II that when the four appropriate entries
are summed, the number of correct diagnoses for the group of psychologists
was 460. This is a highly significant value; the probability of its oc-
currence by chance alone, under a z transformation to the normal curve
(Edwards, 1964, pp. 50-51), is less than .0003.

Table III shows that the number of correct diagnoses in all four cate-
gories made by the university professors (faculty) was equal to 457. This
is also a highly significant value, with a probability of occurrence by
chance alone, under a z transformation to the normal curve, of less than
.0006.

A chi square test for two independent samples (Siegel, 1956, pp.
104-107) yielded no significant difference between the two groups in the
number of correct diagnoses in each category. A Spearman Rank Correlation
(Siegel, 1956, pp. 202-213) between the 16 cells of Tables II and III

yielded a coefficient of .806 (p<.01), suggesting that the two groups tended to place similar numbers of photographs in each category. When the psychologist and faculty groups were combined, the 917 total correct diagnoses had a probability of occurring by chance alone of less than .0001.

In order to test Hypothesis II, the 40 Ss in the psychologist group were randomly divided into two sub-groups of 20 Ss. The modal diagnosis for each photograph was determined for each sub-group. The two sub-groups were then compared to determine the frequency of agreement on modal diagnoses. The same procedure was followed for the faculty group. The modal diagnosis for each photograph was determined for the psychologist group as a whole and for the faculty group as a whole. These two main groups were then compared to determine their frequency of agreement on modal diagnoses. Table IV summarizes the results of these comparisons. When one or both sub-groups (or main groups) had two equal modes for a particular photograph, that comparison was not included in the analysis. The comparisons between the sub-groups and the main groups were all highly significant (z transformation to the binomial distribution, Siegel, 1956, pp. 36-41). Table IV also shows that when the accurate modal agreements were excluded from the analyses, the comparisons remained highly significant, but slightly less so. (Accurate modal agreements were defined as both sub-groups, or main groups, having modal agreements on the correct diagnoses for a photograph.)

A Spearman Rank Correlation Coefficient (corrected for tied values as suggested by Siegel, 1956, pp. 202-213) of .624 (p<.005) was obtained

between the ranks of the number of correct diagnoses for the 40 photographs by the two groups of $\underline{Ss}$. Spearman Rank Correlation Coefficients were also obtained between the two groups for (a) the number of times each of the 30 non-epileptic photographs was placed in the epileptic category ($r_s = .533$); (b) for the number of times each of the 30 non-criminal photographs was placed in the criminal category ($r_s = .638$); (c) for the number of times each of the non-normal photographs was placed in the normal category ($r_s = .803$); and (d) the number of times the 30 non-paranoid photographs were placed in the paranoid category ($r_s = .507$). This suggests that the similarity between the two groups extended to inaccurate as well as accurate perceptions.

Table V shows the number of photographs that were diagnosed accurately more often and less often than the chance expectation of ten. Table VI shows the number of $\underline{Ss}$ in each group obtaining more or less than the expected average of 10 photographs diagnosed accurately. (The chi square test yielded non-significant values for both Tables IV and V.)

Table VII shows the number of choices in the correct category for each group. It can be seen that considerable variation was found in the number of times each photograph was correctly diagnosed by each group. When both groups were combined, the range was from a low of four for one photograph to a high of 45 for another. (See Appendix for detailed analyses of the number of choices in the modal category; for the frequencies of the number of correct diagnoses by each $\underline{S}$; and for the number of times each $\underline{S}$ agrees with the group mode.)

## Discussion

These results suggest that the issue of accuracy versus stereotypy
is not clear cut. Both Hypothesis I, contrary to expectation, and Hypoth-
esis II were supported at highly significant levels of confidence. It
can therefore be concluded that both trained and untrained subjects can
match a randomly selected set of facial photographs with their appropriate
personality categories at frequencies greater than chance would allow.

It can also be concluded that there is a high degree of consistency,
both within groups and between groups, in the way trained and untrained
Ss perceive these faces. This consistency remains high even when accurate
perceptions are eliminated from the analyses.

The fact that no significant difference was found between the two
groups in the number of correct diagnoses in each category and the similar
frequencies of total number of correct diagnoses (457 and 460) suggest
that whatever the cues are that were used to correctly identify the photo-
graphs, they do not tend to increase with specialized training.

