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Accuracy and Agreement of Psychodiagnostic Judgments Based on Different Amounts of Information Defining Diagnostic Categories

August J. Crivolio

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ACCURACY AND AGREEMENT OF PSYCHODIAGNOSTIC JUDGMENTS
BASED ON DIFFERENT AMOUNTS OF INFORMATION
DEFINING DIAGNOSTIC CATEGORIES

by
August J. Crivolio

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
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CHAPTER I

INTRODUCTION

In their recent review of the research on the classification of the behavior disorders, Phillips and Draguns (1971) begin by saying:

In the field of classification of behavior disorders, the last 4 years have been a period of ferment, controversy, and innovation. The subject of diagnosis, once regarded as a preserve of traditionalists, has acquired for many workers in the field a new excitement and vitality. The assumptions, models, divisions, and objectives of psychopathological categorization are being actively scrutinized (p. 447).

This increasing interest in the problems of classification reflects a growing awareness among researchers of the need for a reliable and valid method for making psychiatric distinctions among patients (Katz, Cole, & Barton, 1968). The recent recognition of the importance of accurate diagnosis in epidemiological studies has been noted (Copeland, Cooper, Kendell, & Gourlay, 1971). And Conover (1972) has described the capacity to classify as a necessary first step in psychiatric research. Without it, comparisons cannot be made, change cannot be assessed, and empirical regularities and relationships associated with diagnostic categories cannot be discovered. He reminds investigators that their research findings can be no more reliable or valid than the classification system they use in their research.
There is another reason why the area of diagnosis or classification has attracted the interest of mental health workers. They have become more concerned about their ethical responsibility to critically evaluate their professional practices which include psychodiagnosis and clinical decision making (Milgram, 1972; Wolff, 1972).

One very important and popular field of psychological research that would benefit from improvements in methods of classification is psychiatric treatment.

The authors of two recent reviews of research in psychotherapy have concluded that additional general studies of the effectiveness of psychotherapy would be meaningless. They say that a simple outcome study is like asking the question of whether medicine does any good when a person is sick. (Bergin, 1971; Meltzoff & Kornreich, 1970)

Meltzoff and Kornreich (1970) state:

Although the literature is replete with therapeutic recipes, very few attempts have been made to find out if they truly have any bearing on outcome. This is a neglected but important area in psychotherapy research. The comparative effects of systematic variations in therapeutic technique must be studied experimentally if they are to be refined (p.203).

And although some investigations of the differential effects of various treatments on outcome have been done, this kind of research has been minimal and has revealed only tentative trends (Anthony, Buell, Sharratt, & Althoff, 1972; Luborsky,
chandler, Auerbach, Cohen, & Bachrach, 1971). However, studies concerned with questions of this kind will probably dominate the psychotherapy literature in the next few years.

Bergin (1971) reached a similar conclusion: "I seriously doubt that there is any point in doing more of the kind of outcome research that has typically been done....I believe that the present review has made it quite clear that gross tests of the effects of therapy are obsolete (p.253)." He thinks it is time to begin to ask what kinds of therapy by what kinds of therapists are most effective for what kinds of patients. His view was founded on the results of outcome studies which show "variability of outcomes across diagnosis...and types of therapists (p.253)."

Bergin's conclusion that the time has come to ask what kind of treatment works best with what kind of patient is shared by a number of investigators who have talked about the role of classification in this kind of research (Copeland, Cooper, Kendell, & Gourlay, 1971; Conover, 1972; Katz, Cole, & Barton, 1968; Zubin, 1967). In order to do this kind of research, it will be necessary to classify patients in some way so that the effectiveness of different therapeutic techniques with particular kinds of patients can be assessed with the aim of then applying the proven techniques to all patients who belong to the class from which the research sample was drawn.
Both Zubin (1967) and Honigfeld (1971) have contrasted the need for classification in the past with the need for classification in the present. Zubin (1967) says:

When all we had to offer the behaviorally disturbed person was custodial care, there was not much need for diagnosis, but, paradoxically, the heyday of diagnosis occurred during this custodial period. Diagnosing was perhaps more an academic exercise in search of etiology than a practical tool. Today, with the bulging armamentarium of therapies, we must find some way of selecting the best therapy for each patient. But just now, diagnosis is at its lowest ebb (p. 395).

In talking about the state of psychotherapy practice when there was not a variety of therapeutic techniques and practitioners available, Honigfeld (1971) states that the choice was most often between psychoanalytic treatment or Rogerian therapy. During that more limited stage in the history of the treatment of mental illness, the arguments against patient classification made some sense; but now, with a wide spectrum of therapeutic choices, the problem of differential diagnosis and treatment prescription has become more important.

This investigator is interested in beginning a research program directed toward the evaluation of the effectiveness of different techniques applied to particular kinds of patients. A first step in such a program and the focus of the present research would involve developing a method for categorizing patients accurately and reliably. This study will be mainly concerned with this problem.
CHAPTER II

REVIEW OF THE RELATED LITERATURE

Reliability and Validity of Psychiatric Diagnosis

Zubin (1967) reviewed the research on the reliability of psychiatric diagnosis for the years 1960-1965. His conclusions are similar to those of previous reviewers: Overall agreement among different observers on specific categories—e.g., depressive neurosis, anxiety neurosis—is too low for individual diagnosis. The percentage agreement ranges from 38% to 66%. Overall agreement among different observers on general categories—organic, functional psychoses, characterological, psychoneurosis—is somewhat higher (64% to 84%), but it still leaves much to be desired. That diagnosis is somewhat reliable when broad categories are used and less reliable when narrower categories are used is the general conclusion of most reviewers of the research on the reliability of psychiatric diagnosis (Arthur, 1969; Conover, 1972; Zigler & Phillips, 1972).

Consistency of diagnosis over time is similarly low. In addition, there is some degree of diagnostic variability within the same hospital, more variability among hospitals in a particular region of the country, and even more variability among hospitals in different parts of the country (Phillips, 1968). As might be expected, disagreement about diagnosis occurs when
comparisons are made among judges from different parts of the world (Copeland, Cooper, Kendell, & Gourlay, 1971; Kendell, Cooper, Gourlay, & Copeland, 1971).

Zubin (1967) concluded that no overall statements about the validity of diagnosis could be made. Because the purposes of diagnosis are varied, it is difficult to evaluate how successful diagnostic procedures are in attaining these goals. Conover (1972), in his review, chose not to deal with the validity of psychiatric diagnosis because "there are, as yet, no accepted 'external independent criteria' against which the validity of psychiatric diagnoses can be measured (p.167)."

One of the few studies of the validity of psychiatric diagnosis was done by Hunt, Wittson, and Hunt (1952). They investigated the utility of traditional psychiatric categories for the prediction of actual behavior by studying the medical and service records of a group of military personnel who were marginal neuropsychiatric cases. Their results were interpreted as showing that the behavior of persons diagnosed according to the diagnostic nomenclature were in accord with clinical predictions that would have been made on the basis of their diagnosis. For example, the psychopathic personalities showed severe disciplinary problems.

Although there has been little research on the validity of psychiatric diagnosis, there has been a great deal of research
devoted to the broader area of clinical judgment. Indeed, the
question of clinical versus statistical prediction has been one
of the most hotly debated issues in the psychological litera-
ture, and the case for each position continues to be argued
(Bieri, Atkins, Briar, Leaman, Miller, & Tripodi, 1966;
Meenh, 1954; Sarbin, Taft, Bailey, 1960; Sawyer, 1966; Wiggins
& Kohen, 1971).

Many psychologists interpreted these studies as reflecting
unfavorably upon the value of clinical judgment. Holt (1970),
in an article in defense of clinical judgment, describes this
position quite well:

Nonclinical psychologists increasingly take a
patronizing attitude to the clinical assessment enter-
prise, implying if they do not state outright that it
is a quixotic pursuit for a first-rate person since it
has allegedly been proved to be unreliable and invalid.
The main evidence cited against the diagnostic tester--
thrown into his face might better capture the emotional
tone of many exchanges--is the rout of clinicians by
exponents of statistical and actuarial prediction (p.337).

For many good reasons clinical judgment and the ability to make
a psychiatric diagnosis became closely linked in the minds of a
number of psychologists. For instance, Matarazzo (1965) talks
about the "important premise that psychiatric diagnosis is
merely one example of a more general psychological process--
clinical judgment... (p.422)." And psychiatric diagnosis became
associated with the topic of clinical versus statistical pre-
diction, which led Arthur (1969) to talk about "clinical versus
statistical diagnosis (p.183)." As a result, the research results concerning the clinical versus statistical problem often are considered to have invalidated psychiatric diagnosis; however, the majority of these studies did not involve the usual psychiatric classification task. This point will be discussed in more detail below.

Furthermore, the traditional classification system has been criticized because of its connection with a medical model of psychopathology. Since the medical model is considered by many to be an inappropriate conceptualization of disturbed behavior, the diagnostic system that is associated with the model has also been judged to be invalid.

On the basis of research findings and theoretical objections like those that have been discussed above, some mental health professionals have rejected the whole idea of psychiatric diagnosis and classification. They have questioned the validity, the usefulness, and the entire rationale of the diagnostic labeling process (Albee, 1970; Menninger, 1963; Szasz, 1961; Ullman & Krasner, 1969). Others have suggested completely different alternative approaches to classification (Arthur, 1969; Carson, 1969; Mahrer, 1970; Phillips & Draguns, 1971).

In spite of its shortcomings, however, many have defended traditional psychiatric classification (Brill, 1972; Gough, 1971; Honigfeld, 1971; Hunt, 1971; Lorr, 1970; Masserman, 1972;
Meehl, 1959; Millon, 1969; Nathan, 1967). And Phillips and Draguns (1971), after reviewing the most recent literature on the classification of the behavior disorders, had the impression that the traditional conceptualization and nosology for the classification of psychopathology is the one most accepted and most utilized by clinicians and researchers in the professional fields concerned with mental illness.

Many reasons have been given for retaining the traditional diagnostic classification system. Meehl (1959) some time ago made a statement about the usefulness of this system which still contains a great deal of truth:

I would explain the viability of the Kraepelinian nomenclature by the hypothesis that there is a considerable amount of truth contained in the system. And that, therefore, the practical implications associated with these labels are still sufficiently great, especially when compared with the predictive power of competing concepts, that even the most anti-nosological clinician finds himself worrying about whether a patient whom he has been treating as an obsessional character 'is really a schizophrenic' (p.103).

Lorr (1970) has also presented a strong case for the merits and uses of some kind of typological classification system:

It is perhaps obvious that types facilitate communication. The unique pattern of characteristics make members of a type easily recognized, remembered, understood, and differentiated from nonmembers in a given domain. To label a person a psychopath, an anxious depressive, or a schizoid is to suggest immediately a broad pattern of traits and expected behavior. A depressed patient will be dejected in mood, self-reproachful in attitude, and a candidate for electro-shock. Types thus provide predictive gains immediately upon recognition of belonging to a type. Inference can
made to a wide range of information generally lacking in a single attribute measurement (p.102).

Criticism of Studies of the Reliability and Validity of psychiatric Diagnosis

It has been recognized for some time that the diagnostic categories that are used in research on the reliability of psychiatric diagnosis are inadequate and need to be refined (Hunt, Wittson, & Hunt, 1953; Hunt, 1971). It has also been suggested that reliability is related to the precision with which the categories are defined and delineated:

...reliability is primarily related to the precision with which classes of a schema are defined. Since the defining characteristic of most classes in psychiatric diagnosis is the occurrence of symptoms in particular combinations, the reliability of the system mirrors the specificity with which the various combinations of symptoms (syndromes) have been spelled out (Zigler & Phillips, 1972, p.26).

But too few reliability studies have provided judges with detailed definitions of the categories that were used for classification or with criteria in the form of symptoms or behavior descriptions for deciding whether a patient should be in a particular category. When definitions and criteria have been provided, they have usually come from one of the editions of the Diagnostic and Statistical Manual of Mental Disorders (DSM--I, DSM--II) published by the American Psychiatric Association (1952, 1968). The assumption has been made in these studies that the knowledge about the categories that the judges already
had as a result of training was enough or that this knowledge and the DSM was all the information they needed in order to make a diagnostic decision.

In most of the studies of the reliability of diagnostic classification, judges have had to make decisions in the absence of clear cut, unambiguous, meaningful definitions and criteria on which to base their judgments. The general vagueness, looseness, and ambiguity in the terms used by psychologists and psychiatrists has been recognized for a long time (Grayson & Tolman, 1950). And O'Neill (1968) has noted how the meaning of the terms used in the classification system varies from one geographic area to another. Wilson (1968) clearly recognized these inadequacies of the traditional nosology, and he recommended that the situation could be improved if measures were taken to make sure that all mental health professionals used technical terms in the same way.

Conover (1972) has commented on similar kinds of inadequacies in the definitions and criteria set forth in DSM--II. Millon (1969) has noted that it does not include a wide variety of clinical signs for the different categories; instead, it stresses the significance of dramatic symptoms. And Meehl (1959) has suggested that those trained to have little faith in nosological categories will probably not be aware of some of the minor signs pointing to a particular diagnostic cate-
In fact, he has recently reported that in his experience they often do not know the principal symptoms of some categories:

It disturbs me, for example, when after four years of post-BA training to be a clinical psychologist, a candidate cannot (on a preliminary oral) list for me the major symptoms of a psychotic depression... (Meehl, 1972, p. 937).

In the absence of suitable definitions and criteria on which to base their judgments, all kinds of influences come into play in determining judgments. Pasamanick, Dinitz, and Lefton (1959), in discussing their data, make this point very clearly:

...despite protestations that their point of reference is always the individual, clinicians in fact may be so committed to a particular school of thought, that the patient's diagnosis and treatment is largely predetermined. Clinicians, as indicated by these data, may be selectively perceiving and emphasizing only those characteristics and attributes of their patients which are relevant to their own preconceived systems of thought. As a consequence, they may be over-looking other patient characteristics which would be considered crucial by colleagues who are otherwise committed. This makes it possible for one psychiatrist to diagnose nearly all of his patients schizophrenic while an equally competent clinician diagnoses a comparable group of patients as psychoneurotics (Pp. 229-230).

Other influences also operate to affect the diagnostic decision. Temerlin (1968) did a study in which psychiatrists, clinical psychologists, and graduate students in clinical psychology were asked to diagnose a recorded interview with a normal, healthy man as portrayed by an actor. Before listening to the interview, they heard a high prestige authority, who was a confederate of the experimenter, say that the person to
be diagnosed was "a very interesting man because he looked neurotic but actually was quite psychotic." While no one in the control groups diagnosed psychosis, in the experimental group 60% of the psychiatrists, 28% of the psychologists, and 11% of the graduate students diagnosed psychosis. The study was interpreted as being an indication of poor agreement among observers. But the study could just as easily be interpreted as indicating that observers will rely on clear cut criteria—like an expert's opinion—in the absence of more meaningful and unambiguous standards.

Evaluative frames of reference—idiosyncratic frames of reference which differ from clinician to clinician—have also been shown to be involved in the diagnostic process (Arnhoff, 1954; Gunderson & Kapfer, 1966). Similarly, response styles have received attention because of their contribution to clinical decisions (Grosz & Grossman, 1964, 1968): There seems to be a significant tendency for an observer to respond in a stereotyped way independent of what is being observed. These influences seem to be only a few of a larger class of personality variables which are involved in arriving at clinical judgments (Gordon, 1966, 1967). Social class bias also seems to enter into diagnostic judgments (Routh & King, 1972). However, the influence of these factors would be greatly reduced if meaningful criteria were available as a basis for making
decisions of a diagnostic type.

A study reported by Ward, Beck, Mendelson, Mock, and Erbaugh (1962) provides some research support for what was said above regarding the inadequacies of the classification system, and it pinpoints other factors in the diagnostic process that contribute to unreliability. Four experienced psychiatrists were randomly paired in such a way that each patient in the study was seen separately by two of the diagnosticians. After seeing a patient, the psychiatrist wrote out his diagnostic conclusions which were based on DSM--I. The psychiatrists then met and established reasons for disagreements. These reasons were tallied for 40 cases where the psychiatrists differed on the patient's diagnosis.

The results of this study showed that the patient's behavior accounted for 5% of the disagreements: The patient gave different information to each of the diagnosticians (2.5%); the patient changed due to the first interview (2.5%).

Inconstant behavior on the part of the diagnostician accounted for 32.5% of the disagreements: Different interviewing techniques led to the elicitation of different material (5%); symptoms were weighted differently (17.5%); pathology was interpreted differently (5%); other kinds of variation that were not reported (5%).

Finally, and most important in relation to what was said
above, inadequacies in the diagnostic system used (DSM—I) were responsible for 62.5% of the disagreements: The clinical picture was too ambiguous for classification according to the distinctions used to delineate the categories (7.5%); difficulty in making a decision between the predominance of neurotic disorder and personality disorder when both were present (30%); lack of specification of criteria for membership in a diagnostic category (25%).

When some of the shortcomings mentioned above are controlled, the results do lead to greater reliability. The most comprehensive investigation undertaken in recent years in the field of reliability studies of clinical assessment and psychiatric diagnosis has been that of Wing and his associates at the Maudsley Hospital (Wing, Birley, Cooper, Graham, & Isaacs, 1967). These investigators employed a checklist of more than 400 symptoms covering all the psychiatric features likely to be examined during that part of the psychiatric interview designed to define the current mental state of the patient. Each symptom was defined in detail, a form of questioning for each feature was suggested, and a set of rules were provided to bring consistency into the process of interpreting the clinical information obtained for the purpose of arriving at a preliminary diagnosis. In spite of the fact that the form of the interview was highly structured, it is important to point out that its
sentially clinical features were retained. For example, the final judgment as to whether the symptom was present or not was left to the examiner. The five trained interviewers who took part in this investigation achieved a very satisfactory degree of reliability in the provisional diagnoses. As far as diagnostic categorization was concerned, complete agreement between pairs of clinicians was achieved in 83.7% and partial agreement in 7% of the cases observed. Wing and his associates were justifiably encouraged by these results. They stressed the fact that the clinical form of inquiry is not inherently subjective, inaccurate, and nonreproducible, but that it requires safeguards to insure that standards of precision, comprehensiveness, and inference are maintained at a consistently high level.

In a similar vein, Small (1964) reported a study in which the reliability of two psychiatrists in assigning patients to diagnostic categories was 86%. These psychiatrists conducted a rigidly structured interview and they went to great efforts to come to a similar understanding of the questions and the diagnostic categories prior to the interviews. Indeed, each had a written description of each diagnosis in his possession when he made his decisions. Again, these results indicate the accuracy attainable when clear cut and meaningful criteria are available for making decisions regarding diagnosis.

More recent studies (Copeland, Cooper, Kendell, & Gourlay,
1971; Kendell, Cooper, Gourlay, & Copeland, 1971) in which precautions were taken to avoid the major sources of error mentioned above, have also reported satisfactory levels of diagnostic reliability when judges are grouped by their place of training or by country. As a result of their own work in this area and after reviewing studies like the Wing et al. (1967) study, Copeland et al. (1971) concluded:

In spite of the present state of comparative ignorance, there is no need for a particularly pessimistic outlook when considering the reliability of diagnostic procedures in psychiatry...

...when special steps are taken to avoid the most obvious sources of inter-observer variation, for instance by using standardized interview schedules and agreed glossaries of diagnostic terms, satisfactory levels of reliability and repeatability of the various stages of the diagnostic process can be achieved (Pp.637-638).

