Application for Research Grant

to

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A,6 [redacted]

[redacted] Personality Theory -

- in Patients with Different Symptoms -

Principal Investigator: [redacted] A,6

Sponsoring Institution: Columbia University,
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OTS-16

A,G [redacted] Personality Theory -
in Patients with Different Symptoms

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1. Objectives of the Work Proposed

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The purpose of the proposed studies is to test certain aspects of [redacted] personality theory by comparing the subtest performance on the Wechsler Intelligence Scales of patient groups differing primarily in overt symptoms. Two such studies are anticipated. The first will be an investigation of the Wechsler scores of a sample of conversion hysterics, and will include comparisons of comparable subgroups characterized by different symptoms. The second will consist of a comparison of the subtest performance of comparable groups of migraine and ulcer patients. It is proposed that the three major personality dimensions and their interrelationships, (as formulated by A,G [redacted] and as described below) be analyzed within and across the groups.

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For purposes of research, [redacted] personality theory offers two major advantages:

1. Some aspects of the theory are immediately and objectively verifiable.

2. From a long-range point of view, the method by which the theory orders the data permits of relatively specific predictions concerning the individual's behavior.

In order to clarify some of the major theoretical considerations to be investigated, a brief summary of the theory is included here. The summary is based on direct information from [redacted] and on Saunder's research memoranda, (see bibliography). The theory is given more explicit statement in a separate memorandum by Saunders (1). A,G

According to the theory, the personality structure and function of the individual can be expressed in terms of three basic personality dimensions. These dimensions consist of the Externalizer-Internalizer, the Flexible-Rigid, and the Acceptable-Unacceptable continua. These will hereafter be referred to as the E-I, F-R, and A-U dimensions, respectively.

As the individual develops, he is confronted with the task of reconciling his basic personality pattern with various environmental and social demands, which require him to modify his position on each of the three basic continua. His modifications represent the extent to which the individual is able to compensate for the limitations on adjustment imposed by his basic personality structure.

The theory further postulates that the individual's modifications of his basic personality pattern, as well as the basic dimensions themselves, are reflected by his performance on various subtests of the Wechsler Scales. Thus, his score on the Digit Span subtest shows his position with regard to the E-I dimension, his ultimate location on this continuum being determined by modifying factors which are indicated by his Arithmetic and Information scores. His Block Design score determines his placement on the F-R continuum, modified by his performance on the Similarities and Comprehension subtests. His position on the A-U continuum is shown by his score on the Picture Arrangement subtest, modified by his Picture Completion and Object Assembly performance.

A,G [redacted] has developed a method of expressing the dynamic structure of the individual, in terms of three formulas which are based on Wechsler subtest performance. These formulas, taken together, represent the development of the individual's personality structure across time.

2. Method

Since the studies will test different hypotheses, certain procedures for collecting and treating the data will be different for the two investigations. Procedures which will be specific to each study are described first. Those which will be common to both studies are discussed later, under the section devoted to the treatment of the data.

A. The Conversion Hysteric Study

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Conversion hysterics are thought to constitute an excellent group for an investigation of [redacted] personality theory, in that their particular symptoms presumably reflect essential aspects of the individual's dynamic structure.

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A pilot study, based on 46 conversion subjects, has already been completed, and has provided results which are consistent with [redacted] theoretical formulations. Though the number of subjects was relatively small, particularly in the comparisons based on subgroups, the obtained statistically significant findings and a number of trends which were found, are thought to be well worth a more extensive analysis with a larger sample. The pilot study is summarized in the Appendix of this proposal. Its results suggest the following hypotheses:

1. Pronounced sensory and motor symptoms will be more characteristic of predominantly "E" individuals.

2. Severe and frequently generalized headaches will occur more often in predominantly "I" subjects. (This does not include migraines, which theoretically constitute a different type of symptom).

3. Predominantly "I" individuals will complain of fewer and less specific symptoms than will the predominantly "E" groups.

4. Both the F-R and the A-U continua will be related to symptom choice.

5. Predominantly "I" and predominantly "E" subjects with low scores on the Picture Completion subtest of the Wechsler Scales will differ in their expressed symptoms, in accordance with theoretical expectations of their respective tendencies toward withdrawal and identification.

6. Behavioral differences apart from symptoms will characterize the predominantly "E" and the predominantly "I" groups, these differences depending to some extent on the location of the individual on the F-R and A-U continua.