The results of Hypothesis II are consistent with Sappenfield's (1965)
findings and with the early works of McCabe (1926) and Hollingworth (1931)
that demonstrated high agreement among Ss in "character judgments." The
results of Hypothesis I are seemingly inconsistent with Sappenfield's
study and the previous research demonstrating the inability of judges to
make accurate estimations of intelligence from photographs. However, it
must be pointed out that the dependent variables are quite different.
The present study involved the identification of widely divergent person-
ality types, rather than the judgment of degrees of a single personality

variable, such as masculinity-femininity or intelligence. Moreover, the task was considerably simplified by requiring the matching of photographs with specified personality categories than would have been the case had S selected his own category.

The difference between statistical and practical significance seems pertinent here. The mean number of correct diagnoses for both groups combined was 11.46 which, while highly significant, is not large for predictive purposes. The mean number of incorrect diagnoses per S is 28.54. In other words, inaccurate perceptions exceeded accurate perceptions by a factor of 2.5. It should also be pointed out that Figure 2 shows that among the faculty group, 2 of the 4 categories have modal diagnoses in other than the correct category. Figure 1 shows that for the group of psychologists, 3 of the 4 categories have modes in other than the correct category.

Even though Hypotheses I and II were both supported at highly significant levels of confidence, it is apparent that stereotypical perception occurred more frequently than accurate perception. Evidence for this interpretation can be seen in the fact that when the two groups were combined, only eight photographs accounted for 300 of the 917 correct diagnoses, or in other words, 1/5 of the photographs accounted for almost 1/3 of the correct diagnoses. This suggests that the accuracy of judgments did not apply equally to all photographs.

Furthermore, for both Hypotheses I and II the mean expected value of the dependent variable was .25 of the total possible frequency in the dependent variable. Yet the obtained value of correct diagnoses for both

groups combined was 917 out of a possible 3200, or 28.7%, while the lowest
number of modal agreements, when accurate agreements were eliminated, was
14 out of a possible 26, or 53.8%. When accurate agreements were included,
the lowest number of agreements was 20 out of a possible 32, or 62.5%.

Although it is felt that all possible bias was eliminated in the
selection of people to be photographed, the original assignment of these
people to categories may not have precluded the influence of facial appear-
ance. For example, the degree of influence that a man's facial structure
has on a judge or jury in determining whether he will be found guilty of
a crime is not known. Psychiatric diagnoses may also possible be influenc-
ed by facial structure. This fact, in conjunction with the unexpected
confirmation of Hypothesis I, suggests that further research on this prob-
lem would be desirable. One possible method of improving the present
design would be to take photographs of patients immediately after their
admission to a psychiatric hospital. This would help to eliminate the
uncontrolled variations in medication and length of institutionalization
present in this study. Although the use of some objective personality
scale would entail difficulties of its own, it would greatly reduce sub-
jective bias in the assignment of pictures to personality categories.

Research with the present photographs should be continued in order
to determine the reliability of this task both in terms of accuracy and
in terms of stereotypy. Are the same photographs consistently placed in
the same category by the same S? It would certainly be fruitful to deter-
mine what the cues are that enable an S accurately to diagnose some photo-
graphs and what the cues are that cause other photographs to be rather
consistently placed in the same incorrect category.

## Summary

A review of prior research revealed that the hypothesis of the perception of personality characteristics from the basic structure of the face had never been adequately tested. The present study required 40 clinical psychologists and 40 Ph.D. faculty members to match a standardized set of 40 facial photographs with four personality categories. These photographs consisted of 10 institutionalized paranoid schizophrenics, 10 institutionalized epileptics, 10 criminals, and 10 normals, all randomly selected from their respective groups. Analyses of the number of correct diagnoses and of the modal agreements within and between groups suggested the following conclusions:

1) Both trained and untrained $S$ could match these photographs with their appropriate personality category at frequencies greater than chance would allow.

2) The skills used to correctly identify photographs did not appear to be improved by specialized training.

3) There was a high degree of consistency in the way both groups perceived the photographs. This consistency extended to inaccurate as well as accurate perceptions.

4) Stereotypical perceptions occurred more frequently than did accurate perceptions.

Suggestions were made to improve the present design and for future investigations of related variables.