The validity of psychiatric diagnosis is difficult to evaluate. Zubin (1967) has stated that "the validity of a given diagnosis is one of the most baffling problems that we face (p.388)." He attributes part of the problem to the fact that "the goals of diagnosis are so many and so disparate (p.388)." Both Conover (1972) and Hunt (1971) believe that validity poses such difficult problems because there are no independent, external criteria against which to measure diagnostic validity.

Zigler and Phillips (1972) recommend that the traditional diagnostic system be viewed as a descriptive schema or taxonomy of behavior disorders. If it were conceptualized in this
fashion, it would have some validity since it would be evaluated only in terms of whether members of categories showed the characteristics which defined the class. In addition to the defining attributes of the classes, well-established clinical correlates could be added, and the system would have considerable heuristic merit. They see the present diagnostic system as having some value for administrative and preventive purposes. For example, it is helpful in legal determination of insanity and incompetence; it provides a classification system for census and statistical data which are used as a basis for considerable planning; and it is useful as a screening device for the military services and other agencies. In summing up their case for the validity of psychiatric diagnosis they say: "In view of the extensive criticism of contemporary diagnosis, the surprising fact is not that so few valid predictions can be derived from class membership, but that so many can (p.26)."

It was mentioned above that some psychologists have read the clinical judgment literature as having invalidated psychiatric diagnosis even though most of these studies have not involved the usual psychiatric classification task. This area of research has been evaluated by Holt (1970). He has discussed the shortcomings of these studies and he has criticized the conclusions about the validity of clinical judgment that some have drawn from the results.
One of the main points Holt (1970) makes is that these studies have evaluated a global, unsystematic, diffuse form of clinical judgment instead of a more disciplined, organized, analytical form of clinical judgment. He makes the additional point that a sophisticated clinical decision would be based on a detailed analysis of the criterion to be predicted. Recent studies have shown that when this is done it facilitates the making of more accurate predictions (Moxley & Satz, 1970; Sechrest, Gallimore, & Hersch, 1967).

It was mentioned above that psychiatric diagnosis has been criticized as being invalid because of its association with a disease model of disturbed behavior which is considered invalid. Hunt (1971) has commented on this "guilt by association" assessment of psychiatric diagnosis:

"...to criticize diagnosis simply because it follows a medical model is specious reasoning of the worst sort. Psychiatric diagnosis may have arisen under medical auspices, but the tradition of taxonomy has a long and honorable scientific history independent of medical practice. Indeed, there are few psychological theories of personality today that do not come equipped with some classificatory system designed for the prediction of behavior. If psychology and the sciences adjunctive to medicine (in some circumstances) cannot establish an independent identity without the complete denigration of everything associated with medical practice we have reached a sorry and ignoble professional state (Pp. 16-17).

The Present Study

The studies reviewed above (Copeland et al., 1971;
Kendell et al., 1971; Small, 1964; Wing et al., 1967) have attempted to eliminate the major sources of diagnostic disagreement and have found the level of reliability of diagnosis to be higher than the figures reported in the studies that did not include these improvements. A major methodological fault of the improved studies, however, has been the absence of a control group to allow for the assessment of the significance of the differences in reliability that have been found. The present study will include the necessary control group. In these studies, the methodological improvements have been made by using structured or videotaped interviews which insured that all of the diagnosticians had the same information on which to base their decisions and by attempting to make sure that all judges had the same understanding of the criteria that were the defining characteristics of the diagnostic categories. Since this investigator is primarily interested in determining the effect that clarification of the diagnostic categories has on agreement, this will be the only variable that will be examined in this study.

Another goal of this study is to investigate the concurrent validity of psychiatric diagnosis which Zubin (1967) mentions is not too well established. The criterion will be a diagnosis made on the basis of an unlimited amount of information--clinical interviews, past history, extensive behavior
samples, etc. A criterion diagnosis will be established only for cases where there is unanimous agreement that the clinical picture presented by the patient matches one of the diagnostic categories that will be used in this study, which is the only way that the present categories can be validated (Kendell et al., 1971; Zigler & Phillips, 1972). The experimental judges' accuracy will be measured by how well they are able to predict this criterion on the basis of a different and more limited sample of behavior. Information about the criterion will be given to the judges in the form of the defining characteristics of the diagnostic categories. This will represent the kind of methodological improvement that Holt (1970) calls for in studies of the validity of clinical judgment. It will insure a more disciplined, organized, analytical form of clinical judgment.

A number of studies have shown that the amount of information that is given to judges is related to accuracy and agreement (Bartlett, 1966; Curtis, Smith, Kordasz, & Fogel, 1967; Hamlin, 1954; Huff & Friedman, 1967; Hunt & Walker, 1966; Kostlan, 1954; Oskamp, 1965; Rubin & Shontz, 1960; Schwartz, 1967; Sines, 1959). The usual design of these studies involves giving increasing or decreasing amounts of case history or test information and then measuring increases or decreases in accuracy and agreement. Goldberg (1968) reviewed these studies and concluded that the amount of information available to a
judge is not related to the accuracy of his inferences. However, after reviewing these studies, this investigator agrees with Hunt and Walker (1966) who concluded that the relationship between amount of information and the reliability and validity of diagnostic judgments is a complex one. They found the experimental investigation of this area hindered by the difficulty of pinpointing and controlling the cues available in the case histories and tests that were usually provided to judges. As a result, it is difficult to determine the amount of information the judges have available to process.

On the basis of the studies on amount of case history or test information given to judges, this investigator decided to vary the amount of information that is made available to judges about the diagnostic categories in order to determine what effect this has on the accuracy and agreement of psychiatric diagnosis. Schwartz (1967) found that different amount of test information increased judges' reliability but not their validity. This study will examine whether different amounts of information about the diagnostic categories differentially affects agreement and validity.

The method of studying the reliability and validity of psychiatric diagnosis developed by Hunt and his associates (Hunt, 1959; Hunt & Walker, 1962, 1971; Schwartz, 1967) will be used in this investigation. The sample of behavior on which a diagnosis is made consists of the verbal responses to
the Vocabulary and Comprehension subtests of the Wechsler Adult Intelligence Scale (WAIS). Hunt (1959) lists the merits of this method: The verbal responses to the subtests provide a clear and easily duplicable sample of behavior. Also, the experimenter is able to provide the same information to all the judges. Moreover, the judgment task is one which is convenient and fairly controllable, and it approximates the usual situation faced by the diagnostician who evaluates test responses for their diagnostic significance. Finally, the method allows for the study to be easily replicated.

In spite of the fact that it is common clinical practice to evaluate the responses to the WAIS subtests for the presence of qualitative cues indicative of psychopathology, surprisingly few studies have directly investigated the utility of these cues in diagnostic assessment (Chodorkoff & Mussen, 1952; Cruickshank, 1947; Goldman, Greenblatt, & Coon, 1946; Rashkis, 1946; Spence, 1963). In one study (Hunt & Walker, 1971), judges were able to list qualitative cues in the Comprehension and Vocabulary subtests of the WAIS that they found useful in making a diagnosis. And Potkay (1971) found that experienced clinicians as a group found qualitative forms of information to have considerable utility in Rorschach interpretation, which could be interpreted as evidence for the value of qualitative cues on tests in general.
Primarily on the basis of clinical experience, Matarazzo (1972) suggests that the qualitative features of the WAIS "have shown themselves to be of diagnostic value in the hands of experienced clinicians whose knowledge of the various forms in which psychopathology can manifest itself often is aided by such qualitative cues...(p.482)." Frank (1970) also thinks it is possible to make good clinical use of the qualitative cues available from the WAIS:

Personality variables do seem to be reflected in Wechsler data, but in a very qualitative manner. For example, instead of being able to isolate characteristic patterns of subtest performance for any group which would help us in identifying personality variables, we must, rather, look to the verbalizations and the performance of the subject to determine whether the thought disorder of the schizophrenic or the characteristic quality of thinking of the obsessive-compulsive is revealed in the pattern of thinking tapped by the test...(p.185).

In the present study, therefore, the criteria and information about the diagnostic categories will be in the form of qualitative cues which might appear in the WAIS Comprehension and Vocabulary subtests.

Hypotheses

The specific hypotheses that will be tested in this experiment are as follows:

(1) Clinical judges having criteria and information about diagnostic categories in the form of qualitative cues available to them when making diagnostic decisions will show significantly
more accuracy than judges not having these cues.

(2) Clinical judges having criteria and information about diagnostic categories in the form of qualitative cues available to them when making diagnostic decisions will show significantly more agreement than judges not having these cues.

(3) There will be a significant difference in accuracy due to quantity of cues made available to the judges.

(4) There will be a significant difference in agreement due to quantity of cues made available to the judges.
CHAPTER III

METHOD

Judges

Fifty-four clinical psychologists were asked to participate in this study and 45 readily agreed to serve as judges. Table 1 shows the main descriptive characteristics of the sample.

All of the judges had taught or had taken courses in which there was some emphasis on the interpretation and utilization of the WAIS as a clinical instrument. All of the judges had a year of supervised clinical experience, part of which included the interpretation and utilization of the WAIS as a clinical instrument. All of the judges said they used the WAIS as a tool useful for clinical diagnosis.

When this study was done, all of the judges were working in the same geographic area—in or near a large city in the midwest. About two-thirds of the sample of judges was trained at either of two universities in this area. Each of these universities had an APA (American Psychological Association) approved program in clinical psychology. The courses in diagnostic testing that these judges had were taught by psychologists who had been granted the ABPP (American Board of Professional Psychology) diploma, and most of these judges were trained in agencies located in the area.

26
TABLE 1

Description of Sample Judges

<table>
<thead>
<tr>
<th>Item</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean years of experience</td>
<td>9.22</td>
</tr>
<tr>
<td>S.D. years of experience</td>
<td>7.69</td>
</tr>
<tr>
<td>Range of years of experience</td>
<td>2-35</td>
</tr>
<tr>
<td>Number of Diplomates in clinical psychology</td>
<td>9</td>
</tr>
<tr>
<td>Number of Ph.D.s in clinical psychology</td>
<td>36</td>
</tr>
<tr>
<td>Number of M.A.s in clinical psychology&lt;sup&gt;a&lt;/sup&gt;</td>
<td>9</td>
</tr>
<tr>
<td>Number of males</td>
<td>35</td>
</tr>
<tr>
<td>Number of females</td>
<td>10</td>
</tr>
</tbody>
</table>

<sup>a</sup>These judges had completed all of the requirements for the Ph.D. except for the dissertation.
Materials

Thirty booklets were used. Each booklet contained the WAIS Comprehension and Vocabulary test responses of a single person. These booklets included six cases representing each of the following diagnostic categories: normal, organic, psychoneurotic, retarded, and schizophrenic. The test records used in this study were the same as the one used in the Hunt and Walker (c.f. 1962, 1971) studies in clinical judgment. Appendix A contains all 30 of the case records used in this study.

The psychiatric diagnoses of these patients who were given the Comprehension and Vocabulary subtests used in this study were agreed upon by the professional staffs at the institutions where the patients were tested and they never had any diagnosis other than the one they were assigned (Hunt & Walker, 1962). For the schizophrenics, there was an added external criterion of the severity of the disorder available and they were distributed over the complete range of severity of the disorder (Jones, 1959). The organics were all hospitalized on the neurological ward of a general hospital and there was no history of any functional psychiatric disturbance. Since the psychoneurotic and organic patients were hospitalized, they represent the severe end of the distribution of these disorders. Because they were capable of being tested, the retarded are the "better functioning cases." The normals had no psychiatric history and
there was an absence of any detectable symptoms when they were tested. All subjects were adult males. They were comparable in age, intelligence, educational history, and occupational level (except for the retarded for intelligence, education, and occupation).

The criteria and information defining the diagnostic categories were cues or signs associated with each of the five groups. The following procedure was used in the search for cues. A review of all studies of the Wechsler Bellevue (WB) and WAIS was made. The goal of this search was to isolate any qualitative cues which had been found to be empirically valid in establishing a particular diagnosis. A review was also made of the literature for empirical studies of the performance of the diagnostic groups on projective tests in general, verbal tests, and general experimental tasks. The assumption was made that if a subject from one of the diagnostic categories manifested certain qualitative behaviors on one task or in one testing situation, he might show the same behavior on the WAIS Comprehension and/or Vocabulary. And, since Hunt and Walker (1971) found that their judges' reasons for making diagnostic decisions reflected the standard textbook discussions of clinical material, an extensive review of the major psychiatry and abnormal psychology textbooks was made. Finally, the major texts on projective techniques and intelligence testing were
reviewed for cues. Appendix B contains a list of the sources from which cues were taken.

The cues for the different diagnostic categories were carefully selected. A cue was selected only if it could appear in the sample of behavior that the judges in this study would have: i.e., a person's responses to both the Comprehension and Vocabulary subtests of the WAIS. When there was any doubt about whether the cue could be detected in this sample of behavior, it was included. These cues are shown in Appendix C along with relevant identifying information.

Considerable consensual validation among the many authorities consulted was found for the majority of the cues. But it was decided that there should be an additional check on the clinical utility and validity of the cues that made up the initial list. Therefore, all of the cues listed in Appendix C were presented to three Diplomates (American Board of Professional Psychology) in clinical psychology. These three psychologists were well known as outstanding experts in the field of psychological testing in the geographic areas where they practiced. Each had extensive experience training psychologists in psychological testing. Two of them had published in the area of psychodiagnosis and the third had co-authored a book on psychological testing that was in press at the time of this study. All three Diplomates listed psychodiagnosis as a
specialized interest in their APA directory listing.

In addition to the above qualifications, Diplomate A had 31 years of experience with psychiatric patients. During this time, he used the WB or WAIS as a clinical instrument useful in diagnosis. He had 18 years of experience teaching courses in psychological testing, and part of each course focused on the WAIS as a diagnostic instrument. He also had conducted about 10 workshops on psychodiagnosis.

Diplomate B had 30 years of experience using the Wechsler scales with psychiatric patients. He had taught courses in psychodiagnosis for 26 years and part of each course had focused on the Wechsler scales as diagnostic instruments.

Diplomate C had 19 years of experience using the WB or WAIS as a clinical instrument for diagnosis. He taught a seminar in psychological testing to psychology interns for three years, and part of this course focused on the WAIS as a clinical instrument.

The order of the cues listed in Appendix C was randomized with the aid of a random number table and then they were presented to the three Diplomates grouped according to diagnostic category, but with no other identifying information. The Diplomates were asked to examine each cue in terms of whether it was associated with the diagnostic category under which it was listed and whether it might appear in responses to items from both the WAIS Comprehension and Vocabulary from a person
of that diagnostic type. They were also asked to indicate how often it might appear in this behavior sample on a 5-point scale. (See Appendix D for instructions that were given to Diplomates.) One of the three Diplomates said he had not had too much experience with organic patients; therefore, he was given alternate instructions which are also included in Appendix D. These instructions direct the Diplomate to make his assessment on the basis of whatever experience he had acquired and whatever knowledge he had as a result of other sources of information.

After the Diplomates rated the cues for how often each cue appeared in the WAIS Comprehension and Vocabulary test responses of patients from each of the diagnostic types, their ratings were transformed into standard scores. Each cue was then given a percentile rank on the basis of how all three Diplomates had rated it. Each cue and its percentile rank is listed in Appendix E.

The five cues from each category having the lowest percentile rank were eliminated. The 10 cues from each category having the highest percentile rank were used to make up one list of cues. In the cases where ties occurred, cues were selected randomly by a table of random numbers. The 10 best cues were used for the "Partial Delineation of Category" (Partial Cues) treatment condition. A second list of cues was composed of all of the cues except for the five from each category that had the lowest
percentile ranks. This group of cues was used for the "Full Delineation of Category" (Full Cues) treatment condition. Appendix F includes both lists of cues in the format that was used when they were presented to judges in these two conditions. In addition to these conditions, there was a third treatment condition--"No Delineation of Category" (No Cues) which consisted of giving judges no cues.

Procedure

A list of potential judges was constructed, and each psychologist was asked to participate. He was told that the task involved giving a diagnosis for six cases on the basis of WAIS Comprehension and Vocabulary subtests. He was then randomly assigned to one of the three treatment conditions by the draw of a poker chip. The treatment condition was described to him, and he was told how much time it would take: 30 to 60 minutes for the No Cues condition; 60 minutes for the Partial Cues condition; 120 minutes for the Full Cues condition. While most psychologists readily agreed, the following distribution of refusals occurred for the three conditions: one for the No Cues condition; two for the Partial Cues condition; six for the Full Cues condition. In order to avoid biasing the results, no psychologist was asked to be in a condition which took less time if that was the reason for refusal. If a judge refused, he was thanked, and then dropped from the list of potential judges.
After 15 psychologists agreed to serve as judges in each of the three treatment conditions, a random number table was used to assign them to one of three independent panels which were to be composed of five judges each within treatment conditions. Each panel member was randomly (random number table) assigned six cases from a set of 30 cases. Cases were assigned to each panel without replacement, and each panel was assigned the same 30 cases. The 30 cases included six of each type of diagnosis (normals, organics, psychoneurotics, retardates, and schizophrenics).

The instructions for the judges in the No Cues condition were to examine the protocols and make a first and second choice diagnosis on the top of the protocol in the spaces provided. (See Appendix G for these instructions.) Judges in the Partial Cues and Full Cues conditions were asked to mark any cues from all five diagnostic categories that they judged to be present in each protocol they were given. Then they were asked to make a first and second choice diagnosis on the basis of the cues. Judges in the cue conditions were given a new set of the same cues for each protocol, and they recorded judgments about the presence of a cue in the space provided at the beginning of each cue. (See Appendix F.)

In addition to the instructions, all judges were given a sheet which had the Comprehension cue words and the complete questions to which they referred (Appendix H).
All of the judges completed the task when and where it was most convenient for them, usually at the agency where they were employed. All were prompt, extremely cooperative, and very conscientious in performing the task. They were given the instructions to read and the experimenter answered any questions they had about what they were to do. The experimenter (the same for all judges) was present and available during the entire time that 33 of the judges completed the task. For the remaining 12 judges (four from each condition) the experimenter was present for part of the time they worked on the task. This time was spent with the latter group to make sure that they understood exactly what they were to do.

All judges were told that they could take as long as they wished to complete the task and that the examiner would return at their convenience if necessary. Most judges in the No Cues and Partial Cues conditions had no difficulty completing the task within the approximate time they were told it would take. Some judges in the Full Cues condition found it necessary to take more than 120 minutes to complete the task, although no judge took more than 180 minutes to finish. As soon as it became clear to the experimenter that the Full Cues condition task might take a longer period of time to complete than anticipated, he made this known to the judges who had not yet done the task. This was done so that judges who were originally told the task would take only two hours could choose not to
participate because of the longer time required or could arrange to do the task when they had more time available.

Many of the judges had a difficult time deciding on a second diagnosis. It was clear to the experimenter that in many instances the judges did not have a second choice diagnosis. Some of these judges responded to the experimenter's request that they attempt to give a second choice diagnosis; others did not. Since all judges did not make second choice diagnoses and since many who did were responding to some pressure from the experimenter, it was decided to exclude second choice diagnoses from the analysis of the results.
Preliminary Data

The means and standard deviations of judges' years of clinical experience for each treatment condition are presented in Table 2. An inspection of Table 2 suggested that the random assignment of judges to conditions had resulted in a comparable distribution of experience across the treatment conditions.