Sample

The sample will consist of approximately 100 subjects, whose medical records do not indicate neurological pathology, and who have been diagnosed as conversion hysterics by examining neurologists. It is anticipated that the age range will not go below 15 or above 49 years, and that mentally retarded subjects will be excluded.

Specific Procedures

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1. The occurrence of the various [redacted] formulae will be determined first for the group as a whole.

2. Wechsler subtest performance of comparable subgroups characterized by different symptoms will be compared.

3. Specific hypotheses pertaining to the relationships between symptom choice, personality structure, and behavior, as defined by the theory, will be tested.

4. The influence on Wechsler subtest performance of population variables such as age, sex, educational and socio-economic background, and intelligence (as measured by the individual's normal level, in accordance with the theory) will be analyzed.

B. The Comparisons of Ulcer and Migraine Patients

Ulcer and migraine patients have been selected because their use permits the testing of a number of hypotheses which [redacted] theory implies. These hypotheses are as follows:

1. Theoretically, the predominantly "I" individual looks inward, is ideationally dominant, and tends toward withdrawal. [redacted] has predicted that such subjects will be more characteristic of the ulcer groups.

2. In contrast, the predominantly "E" individual looks outward, is perceptually dominant, and environmentally sensitive. It is predicted by [redacted] that the migraine patients will consist of subjects predominantly in the "E" category.

3. It is further anticipated that the strength of the "I" or "E" component of the individual's personality, as determined by the three formulae, will be a significantly differentiating factor.

4. With respect to the F-R continuum, it is predicted that ulcer patients will be predominantly "F" individuals. The "F compensated" subjects in particular should tend toward ulcers, because of the continual physiological and psychological stress with which their equilibrium is maintained. Theoretically, low Block Design scores plus low Similarities performance should be more typical of ulcer sufferers, since a low Similarities score indicates a tendency toward repression. On the other hand, a high Similarities score in a low Block Design record points to greater control of emotionality and therefore to less need for repression, which would represent a contra-indication of the formation of ulcers.

5. It is hypothesized that the migraine patients will consist chiefly of predominantly "R" subjects. Compensatory factors, corresponding to those stated above in connection with predominately "F" groups, will be studied for the predominantly "R" subjects.

6. It is further hypothesized that the strength of the "F" or "R" components of the individual's personality structure, as represented by the three formulae, will be a significantly differentiating factor.

7. It is also anticipated that the quality of the individual's social relationships will be related to his psychological equilibrium, and possibly to his symptom choice as well. Therefore, his development along the A-U continuum will also be studied.

Sample

Approximately 50 ulcer and 50 migraine patients are anticipated. Insofar as possible, the groups will be limited to those without evidence of further medical complications. The diagnoses will be medically determined. Groups comparable with respect to age, sex, educational and socio-economic levels, and intelligence (as measured by normal levels) will be used. It is anticipated that subjects will be restricted to those between the ages of 15 and 49, and will not include the mentally retarded.

Specific Procedures A,6

1. The occurrence of the various [redacted] formulae will be studied within each of the groups. A,6

2. The occurrence of the various [redacted] formulae in the groups will be compared.

3. Specific hypotheses related to the symptoms of ulcers and migraines in terms of the theory will be tested.

Treatment of the Data

The experimental data will consist of the three formulae, computed for each subject, and based on weighted scores from the Wechsler subtests. Further, scores will be derived from a theory-determined weighting of various degrees of compensation of the individual's basic tendencies, to produce three single scores for each subject on each continuum. These will be interpreted as representing the strength of the basic dimensions within the individual's personality configuration.

The data will be treated in accordance with theoretical predictions. Contingency tests, (Chi-square and Fisher's exact tests), will be applied, to determine the differential incidence of the various personality configurations within and between the groups.

In analysing the results for the strength of the basic tendencies, tests of the differences in location of these score distributions within and between groups will be performed by means of the t distribution, or its non-parametric analogue, depending on the nature of the data obtained. The influence of pertinent population variables on test performance will probably be analyzed by appropriate analysis of variance techniques.

Although the studies will be undertaken to test a theory, (for which one-tailed tests of significance are sometimes used), only two-tailed tests will be employed, in order to permit the interpretation of contra-theoretical results.

3. Period of time

A one-year project is anticipated.