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TABLE I

MEAN AGES AND MEAN LENGTH OF INSTITUTIONALIZATION BY GROUPS

| Group | Mean Age (in years) | Mean Length of Institutionalization |
|---|---|---|
| Paranoid Schizophrenics | 52.7 | 19.3 years |
| Epileptics | 46.3 | 16.1 " |
| Criminals | 46.8 | 7.6 " |
| Normals | 51.4 | (2-60 days) |

Note. Ten Ss in each group.

TABLE II

CORRECT AND INCORRECT DIAGNOSES MADE BY 40 CLINICAL

PSYCHOLOGISTS IN CLASSIFYING 40 PHOTOGRAPHS

INTO FOUR CATEGORIES OF 10 EACH

| Actual Diagnosis | Judged Diagnosis | | | | |
|---|---|---|---|---|---|
| | Epileptics | Criminals | Normals | Paranoids | Total |
| Epileptics | 124 | 135 | 57 | 84 | 400 |
| Criminals | 58 | 92 | 144 | 106 | 400 |
| Normals | 81 | 93 | 130 | 96 | 400 |
| Paranoids | 137 | 80 | 69 | 114 | 400 |
| Total | 400 | 400 | 400 | 400 | 1600 |

Note. Correct Diagnoses are shown in lower right to upper left diagonal.

## TABLE III

### CORRECT AND INCORRECT DIAGNOSES MADE BY 40 UNIVERSITY

### PROFESSORS IN CLASSIFYING 40 PHOTOGRAPHS INTO

### FOUR CATEGORIES OF 10 EACH

| Actual Diagnosis | Judged Diagnosis | | | | |
|---|---|---|---|---|---|
| | Epileptics | Criminals | Normals | Paranoids | Total |
| Epileptics | 107 | 129 | 60 | 104 | 400 |
| Criminals | 71 | 92 | 155 | 82 | 400 |
| Normals | 110 | 90 | 122 | 78 | 400 |
| Paranoids | 112 | 89 | 63 | 136 | 400 |
| Total | 400 | 400 | 400 | 400 | 1600 |

Note.   Correct Diagnoses are shown in lower right to upper left diagonal.

TABLE IV

FREQUENCIES AND PROBABILITIES OF MODAL COMPARISONS

| | Number of Comparisons | Frequency of Agreement | p | Excluding Accurate Agreements | | |
| | | | | Number of Comparisons | Frequency of Agreement | p |
|---|---|---|---|---|---|---|
| Psychologist Sub-Groups | 32 | 20 | <.0001 | 26 | 14 | <.0026 |
| Faculty Sub-Groups | 35 | 22 | <.0001 | 29 | 16 | <.0002 |
| Between Groups | 34 | 23 | <.0001 | 27 | 16 | <.0001 |

## TABLE V

NUMBER OF PHOTOGRAPHS DIAGNOSED ACCURATELY ABOVE AND BELOW

CHANCE EXPECTANCY

|  | Faculty | Psychologists |
|---|---|---|
| Number of Photographs Diagnosed Accurately More than Ten Times | 21 | 22 |
| Number of Photographs Diagnosed Accurately Ten or Less Times | 19 | 18 |

TABLE VI

NUMBER OF Ss ABOVE AND BELOW CHANCE EXPECTANCY

|  | Faculty | Psychologists |
|---|---|---|
| Number of Ss Diagnosing More than Ten Photos Accurately | 23 | 26 |
| Number of Ss Diagnosing Ten or Less Photos Accurately | 17 | 14 |