In order to statistically test whether there were any significant differences for judges' years of experience across treatment conditions, a one way analysis of variance was done. A summary of this analysis is presented in Table 3. Since the F value was less than one, it was concluded that there was no evidence for any significant differences in judges' years of experience and that this variable could be ruled out as a confounding variable in analyzing additional results of the study.

Accuracy of Diagnosis

This study was designed to test the following hypotheses regarding the accuracy of diagnosis:

A. Clinical judges having criteria and information about diagnostic categories in the form of qualitative cues available to them when making diagnostic decisions will show significantly more accuracy than judges not having these cues.
TABLE 2

Means and Standard Deviations of Judges' Year of Experience

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Cues</td>
<td>8.70</td>
<td>7.89</td>
</tr>
<tr>
<td>Partial Cues</td>
<td>9.00</td>
<td>6.25</td>
</tr>
<tr>
<td>Full Cues</td>
<td>9.97</td>
<td>8.95</td>
</tr>
</tbody>
</table>
### TABLE 3

**Analysis of Variance Summary for Judges' Years of Experience**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>6.57</td>
<td>&lt; 1.00</td>
</tr>
<tr>
<td>Within</td>
<td>42</td>
<td>60.43</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B. There will be a significant difference in accuracy due to quantity of cues made available to the judges.

It was also decided that a complete analysis for accuracy would include testing for significant differences in accuracy across diagnostic categories and for each diagnostic category within treatment conditions.

Means, standard deviations, and ranges of hits (correct diagnoses) for each of the treatment conditions are presented in Table 4. Means were not ordered as predicted because judges in the Partial Cues condition showed the lowest accuracy; however, the difference between the No Cues condition and the Full Cues condition was in the predicted direction. A perfect score on the judgment task was six correct diagnoses; no judge achieved this score. In fact, no judge in the entire sample made more than four correct diagnoses.

Means and standard deviations of hits across diagnostic categories for all judges in the sample are presented in Table 5. No predictions were made about the order of the means; however, an inspection of Table 5 suggested that the greatest differences in accuracy occurred for normals and organics.

In order to test whether any of these differences were significant and to test for an interaction effect between treatment condition and diagnosis, a two-way analysis of variance with repeated measures on one factor (split plot) was used.
<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Cues</td>
<td>2.27</td>
<td>0.70</td>
<td>1--3</td>
</tr>
<tr>
<td>Partial Cues</td>
<td>1.93</td>
<td>1.28</td>
<td>0--4</td>
</tr>
<tr>
<td>Full Cues</td>
<td>2.87</td>
<td>0.92</td>
<td>1--4</td>
</tr>
</tbody>
</table>
TABLE 5

Means and Standard Deviations of Hits for Diagnostic Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean Hits</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>3.56</td>
<td>0.53</td>
</tr>
<tr>
<td>Organic</td>
<td>1.22</td>
<td>0.83</td>
</tr>
<tr>
<td>Psychoneurotic</td>
<td>2.11</td>
<td>1.05</td>
</tr>
<tr>
<td>Retarded</td>
<td>2.67</td>
<td>0.87</td>
</tr>
<tr>
<td>Schizophrenic</td>
<td>2.22</td>
<td>1.30</td>
</tr>
</tbody>
</table>
(Winer, 1962, p.302). A summary of this analysis is presented in Table 6.

From an inspection of Table 6, it can be seen that the \( F \) value for treatments is 3.59. An \( F \) value of 5.14 is needed for significance at the .05 level (2, 6 df). Therefore, there is no evidence for a difference among treatments.

The \( F \) value for diagnoses is 8.50. An \( F \) value of 6.59 is needed for significance at the .001 level (4, 24 df). Therefore, it can be concluded that there is a significant difference for diagnoses. A Duncan multiple-range test was used to determine which of the means significantly differed. The results of the range test showed that the following comparisons were significant at the .01 level: normal > schizophrenic; normal > psychoneurotic; normal > organic; retarded > organic. The following comparisons were significant at the .05 level: normal > retarded; schizophrenic > organic; psychoneurotic > organic.

The \( F \) value for the interaction between treatment and diagnosis was insignificant.

**Agreement on Diagnosis**

This study was designed to test the following hypotheses regarding agreement on diagnosis:

A. Clinical judges having criteria and information about diagnostic categories in the form of qualitative cues available to them when making diagnostic decisions show significantly more agreement than judges not having these cues.
TABLE 6

Analysis of Variance Summary for Treatment Conditions and Diagnoses

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Panels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatments</td>
<td>2</td>
<td>3.36</td>
<td>3.59</td>
</tr>
<tr>
<td>P W T</td>
<td>6</td>
<td>0.93</td>
<td></td>
</tr>
<tr>
<td>Within Panels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnoses</td>
<td>4</td>
<td>6.52</td>
<td>8.50*</td>
</tr>
<tr>
<td>D x T</td>
<td>8</td>
<td>.69</td>
<td>&lt; 1.00</td>
</tr>
<tr>
<td>D x P x T</td>
<td>24</td>
<td>.77</td>
<td></td>
</tr>
</tbody>
</table>

*p < .001
B. There is a significant difference in agreement due to quantity of cues made available to the judges.

Since each protocol was judged by three different judges in each of the treatment conditions, it was possible for three judges to agree on a diagnosis. But, in this study, agreement could be a function of accuracy because if each of the three judges was correct in his diagnosis, an instance of three judges agreeing would occur. Therefore, it was decided to examine whether there was more agreement in any of the conditions than the agreement that would be expected on the basis of accuracy alone.

In order to do this, the proportion of correct diagnoses for each condition was calculated. These proportions are presented in Table 7. Each proportion was then taken as the probability of a correct decision in the respective treatment conditions. These figures were then used to calculate the probabilities of two judges and of three judges making correct diagnoses. These probabilities were used as the theoretically expected proportions of agreements due to accuracy alone, and they are presented in Table 8. Table 9 presents the observed frequency and observed proportion of two judges and of three judges agreeing on correct diagnoses. Table 10 presents the observed proportion of agreements for the three treatment conditions along with their 95% confidence intervals. It also shows the theoretically expected proportions for each treatment
TABLE 7

Proportion of Hits in Each Treatment Condition

<table>
<thead>
<tr>
<th>Condition</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Cues</td>
<td>.376</td>
</tr>
<tr>
<td>Partial Cues</td>
<td>.321</td>
</tr>
<tr>
<td>Full Cues</td>
<td>.476</td>
</tr>
</tbody>
</table>
## TABLE 8

Expected Proportion of Agreements Due to Accuracy for Two and Three Judge Agreements on Correct Diagnosis

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number of Judges in Agreement</th>
<th>Expected Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Cues</td>
<td>3</td>
<td>.053</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.264</td>
</tr>
<tr>
<td>Partial Cues</td>
<td>3</td>
<td>.033</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.209</td>
</tr>
<tr>
<td>Full Cues</td>
<td>3</td>
<td>.108</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.356</td>
</tr>
<tr>
<td>Condition</td>
<td>Number of Judges in Agreement</td>
<td>Observed Frequency</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>No Cues</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Partial Cues</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Full Cues</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>
TABLE 10

Comparison of Observed Proportion of Agreements with Expected Proportion of Agreements

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number of Judges in Agreement</th>
<th>11&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Observed Proportion</th>
<th>ul&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Expected Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Cues</td>
<td>3</td>
<td>.008</td>
<td>.066</td>
<td>.221</td>
<td>.053</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.147</td>
<td>.300</td>
<td>.494</td>
<td>.264</td>
</tr>
<tr>
<td>Partial Cues</td>
<td>3</td>
<td>.008</td>
<td>.066</td>
<td>.221</td>
<td>.033</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.099</td>
<td>.233</td>
<td>.422</td>
<td>.209</td>
</tr>
<tr>
<td>Full Cues</td>
<td>3</td>
<td>.077</td>
<td>.200</td>
<td>.386</td>
<td>.108</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.099</td>
<td>.233</td>
<td>.422</td>
<td>.356</td>
</tr>
</tbody>
</table>

<sup>a</sup> lower limit  
<sup>b</sup> upper limit
An inspection of Table 10 shows that all of the theoretically expected values are within the confidence intervals of the observed values. Therefore, it must be concluded that there is no evidence that agreement in any of the conditions was greater than what would be expected on the basis of accuracy alone. Thus, there is no evidence that judges having criteria and information about diagnostic categories in the form of qualitative cues available to them when making diagnostic decisions will show significantly more agreement than judges not having these cues. And there is no evidence that there is a significant difference in agreement due to quantity of cues made available to the judges.

Supplementary Data

This experiment was designed to test the stated hypotheses regarding accuracy and agreement of diagnosis. The results presented above provided a test of these hypotheses and the experiment would be complete with only these results. In this section, additional results are presented. These are incidental findings that turned up in the process of testing the main hypotheses. Since these results were not planned for, they did not lend themselves to statistical analysis. Although they may not have statistical significance, they may be of help in providing tentative information regarding the hypotheses that were
tested, and they may be of help in suggesting additional areas of investigation.

Table 11 presents the distribution of judges' diagnoses for the entire sample of 45 judges. The underlined numbers in the diagonal represent correct diagnoses. An inspection of Table 11 shows that normals were most often misdiagnosed as psychoneurotic or schizophrenic, but they were also easily seen as belonging to the other diagnostic groups. Psychoneurotics were primarily called normal. Retardates were often said to be schizophrenic; and schizophrenics were judged to be psychoneurotic or normal.

The judge's task in the Partial Cues and Full Cues conditions was to mark off the cues defining each diagnostic category that he thought were present in each of the protocols on which he made a diagnosis. He would indicate that a cue was present by a number from one to five which reflected his confidence in the cue's presence. He then had to arrive at his diagnosis on the basis of the cues he used.

With this information, it was possible to go through each judge's ratings of the cues defining the five diagnostic categories and to arrive at two totals for each category. First, the total number of cues were added, and the confidence rating was ignored; then, the confidence ratings were added to get a second total. After this was done, these totals for each of the
TABLE 11

Distribution of Judge's Diagnoses for Entire Sample

<table>
<thead>
<tr>
<th>Actual Diagnosis</th>
<th>N</th>
<th>O</th>
<th>PN</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (N)</td>
<td>32a</td>
<td>1</td>
<td>13</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Organic (O)</td>
<td>10</td>
<td>11</td>
<td>7</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Psychoneurotic (PN)</td>
<td>22</td>
<td>6</td>
<td>19</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Retarded (R)</td>
<td>1</td>
<td>8</td>
<td>0</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>Schizophrenic (S)</td>
<td>13</td>
<td>3</td>
<td>17</td>
<td>1</td>
<td>20</td>
</tr>
</tbody>
</table>

Note.--Underlined numbers in the diagonal represent correct diagnoses.

aThe entry for correct diagnoses has a maximum value of 54 which is also the sum of each row. There were six protocols from each category each of which was judged three times in each of the three treatment conditions.
five categories were compared, and the diagnostic categories for which total number and total weight was greatest were noted. These diagnostic categories were then compared with the diagnosis the judge assigned to the protocol.

Table 12 presents the results of these comparisons. From an inspection of Table 12, it can be seen that in 84.9% of the cases, the judge's choice of diagnosis corresponded to the category in which the greatest number of cues were marked. When the confidence ratings were summed, these cues also had the greatest weight. In 1.6% of the cases, the judge's diagnosis corresponded to the total number of cues used, but the weight of cues defining a different category was greater. Similarly, in 1.6% of the cases the judge's diagnosis corresponded to the total weight of cues used, but the number of cues defining a different category was greater. For .5% of the cases in which ties occurred, either the total weight of the cues or the total number of the cues defining a category corresponded to the judge's diagnosis. Finally, in 11% of the cases, there was no correspondence between the cues used and the diagnosis made by the judge.

The percentage of times the judge's decision was correct and the percentage of times the judge's decision was incorrect is also presented in Table 12. For instance, in 48.8% of the cases in which the judge's choice of diagnosis corresponded to the category in which the greatest number of cues was marked,
TABLE 12

Percentage of Times Category with Greatest Cue Totals
Corresponded to Judge's Diagnosis

<table>
<thead>
<tr>
<th>Cue Totals</th>
<th>Percent Total</th>
<th>Percent Correct</th>
<th>Percent Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number &amp; Weight</td>
<td>84.9</td>
<td>36.1</td>
<td>48.8</td>
</tr>
<tr>
<td>Number</td>
<td>1.6</td>
<td>0</td>
<td>1.6</td>
</tr>
<tr>
<td>Weight</td>
<td>1.6</td>
<td>1.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Number or Weight</td>
<td>0.5</td>
<td>0</td>
<td>0.5</td>
</tr>
<tr>
<td>None of the Above</td>
<td>11.0</td>
<td>3.8</td>
<td>7.2</td>
</tr>
<tr>
<td>Totals</td>
<td>99.6</td>
<td>41.0</td>
<td>58.6</td>
</tr>
</tbody>
</table>
the judge was wrong.

The results presented in Table 12 have to be qualified in a number of ways. There was no control for judges justifying a diagnosis by finding cues to support a diagnosis instead of using the cues to make the diagnosis. Although the judges looked through all of the cues before seeing the first protocol, in five instances they first looked at the protocol and then checked off the cues.

On the basis of the behavior of the judges that were observed, it seemed as if they were trying to use the cues for their diagnoses. However, only three of the judges observed ever systematically added up the cues they checked. A few judges stated they made a decision and then felt they had to justify it on the basis of the cues. And a few judges said they formed an initial impression which was changed after an examination of the cues. Some of the judges quickly glanced through sets of cues and then eliminated them from further consideration; they then focused on the remaining sets of cues and thus narrowed their judgment activities to these diagnostic groups. Some judges checked a large number of cues from each category and some checked only a few.

The qualifications mentioned above must also be kept in mind while examining the results of cue usage to be presented below. In particular, it must be kept in mind that the judge's ratings of the presence or absence of cues may have been in-
fluenced by a wrong decision about diagnosis. As was pointed out above, in 48.8\% of the cases in which the judge’s choice of diagnosis corresponded to the category in which the greatest number of cues was marked, the judge was wrong.

Table 13 illustrates additional problems involved in interpreting the results on the way the judges used the cues. Table 13 presents data showing how the 15 judges in the Partial Cues condition used Normal Cue 1. First, it can be seen immediately that not all of the judges had the opportunity to judge whether the cue was present in a protocol from each of the diagnostic types; and some judges had more than one opportunity to judge whether the cue was present in a protocol from each of the diagnostic types. For instance, Judge 16 had no psychoneurotic protocols to judge; but he did have two normals and two retardates. As a result of many instances like this one, there were multiple opportunities for the idiosyncratic ratings of some judges to come into play to bias the results.

The results for cue usage have to be qualified in additional ways. There were only six cases of each diagnostic type and three judges for each case in each condition. The number of cases and the number of judges is too few to have much confidence in the significance of the numbers that occurred for each total listed at the bottom of Table 13. A greater number of cases would have to be used with a greater number of judges
TABLE 13

Usage of Normal Cue 1 by Judges in the Partial Cues Condition

<table>
<thead>
<tr>
<th>Judge</th>
<th>N</th>
<th>O</th>
<th>PN</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>++</td>
<td>0</td>
<td></td>
<td>00</td>
<td>+</td>
</tr>
<tr>
<td>17</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>0</td>
<td>00</td>
</tr>
<tr>
<td>18</td>
<td>+</td>
<td>00</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>19</td>
<td>00</td>
<td>0+</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>00</td>
<td>00</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>++</td>
<td>0+</td>
<td>0</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>+</td>
<td>00</td>
<td>+</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>23</td>
<td>00</td>
<td>0</td>
<td>+0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>+</td>
<td>+0</td>
</tr>
<tr>
<td>25</td>
<td>0</td>
<td>00</td>
<td></td>
<td>000</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>0</td>
<td>0</td>
<td>+0</td>
<td>0</td>
<td>0+</td>
</tr>
<tr>
<td>27</td>
<td>0</td>
<td>0+0</td>
<td>+</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>28</td>
<td>0</td>
<td>00</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>29</td>
<td>+0</td>
<td>0</td>
<td>00</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>0+</td>
<td>+</td>
<td>00</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Totals(+)</td>
<td>9</td>
<td>3</td>
<td>9</td>
<td>0</td>
<td>7</td>
</tr>
</tbody>
</table>

Note.—N = Normal; O = Organic; PN = Psychoneurotic; R = Retarded; S = Schizophrenic. + = cue judged present in a protocol from the diagnostic group; 0 = cue judged absent in a protocol from the diagnostic group. The maximum + value for each column is 18. This would occur if normal cue 1 was judged present by each of the three judges in each of the 6 protocols representing each of the diagnostic categories.
in order to get scores that could be validly used for generalization. In addition, there is no information about the reliability of the judges' ratings. Finally, there was no external criterion for the presence or absence of each cue in the protocols.

Because of all these inadequacies in the data on cue usage and because of problems with mixed dependence and independence of observations, no statistical analysis of the data presented below was done. These results will be presented only for their heuristic value.

Tables 14 and 15 present one cue from each group of cues that were used to define each of the five diagnostic groups in the Partial Cues and Full Cues conditions respectively. The totals in each cell were obtained from tables similar to Table 13, one of which was constructed for each cue. The cues in Tables 14 and 15 are examples of the "better cues." That is, they were seen most often in protocols from the category they were used to define and comparatively less often in other categories. For instance, in Table 14, Retarded Cue 10 appears nine times in the retarded category, and it never appears more than two times in any of the other categories. Appendix F contains the full cue descriptions of the cues in Tables 14 and 15. Appendices I and J present the same information that appears in Tables 14 and 15 for all the cues in the Partial Cues and Full
TABLE 14

Examples of Cue Usage in Partial Cues Condition

<table>
<thead>
<tr>
<th>Cue</th>
<th>N</th>
<th>O</th>
<th>PN</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-2: Not Defensive</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>O-3: Inadequacy &amp; Insecurity</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PN-1: No Sense of Choice</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>R-10: Poor Motivation</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>S-2: Peculiar Use of Words</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

Note.—N = Normal; O = Organic; PN = Psychoneurotic; R = Retarded; S = Schizophrenic. Following each cue is the number of times it was judged present in 18 judgments of 6 protocols representing each of the five categories. Underlined entries represent the number of times the cue was judged present in the protocols from the category which the cue defined. See Appendix F for full description of cues.
TABLE 15

Examples of Cue Usage in Full Cues Condition

<table>
<thead>
<tr>
<th>Cue</th>
<th>N</th>
<th>O</th>
<th>PN</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-12: Absence of Ambiguous Answers</td>
<td>15</td>
<td>4</td>
<td>9</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>0-20: Perseveration</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>PN-6: Neurotic</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>R-4: Limited Level of Concepts</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>S-33: Circumstantial</td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Note.--N = Normal; O = Organic; PN = Psychoneurotic; R = Retarded; S = Schizophrenic. Following each cue is the number of times it was judged present in 18 judgments of 6 protocols representing each of the five categories. Underlined entries represent the number of times the cue was judged present in the protocols from the category which the cue defined. See Appendix F for full description of cues.
conditions respectively. These results suggest that none of the cues had pathognomonic significance in the sense that it was seen only in the protocols from a particular diagnostic group.

Tables 16 and 17 present the percentage of cues defining each diagnostic category that were judged present in the protocols representing each of the five diagnostic categories. They were constructed by summing over the cell totals for each cue (See Appendices I & J) and then converting the results into percentages.