4. Estimated Budget

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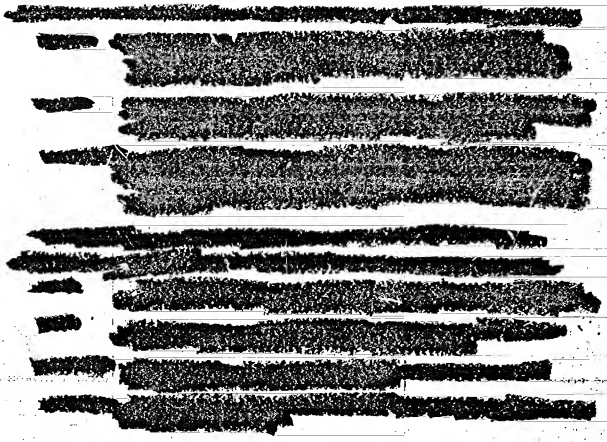
|---|---|
| Psychometrist and Research Assistant | $ 6,000 |
| Co-Principal Investigator (part time) | 3,000 |
| Clerical Assistance (part time) | 1,800 |
| Miscellaneous (Psychological Test Equipment, Office Supplies, Telephone & Travel) | 1,000 |
| Total of Direct Costs | 11,800 |
| Indirect Cost Allowance | 1,770 |
| Total Cost | 13,570 |

5. Qualifications of Investigators



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6. Previous Work in this Area

A pilot study, based on 46 conversion hysterics, has been completed. It is described in the Appendix, which follows.

7. Other Sources of Support

Support has not been nor is being requested of other foundations.

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Appendix

A Pilot Study in [redacted] Personality Theory with Conversion Hysterics

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Sample

The sample consisted of 46 subjects medically examined and psychologically evaluated at [redacted]. The subjects were diagnosed as conversion hysterics by the examining neurologists, and their records lacked indications of neurological pathology. The group ranged in age from 15 to 49, with a mean of 34.41. Normal levels ranged from 6 to 14, mean 10.44. There were 14 males and 32 females. They were tested on the Wechsler Bellevue Intelligence Scale, Form I.

Method

The experimental data consisted of the three [redacted] formulae, determined for each subject on the basis of his weighted scores on the Wechsler subtests. The data were studied both for the group as a whole, and in comparisons of subgroups within it. Since different procedures were followed in the two types of analyses, and different results were obtained, they are separately presented below.

I. The Pilot Study with the Whole Group, ($N = 46$).

A. Procedure

In the attempt to study symptom-choice, the following groupings were used for the various symptoms which the subjects manifested:

1. Fainting spells, dizziness, drowsiness, and generalized states of weakness, shaking, and nausea.
2. Pain in areas other than the head region.
3. Headaches.
4. Paralysis of extremities, and spasms, jerks, and numbness in those areas.
5. Pronounced sensory symptoms.
6. Numbness and jerking movements in the head and face region.

B. Treatment of the Data and Results[1]

1. Pronounced sensory symptoms (#5) were found in 7 of the 46 subjects and were significantly more characteristic of predominantly E individuals (as determined by the first formula).[2] Age and normal

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1 One-tailed tests of significance were used when direction was predicted in advance. Otherwise, two-tailed tests were used. Reported "trends" fell within the .10 to .20 levels.

2 $p < .02$ by Fisher's exact test.

level[3] did not significantly influence the occurrence of these symptoms, nor were any significant differences obtained between the compensated and uncompensated groups. However, a trend in the direction of increased numbers of subjects in the compensated groups, (IC and EC) was observed.

2. In studying the formulae of subjects with pronounced sensory symptoms, it was noted that the 3 cases in the group who suffered from hysterical blindness were F-uncompensated-compensated individuals in their location on the F-R continuum. This suggested a further study of such subjects, of whom there were 9. These 9 were almost equally divided between "I" and "E" subjects according to their first formulae, 7 becoming "E" individuals according to the second. All of them concluded as "I" individuals in the third formula, departing significantly from the hypothesis of an equal E-I split.[4] AS

The above-mentioned results are thought to be in line with [redacted] theoretical formulations in the following respects. Disturbances in the sensory areas would be more typical of "E" subjects, who are theoretically perceptually dominant and who, if maladjusted, would tend toward defensiveness in this respect. AS

Further, in connection with [redacted] placement of the individual on the F-R continuum, it would be anticipated that subjects in whom the "R" component was comparatively recent (i.e., appearing in the third formula only) would remain affected by their "F" characteristics, and be therefore subject to confusional states.