## TABLE VII

### NUMBER OF CHOICES IN CORRECT CATEGORY BY GROUPS

| | | Number Correct | | |
|---|---|---|---|---|
| Photo Category | Photo Number | Faculty | Psychologists | Both Groups Combined |
| E | 1 | 14 | 23 | 37 |
| | 2 | 3 | 3 | 6 |
| | 3 | 4 | 15 | 19 |
| | 9 | 17 | 19 | 36 |
| | 13 | 8 | 14 | 22 |
| | 19 | 8 | 7 | 15 |
| | 23 | 12 | 9 | 21 |
| | 24 | 14 | 18 | 32 |
| | 33 | 11 | 2 | 13 |
| | 40 | 16 | 14 | 30 |
| C | 5 | 9 | 7 | 16 |
| | 6 | 12 | 13 | 25 |
| | 8 | 9 | 2 | 11 |
| | 10 | 7 | 8 | 15 |
| | 14 | 6 | 10 | 16 |
| | 15 | 13 | 10 | 23 |
| | 28 | 10 | 9 | 19 |
| | 32 | 4 | 10 | 14 |
| | 38 | 5 | 6 | 11 |
| | 39 | 17 | 17 | 34 |
| N | 4 | 9 | 11 | 20 |
| | 7 | 14 | 15 | 19 |
| | 12 | 21 | 12 | 33 |
| | 18 | 3 | 5 | 8 |
| | 21 | 9 | 14 | 23 |
| | 22 | 1 | 3 | 4 |
| | 27 | 25 | 20 | 45 |
| | 30 | 12 | 13 | 25 |
| | 35 | 8 | 12 | 20 |
| | 36 | 20 | 25 | 45 |
| P | 11 | 22 | 15 | 37 |
| | 16 | 11 | 5 | 16 |
| | 17 | 11 | 8 | 19 |
| | 20 | 10 | 13 | 23 |
| | 25 | 16 | 16 | 32 |
| | 26 | 8 | 8 | 16 |
| | 29 | 17 | 9 | 26 |
| | 31 | 17 | 13 | 30 |
| | 34 | 6 | 12 | 18 |
| | 37 | 18 | 15 | 33 |
| | Totals | 457 | 460 | 917 |

# Appendices

Name
Address


Dear Dr. _____:

I am a graduate student at Montana State University engaged in a research project as partial fulfillment for a Master's degree. In order to complete this project, I need the cooperation of trained clinical psychologists such as yourself. This task involves the judgments of some facial photographs and requires about 10 minutes or less to complete. If you indicate your willingness to participate, the materials will be mailed to you with a stamped return envelope.

In order to fulfill random sampling requirements, it is essential that I receive a high percentage of cooperation. In any case, would you kindly check the appropriate box on the enclosed post card indicating whether you can participate, sign your name and mail the card.

Your valued judgments in this matter will be greatly appreciated.

Sincerely yours,


Berton Kaplan

Name
Address

Dear Dr. _____:

I am sincerely grateful for your reply indicating that you will allow me some time from your busy schedule.

Enclosed you will find the materials necessary to carry out the task. Please begin by reading the instructions on the following page. Let me point out that these instructions were written so that the identical task could be given to people with no training in psychology.

When you have completed the task, kindly place the record form and the manilla envelope containing the photographs in the stamped return envelope and return it at your earliest convenience.

Very truly yours,


Berton Kaplan

## Instructions

This research project is an attempt to determine if personality characteristics can be perceived in the basic structure of the face.

In the accompanying manila envelope you will find 40 photographs of male faces. These photographs can be divided into 4 categories of 10 photographs each on the basis of personality characteristics.

Would you please look through the photos to get an idea of the kind of faces you will be judging, and then read the descriptions of the 4 categories on the following page. Determine which category each photograph looks as if it belongs in and place it in the appropriate square on the sorting chart (page 3). Feel free to shift any photograph from category to category until you are satisfied with its classification.

You will notice that on the reverse side of each photo there is a number from 1 to 40 (randomly assigned). When all 40 photographs have been sorted to your satisfaction, please fill in the record form (page 4) by placing the 10 numbers of each category in the 10 squares provided for that category.

Descriptions of the Four Categories

<u>Normals</u>: Patients in a general medical hospital who are suffering from such ailments as heart disease, broken arms, broken legs, gall stones, etc., and are not known to exhibit any psychological abnormalities.

<u>Criminals</u>: Penitentiary inmates convicted of violent and aggressive crimes such as premeditated murder or assault with a deadly weapon.

<u>Epileptics</u>: Patients committed to a psychiatric hospital who are suffering from idiopathic grand mal epilepsy (severe epileptic seizures not due to external injury). Five of these patients are also psychotic. Epileptics have often been found to display certain emotional characteristics such as eccentricity, irritability, inflexibility, quarrelsomeness, frequent emotional outbursts and tend to have shallow emotional relationships.