From an inspection of Tables 16 and 17, it can be seen that over half of the normal cues were seen in the normal protocols; however, about half of the normal cues were also seen in the psychoneurotic protocols. And, in the Partial Cues condition, about half of the normal cues were seen in the schizophrenic protocols. For the remaining groups of cues, considerably less than half of the cues defining the categories were seen in the protocols representing the categories. Moreover, the percentage for the category the cues define is usually similar to the percentage for a category the cues do not define. One exception to this is for the Retarded cues in the Partial Cues condition. For these cues, 35% of them were seen in the retarded protocols; however, no more than 12% of them were seen in the protocols from the other diagnostic groups.
TABLE 16

Percentage of Cues Judged Present in Protocols:
Partial Cues Condition

<table>
<thead>
<tr>
<th>Cues</th>
<th>N</th>
<th>O</th>
<th>PN</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (N)</td>
<td>61</td>
<td>26</td>
<td>54</td>
<td>12</td>
<td>48</td>
</tr>
<tr>
<td>Organic (O)</td>
<td>2</td>
<td>23</td>
<td>14</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>Psychoneurotic (PN)</td>
<td>25</td>
<td>21</td>
<td>37</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Retarded (R)</td>
<td>2</td>
<td>12</td>
<td>2</td>
<td>35</td>
<td>7</td>
</tr>
<tr>
<td>Schizophrenic (S)</td>
<td>11</td>
<td>31</td>
<td>18</td>
<td>33</td>
<td>18</td>
</tr>
</tbody>
</table>

Note.—The percentages in this table represent the percentage of total cues defining each diagnostic category that were judged present in the protocols representing each of the five diagnostic categories. Underlined entries represent the percentage of cues judged present in protocols from the categories that the cues were used to define.
TABLE 17

Percentage of Cues Judged Present in Protocols:

Full Cues Condition

<table>
<thead>
<tr>
<th>Cues</th>
<th>N</th>
<th>O</th>
<th>PN</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (N)</td>
<td>55</td>
<td>25</td>
<td>40</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>Organic (O)</td>
<td>7</td>
<td>27</td>
<td>9</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Psychoneurotic (PN)</td>
<td>14</td>
<td>11</td>
<td>17</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Retarded (R)</td>
<td>2</td>
<td>22</td>
<td>5</td>
<td>32</td>
<td>9</td>
</tr>
<tr>
<td>Schizophrenic (S)</td>
<td>6</td>
<td>19</td>
<td>8</td>
<td>19</td>
<td>19</td>
</tr>
</tbody>
</table>

Note.—The percentages in this table represent the percentage of total cues defining each diagnostic category that were judged present in the protocols representing each of the five diagnostic categories. Underlined entries represent the percentage of cues judged present in protocols from the categories that the cues were used to define.
Accuracy of Diagnosis

The only significant finding for accuracy of diagnosis was that certain categories are judged more accurately than others across conditions. Most of the significant differences were between normals and the other categories. But there is a possible artifact due to the possibility that a normal diagnosis may have often been made by exclusion. If the judge was unable to call a protocol anything else, he may have called it normal. This would result in an artificially inflated accuracy level for the normal category. In addition, accuracy for organics was significantly lower than accuracy for any of the other diagnostic types. These results replicate those of Hunt and Walker (1962, 1971).

No evidence was found to support the hypothesis that judges are more accurate in their judgments if they are given information and criteria defining the diagnostic categories. The results seem to suggest that even when classification is done in a disciplined, organized, analytical manner, which Holt (1970) talks about, no increase in accuracy of diagnosis occurs. The results of this study conflict with those of Sechrest et al. (1967) who found that the accuracy of judges' predictions was
improved by giving them information similar to that which was given to the judges in this study. Perhaps the difference between the two studies may lie in the fact that the judges in the Sechrest et al. (1967) study were naive judges who could be helped more by the information they were given.

It is clear that the task presented to the judge was a demanding one. No judge in any of the conditions got more than four correct diagnoses out of a total possible of six. Many of the judges talked about the difficulty of the task and said they would never make a diagnosis on the basis of such a limited amount of information. It could be the case that the judges were not able to make use of the cues that were given to them because the behavior the cues referred to was not present in the protocols. The results on percentage of cues judged present lend some support to this possibility, although the inadequacies of these results on cue usage must be kept in mind.

No evidence was found for any difference in accuracy due to the quantity of cues made available to the judges since such evidence could only come from differences in accuracy among the three conditions. When the means of the judges in the three conditions were computed it was somewhat surprising to find that the judges in the Partial Cues condition did most poorly. But, upon further consideration, it seemed likely that judges with just 10 cues would do more poorly than judges who had a considerable number of cues available to them as a result of their
training and experience. A significant difference probably would have occurred between the Partial Cues condition and the other conditions if 10 randomly selected cues had been given to these judges instead of the 10 best cues.

Since there was no interaction effect between treatment condition and diagnostic category, it must be concluded that none of the sets of cues was particularly valuable in terms of increasing accuracy.

One purpose of this study was to examine whether the concurrent validity of psychiatric diagnosis would be increased if judges were given information about the criterion. In this study, the criterion was the diagnosis made on the basis of a wide sample of behavior. The judges had to predict this criterion on the basis of a different and more limited sample of behavior. The results of this study suggest that even when most of the known defining characteristics of a category are given to a judge as they might appear in a sample of behavior, his accuracy is not increased. This may be because many of the characteristics do not occur in all samples of behavior. It may be because a great many of the characteristics defining one category also appear in other categories. And it may be that judges are able to see the characteristics in a wide variety of ambiguous clinical behavior once they make a decision about a possible diagnosis for a person. The results of this study could be used to support each of these hypotheses.
Agreement on Diagnosis

One of the hypotheses tested in this study was that significantly more agreement would occur among judges using the same set of cues to make a diagnosis than among judges not having the cues available. The results of this investigation provided no evidence in support of this hypothesis. It is possible that if recent studies (Copeland et al., 1971; Kendell et al., 1971; Small, 1964; Wing et al., 1967) reporting high levels of reliability for psychiatric diagnosis as a result of defining the categories had included a control group, they would have found no significant differences in reliability between the control group and the groups for whom the categories were defined. Perhaps the patients in these latter studies behaved in such a way so as to insure the high reliability of diagnosis that was found.

The assumption was made that if all the judges had the same sample of behavior and the same set of cues on the basis of which to make a decision, they would show more agreement than if they did not have the same cues available. If one judge was able to see an entire set of cues in a protocol, it was expected that the other judges would generally see the same set of cues present; and, the larger the set of cues to influence a judge's decision, the higher the level of agreement that was expected. In this study, it was thought that, in
general, if one judge got a diagnosis correct, then usually the others would get it correct since they all had the same information available to make a decision and differences in diagnostic ability were not considered to be that great.

The possible reasons for the lack of any evidence in support of the hypotheses about agreement on diagnosis are similar to those offered above in the discussion of the results on the accuracy of diagnosis. The cues or the sample of behavior or both were not enough to influence the judges' decisions in the same direction.

Implications of Supplementary Findings

The results on choices of incorrect diagnoses suggested that normals were most often misdiagnosed as psychoneurotic or schizophrenic. Organics tended to be seen as belonging to all of the other categories. The psychoneurotics were usually called normal. And the retardates were classified as schizophrenics. The schizophrenics seemed to be assigned to the normal and psychoneurotic categories. These results are almost identical to those of Hunt and Walker (1962). Whether the cues present in the protocols influence the diagnoses in these directions or whether the diagnoses influence judgments about the presence of cues cannot be determined by the data from this study. Either interpretation fits the data.

In 84.9% of the decisions made by the 30 judges in the cue
conditions, the category from which the greatest number of cues was judged to be present corresponded to the diagnostic decision of the judge; in 48.8% of these decisions, the judge was wrong. These results suggest either that a large number of the cues defining each diagnostic category appear in cases representing other categories as well or that judges are able to find a large number of cues defining each diagnostic category in cases that do not represent these categories.

No cue was pathonomonic for a particular category. The psychologists in this sample judged all cues to be present in protocols from all categories. Some cues seem more useful than others for distinguishing particular groups; but none has a high degree of utility in this respect.

Finally, the percentage of cues defining each category that was judged present in cases representing the categories was not particularly high and rarely exceeded 50%. Moreover, the percentage of groups of cues defining a category seen in cases from that category was usually equal to the percentage of the group of cues seen in cases from another category. Thus, it seems that even groups of cues were not too useful in helping judges decide which diagnosis was correct.

It must be kept in mind that the conclusions stated in this last section are based on results that were highly qualified by inadequacies in the data. The tentative conclusions stated in this section can only be accepted after these results have been
confirmed by additional research.

**Suggestions for Future Research**

Studies similar to this one should be done using different samples of behavior. One approach would be to use structured or videotaped diagnostic interviews similar to those used in recent studies of diagnostic reliability (Copeland et al., 1971; Kendell et al., 1971; Small, 1964; Wing et al., 1967) but with the addition of a control group for whom categories are not defined. Other samples of behavior might include test results other than those from the Wechsler scales or in addition to the Wechsler sample.

Another study might involve not giving the judges any labels to use; the categories, which would be known to the investigator, would be represented by neutral names or numbers. Cues could be presented in scrambled fashion instead of by category; then they could be rearranged and analyzed by category.

Judges behavior as a function of ambiguity of the presenting clinical picture could also be studied. Do judges have a tendency to see cues which are not present as a function of the ambiguity of the clinical material? This would necessitate some external criterion establishing the presence or absence of cues.

It would also be interesting to see how the judgment performance of non-clinical psychologists would compare to the
performance of clinical psychologists. Judges who are Ph.D.s in other fields could be used as subjects which would eliminate differences in intellectual ability and training.

Only after studies such as those suggested above are done will the tentative explanations for the results of this study be acceptable.
SUMMARY

This study was done to investigate the effect that defining diagnostic categories has on the accuracy and agreement of clinical psychologists' psychodiagnostic judgments. WAIS Comprehension and Vocabulary test responses from 30 persons were the stimuli judged. There were six cases representing each of the following diagnostic categories: normal, organic, psychoneurotic, retarded, and schizophrenic.

An extensive review of the clinical and empirical literature was made in order to find qualitative cues to be used to define the categories. The search was limited to cues that would be helpful in identifying each of the five diagnostic groups mentioned above. All of the cues selected were cues that could appear in a behavior sample consisting of the WAIS Comprehension and Vocabulary subtests. Three ABPP psychologists then assessed the utility of the cues and selected the 10 best cues for each category from the entire list of cues collected for each category.

Forty-five clinical psychologists served as judges in this study. Each judge had to make a diagnosis for six cases that were randomly assigned to him. Each judge was randomly assigned to one of three conditions. In the first condition, judges got no cues and had to rely on their training and experience. In the second condition, judges got the 10 best cues for each of
the five categories. In the third condition, judges got all of the cues. Judges in the cue conditions marked the cues they judged present and made a diagnosis on the basis of these cues.

Accuracy was measured in terms of agreement with the staff diagnosis for each case. Each of the 30 protocols was judged three times in each of the conditions and, therefore, agreement was measured by counting the number of times the three judges agreed on a correct diagnosis in each of the conditions.

The results indicated that the task was a difficult one. No judge in the entire sample got more than four correct diagnoses. An analysis of the results showed no significant differences among conditions for accuracy or agreement. Results which suggested how the judges used the cues in arriving at a diagnosis were also presented.

Tentative explanations were offered for the lack of significant differences among the groups. Suggestions for additional research were given.
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APPENDIX A
### Vocabulary Test

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td>Winter is the cold season of the year, which begins with the shortest day of the year.</td>
</tr>
<tr>
<td>Repair</td>
<td>To correct breakdown defects and restore to operating condition.</td>
</tr>
<tr>
<td>Breakfast</td>
<td>The first meal of the day, eaten shortly after rising.</td>
</tr>
<tr>
<td>Fabric</td>
<td>Several meanings, one of them is cloth. Another is any materiality.</td>
</tr>
<tr>
<td>Slice</td>
<td>A comparatively thin flat portion cut from a larger body of material.</td>
</tr>
<tr>
<td>Assemble</td>
<td>Bring together, collect.</td>
</tr>
<tr>
<td>Conceal</td>
<td>Hide</td>
</tr>
<tr>
<td>Enormous</td>
<td>Very large</td>
</tr>
<tr>
<td>Hasten</td>
<td>Speed</td>
</tr>
<tr>
<td>Sentence</td>
<td>A group of words expressing a complete thought.</td>
</tr>
<tr>
<td>Regulate</td>
<td>Control</td>
</tr>
<tr>
<td>Commence</td>
<td>Begin</td>
</tr>
<tr>
<td>Ponder</td>
<td>To consider at length, to think carefully and probably slowly.</td>
</tr>
<tr>
<td>Cavern</td>
<td>Cave</td>
</tr>
<tr>
<td>Designate</td>
<td>To point out and specify an individual, to nominate—Individual does not mean people only,...</td>
</tr>
<tr>
<td></td>
<td>may mean things.</td>
</tr>
<tr>
<td>Domestic</td>
<td>Pertaining to the home.</td>
</tr>
<tr>
<td>Consume</td>
<td>To use up or to eat.</td>
</tr>
</tbody>
</table>

83
<table>
<thead>
<tr>
<th>Terminate</th>
<th>Complete, finish.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstruct</td>
<td>To interfere with.</td>
</tr>
<tr>
<td>Remorse</td>
<td>A feeling of guilt mixed with sorrow.</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>A place of safety.</td>
</tr>
<tr>
<td>Matchless</td>
<td>Without equal, used in the same sense of superior.</td>
</tr>
<tr>
<td>Reluctant</td>
<td>Preferring not to do something.</td>
</tr>
<tr>
<td>Calamity</td>
<td>Disaster</td>
</tr>
<tr>
<td>Fortitude</td>
<td>Courage</td>
</tr>
<tr>
<td>Tranquil</td>
<td>Peaceful, serene.</td>
</tr>
<tr>
<td>Edifice</td>
<td>An imposing structure...a structure, usually imposing.</td>
</tr>
<tr>
<td>Compassion</td>
<td>Sympathy for one who has difficulties.</td>
</tr>
<tr>
<td>Tangible</td>
<td>Subject to being touched, concrete.</td>
</tr>
<tr>
<td>Perimeter</td>
<td>Border</td>
</tr>
<tr>
<td>Audacious</td>
<td>Courageous in taking risks and frequently in defying convention.</td>
</tr>
<tr>
<td>Ominous</td>
<td>Threatening.</td>
</tr>
<tr>
<td>Tirade</td>
<td>An angry and ill-tempered speech.</td>
</tr>
<tr>
<td>Encumber</td>
<td>Burden</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>To steal the writings of another...to use without credit, to copy.</td>
</tr>
<tr>
<td>Impale</td>
<td>To pierce onto or through with a long narrow object.</td>
</tr>
<tr>
<td>Travesty</td>
<td>A distortion, a...turning from proper usage.</td>
</tr>
</tbody>
</table>

**Comprehension Test**

<table>
<thead>
<tr>
<th>Envelope</th>
<th>Put it in the letter box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad company</td>
<td>Because it may tend to influence us badly.</td>
</tr>
<tr>
<td>Movies</td>
<td>Call an usher and point it out to him... unobtrusively</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Taxes</td>
<td>To support the government functions...that are desirable for the people's welfare</td>
</tr>
<tr>
<td>Iron</td>
<td>Take advantage of opportunities before they are lost.</td>
</tr>
<tr>
<td>Child Labor</td>
<td>To minimize the undesirable exploitation of immature people by commercial enterprises.</td>
</tr>
<tr>
<td>Forest</td>
<td>One can tell directions by the sun, if one knows the time and one would need to know what direction is &quot;out.&quot; A more general solution is to go down stream or down hill.</td>
</tr>
<tr>
<td>Deaf</td>
<td>Because they are unable to learn by experience what the vocal cords do...can't hear talking and don't know what they are trying to reproduce.</td>
</tr>
<tr>
<td>City land</td>
<td>Because it is scarce and there are a multitude of bidders who feel they have good uses for it.</td>
</tr>
<tr>
<td>Marriage</td>
<td>So that they'll have a public record and probably because of some sociological advantages in restraining unwise marriages.</td>
</tr>
<tr>
<td>Brooks</td>
<td>A person who has little depth of understanding is talkative, may be talkative...I guess it means is talkative.</td>
</tr>
<tr>
<td>Swallow</td>
<td>It does not pay to generalize from limited data, from singular points.</td>
</tr>
</tbody>
</table>

Protocol #14 (Normal)

Vocabulary Test

| Winter | Cold, snow, and have colds and sickness...makes you think of winter...mainly that it's cold |
| Repair | Fixing something that's broken. |
| Breakfast | First meal |
Clothing

A thin layer of just anything...oh, bread...meat.

Oh, let's see, well...just can't think what you say it is.

To hide.

Large in proportion...large in size I should say.

Hurry

A saying of some kind or a...don't know...an expression to express it, make a sentence out of it...to write a line about something.

To control.

To start

Think about.

Something like a cave...in a mountain I guess...or a slight indentation in a mountain.

To define something

Home life

To absorb something

Expire

To block something.

Sadness

Well, let's see, I say it's like an institution of some sort...don't know directly how to say it...something like a church.

Unlike

Oh, refuse

A tragedy
| Portitude | Sort of...a stronghold. |
| Tranquil | Tranquil, that's like a...oh...like a medicine to increase your physical feeling I guess. |
| Edifice | Edifice? I don't know. |
| Compassion | Sort of a companionship I guess. I don't know, something in those channels I guess. |
| Tangible | Oh...I know what I mean but I just can't seem to...oh, like an interest, just don't know how to describe it. |
| Perimeter | It's...perimeter is like a...ah...a pyramid, a measure of some sort. |
| Audacious | I don't know. |
| Ominous | Like an interesting...oh, see...something interesting but unbelievable. |
| Tirade | I don't know. |
| Encumber | Oh, encumber...I don't know. |
| Plagiarize | Don't know. |
| Impale | To disfigure or destroy something. |
| Travesty | I don't know. |

**Comprehension Test**

| Envelope | Turn it in to the post office...could drop it in mailbox. |
| Bad company | Well, mainly picking up habits you might not have, I guess. |
| Movies | I'd...I don't know...wouldn't want to panic the crowd but I'd want to warn everybody. Just holler "fire" I guess. |
| Taxes | Help the government...help the government take care of their problems...don't know just how to word it. They have a lot of expenses to be met... I'd say that's why we should. |
Iron
While the opportunity is there, I'd say, take advantage of it.

Child labor
Well, I think mainly children would be used for more work than they should and would affect working conditions of older people who need it...and people are looking for cheaper labor. That's why they hire children.

Forest
Well...well...I think I'd go by the sun. Get my directions straight, go in one direction and just keep going that way.

Deaf
Should know and can't think of it...my sister-in-law was deaf, and I can't think...course she was deaf from a tonsil operation. She wasn't born deaf. I just don't know.

City land
City has more costs...sewerage, electric, and all that, and water. They got more utilities and things to keep up.

Marriage
Make it legal...have proof I guess.

Brooks
I don't know. It's just like a...thinking about it...just like a cave, it would echo cause it's so empty.

Swallow
Hmmm...I don't know...is that a bird...if so, I would say one swallow could fly up here by mistake in the colder climate and be wrong that it's not summer yet.

Protocol #15 (Normal)

Vocabulary Test

Winter
The cold season of three months or there abouts.

Repair
To restore to former, better, and normal condition.