3. Numbness and jerking movements in the head and face regions (#6) were significantly more prevalent among the "E" subjects.[5] The jerking movements were especially common in these individuals. Since the latter were primarily motor disturbances, all of the subjects who suffered from motor disturbances were selected out, and a marked trend in the direction of increased numbers in the "E" individuals was observed.

These findings, too, are thought to be consistent with the theory, in that motor disturbances would be expected in "E" groups, who are both perceptually dominant and environmentally sensitive.

4. Fainting spells, dizziness, drowsiness, and generalized states of weakness, shaking, and nausea (#1), which occurred in 15 of the 46 subjects, were significantly more characteristic of the dull group than of the brighter subjects.[6] A trend was also found in the

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3 For analyses based on age, the group was split at the median (37.69), creating a young and old group each with 23 subjects. Nonsignificant differences in their mean normal levels and sex distributions were obtained. In studying the influence of normal level, a bright group of 31 subjects with normal levels of 10 and over, and a dull group of 15 individuals with normal levels below 10 were used. No significant differences were found between their mean ages and their sex distributions.

4 $p < .004$ by the binomial test.

5 $p < .015$ by Fisher's exact test.

6 $p < .008$ by Fisher's exact test.

direction of more subjects in the uncompensated versus the compensated groups, with the greatest number of individuals falling in the uncompensated E category. Age was a non-significant factor.

These results are supportive of the theory, in that a less differentiated level of perceptual disturbance, reflected in sensory symptoms, would be anticipated in predominantly "E" subjects who are characterized by a lower level of intellectual functioning.

5. The following trends were also noted.

a. In dividing the group into four quadrants according to [redacted] groupings, subjects were distributed as follows:

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| Uncompensated I | Uncompensated E |
|---|---|
| 10 | 8 |
| **Compensated I** | **Compensated E** |
| 16 | 12 |

It can be seen that there is a trend toward the greatest numbers of subjects falling in the two compensated groups. While more subjects are needed for a more definitive breakdown in terms of quadrant placements, the predominance of compensated subjects is consistent with theoretical expectations.

b. A trend toward fewer symptoms, usually somewhat generalized in their nature, was found to be more characteristic of the "I" group, the "E" subjects having a greater number of relatively specific complaints. While the two compensated groups showed no marked difference in these respects, all of the 10 uncompensated I subjects complained of 2 or less symptoms, while only 4 of the 8 uncompensated "E" individuals did so, the remainder complaining of 3 or more. Neither age nor normal level influenced these results to any marked extent.

The increased number of reported symptoms in the "E" subjects, as well as their relatively greater specificity, may again reflect their perceptual dominance and associated specificity, as compared to the ideationally dominant, more abstract "I" group.

6. No significant results or marked trends were obtained with regard to the remaining symptom groupings. However, a more theory-oriented classification of these symptoms is thought to be worth attempting.

II. The Pilot Study with Subgroups. (N = 14).

A. Procedures

A subgroup was selected out of the whole sample, consisting of all subjects with low scores on the Picture Completion subtest of the Wechsler Scale. A low PC score was defined as -3 or more in relation to the individual's normal level. Fourteen of the 46 subjects met this criterion. This subgroup was chosen because of the theoretical distinction made in the meaning of a low PC score in a predominantly "I" and a predominantly "E" individual. Theoretically, such a score in the former suggests withdrawal in the direction of autism. On the other hand, in the latter, it indicates withdrawal chiefly through identification. It was therefore thought that this distinction might be reflected in symptom choice.

B. Treatment of the Data and Results

Seven of the 14 "low PC" subjects were found to be in the "I" category and 7 in the "E" group, as determined by the first formula. Six in each group were compensated, and 1 was uncompensated. The groups were closely matched in terms of sex distribution, chronological age, and normal level, as well as on verbal, performance, and full-scale IQ, and range and mean PC scores.[7]

The following results were obtained:

1. None of the 7 "E" subjects suffered from headaches, and all of the 7 "I" subjects suffered from severe headaches.[8] (Note: None of these were migraines, the latter being absent in the conversion group. This is in line with theoretical expectations, since migraines constitute a different symptom in terms of the individual's dynamic structure).

It is thought that these results are strongly supportive of [redacted] theoretical views, in that headaches would be more apt to occur in the ideationally-dominant I individuals. Further in most cases the "I" subjects reported headaches of a more or less generalized nature, suggesting the characteristic lack of specificity in such individuals.