<u>Paranoid Schizophrenics</u>: Patients committed to a psychiatric hospital who are diagnosed as paranoid schizophrenics. These people are characterized by fantastical, unrealistic thinking, false beliefs that they are being persecuted and/or that they are exceptional people such as Napoleon or Christ, and they frequently see people or hear voices that are not actually there. They are often unpredictable, hostile, and aggressive.
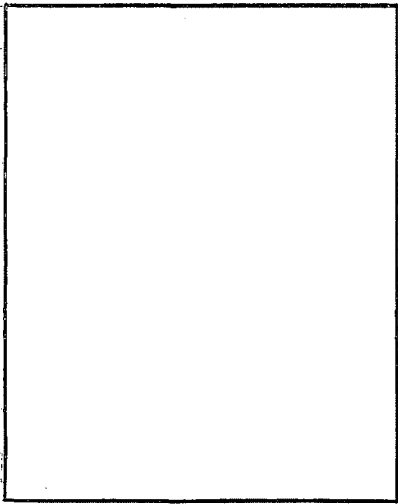
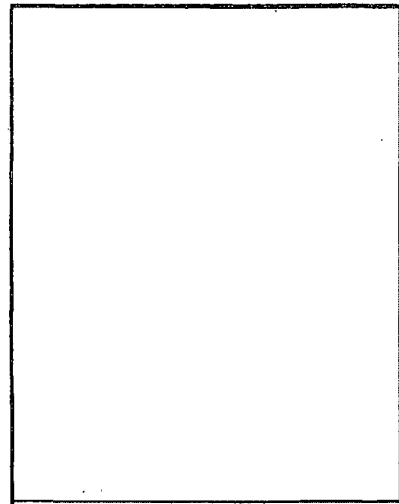Sorting Chart

(Each category contains exactly 10 photographs)
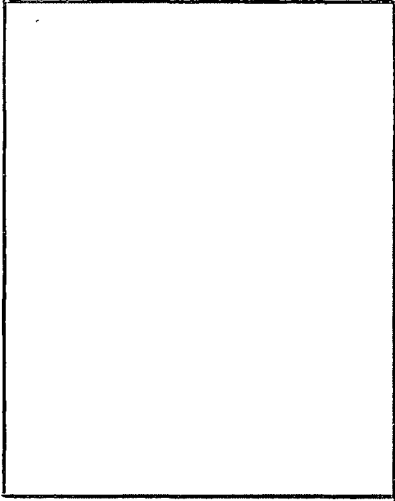
Epileptics
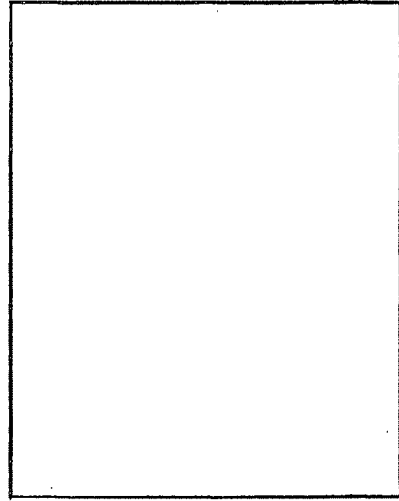
Criminals

Normals

Paranoid
Schizophrenics

## Record Form

(only 1 number should appear in each of the 40 squares)

| Epileptics | □ □ □ □ □ □ □ □ □ □ |

| Criminals | □ □ □ □ □ □ □ □ □ □ |

| Normals | □ □ □ □ □ □ □ □ □ □ |

| Paranoid Schizophrenics | □ □ □ □ □ □ □ □ □ □ |

Comments (at your option)