Breakfast
The first meal after fasting, usually the first in the day.
Fabric

Slice

Assemble

Conceal

Enormous

Hasten

Sentence

Regulate

Commence

Ponder

Cavern

Designate

Domestic

Consume

Terminate

Obstruct

Remorse

Sanctuary

Matchless

Reluctant

Calamity

Fortitude

Tranquil

Either literally or figuratively, a basic formed or manufactured material

A piece cut off of a larger whole, usually thin.

To put together.

To hide

Of unusually large size

To speed up or hurry.

A group of words expressing at least one consecutive thought...I'm sorry, one complete thought.

To govern

To begin

To consider deeply with oneself.

A large, usually empty, cave or hole.

To single out for attention

Pertaining to one's...home.

To use up or to burn

To reach a boundary or to end...boundary or goal...no, boundary.

To stand in the way of, to block.

Regret

A place of safety.

Without peer.

Unwilling or not willingly.

A major tragedy or misfortune.

Courage, determination.

Calm, serene
Edifice: Any building, usually large or imposing.
Compassion: Sympathetic regard or understanding.
Tangible: Capable of being physically touched.
Perimeter: A complete boundary around outside edge.
Audacious: Bold
Ominous: Portentous
Tirade: An outburst of angry speech.
Encumber: To hinder
Plagiarize: To steal works or ideas of another person
Impale: Can't think of word I want...to put on a skewer, to skewer I guess.
Travesty: A mockery

Comprehension Test

Envelope: Mail it
Bad company: How much latitude am I allowed?...I'm not sure we should...the question is not clear enough, definition of bad.
Movies: Notify the manager
Taxes: Support necessary governmental functions.
Iron: Take advantage of an opportunity as soon as possible.
Child labor: To prevent exploitation of the young.
Forest: Sight and walk a straight line until I come to a fence, or water or a road.
Deaf: Can't learn speech by imitation.
City land: Because more people want it.
Marriage: To insure a legal record of marriages.
Very talkative people are not generally deep thinkers.

A single instance is not proof of a general proposition.

Protocol #28 (Normal)

Vocabulary Test

Winter
Repair
Breakfast
Fabric
Slice
Assemble
Conceal
Enormous
Hasten
Sentence
Regulate
Commence
Ponder
Cavern
Designate
Domestic

It's a...name for a season.
Repair is to fix or mend.
It's the morning meal
Well, that would be cloth, material.
Slice could be to cut or a part of, such as, a slice of cake.
Put together
Hide
That would be something large.
Hasten. That's to go faster
That could be a group of words or it could also be...such as, in court a sentence would be a debt to be paid.
Well, that is to change or control.
That's to start
That would be to think.
That would be a large underground cave.
Designate...appoint or...let's see...I imagine ascertain would be about the same.
Ah...referring to animals that would be tame.
Consume  
Well, that would be to eat or fire would destroy ...consume it.

Terminate  
That's to end.

Obstruct  
That would be an obstacle...to place an obstacle is to obstruct.

Remorse  
Sadness.

Sanctuary  
That would be a holy place or a place of shelter.

Matchless  
In athletics it could be unbeatable. Pertaining to two objects, it could be...well, only one or an original.

Reluctant  
Unwilling

Calamity  
Misfortune

Fortitude  
Staunchness

Tranquil  
Calm

Edifice  
I'm not sure about that one.

Compassion  
Pity

Tangible  
That would be probable or...unbelievable.

Perimeter  
The outer area of a circumference.

Audacious  
I'm not sure.

Ominous  
To be unknown

Tirade  
I don't know that one.

Encumber  
I believe that's to hinder.

Plagiarize  
I don't know that one.

Impale  
I don't know.

Travesty  
That would be pain.
Comprehension Test

Envelope: You'd mail it.

Bad company: Well, to keep out of trouble.

Movies: Well, first you would have to remain calm and tell everyone else in some way that they don't panic. Then notify someone in charge.

Taxes: Well, to support the government...and to...well, they're necessary for the welfare of our country.

Iron: That would be the same as opportunity...take advantage of it.

Forest: Well, I'm not sure if this is right. They say that moss grows on the north side of the tree. Or you could look at the sun...according to the time of the year, you could judge direction by the sun.

Deaf: Because they can't hear the words and they wouldn't know how to pronounce them.

City land: Well, you have your industry in the city and your living quarters are closer together. You have more buildings in a small space.

Marriage: Well, that's for their own protection and also they have to take those tests which are more or less for health standards. And in legal matters also it is proof.

Brooks: Well, it could mean any number of things. Like a proverb about people...people, with shallow minds who don't know too much like to talk to make people think that they do.

Swallow: I think that has to do with the importance of anything. You can't place too much importance on just any one thing.
## Vocabulary Test

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td>It means a cold season, snow.</td>
</tr>
<tr>
<td>Repair</td>
<td>Restore, fix, put in operation.</td>
</tr>
<tr>
<td>Breakfast</td>
<td>It's the first meal of the day.</td>
</tr>
<tr>
<td>Fabric</td>
<td>It's something clothes are made of</td>
</tr>
<tr>
<td>Slice</td>
<td>To cut something</td>
</tr>
<tr>
<td>Assemble</td>
<td>To put together</td>
</tr>
<tr>
<td>Conceal</td>
<td>To hide</td>
</tr>
<tr>
<td>Enormous</td>
<td>Large, huge</td>
</tr>
<tr>
<td>Hasten</td>
<td>Hurry</td>
</tr>
<tr>
<td>Sentence</td>
<td>That's a complete thought.</td>
</tr>
<tr>
<td>Regulate</td>
<td>Control</td>
</tr>
<tr>
<td>Commence</td>
<td>Begin I guess.</td>
</tr>
<tr>
<td>Ponder</td>
<td>That's kind of to wonder like.</td>
</tr>
<tr>
<td>Cavern</td>
<td>A cave</td>
</tr>
<tr>
<td>Designate</td>
<td>To point out.</td>
</tr>
<tr>
<td>Domestic</td>
<td>It means to civilize, to tame down.</td>
</tr>
<tr>
<td>Consume</td>
<td>To use something</td>
</tr>
<tr>
<td>Terminate</td>
<td>To end</td>
</tr>
<tr>
<td>Obstruct</td>
<td>Stop</td>
</tr>
<tr>
<td>Remorse</td>
<td>I don't know that one.</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>I've heard of a sanctuary as a place where birds and things are kept.</td>
</tr>
<tr>
<td>Matchless</td>
<td>That's something you can't compare.</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Reluctant</td>
<td>To hold back</td>
</tr>
<tr>
<td>Calamity</td>
<td>I don't know that one.</td>
</tr>
<tr>
<td>Fortitude</td>
<td>I don't know that one either.</td>
</tr>
<tr>
<td>Tranquil</td>
<td>I don't really know that one.</td>
</tr>
<tr>
<td>Edifice</td>
<td>I don't know that one either.</td>
</tr>
<tr>
<td>Compassion</td>
<td>I don't know.</td>
</tr>
<tr>
<td>Tangible</td>
<td>I don't know.</td>
</tr>
<tr>
<td>Perimeter</td>
<td>The outside of something.</td>
</tr>
<tr>
<td>Audacious</td>
<td>I don't know.</td>
</tr>
<tr>
<td>Ominous</td>
<td>I don't know that either.</td>
</tr>
<tr>
<td>Tirade</td>
<td>I don't know.</td>
</tr>
<tr>
<td>Encumber</td>
<td>To load down something.</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>I don't know.</td>
</tr>
<tr>
<td>Impale</td>
<td>That I don't know.</td>
</tr>
<tr>
<td>Travesty</td>
<td>I don't know.</td>
</tr>
</tbody>
</table>

**Comprehension Test**

<table>
<thead>
<tr>
<th>Envelope</th>
<th>Well, that depends on everything being complete, that is, stamps, address, and so forth. If so, I'd mail it.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad company</td>
<td>It doesn't make you look good as a person yourself.</td>
</tr>
<tr>
<td>Movies</td>
<td>Get ahold of the manager right away...call the fire department.</td>
</tr>
<tr>
<td>Taxes</td>
<td>To uphold the government I guess.</td>
</tr>
</tbody>
</table>


Well, I think it comes from the blacksmith. Beat or bend the iron while it is hot yet, when you take it out of the fire.

Well, some kinds start working way before they really should.

Well, first of all I'd try to follow out by the sun. That is, if it was shining.

Because they are unable to understand the sounds of the words...how to pronounce them.

Because it's valued much higher.

That I don't know.

That I don't know. I never heard it before.

I never heard that one either.

Protocol # 38 (Normal)

**Vocabulary Test**

**Winter**

It's a time or a season.

**Repair**

Fix

**Breakfast**

First meal of the day.

**Fabric**

Material

**Slice**

Cut

**Assemble**

Put together

**Conceal**

Hide

**Enormous**

Big

**Hasten**

Speed up

**Sentence**

A group of words

**Regulate**

Control
Commence
Ponder
Cavern
Designate
Domestic
Consume
Terminate
Obstruct
Remorse
Sanctuary
Matchless
Reluctant
Calamity
Fortitude
Tranquil
Edifice
Compassion
Tangible
Perimeter
Audacious
Ominous
Tirade
Encumber
Plagiarize

Begin
Think
A cave
Specify
Domestic...domestic...clean.
Consume...to eat.
End
Stop
Sorrow
Well, safety
Matchless...that's...not the same.
Hesitant
Disaster
Strength
Stop, no...offset something.
That I don't know.
Feeling
Able to grasp.
Distance around.
Audacious...I'll have to pass
Bad
Temper
Liens or something like that I imagine.
Steal
| **Impale** | Beg...no, ask. |
| **Travesty** | Farce |
| **Comprehension Test** | |
| **Envelope** | Look to see if there is a return address and return it if there was |
| **Bad company** | Environment is a big thing regarding your own reactions. |
| **Movies** | Have somebody turn the lights on. |
| **Taxes** | Why should people pay taxes? Taxes support the country. |
| **Iron** | Do something before you forget about it or while it is fresh in your mind. |
| **Child labor** | Too much labor could harm them physically. |
| **Forest** | That would depend on where the sun is. |
| **Deaf** | That's a good one...wait...if they are born deaf...they can't hear what they are saying. |
| **City land** | Cause you're closer to things. |
| **Marriage** | So they have a record of it. |
| **Brooks** | Shallow brooks are noisy. I'd have to think of something for that...that...I wouldn't...I wouldn't know...the shallower they are, the noisier. |
| **Swallow** | The same as one day doesn't make the summer. |

**Protocol #1 (Organic)**

**Vocabulary Test**

<p>| <strong>Winter</strong> | Season of year at which time weather is cold...snow and ice. |
| <strong>Repair</strong> | Repair...system we use to put things in order. |</p>
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>Breakfast is a meal...usually first meal of the day.</td>
</tr>
<tr>
<td>Fabric</td>
<td>Generally produced into or rather is a cloth...can be made from cotton, wool, and used for clothing.</td>
</tr>
<tr>
<td>Slice</td>
<td>Slice...is action of cutting.</td>
</tr>
<tr>
<td>Assemble</td>
<td>Is action of putting things together.</td>
</tr>
<tr>
<td>Conceal</td>
<td>Conceal is a means by which we may hide things.</td>
</tr>
<tr>
<td>Enormous</td>
<td>Enormous can be anything as long as it is extremely large.</td>
</tr>
<tr>
<td>Hasten</td>
<td>Action work...we are moving very quickly</td>
</tr>
<tr>
<td>Sentence</td>
<td>Sentence...is a construction of words into a sensible pattern so we can understand.</td>
</tr>
<tr>
<td>Regulate</td>
<td>Is means by which certain things are put in order.</td>
</tr>
<tr>
<td>Commence</td>
<td>Commence...usually beginning of something.</td>
</tr>
<tr>
<td>Ponder</td>
<td>Ponder...to think over...to decide</td>
</tr>
<tr>
<td>Cavern</td>
<td>Cavern...usually a large hole in the ground</td>
</tr>
<tr>
<td>Designate</td>
<td>Is same as specifying something</td>
</tr>
<tr>
<td>Domestic</td>
<td>Domestic can be used in several ways...can mean home ground or associated with home brew.</td>
</tr>
<tr>
<td>Consume</td>
<td>Something like eating...is using up of materials.</td>
</tr>
<tr>
<td>Terminate</td>
<td>Means the end</td>
</tr>
<tr>
<td>Obstruct</td>
<td>To get in way of...interfere</td>
</tr>
<tr>
<td>Remorse</td>
<td>Remorse equals sadness.</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>Is a place...can be either for just thinking or a kind of place of quiet like a church, for example.</td>
</tr>
<tr>
<td>Matchless</td>
<td>Matchless...means something not equal or...no best word for it.</td>
</tr>
</tbody>
</table>
Reluctant...idea of not being willing to do something.

Disaster

Fortitude...that's something like an inner strength.

Tranquil...that's very easy going.

Edifice is a building. What type I don't know.

Concerned with

Something we can see and touch. Something actually there.

Outer edge of an object

Sort of like rowdy I think.

Is spooky

Tirade is very loud expounding about something.

Means to load up

To copy

Like putting stick thru or something

Don't know

Put it in mailbox.

Cause become influenced by it.

Walk out and get manager or usher.

Support water works which benefit the people.

Means take advantage of opportunity while it's right.

Well, to safeguard health of children and giving breadwinners opportunity to make money and raise family.
One way might use...moss on north side of tree and could also locate stream and follow it out.

Because can't...don't know sound...never heard sound and thus doesn't know what it is.

Well, usually because of benefits derived from land in city greater than land in the country.

One reason...licenses acts as means for state to record marriages. Also center for people to go through...health and so forth.

Could mean that people who are not deep in thinking are busy to overcome that handicap.

Just because bird appears doesn't mean spring is here...need the other things that go with spring.

Protocol #18 (Organic)

**Vocabulary Test**

<table>
<thead>
<tr>
<th>Winter</th>
<th>Snow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repair</td>
<td>Fix</td>
</tr>
<tr>
<td>Breakfast</td>
<td>Eat Chow</td>
</tr>
<tr>
<td>Fabric</td>
<td>Linen</td>
</tr>
<tr>
<td>Slice</td>
<td>Cut in two</td>
</tr>
<tr>
<td>Assemble</td>
<td>Put together</td>
</tr>
<tr>
<td>Conceal</td>
<td>Hide</td>
</tr>
<tr>
<td>Enormous</td>
<td>A lot...a tremendous amount</td>
</tr>
<tr>
<td>Hasten</td>
<td>Quiet</td>
</tr>
<tr>
<td>Sentence</td>
<td>Period...period is at the end of a sentence.</td>
</tr>
<tr>
<td>Regulate</td>
<td>Take care</td>
</tr>
<tr>
<td>Commence</td>
<td>Start</td>
</tr>
</tbody>
</table>
Do something

I hide cavern...I hide in a cavern...go in.

Means something

I don't know.

Take it all

All done

Take apart

I don't know

Church

Only...only one like it.

I don't know.

Only one like it.

I don't know.

I don't know.

Thea days we feel compassion...good.

I don't know

I don't know

I don't know

A tremendous amount

I don't know.

I don't know

I don't know

I feel impaled...bad.
Travesty

I don't know.

Comprehension Test

Envelope
Mail it...put it in mailbox

Bad company
Get bad habits from them

Movies
Yell, yell "Fire!"

Taxes
Pay the employees for working on them...their things

Iron
Do it in a hurry

Child labor
Keep them from working...it ain't right. It's wrong to let them work. They're too young to work.

Forest
I don't know.

Deaf
They don't know what it sounds like.

City land
More popular

Marriage
Keep track of them better

Brooks
I don't know.

Swallow
I don't know.

Protocol #20 (Organic)

Vocabulary Test

Winter
Season...the fact that it's cold.

Repair
Fix

Breakfast
To eat

Fabric
Cloth...could be a metal fabric too.

Slice
To cut

Assemble
Congregate
Conceal
Enormous
Hasten
Sentence
Regulate
Commence
Ponder
Cavern
Designate
Domestic
Consume
Terminate
Obstruct
Remorse
Sanctuary
Matchless
Reluctant
Calamity
Fortitude
Tranquil
Edifice
Compassion

To hide
Exceptionally large
To hurry
A complete meaning of what you're saying... has to have a noun and a verb.
To meter
Begin
To weigh one thing against another
Underground removal by water of lime deposits.
Point out
Animals and human beings being tamed... that's a funny one.
Eating... could mean reading a book or consuming things with our senses.
The end
To block
Sorrow over something that's happened.
Give a place of freedom or rest... India is a sanctuary for Tibetans now.
Incomparable
Hesitant
A particular turmoil... for example, an earthquake, a fire, etc.
Courage to carry on.
Soothing the senses
The front of a building is considered an edifice.
Feeling for others.
<table>
<thead>
<tr>
<th>Tangible</th>
<th>Can be used...a pencil and paper to some people is tangible.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perimeter</td>
<td>Outer measurement of a particular area.</td>
</tr>
<tr>
<td>Audacious</td>
<td>A person who doesn't stop and think what he's doing...steps on somebody's toes.</td>
</tr>
<tr>
<td>Ominous</td>
<td>I'd guess at...unknown, or abvious...it could be either.</td>
</tr>
<tr>
<td>Tirade</td>
<td>Politician's line...used to impress or cause fear.</td>
</tr>
<tr>
<td>Encumber</td>
<td>To meet.</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>Use somebody else's writing...take it and give it as your own.</td>
</tr>
<tr>
<td>Impale</td>
<td>Can impale yourself on a picket fence if you fall on it...stick yourself or knights of old used a lance to impale a person.</td>
</tr>
<tr>
<td>Travesty</td>
<td>Don't know...might be trespassing mentally or physically.</td>
</tr>
</tbody>
</table>

**Comprehension Test**

<table>
<thead>
<tr>
<th>Envelope</th>
<th>Drop it in mailbox, unless you want the FBI after you.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad company</td>
<td>We feel that they can influence us.</td>
</tr>
<tr>
<td>Movies</td>
<td>Notify the manager--Don't cause a stampede</td>
</tr>
<tr>
<td>Taxes</td>
<td>To support our way of life...schools, hospitals, things like that...our government.</td>
</tr>
<tr>
<td>Iron</td>
<td>He who hesitates is lost.</td>
</tr>
<tr>
<td>Child labor</td>
<td>Protects youths from being overworked...then they can pursue knowledge, schooling.</td>
</tr>
<tr>
<td>Forest</td>
<td>Climb a tree, find out where the sun is...rising or setting...east or west...depends on where equinox is at too.</td>
</tr>
<tr>
<td>Deaf</td>
<td>We learn through hearing.</td>
</tr>
</tbody>
</table>
Lot of reasons, but there is more employment and development of necessities like sewers, water, housing, and transportation.

Check on VD, TB

The less you know, the more tendency there is to talk and make noise.

Don't jump to conclusions.