2. Of the headache sufferers, 3 reported no additional symptoms. These were "iru" individuals according to the third formula, and were also Iei across the three formulae. The remaining "I" subjects included 2 "iru"individuals, 1 "eru," and 1 "ifu." Thus, all of them concluded as "unacceptable" on the A-U continuum, while 6 were originally "acceptable."

It may well be that the efforts at adjustment made by these subjects was further complicated by their unacceptability, which would theoretically reflect increased difficulties in the individual's social relationships,thus increasing the need for compensation.

3. In view of the apparent distinction in connection with headaches, the remainder of the conversion subjects (not characterized by low PC scores) was surveyed for the occurrence of this symptom. Nine such subjects were found, 4 in the "I" group and 5 in the "E", a clearly nonsignificant

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[7] Each group included 6 females and 1 male. The age range for the I group was from 17 to 44 years, mean 33.86, while that of the E group was 20 to 49, mean 38.16. No significant differences were found between the age ranges. Normal levels for the I subjects ranged from 8 to 12, mean 10.14, and for the F group from 9 to 13, mean 10.83, with nonsignificant differences obtained between them Nonsignificant differences were also obtained between their full-scale, verbal, and performance IQs. In both, PC scores were -3 to -7, means -5.00 & -4.83 (NS)

[8] $p < .001$ by Fisher's exact test.

[9] $p < .016$ by the binomial test.

difference.

This finding tends to support the rationale for conducting further study of "low PC" individuals with additional subjects, rather than considering the division in terms of "I" and "E" components alone.

4. In the "E" group, a trend toward symptoms centering primarily in the area of the legs and feet was noted. This was observed in 6 of the 7 "E" subjects, as opposed to 2 of the 7 "I" individuals. There was also a predominance of walking difficulties among the "E" subjects.

Since 6 of the 7 in the "E" category were compensated, it may be that their motor difficulties reflect the later development of an "I" component, mitigating against a primarily environmentally dominated orientation.

5. On the A-U continuum, in contrast to the "I" group, all of the "E" subjects began as "acceptable" according to the first formula,[10] shifted to the "unacceptable" according to the second,[11] and were about equally divided in this respect on the third.

These findings suggest that the A-U continuum may be relevant to symptom-choice, perhaps operating differentially with basically different types of personality configurations.

6. On the F-R continuum, both groups were approximately equally divided between "F" and "R" components according to the first and second formulae. However, according to the third, 6 of the 7 "I" subjects concluded as "R" individuals, while the "E" group remained about evenly divided between "R" and "F."

This trend toward increased rigidity on the part of "I" subjects with low PC scores would have considerable theoretical importance, if substantiated by further investigation. It also constitutes a further indication that the three basic continua and their interrelationships must all be taken into consideration in evaluating personality functioning, a point of view which the theory stresses.

7. When the subgroups were combined into a single "low PC" group, ($N = 14$), a significantly greater number of "compensated" as opposed to "uncompensated" subjects were found (when compared to the possibility of an equal division).[12] The relevance of this finding to the theory has already been commented on under results obtained for the whole sample.

8. Significant behavioral differences apart from symptoms were also obtained in comparing the two "low PC" groups. Among the "I" subjects, 5 of the 7 were characterized by periods of abrupt disruption of control with outbreaks of irrational emotional display, while none of the "E" subjects demonstrated this behavior.[13]

These results, which were based on the psychological and psychiatric records of the subjects, strongly suggest that further investigation with a larger sample might serve to support the theory in terms of differential emotional reactions. It would be anticipated that the interrelations among the continua would be highly pertinent in this connection.

[10] $p < .016$ by the binomial test.
[11] $p < .016$ by the binomial test.
[12] $p < .01$ by the binomial test.
[13] $p < .025$ by Fisher's exact test.

Summary of the Pilot Study

Some statistically significant results as well as a number of trends, in accord with theoretical expectations, were found in a pilot study based on 46 conversion subjects. The findings were related to the three major personality dimensions of [redacted] theory, (i.e., the I-E, F-R, and A-U continua). Significant differences in behavior, as well as in symptom-choice, were also noted. The conversion group appears to be well suited to a more extensive investigation of the theory, since symptom-choice presumably reflects basic aspects of the individual's dynamic structure. The preliminary work has suggested a number of hypotheses which warrant further testing with a larger sample.

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