NUMBER OF CHOICES IN MODAL CATEGORY BY GROUPS

| Photo Category | Photo Number | Faculty | | Psychologists | |
|---|---|---|---|---|---|
| | | Number of Choices in Modal Category | Modal Category | Number of Choices in Modal Category | Modal Category |
| E | 1 | 16 | P | (23) | (E) |
| | 2 | 23 | C | 21 | C |
| | 3 | 17 | C | (15) | (E) |
| | 9 | (17) | (E) | (19) | (E) |
| | 13 | 13 | CP | (14) | (E) |
| | 19 | 15 | C | 16 | C |
| | 23 | 14 | C | 25 | C |
| | 24 | 20 | P | (18) | (E) |
| | 33 | 18 | N | 17 | N |
| | 40 | (16) | (E) | 17 | C |
| C | 5 | 19 | N | 14 | NP |
| | 6 | 12 | E(C) | (13) | (C) |
| | 8 | 20 | N | 27 | N |
| | 10 | 24 | P | 20 | P |
| | 14 | 15 | P | 16 | P |
| | 15 | 18 | N | 13 | N |
| | 28 | 19 | N | 21 | N |
| | 32 | 25 | N | 22 | N |
| | 38 | 27 | N | 27 | N |
| | 39 | (17) | (C) | (17) | (C) |
| N | 4 | 15 | E | 14 | E |
| | 7 | 14 | E(N) | (15) | (N) |
| | 12 | (21) | (N) | 14 | C |
| | 18 | 16 | C | 18 | C |
| | 21 | 12 | EP | 18 | P |
| | 22 | 20 | C | 23 | P |
| | 27 | (25) | (N) | (20) | (N) |
| | 30 | (12) | (N) | (13) | (N) |
| | 35 | 14 | P | (12) | (N) |
| | 36 | (20) | (N) | (25) | (N) |
| P | 11 | (22) | (P) | (15) | (P) |
| | 16 | 14 | N | 13 | N |
| | 17 | 17 | E | 18 | E |
| | 20 | 19 | C | 16 | C |
| | 25 | (16) | (P) | (16) | (P) |
| | 26 | 12 | N | 15 | C |
| | 29 | (17) | (P) | 21 | E |
| | 31 | (17) | (P) | 17 | E |
| | 34 | 16 | E | 12 | N(P) |
| | 37 | (18) | (P) | 16 | E |

Note. Parentheses indicate accurate diagnoses.

## NUMBER OF AGREEMENTS WITH GROUP MODE

| Subject Number | Faculty | | Psychologists | |
|---|---|---|---|---|
| | Number of Agreements With Accurate Group Mode | Number of Agreements With Inaccurate Group Mode | Number of Agreements With Accurate Group Mode | Number of Agreements With Inaccurate Group Mode |
| 1 | 3 | 6 | 4 | 11 |
| 2 | 6 | 7 | 8 | 9 |
| 3 | 5 | 11 | 2 | 13 |
| 4 | 9 | 15 | 7 | 15 |
| 5 | 8 | 9 | 4 | 8 |
| 6 | 1 | 3 | 2 | 14 |
| 7 | 6 | 11 | 10 | 15 |
| 8 | 7 | 12 | 6 | 12 |
| 9 | 4 | 9 | 7 | 14 |
| 10 | 5 | 11 | 6 | 14 |
| 11 | 3 | 8 | 5 | 13 |
| 12 | 7 | 11 | 7 | 4 |
| 13 | 4 | 11 | 5 | 10 |
| 14 | 4 | 11 | 4 | 11 |
| 15 | 6 | 14 | 10 | 10 |
| 16 | 7 | 12 | 8 | 13 |
| 17 | 6 | 13 | 7 | 13 |
| 18 | 4 | 13 | 6 | 15 |
| 19 | 6 | 9 | 2 | 12 |
| 20 | 6 | 10 | 5 | 12 |
| 21 | 3 | 14 | 5 | 13 |
| 22 | 5 | 11 | 9 | 5 |
| 23 | 7 | 9 | 4 | 16 |
| 24 | 6 | 13 | 7 | 12 |
| 25 | 6 | 15 | 8 | 14 |
| 26 | 5 | 11 | 4 | 9 |
| 27 | 11 | 11 | 7 | 9 |
| 28 | 4 | 9 | 8 | 10 |
| 29 | 6 | 7 | 6 | 9 |
| 30 | 5 | 11 | 5 | 10 |
| 31 | 5 | 6 | 3 | 9 |
| 32 | 2 | 15 | 6 | 10 |
| 33 | 5 | 14 | 8 | 13 |
| 34 | 7 | 13 | 7 | 11 |
| 35 | 6 | 14 | 4 | 7 |
| 36 | 7 | 13 | 6 | 13 |
| 37 | 7 | 11 | 5 | 9 |
| 38 | 2 | 10 | 6 | 7 |
| 39 | 8 | 11 | 3 | 11 |
| 40 | 6 | 9 | 5 | 11 |