Protocol #49 (Organic)

<table>
<thead>
<tr>
<th>Vocabulary Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
</tr>
<tr>
<td>Repair</td>
</tr>
<tr>
<td>Breakfast</td>
</tr>
<tr>
<td>Fabric</td>
</tr>
<tr>
<td>Slice</td>
</tr>
<tr>
<td>Assemble</td>
</tr>
<tr>
<td>Conceal</td>
</tr>
<tr>
<td>Enormous</td>
</tr>
<tr>
<td>Hasten</td>
</tr>
<tr>
<td>Sentence</td>
</tr>
<tr>
<td>Regulate</td>
</tr>
<tr>
<td>Commence</td>
</tr>
<tr>
<td>Ponder</td>
</tr>
<tr>
<td>Cavern</td>
</tr>
<tr>
<td>Designate</td>
</tr>
</tbody>
</table>
Domestic
Consume
Terminate
Obstruct
Remorse
Sanctuary
Matchless
Reluctant
Calamity
Fortitude
Tranquil
Edifice
Compassion
Tangible
Perimeter
Audacious
Ominous
Tirade
Encumber
Plagiarize
Impale
Travesty

Domestic...a figure...art.
I don't know.
Terminate? You got a dictionary? I don't know.
Obstruct? In what manner are you using it?
I don't know what that means.
Put away...like in a casket.
Fire
I don't know.
I don't know.
Fortitude? I don't know.
How do you spell that? I don't know.
I haven't...I don't know.
I've heard the word, but I don't know what it means. Bashful?
I don't know.
I don't know.
Some kind of religion?
The opposite
I don't know.
I don't know.
I don't know.
I don't know.
I don't know.
I don't know.
**Comprehension Test**

**Envelope**
Put it in the post office...if it had a stamp on it.

**Bad company**
Well...to keep out of mischief

**Movies**
Get a fire extinguisher if I was able...I sure wouldn't yell "Fire" because everybody would get panic.

**Taxes**
Well...I couldn't tell you.

**Iron**
Repeat that again please...I wouldn't do that...I have no cause to strike anybody with iron...only a fool would do that.

**Child labor**
For their benefits...so they don't have to stay out after 10 o'clock at night.

**Forest**
I...climb a tree...the highest tree that is and if you see anybody in the forest, you would yell to them.

**Deaf**
Well, that's something I wouldn't know. I'm not a doctor. Of course, they can go to some school to learn to read with their eyes.

**City land**
Well...in the city they build houses, buildings...and that costs tax too.

**Marriage**
I don't know...I'm not married.

**Brooks**
I don't know. I've never seen a shallow brook noisy in the first place. In fact, I've never seen a shallow brook around here.

**Swallow**
I have no idea what it means.

**Protocol #54 (Organic)**

**Vocabulary Test**

**Winter**
Well, winter is just...well, the winter...the way...the only thing I can think about around here is cold, snow, bad driving.
<table>
<thead>
<tr>
<th>Repair</th>
<th>Well, repair...reparing something...just like your folder...maybe it's the tearing of the seam.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>Break...eating in the morning.</td>
</tr>
<tr>
<td>Fabric</td>
<td>Well, as far as fabric...on clothes...fabrics...well, fabrics are good for a lot of things in the home itself.</td>
</tr>
<tr>
<td>Slice</td>
<td>Well...something to cut with.</td>
</tr>
<tr>
<td>Assemble</td>
<td>Assemble...like putting something apart...I don't mean apart...again...I'm saying it wrong...putting it back in place.</td>
</tr>
<tr>
<td>Conceal</td>
<td>Conceal...concealing something that you don't want to have other people see or notice.</td>
</tr>
<tr>
<td>Enormous</td>
<td>Enormous...a lot of something...or everything.</td>
</tr>
<tr>
<td>Hasten</td>
<td>Hasting...hasten...hasten you...having somebody come somewheres.</td>
</tr>
<tr>
<td>Sentence</td>
<td>Oh, sentence...something you have to do like a prison...a person going to a prison...they have sentenced him for life.</td>
</tr>
<tr>
<td>Regulate</td>
<td>Regulate...regulate the heat in the house.</td>
</tr>
<tr>
<td>Commence</td>
<td>Commence...commenced...commence doing something.</td>
</tr>
<tr>
<td>Ponder</td>
<td>Ponder...like I would...well...maybe a person that was very wasteful...throwing money away.</td>
</tr>
<tr>
<td>Cavern</td>
<td>Cavern...cavern...I can't think of anything...to use it for.</td>
</tr>
<tr>
<td>Designate</td>
<td>Designate...to appoint I'd say...going somewhere.</td>
</tr>
<tr>
<td>Domestic</td>
<td>Domestic...that's a...I couldn't bet money on this.</td>
</tr>
<tr>
<td>Consume</td>
<td>Consume...well, consuming something.</td>
</tr>
<tr>
<td>Terminate</td>
<td>Terminating where you're at.</td>
</tr>
</tbody>
</table>
Obstruct

Obstruct...obstruct...like...something a person owns but being hurt with...some way it isn't he himself, but something he owns or lives in...being hurt in some way.

Remorse

Remorse...I can't think...I can't get any knowledge from that.

Sanctuary

I wouldn't be too sure on that one itself.

Matchless

Matchless...about the only thing I can think about for matchless is two people doing something.

Reluctant

I'm reluctantly on my schooling today on how I'm doing.

Calamity

Calamity...calamity...there isn't...repeat that please...calamity...there's nothing I'm sure of.

Fortitude

Fortitude...fortitude...well, there isn't...there isn't anything registering.

Tranquil

I'm trying to express it in stocks and bonds, and I don't have a full meaning on it.

Edifice

Edison...nothing in it for me.

Compassion

Compassion...compassion of people...things alive in this world that people like or want.

Tangible

Tangible...nothing for sure...tangible.

Perimeter

Perimeter...the only thing I can think of in a hurry...the world.

Audacious

No knowledge about it.

Ominous

Ominous...that's a blank.

Tirade

Repeat that one please...No.

Encumber

No knowledge on that one...it's a blank.

Plagiarize

Plague...nothing

Impale

Impale...impale...impeal.
Travesty

Travesty...the only thing I would be thinking about...it might have been movement from one place to another like vacation...but I wouldn't be able to bet money on it.

Comprehension Test

Envelope

Well, the first thing I would think about would be to give it to the post office, or if I knew the person or family, give it to them.

Bad company

Well, to keep yourself up doing things that are...that help you and have good friends instead of bad ones.

Movies

Well, report it to somebody working there that there is a fire there.

Taxes

Well, from the government to...well, all of it is from the government to keep this country better and make it better than it is at the present time.

Iron

Well, it's in World War II...do you remember? Well, it's just...just a moment. Well, do what you want to do if it's possible.

Child labor

Well, for sure...the children have to be so old to get the job in a lot of cases.

Forest

Well, it would just be on the...well, I myself would try to follow the sun one way or another to get myself out.

Deaf

Well...if you...just can't...well...if you are unable to hear what is going on...for young children with enough schooling on it are able to watch the mouth and know what the person or people are talking about.

City land

Well, acreage is so much cheaper out of the city, and the city...there is just lots that are sold and costlier than the land out of the city.

Marriage

Well, so they can record the...about them two people being married and the government is able to know about the persons getting married.
Brooks: Well...shallow...the only thing I can think about is water in one of the lakes around here or the oceans and a big rain...I was just...there are so many possible things that can go on in water...floods.

Swallow: I don't get that...the point.

Protocol #57 (Organic)

Vocabulary Test

Winter: It means it's cold...cold or snow.

Repair: You gotta fix something...something needs fixin...you gotta work on it.

Breakfast: That's what you eat after a night's sleep...the first meal of the morning.

Fabric: I guess it's some tales you read.

Slice: I don't know...cut something I guess.

Assemble: Everybody joins and gets together.

Conceal: It means you hide...you hide something somewhere cause you don't want somebody to see it.

Enormous: Too many people I guess or too much fire.

Hasten: Means you gotta hurry.

Sentence: Something you say.

Regulate: It means people do things a certain way.

Commence: Commence joining, doing something.

Ponder: Wonder over something...you ponder over what that is.

Cavern: Cavern...I don't know.

Designate: Designate...means you're saying where some place is.
Domestic
You're quoting something.

Consume
You take in what they tell you.

Terminate
Wonder if it's true.

Obstruct
I don't know.

Remorse
I don't know.

Sanctuary
A place in church.

Matchless
Something that can't be compared.

Reluctant
Something you don't want to do or don't like to do.

Calamity
I don't know.

Fortitude
You're combining what you got.

Tranquil
I don't know

Edifice
Edifice. I don't know. I never heard of it.

Compassion
Comparing what was said or thinking about it.

Tangible
Means you're confused or it can be compared with something.

Perimeter
Perimeter, huh? A place you're going or leaving I guess.

Audacious
I don't know.

Ominous
I don't know that either.

Tirade
Tirade. I don't know.

Encumber
Encumber somebody you meet.

Plagiarize
Plagiarize. I don't know.

Impale
Something you say I guess...or compare.

Travesty
Travesty means you're traveling I guess.
Comprehension Test

Envelope
Open it I guess...if it was addressed to me or something...I wouldn't open it I think.

Bad company
Because I don't like it...they ain't no good I know.

Movies
Put it out and call the fire department.

Taxes
Pay...I don't know...pay people that work...I...don't know.

Iron
Means get some money.

Child labor
They need them to raise the child right.

Forest
Walk I guess.

Deaf
I don't know.

City land
I don't know.

Marriage
I didn't get no license to be married...the state of Missouri didn't...I don't think they ever will.

Brooks
It means they make a lot of racket.

Swallow
Doesn't...I know it doesn't.

Protocol #10 (Psychoneurotic)

Vocabulary Test

Winter
That's season when it changes from fall to winter.

Repair
Well, it means if something is broken, you put it back in good order.

Breakfast
It's the first meal of the day when you arise...presently, in the a.m.

Fabric
Form of manufactured cloth.
Slice
Usually means to cut something, like a slice of bread or ham. But you can slice with a sword. It could also mean a piece...like a piece of cake.

Assemble
It means to gather a bunch of components and assemble them in a numerical order or the way they are supposed to be to reach some end or finished product.

Conceal
It would mean to hide or put out of sight...either an object or a verbal thing.

Enormous
Ah...it is a description of size in comparison to something else. This building is enormous compared to me, but small compared to the Empire State Building.

Hasten
That would mean to hurry up or to speed up some process in motion.

Sentence
It's a word...a group of words to make an intelligent meaning or betray a message...to get across a message.

Regulate
That would be to put certain conditions on a thing or to control it so that it would conform to a process or pattern.

Commence
It would be the beginning...in other words, you are starting something.

Ponder
It would be to wonder or think about something...to give it thought.

Cavern
That would be a...usually a hole in the ground...a natural cave...or it wouldn't have to be natural...you could build a cavern.

Designate
That would be to appoint something or someone...to make a specific choice.

Domestic
That's...could be several things...a domestic animal that has learned to live in civilization with mankind.

Consume
To use up in some manner or form.
Terminate
That would be to end something or to bring a halt to some process.

Obstruct
It would be to get in the way of...cause difficulty in completing something. A dam would be an obstruction to a river anyway.

Remorse
Means to feel sorrow...to have bad feelings over something...not bad, but sorrowful.

Sanctuary
Well, usually it is a place where you can go and feel secure.

Matchless
It means two things that aren't in harmonious conjunction. They don't match. They're not the same thing.

Reluctant
It means you don't particularly want to do it. You are reluctant to get out of bed in the morning or you are reluctant to undertake to do something you don't feel is right.

Calamity
Usually a form of disaster...something that has happened to a person or a project that has hurt him immensely.

Fortitude
That would be a form of...you would say a person has fortitude if he has convictions and sticks with them. He goes all out for his convictions.

Tranquil
That could be peace of mind...in other words you are not tied up with emotional problems of any kind. You are just happy.

Edifice
I'm not sure...I think it means explain.

Compassion
It means you have feelings for something or someone...sympathize with them.

Tangible
Well, that could be...something that is tangible could be something possible. Actually, that is not the correct definition, but I can't think of anything but a circle with a tangent. May be that's it...it means come close and touch at one point.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perimeter</td>
<td>That would be the distance around a certain object or given area. It would be two or three dimensional.</td>
</tr>
<tr>
<td>Audacious</td>
<td>I don't know.</td>
</tr>
<tr>
<td>Ominous</td>
<td>I'm not sure of that one either...I know what it is, but I can't think of it.</td>
</tr>
<tr>
<td>Tirade</td>
<td>That I don't know either. I know it, but I can't think of it.</td>
</tr>
<tr>
<td>Encumber</td>
<td>It means to come across something I would imagine.</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>Nope.</td>
</tr>
<tr>
<td>Impale</td>
<td>Nope...couldn't give a good explanation of it anyway.</td>
</tr>
<tr>
<td>Travesty</td>
<td>No, too.</td>
</tr>
<tr>
<td>Comprehension Test</td>
<td>You mean if you're honest (laughs)...put it in the mailbox.</td>
</tr>
<tr>
<td>Envelope</td>
<td>Lay down with dogs and you get up with fleas I guess.</td>
</tr>
<tr>
<td>Bad company</td>
<td>Report it to somebody in charge.</td>
</tr>
<tr>
<td>Movies</td>
<td>Why? To support the government...if they're going to live in a common community they have to pay for them.</td>
</tr>
<tr>
<td>Taxes</td>
<td>Well, it means you might as well do something when you have the opportunity to do it. In other words, when the light is green, you might as well cross the street.</td>
</tr>
<tr>
<td>Iron</td>
<td>So that certain unscrupulous people won't take advantage of the unfortunate children, and to protect the general public.</td>
</tr>
<tr>
<td>Child labor</td>
<td>You mean direction-wise?...I'd determine which way the sun was moving so I'd know what was east and what was west</td>
</tr>
</tbody>
</table>
Because they've never heard sound. They can't repeat what they haven't heard.

Well, it's more valuable for the simple reason that business opportunity is greater in a congested area where you can sell your produce.

Well, there could be several reasons. One reason is a source of revenue. Secondly, for the purpose of statistics...to keep track of who is married and who isn't. And to prevent people from getting married who shouldn't, for example, first cousins, brothers and sisters.

Well, it's a proverb. If a brook is shallow, it makes a lot of noise when the water rushes through it. It could also mean that a person might make a lot of noise and not be very deep in his subject.

It means simply that if one swallow comes now, summer isn't here. You might get another cold streak. Until all the swallows come north or back to Capistrano or wherever they go, summer hasn't arrived for certain.

Protocol #27 (Psychoneurotic)

Vocabulary Test

Winter Well, winter, of course, pertains to cold weather, ice and snow...temperature is above normal.

Repair Repair is to make an adjustment on something that has been broken.

Breakfast Breakfast means food that you partake at the beginning of each day.

Fabric Fabric is a piece of material.

Slice To slice is well...if you need several cuts of meat, you have to slice it, in other words, to cut.
Assemble
To assemble...that is something you put together.

Conceal
Conceal is something to hide.

Enormous
Enormous is something big, oversize.

Hasten
Hurry something...in other words fast pace.

Sentence
Sentence is something that...it can refer to jail sentence or sentence that can be written.

Regulate
Time element.

Commence
To start

Ponder
Ponder is to...well, when you say ponder your thoughts, you hesitate your thoughts.

Cavern
Cavern is something like part of a ravine, a cave, an opening.

Designate
Designate is to pick from.

Domestic
Domestic is, well, pertaining to houseware perhaps, or animal life, help.

Consume
To consume is to buy, to take in.

Terminate
Loss of job, perhaps.

Obstruct
To...to obstruct...in other words to destroy.

Remorse
Remorse is, well, kind of down in dumps...well, brood you might say.

Sanctuary
Sanctuary is, well, where you place yourself...a place where you are alone.

Matchless
Matchless is something you don't match up...it doesn't match.

Reluctant
Against.

Calamity
Let's see, calamity...somebody...I can't explain it...jolly...Calamity Jane.

Fortitude
Someone, perhaps, might have ambition, perhaps.
| Tranquil | Tranquil...well, let's see...tranquil...I'll bypass that one. |
| Edifice | This one too...I'm not familiar with the termination. |
| Compassion | Say without affection perhaps. |
| Tangible | Someone that is reliable, capable...something that stands. |
| Perimeter | I don't know. |
| Audacious | I don't know. |
| Ominous | 0...I see...Ominous...I can't get that one either at the moment. |
| Tirade | Tirade...somebody naughty...or opposite of someone good or fine. |
| Encumber | I don't know. |
| Plagiarize | I don't know. |
| Impale | I don't know. |
| Travesty | I don't know. I've never come in contact with the last four. I can't recall ever using these words. |

**Comprehension Test**

| Envelope | I would certainly mail it. |
| Bad company | Why? Well, after all bad company is a bad influence on the personality of the individual as to how he performs in society. I don't go around with bad company...at least, I don't make a habit of it. |
| Movies | If I were? Immediately I would holler out "Fire" and then I would help people within reach to the nearest exit. |
| Taxes | Why? It to...It's to help to build schools, to build roads, things of that nature which would be a benefit to the community in which they live. |
Strike? In other words, that means to...if the thing is important to you, it is better to proceed to do this...in other words, don't delay. Make hay while the sun shines.

Child labor

Well, for one thing...why are they needed? Well, perhaps due to illness in the family or death in the family...if one of them is old enough...I really don't approve of it, but if it is necessary the child has no alternative.

Forest

If I was lost in the forest? Well...let's see...I'd try to recall the direction I came from in the beginning. If I couldn't, I would holler out or do the best I could. If it got dark, I would find a place to lie down and rest until daytime. Of course, it depends on how dense the forest is. If you are on a bike you should bring enough provisions with you. That's where Boy Scout training comes in handy.

Deaf

Why is it usual? Well, maybe there is some sickness connected with the deafness that impairs the vocal cords. Not coming in contact with many deaf people, I have never asked why they don't talk.

City land

Well, for one thing in the city it is more populated, there is more schools to be provided for, ways and means of living cost more. On a farm you have property to grow commodities for yourself. The ways and means of living don't cost as much. In the city the homes are newer and cost more, where in the country property is handed from generation to generation.

Marriage

Why? Well, after all marriage is a very sacred thing, very sacred. It is something that binds people together in the eyes of the law as well as God. In other words, it is a permit to marriage.

Brooks

Shallow? Well, it depends on where you are. If you speak of a shallow brook, you are probably at a place where it is quiet, peaceful. Noisy...if there is a lot of noise and disturbance, as in a city...people can be quite noisy.
Swallow

One? Huh...that's an odd one. One swallow doesn't make a summer. I'm afraid I can't answer that one.

Protocol #31 (Psychoneurotic)

<table>
<thead>
<tr>
<th>Vocabulary Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
</tr>
<tr>
<td>Repair</td>
</tr>
<tr>
<td>Breakfast</td>
</tr>
<tr>
<td>Fabric</td>
</tr>
<tr>
<td>Slice</td>
</tr>
<tr>
<td>Assemble</td>
</tr>
<tr>
<td>Conceal</td>
</tr>
<tr>
<td>Enormous</td>
</tr>
<tr>
<td>Hasten</td>
</tr>
<tr>
<td>Sentence</td>
</tr>
<tr>
<td>Regulate</td>
</tr>
<tr>
<td>Commence</td>
</tr>
<tr>
<td>Ponder</td>
</tr>
<tr>
<td>Cavern</td>
</tr>
<tr>
<td>Designate</td>
</tr>
<tr>
<td>Domestic</td>
</tr>
<tr>
<td>Consume</td>
</tr>
<tr>
<td>Terminate</td>
</tr>
<tr>
<td>Obstruct</td>
</tr>
<tr>
<td>Remorse</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Sanctuary</td>
</tr>
<tr>
<td>Matchless</td>
</tr>
<tr>
<td>Reluctant</td>
</tr>
<tr>
<td>Calamity</td>
</tr>
<tr>
<td>Fortitude</td>
</tr>
<tr>
<td>Tranquil</td>
</tr>
<tr>
<td>Edifice</td>
</tr>
<tr>
<td>Compassion</td>
</tr>
<tr>
<td>Tangible</td>
</tr>
<tr>
<td>Perimeter</td>
</tr>
<tr>
<td>Audacious</td>
</tr>
<tr>
<td>Ominous</td>
</tr>
<tr>
<td>Tirade</td>
</tr>
<tr>
<td>Encumber</td>
</tr>
<tr>
<td>Plagiarize</td>
</tr>
<tr>
<td>Impale</td>
</tr>
<tr>
<td>Travesty</td>
</tr>
<tr>
<td>Comprehension Test</td>
</tr>
<tr>
<td>Envelope</td>
</tr>
<tr>
<td>Bad company</td>
</tr>
</tbody>
</table>
Movies
Well, the first thing I would do would get to an usher or manager and report it. I would get to some authority in the theatre rather than notify the crowd.

Taxes
Well, to support the government.

Iron
Well, it means to do something immediately to keep from wasting time.

Child labor
To prevent children from working under age... because of the main effect on their health, I suppose.

Forest
Hmmm... Well, if you could do it... walk in a straight line.

Deaf
Well, I guess they never were able to learn the meanings of words, I suppose. That's a stumper. I don't know.

City land
I don't know. Gosh, you got me there. Taking a guess... land is more congested... in the city... well, you got me on that one. Taxes are higher. That's one thing.

Marriage
Well, so that they can't practice polygamy I guess. So you can have only one husband or wife.

Brooks
Shallow brooks are noisy. All I can say is they have no value.

Swallow
It's not enough for anything. I don't know.

Protocol #40 (Psychoneurotic)

Vocabulary Test
Winter
The cold season of the year.

Repair
Fix

Breakfast
Meal on arising

Fabric
Material
<table>
<thead>
<tr>
<th>Slice</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assemble</td>
<td>Gather</td>
</tr>
<tr>
<td>Conceal</td>
<td>Hide</td>
</tr>
<tr>
<td>Enormous</td>
<td>Large</td>
</tr>
<tr>
<td>Hasten</td>
<td>Hurry</td>
</tr>
<tr>
<td>Sentence</td>
<td>Does that have to be answered in one word? A complete statement grammatically.</td>
</tr>
<tr>
<td>Regulate</td>
<td>Control</td>
</tr>
<tr>
<td>Commence</td>
<td>Beginning</td>
</tr>
<tr>
<td>Ponder</td>
<td>Think</td>
</tr>
<tr>
<td>Cavern</td>
<td>Cave</td>
</tr>
<tr>
<td>Designate</td>
<td>Indicate</td>
</tr>
<tr>
<td>Domestic</td>
<td>Homelike</td>
</tr>
<tr>
<td>Consume</td>
<td>Eat</td>
</tr>
<tr>
<td>Terminate</td>
<td>End</td>
</tr>
<tr>
<td>Obstruct</td>
<td>Dam</td>
</tr>
<tr>
<td>Remorse</td>
<td>Sorrow</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>Holy place</td>
</tr>
<tr>
<td>Matchless</td>
<td>I have the word...I can't get it. It won't come ...without comparison...incomparable.</td>
</tr>
<tr>
<td>Reluctant</td>
<td>Undesirous</td>
</tr>
<tr>
<td>Calamity</td>
<td>Tragedy</td>
</tr>
<tr>
<td>Fortitude</td>
<td>Strength</td>
</tr>
<tr>
<td>Tranquil</td>
<td>Quiet</td>
</tr>
<tr>
<td>Edifice</td>
<td>Building</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Feeling for</td>
<td>Feeling for is all I can think of.</td>
</tr>
<tr>
<td>Perceptible</td>
<td>Perceptible</td>
</tr>
<tr>
<td>Circumference</td>
<td>Circumference...area...distance around</td>
</tr>
<tr>
<td>Bold</td>
<td>Bold</td>
</tr>
<tr>
<td>Threatening</td>
<td>Threatening</td>
</tr>
<tr>
<td>Angry speech</td>
<td>Angry speech</td>
</tr>
<tr>
<td>Hinder</td>
<td>Hinder</td>
</tr>
<tr>
<td>Steal</td>
<td>Steal</td>
</tr>
<tr>
<td>To fasten to</td>
<td>To fasten to a stake...on a stake</td>
</tr>
<tr>
<td>a travesty</td>
<td>a travesty of justice, for instance. I can use the word, but I can't define it the way it should be.</td>
</tr>
<tr>
<td>I know what</td>
<td>I know what it means, but I can't think of it...a travesty of justice, for instance. I can use the word, but I can't define it the way it should be.</td>
</tr>
<tr>
<td>iron</td>
<td>To protect children from injury that would prevent them from attaining maturity...I don't mean physical injury necessarily.</td>
</tr>
</tbody>
</table>

**Comprehension Test**

| Envelope          | You know what I'd do...I'd drop it in the mailbox.                        |
| Bad company       | Possibility of bad example personally.                                    |
| Movies             | I think I'd notify the manager, pull in the alarm, and try as calm as possible to get the people to leave the premises. |
| Taxes              | The government is not self-supporting.                                    |
| Iron               | Well, that presents a rather flexible statement to me. But it means to me, make an impression while you can. |

*Iron*
That presents a question to me. One that I've never been in before. I think I would establish a direction for myself and try to maintain it. There would be an easier way to get out, for if I would have entered and maintained a direction it would be easy to get out. But I don't know if anyone does it.

Learning speech depends a lot on being able to hear, so they are dependent on that one requisite.

Why does land in the city cost more than land in the country? I don't really know the answer to that except that there is additional cost in surveying, which you call partitioning. I don't know if the advantage of city life enters in or not. And you do have to pay for all of the improvements.

Well, I think...I'd say there are two reasons. Primarily, it enables the state to have a record of the marriage and it is a source of revenue. It helps control...what is the name of it...polygamy.

Because...you want the physical definition? Well, a shallow brook runs noisy because of more current and on that basis I would say a person with a shallow mentality does a lot of talking too.

That's a rather tough one. It takes more than one bird to make a summer. It takes more than birds to make a summer. It occurs to me that one opinion doesn't make a fact.

Protocol #46 (Psychoneurotic)

**Vocabulary Test**

**Winter**
A season

**Repair**
To...well, repair is to fix something that is broken.

**Breakfast**
It's usually the first meal of the day and it refers to breaking the fast of the night.
Fabric
Fabric is a cloth.
Slice
That's a portion of a larger object.
Assemble
Put together the components of a machine.
Conceal
Hide from view.
Enormous
Very large
Hasten
Quickening
Sentence
It's a group of words expressing a complete thought.
Regulate
Adjust or control.
Commence
Start
Ponder
Think deeply
Cavern
A hole in a hill or a hole in the earth.
Designate
Point out.
Domestic
Generally refers to something that would be associated with civilization.
Consume
Take in or absorb.
Terminate
Bring to an end.
Obstruct
Well, this is ambiguous...obstruct would be to get in the way of or put in the way of.
Remorse
Deep regret
Sanctuary
A...privileged place...some place to hide.
Matchless
Cannot be duplicated.
Reluctant
Well...prefer not to or hesitate to do something.
Calamity
Well, some catastrophe or some bad happening.
Fortitude
Determination over a period of time.
Tranquil
Quiet
<table>
<thead>
<tr>
<th>Edifice</th>
<th>Oh...something like a structure or a statue pertaining to something.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compassion</td>
<td>Sympathy or forgiveness.</td>
</tr>
<tr>
<td>Tangible</td>
<td>Touchable or visible object.</td>
</tr>
<tr>
<td>Perimeter</td>
<td>Outer edges of anything.</td>
</tr>
<tr>
<td>Audacious</td>
<td>Oh...sassy or...I'm searching for a word and can't think of it...a sassy, belligerent attitude.</td>
</tr>
<tr>
<td>Ominous</td>
<td>Something threatening or frightening.</td>
</tr>
<tr>
<td>Tirade</td>
<td>Usually a loud, hostile verbal spanking so to speak.</td>
</tr>
<tr>
<td>Encumber</td>
<td>Oh...imburden or constrict or hold back.</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>Oh...refers to scandalous sayings.</td>
</tr>
<tr>
<td>Impale</td>
<td>Well, this would refer to...stick onto...referring to a person it would mean to stick a knife in their stomach or something like that.</td>
</tr>
<tr>
<td>Travesty</td>
<td>Well, this would be a misuse of another person, place, or thing...and avoiding the issue.</td>
</tr>
</tbody>
</table>

**Comprehension Test**

<table>
<thead>
<tr>
<th>Envelope</th>
<th>Put it in the mailbox.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad company</td>
<td>So we don't imitate them.</td>
</tr>
<tr>
<td>Movies</td>
<td>I'd probably notify the manager or somebody in authority.</td>
</tr>
<tr>
<td>Taxes</td>
<td>Support the government</td>
</tr>
<tr>
<td>Iron</td>
<td>Take advantage of opportunity.</td>
</tr>
<tr>
<td>Child labor</td>
<td>To prevent...unscrupulous employers from taking advantage of them.</td>
</tr>
</tbody>
</table>
In the daytime... find my way out... this would depend if the sun was out... then I could approximate the time of day and my direction so I could get back to where I started from.

Because being born deaf, they really don't know how to make the sounds of talking... they really don't understand what sound is.

Well... because... of the congregation of people... it is more readily usable... and then, of course, the demand is higher.

So they know who is married and who isn't married... to control the functions of marriage you might say.

Oh... if... referring to people... it would mean that... you could say unintelligent people make noise to impress others.

Well... you wouldn't judge things of great magnitude on insignificant single factors.

Protocol #58 (Psychoneurotic)

**Vocabulary Test**

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td>A season</td>
</tr>
<tr>
<td>Repair</td>
<td>To fix</td>
</tr>
<tr>
<td>Breakfast</td>
<td>Meal... morning meal.</td>
</tr>
<tr>
<td>Fabric</td>
<td>Cloth</td>
</tr>
<tr>
<td>Slice</td>
<td>Part of... piece.</td>
</tr>
<tr>
<td>Assemble</td>
<td>Put together.</td>
</tr>
<tr>
<td>Conceal</td>
<td>Hide</td>
</tr>
<tr>
<td>Enormous</td>
<td>Large or great</td>
</tr>
<tr>
<td>Hasten</td>
<td>Fast... speed up.</td>
</tr>
</tbody>
</table>
Now sentence...could be two couldn't it. A group of words...a line of words.

Adjust

Start

To think or dwell on an idea...to ponder over something.

Part of a cave...a cave.

I should know those words but they don't come to me...to assign.

Tame...a domestic animal is a tame animal.

to use or eat.

End

Stop or...obstruction...barrier or something.

Sad I guess.

Terrible! Sanctuary...I just haven't got the words for it. I used to know it.

Matchless. Well, it can't be matched. Unmatchable.

Reluctant. I can give you a sentence, but it is a son of a gun to give

Maybe I'm thinking too hard. It's a calamity. It's a...you got me at the wrong time...that's all.

No.

No.

Edifice. A statue...it's an edifice...it's a ...

No.

No.
<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible</td>
<td>No. I should know it...something tangible...if I could think of words to express myself.</td>
</tr>
<tr>
<td>Perimeter</td>
<td>A perimeter...a circle...a circled area.</td>
</tr>
<tr>
<td>Audacious</td>
<td>No.</td>
</tr>
<tr>
<td>Ominous</td>
<td>No.</td>
</tr>
<tr>
<td>Tirade</td>
<td>No.</td>
</tr>
<tr>
<td>Encumber</td>
<td>No.</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>Never heard of that one.</td>
</tr>
<tr>
<td>Impale</td>
<td>Impale...means to be caught...to be impaled on a picket fence.</td>
</tr>
<tr>
<td>Travesty</td>
<td>Travesty...I don't get that one at all...a definition for...I can't think of it.</td>
</tr>
</tbody>
</table>

**Comprehension Test**

<table>
<thead>
<tr>
<th>Item</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Envelope</td>
<td>Put it in the mailbox.</td>
</tr>
<tr>
<td>Bad company</td>
<td>To keep out of trouble.</td>
</tr>
<tr>
<td>Movies</td>
<td>I'd notify the persons to be notified in the movie...those responsible for the movie...the movie house.</td>
</tr>
<tr>
<td>Taxes</td>
<td>What? To keep up the community or communities</td>
</tr>
<tr>
<td>Iron</td>
<td>Take advantage of opportunities while they are there</td>
</tr>
<tr>
<td>Child labor</td>
<td>Well...let's see. How can I word that. So there would be no...let's see...no manner of slavery...taken advantage of illegally.</td>
</tr>
<tr>
<td>Forest</td>
<td>Well...I'd have to go by the sun or the structure of the trees to get my direction. The trees should have fewer leaves on the north side I think.</td>
</tr>
</tbody>
</table>
They don't have the faculty of speech...oh, I didn't think that time...they're deaf...they should be able to speak.

Well, now let me tell you something...some lands in the country doesn't cost less. It depends on the area. In some rural areas the improvement is less. Today all land is high.

To make it legal I would say.

I don't know...let's see...shallow brooks are noisy...still water runs deep...I never heard that saying actually. Unless...I'll tell you what I'd say...people that let words slip off their tongue before it goes through their brain...idle talk. I never heard that expression.

Now wait a minute...no...you're talking about a bird aren't you. One person's opinion doesn't make it right.

Protocol #2 (Retarded)

Vocabulary Test

Winter  When it's cold outside, snow, rain
Repair  Repair the houses and furnitures...to remodel the stuff
Breakfast  When you eat
Fabric  I don't know that one.
Slice  I don't know that one.
Assemble  I don't know that one.
Conceal  I don't know that one.
Enormous  I don't know that one.
Hasten  I don't know that one.
Sentence  I don't know that one.
I used to know that, but I don't no more.
I used to know that, but I don't no more.
I don't know that one.
I don't know that one.
I used to know it, but not no more.
It sounds like Mexican. I used to know some of those words, but not no more.
I don't know that one.
I used to know that, but I don't no more.
I forgot what that is.
Means marking, ain't it?
I don't know.
Sounds like matches, ain't it?
Relax
In a certain way, but I can't get the word out.
I don't know that.
Something like a transverse...that's what they call it.
I don't know that one.
I don't know that one.
I don't know that one.
That's another one that is new to me.
Audacious? Sounds like dishes to me.
Sounds like hominy, ain't it?
Tirade? Sounds like tire to me.
Incorrupt
plagiarize
Impale
Travesty
Comprehension Test

Envelope
Bad company
Movies
Taxes
Iron
Child labor
Forest
Deaf
City land
Marriage
Brooks
Swallow

Income tax
I don't know that one.
Sounds like a pail of water to me.
Traveling

Well, I'd just turn it in. I work uptown so I'd take it to the post office.
To behave yourself
To put out the fire
In case they have the money
I don't know that one.
I don't know that one.
I don't know that one.
I don't know that one.
I used to know, but I don't know now.
I don't know that one.
It's lousy.
I used to know that one, but I don't now.

Vocabulary Test

Winter
Repair
Breakfast
Fabric

Cold weather
Fix up
To eat
To wear

Protocol #16 (Retarded)
<table>
<thead>
<tr>
<th>Slice</th>
<th>To cut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assemble</td>
<td>Put together</td>
</tr>
<tr>
<td>Conceal</td>
<td>Hide</td>
</tr>
<tr>
<td>Enormous</td>
<td>Big</td>
</tr>
<tr>
<td>Hasten</td>
<td>Rush</td>
</tr>
<tr>
<td>Sentence</td>
<td>Question...question, to write a sentence.</td>
</tr>
<tr>
<td>Regulate</td>
<td>Put together</td>
</tr>
<tr>
<td>Commence</td>
<td>Start</td>
</tr>
<tr>
<td>Ponder</td>
<td>Tap</td>
</tr>
<tr>
<td>Cavern</td>
<td>Got me on that</td>
</tr>
<tr>
<td>Designate</td>
<td>Distance</td>
</tr>
<tr>
<td>Domestic</td>
<td>Variety</td>
</tr>
<tr>
<td>Consume</td>
<td>To order</td>
</tr>
<tr>
<td>Terminate</td>
<td>Distinguish</td>
</tr>
<tr>
<td>Obstruct</td>
<td>Destroy</td>
</tr>
<tr>
<td>Remorse</td>
<td>You got me on that</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>Safe...safe place, sanctuary to hide.</td>
</tr>
<tr>
<td>Matchless</td>
<td>Like they match something, and it ain't the right match. That's what they call matchless.</td>
</tr>
<tr>
<td>Reluctant</td>
<td>Like you buy something, and it's high priced. That's what they call reluctant...valuable.</td>
</tr>
<tr>
<td>Calamity</td>
<td>Some incident...just an incident...most anything.</td>
</tr>
<tr>
<td>Fortitude</td>
<td>Just like a fort...fortitude.</td>
</tr>
<tr>
<td>Tranquil</td>
<td>You got me there.</td>
</tr>
<tr>
<td>Edifice</td>
<td>Edifice? You got me there.</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Compassion</td>
<td>Compassion? Something like a...something like is going to happen in your life and it happens. That's what you call compassion</td>
</tr>
<tr>
<td>Tangible</td>
<td>Tangible? Go to buy something, and it's precious. That's tangible.</td>
</tr>
<tr>
<td>Perimeter</td>
<td>You got me there.</td>
</tr>
<tr>
<td>Audacious</td>
<td>You got me there.</td>
</tr>
<tr>
<td>Ominous</td>
<td>Something like happened a long time ago. That's what you call ominous</td>
</tr>
<tr>
<td>Tirade</td>
<td>You got me there.</td>
</tr>
<tr>
<td>Encumber</td>
<td>You got me there.</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>You got me there.</td>
</tr>
<tr>
<td>Impale</td>
<td>Like you're sick or something, and you got impale.</td>
</tr>
<tr>
<td>Travesty</td>
<td>You got me.</td>
</tr>
<tr>
<td>Comprehension Test</td>
<td>Take it to the post office</td>
</tr>
<tr>
<td>Envelope</td>
<td>Get you in trouble...they make it hard on you.</td>
</tr>
<tr>
<td>Bad company</td>
<td>Turn it in to the manager</td>
</tr>
<tr>
<td>Movies</td>
<td>If they didn't pay taxes...wouldn't be any government.</td>
</tr>
<tr>
<td>Taxes</td>
<td>That's a verse...it means strike wire is hot.</td>
</tr>
<tr>
<td>Iron</td>
<td>If they didn't have labor laws...children would be unruly.</td>
</tr>
<tr>
<td>Child labor</td>
<td>I'd keep walking till I found my way out.</td>
</tr>
<tr>
<td>Forest</td>
<td>They were born that way.</td>
</tr>
<tr>
<td>Deaf</td>
<td>Cause it's more valuable...probably cost more.</td>
</tr>
<tr>
<td>Marriage</td>
<td>That's the law.</td>
</tr>
</tbody>
</table>
Brooks makes too much noise.

You got me there.

Protocol #30 (Retarded)

Vocabulary Test

Winter

Means cold days or snow, cold weather, wind

Repair

Repair...if you want to go out, you get all repaired for it.

Breakfast

When you get up in the morning, you eat your breakfast before you go to work.

Fabric

Fabric...you got me on that one.

Slice

Oh, this means like you're slicing meat. Slice it in two. Or slice your finger with a knife.

Assemble

Assemble? What you put over your finger when you sew to keep from sticking yourself.

Conceal

Like seal up a box to send out...tape up a package to mail.

Enormous

Enormous? You got me on that one.

Hasten

I don't know about that one either.

Sentence

Like when you're writing a letter and you cut something out and put something else in place of it.

Regulate

Regulate? Keep something going...like a motor.

Commence

Commence? I don't know about that one. You got me on that one.

Ponder

Pound something in...nail and hammer.

Cavern

Like a cabinet to put books in.

Designate

I don't know.
Domestic
Consume
Terminate
Obstruct
Remorse
Sanctuary
Matchless
Reluctant
Calamity
Tranquil
Edifice
Compassion
Tangible
Perimeter
Audacious
Ominous
Tirade
Encumber
Plagiarize
Impale
Travesty

Comprehension Test

Envelope Find the address it belongs to and stick it in the mail box.
Bad company

Bad company get you in trouble...get you locked up...sent to jail and places...like that.

Movies

Run up to the usher and tell him the place is on fire and tell him to call the fire department.

Taxes

To help out crippled children, institutions, the army, and places like that.

Iron

I don't know about that one.

Child labor

Because kids get in too much trouble...messing up all the time.

Forest

Keep walking until find the end of the forest... keep walking in all the different directions until I find the way out.

Deaf

Because they got something wrong in the brain. They weren't born normal.

City land

Because in the city you can build more buildings than in the country.

Marriage

Because...if they ain't got a license, they'd be picked up in court...put in jail.

Brooks

Don't know.

Swallow

Don't know.

Protocol #33 (Retarded)

Vocabulary Test

Winter

Cold weather

Repair

Repair furniture...fix'em up

Breakfast

Eat

Fabric

Put the fan together

Slice

Slice meat...make a sandwich of it.

Assemble

Use it on your finger
Conceal
You conceal an envelope or anything. Then mail it out.

Enormous
Your temperature is normal and right.

Hasten
People hates you and you hates them.

Sentence
I don't know.

Regulate
You can regulate a watch. Make it run.

Commence
Pay attention

Ponder
I don't know much about that one.

Cavern
Wooden cabin

Designate
You aggravate me too much.

Domestic
Send a message to somebody.

Consume
Like you consume fast

Terminate
I don't know much about that.

Obstruct
You strike something.

Remorse
I don't know much about that.

Sanctuary
I don't know what that one is.

Matchless
Matchbooks

Reluctant
Civilized

Calamity
Naps

Fortitude
I don't know about that one.

Tranquil
On the radio

Edifice
I don't know about that one.

Compassion
People are passing by too much.

Tangible
That's an orange.

Perimeter
I don't know about that.
I don't know about that one either.
You harm somebody.
I don't know.
I don't know.
Play
Your face looks pale.
You're going to travel somewhere.
Take it to the post office
Cause you get in trouble.
Turn it in...to the police.
Cause too many people are running around.
I don't know much about that
Constipated
Use a compass...use the sun...look up at the sun...you could get left and right from it.
Some persons be deaf and some don't.
In city too much people there.
You'd have to have a license in order to get married.
Too much noise.
Might hurt the boy.
Protocol #43 (Retarded)

**Vocabulary Test**

**Winter**
- A season where it gets cold...snow comes, sleet, storms.

**Repair**
- To fix something.

**Breakfast**
- Well, you eat breakfast in the morning when you get up out of bed.

**Fabric**
- I don't know.

**Slice**
- Slice meat, bread.

**Assemble**
- You assemble something or that.

**Conceal**
- It means if a letter or package isn't sealed, you have to conceal it over.

**Enormous**
- I don't know.

**Hasten**
- Hasten? You aren't supposed to waste something.

**Sentence**
- When a man commits murder, he goes up and the judge sentences him to 20 years or life in prison.

**Regulate**
- To regulate the thermometer or that.

**Commence**
- I don't know.

**Ponder**
- A ponder is a man that is fixin something or building a house.

**Cavern**
- A place where you go to drink beer...it sounds like it.

**Designate**
- I don't know.

**Domestic**
- I don't know.

**Consume**
- You are so panicked that you want to be consumed.

**Terminate**
- Terminate? A man is a terminator...he goes and kills bugs and stuff like that.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstruct</td>
<td>A construct is making blueprints or stuff like that.</td>
</tr>
<tr>
<td>Remorse</td>
<td>Remorse? I don't know.</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>Sanitary...mild, dietary or something like that.</td>
</tr>
<tr>
<td>Matchless</td>
<td>You don't have no matches.</td>
</tr>
<tr>
<td>Reluctant</td>
<td>I don't know</td>
</tr>
<tr>
<td>Calamity</td>
<td>That's a word that means funny, silly...like Calamity Jane.</td>
</tr>
<tr>
<td>Fortitude</td>
<td>A tube is something you are not supposed to touch.</td>
</tr>
<tr>
<td>Tranquil</td>
<td>Tranquil? I don't know</td>
</tr>
<tr>
<td>Edifice</td>
<td>Edifice? You're not supposed to hit anybody with your fist or that.</td>
</tr>
<tr>
<td>Compassion</td>
<td>When you go to church, the statues are covered...</td>
</tr>
<tr>
<td>Tangible</td>
<td>Tangible? In other words, tangerine is a fruit.</td>
</tr>
<tr>
<td>Perimeter</td>
<td>Perimeter? I don't know</td>
</tr>
<tr>
<td>Audacious</td>
<td>Audacious? I don't know</td>
</tr>
<tr>
<td>Ominous</td>
<td>Ominous? That's a story on TV.</td>
</tr>
<tr>
<td>Tirade</td>
<td>Trade? Tirade? Well, in other words, you want trade or if you don't want to you don't have to.</td>
</tr>
<tr>
<td>Encumber</td>
<td>Encumber? Well, a man comes in...he's a new incomer.</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>Plagiarize? Plagiarize the milk or food.</td>
</tr>
<tr>
<td>Impale</td>
<td>Impale? Well, when a guy is sick he is impale.</td>
</tr>
<tr>
<td>Travesty</td>
<td>A man who travels all over the world.</td>
</tr>
</tbody>
</table>

**Comprehension Test**

* Envelope Take it to the post office.
<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad company</td>
<td>Cause they make trouble for you.</td>
</tr>
<tr>
<td>Movies</td>
<td>Run out and call the fire engine.</td>
</tr>
<tr>
<td>Taxes</td>
<td>They have to pay taxes to keep up living and that.</td>
</tr>
<tr>
<td>Iron</td>
<td>Saying...insane! Never hit a person while the iron is hot.</td>
</tr>
<tr>
<td>Child labor</td>
<td>Keep children from getting into mischief and that.</td>
</tr>
<tr>
<td>Forest</td>
<td>I'd either holler for help or make smoke signals like the Indians used to.</td>
</tr>
<tr>
<td></td>
<td>Or find another direction and go that way until I got out.</td>
</tr>
<tr>
<td>Deaf</td>
<td>Caused from some accident when they were small.</td>
</tr>
<tr>
<td>City land</td>
<td>Well, because it is government property, or it belongs to people that owns it.</td>
</tr>
<tr>
<td>Marriage</td>
<td>Otherwise if they don't have no license, they can't get married. It shows that they are man and wife.</td>
</tr>
<tr>
<td>Brooks</td>
<td>At night time you go out...the brooks make noise or animal make noise and scare you, or the wind blows.</td>
</tr>
<tr>
<td>Swallow</td>
<td>If you have a whole glass of water and don't drink it all...you swallow a little and not the whole glass of water.</td>
</tr>
</tbody>
</table>

**Protocol #50 (Retarded)**

**Vocabulary Test**

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td>Winter is a...like there is snow and that...like cold weather.</td>
</tr>
<tr>
<td>Repair</td>
<td>Repair...there is a man repairing...fixing the door.</td>
</tr>
<tr>
<td>Breakfast</td>
<td>Breakfast...a person got through with his breakfast...like it I eat my breakfast in the morning before I go to work.</td>
</tr>
</tbody>
</table>
Fabric
I don't know fabric.

Slice
Like...I slice the meat and that.

Assemble
A thimble...put a thimble on your finger and sew buttons and that.

Conceal
Conceal? I don't know that one.

Enormous
I don't know.

Hasten
Hasten? I don't know.

Sentence
A sentence? I don't know.

Regulate
Regulate? If the furnace ain't working, you regulate the stove.

Commence
Commence? I don't know.

Ponder
Ponder? I don't know.

Cavern
A cabin...I don't know.

Designate
Designate? I don't know.

Domestic
No.

Consume
I don't know.

Terminate
I don't know.

Obstruct
Obstruct? I don't know.

Remorse
Remorse? I don't know.

Sanctuary
Sanctuary? I don't know.

Matchless
Matchless? I don't know.

Reluctant
Reluctant? I don't know.

Calamity
A calamity? A calamity is a clown or what, isn't it.

Fortitude
Fortitude? I don't know.

Tranquil
A tranquil...I don't know.
Edifice
Compassion
Tangible
Perimeter
Audacious
Ominous
Tirade
Encumber
Plagiarize
Impale
Travesty

Edifice? I don't know.
A compassion? I don't know.
Tangible? I don't know.
Perimeter? I don't know.
Audacious? I don't know.
Ominous? I don't know.
A tirade? I don't know.
Encumber? I don't know.
Play what? I don't know.
Impale? I don't know.
A travesty...I don't know.

Comprehension Test

Envelope
Bad company
Movies
Taxes
Iron
Child labor
Forest
Deaf
City land
Marriage
Brooks

I'd take it to the post office.
Bad company is not very good.
I don't know.
I don't know
I don't know
Children laws? I don't know.
Find the way out? Go about four miles that way or keep on going until I hit a farm and then ask a farmer the way out.
They lost their hearing.
I don't know that one.
If they don't get their licenses, then they can't get married and that.
I don't know that one.
I don't know.

Protocol #4 (Schizophrenic)

**Vocabulary Test**

**Winter**
Winter is a season of the year. (?) Well, you have four seasons, winter, summer, fall and spring. Winter is the season when the sun is furthest from the earth and due to that fact the earth is coldest.

**Repair**
Repair means to fix something. To put into original condition. Like if a radiator is broken you look into the top to see what was wrong. If you're repairing your car--(patient tells a long, very rapid story of how to repair an auto motor if it isn't running right)

**Breakfast**
Breakfast is the meal...the first meal of the day.

**Fabric**
Fabric is a form of cloth, usually tightly woven.

**Slice**
Slice means to cut up and eat in pieces.

**Assemble**
Assemble means to put together.

**Conceal**
Conceal means to hide something away so it's not noticed. Hide isn't good enough...like camouflage a jeep so it can't be noticed. You've concealed it. Same with a tank, you camouflage a tank so it can't be noticed. You've concealed it.

**Enormous**
Enormous means large, out of proportion, amazon.

**Hasten**
To hurry

**Sentence**
Sentence...what kind of sentence? Well, there's a group of words expressing a complete thought...that's one kind of sentence.
<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulate</td>
<td>Regulate means to adjust...just like a person can regulate their surroundings. I'm not too sure that's correct. You could adjust something mechanical. That would be regulated. So adjust... seems to me it should be used only in the mechanical sense.</td>
</tr>
<tr>
<td>Commence</td>
<td>To begin, to start.</td>
</tr>
<tr>
<td>Ponder</td>
<td>Ponder means to reason out, to slowly go over in your brain...you're at a standstill, just momentarily thinking.</td>
</tr>
<tr>
<td>Cavern</td>
<td>Cavern? It's a type of an underground cave.</td>
</tr>
<tr>
<td>Designate</td>
<td>When you designate something you point it out.</td>
</tr>
<tr>
<td>Domestic</td>
<td>Domestic means at home...domestic means home.</td>
</tr>
<tr>
<td>Consume</td>
<td>Consume means to use up...when a person or animal devours something, it consumes it. Or wear it out...no, when you wear out a tie you say you consume it. You wear it out.</td>
</tr>
<tr>
<td>Terminate</td>
<td>Terminate means time has been used up. Terminate a contract.</td>
</tr>
<tr>
<td>Obstruct</td>
<td>Obstruct means to stand in the way of.</td>
</tr>
<tr>
<td>Remorse</td>
<td>Sorrow...feeling of sorrow (?) Like a person who's remorseful is sorry. Either sorry for something he's done, or if you kill someone he's sorry...he has a feeling of remorse.</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>A sanctuary is a place where you go to feel safe...like a sanctuary in an army fort. People look for different kinds of sanctuary. Some people want to get away from the world--find sanctuary in that.</td>
</tr>
<tr>
<td>Matchless</td>
<td>Matchless, matchless, let's see...I'd say unable to compare. (?) It's something...like you had a rare type of flower, it wouldn't compare with another type of rare flower...it's rare, it's matchless.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Reluctant</td>
<td>Reluctant, oh, that's a very good word...it's a feeling of &quot;I don't want&quot;...like you could be reluctant to an idea. Something like that leads to a lot of trouble, so you're reluctant to do that.</td>
</tr>
<tr>
<td>Calamity</td>
<td>I don't know. Well, wait a minute. I think calamity would be a series of emotions caused by a disturbing factor or unusual circumstance. That would be a calamity, I think, an unusual circumstance would be a reason behind it.</td>
</tr>
<tr>
<td>Fortitude</td>
<td>Fortitude. Fortitude. That's a good word...fortitude...I have no idea.</td>
</tr>
<tr>
<td>Tranquil</td>
<td>Tranquil is usually a good feeling.</td>
</tr>
<tr>
<td>Edifice</td>
<td>Edifice...nope</td>
</tr>
<tr>
<td>Compassion</td>
<td>Compassion...compassion...is a feeling toward somebody or about somebody.</td>
</tr>
<tr>
<td>Tangible</td>
<td>Tangible...you could say this object is tangible. Let's see...you can say something is intangible. I don't know. I should know that. I'm a dummy. Well, let's see, an arc-tangent...no, it's too deep for me.</td>
</tr>
<tr>
<td>Perimeter</td>
<td>Oh, a perimeter means the distance around an object.</td>
</tr>
<tr>
<td>Audacious</td>
<td>Audacious wouldn't that be...would that be a type of a person, audacious? It would be a person who jumps at another person, from the way it's used in a sentence.</td>
</tr>
<tr>
<td>Ominous</td>
<td>I don't know</td>
</tr>
<tr>
<td>Tirade</td>
<td>I don't know</td>
</tr>
<tr>
<td>Encumber</td>
<td>Encumber would be to surround, encumber would be to completely envelope, to surround.</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>I don't know</td>
</tr>
<tr>
<td>Impale</td>
<td>I know what impair means. I don't know. Could be a lot of things.</td>
</tr>
</tbody>
</table>
Travesty

I don't know.

Comprehension Test

Envelope

Drop it in the mailbox.

Bad company

Because, well for one thing its contagious.

Movies

If in the movies, you were the first person to see...I think I'd notify an usher so that steps could be taken...if you holler fire, they're all nuts.

Taxes

Well, that's about the only proper way or means to support the government.

Iron

Means when you have an opportunity, take full advantage of it.

Child labor

Well, that's very good...for one thing, to keep children from...well, first of all, to keep children from losing their health when they're too young. Protect children from slave labor techniques.

Forest

Go by the shadows of the trees.

Deaf

That's simple---that's purely a matter of communication. If a person is receptive, he'll pick up things and if he can't he won't. It's a matter of reflection.

City land

Land in the city has a higher value due to the fact that it has a commercial value. Land in the city can be used for stores, banks, businesses--land in the country would be used only for farms. So from a financial point of view, land in the city would be worth more.

Marriage

Who does the state require a license? I don't see any reason for that law, unless...well, let's see, there could be a reason. So nothing was done involuntarily...if a fellow forced a girl...outside of that is a foolish law.
Shallow brooks are noisy...well, that could be like the saying even the walls have ears. People often judge you by what they hear, but they don't always know the facts behind everything.

One swallow doesn't make a summer...that's a hard one. (Repeats twice more) Say one mistake wouldn't ruin a person's life. Would it?

**Protocol #19 (Schizophrenic)**

<table>
<thead>
<tr>
<th><strong>Vocabulary Test</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Winter</strong></td>
</tr>
<tr>
<td><strong>Repair</strong></td>
</tr>
<tr>
<td><strong>Breakfast</strong></td>
</tr>
<tr>
<td><strong>Fabric</strong></td>
</tr>
<tr>
<td><strong>Slice</strong></td>
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<tr>
<td><strong>Assemble</strong></td>
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<tr>
<td><strong>Conceal</strong></td>
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<tr>
<td><strong>Enormous</strong></td>
</tr>
<tr>
<td><strong>Hasten</strong></td>
</tr>
<tr>
<td><strong>Sentence</strong></td>
</tr>
<tr>
<td><strong>Regulate</strong></td>
</tr>
<tr>
<td><strong>Commence</strong></td>
</tr>
<tr>
<td><strong>Ponder</strong></td>
</tr>
<tr>
<td><strong>Cavern</strong></td>
</tr>
<tr>
<td>Designate</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Domestic</td>
</tr>
<tr>
<td>Consume</td>
</tr>
<tr>
<td>Terminate</td>
</tr>
<tr>
<td>Obstruct</td>
</tr>
<tr>
<td>Remorse</td>
</tr>
<tr>
<td>Sanctuary</td>
</tr>
<tr>
<td>Matchless</td>
</tr>
<tr>
<td>Reluctant</td>
</tr>
<tr>
<td>Calamity</td>
</tr>
<tr>
<td>Fortitude</td>
</tr>
<tr>
<td>Tranquil</td>
</tr>
<tr>
<td>Edifice</td>
</tr>
<tr>
<td>Compassion</td>
</tr>
<tr>
<td>Tangible</td>
</tr>
<tr>
<td>Perimeter</td>
</tr>
<tr>
<td>Audacious</td>
</tr>
<tr>
<td>Ominous</td>
</tr>
<tr>
<td>Tirade</td>
</tr>
<tr>
<td>Encumber</td>
</tr>
</tbody>
</table>
plagiarize

Steal (?) It's used to...in reference to stealing of...to use or to take the written material of somebody without giving him credit for it.

Impale

Impale? That means to pierce...I believe to pierce on something solid or immobile.

Travesty

Comedy (?) That isn't too complete, is it? That is, well, it's a comedy of tragic mistakes.

Comprehension Test

Envelope

I suppose the thing is to drop it into the mailbox if you don't know the individual and see no reason for contacting them directly.

Bad company

Well...I don't know just what is meant by bad. Almost any company that's bad is going to have a bad influence on us.

Movies

Attempt to determine what's the source of it. (?) Yes, if it is an actual fire for which an alarm is called for, the thing is to see that the alarm is turned in. If it's a danger to the people, the first thing is to see that the people are informed of the fire. The fireman would say the first thing is to turn in the alarm.

Taxes

Because they want government. (?) Well, to elaborate, I suppose you'd say they want the services of government. They want to finance the activities that have to be community activities.

Iron

Means to act while the time is still appropriate.

Child labor

Because there are some people who would--well, just because there are some people who want children to work, and you probably want elaboration on that. Do you? (If you like) In a society where it isn't necessary there are people who want children to work in circumstances where this compulsion would be a harmful thing.
Well, I understand that first of all a sunny day, the sun would give you some idea of direction. I understand that moss grows on the north side of a tree. The wind might possibly give you an idea of direction.

Because we first learn our speech by imitation.

Because it's developed land. It's concentration of population and the things that make a city put a premium on its value. Make it more scarce in a way.

Because...because the fact of marriage often involves aspects which become legal matters. (?)

Well, in case of death of one partner for instance, there's litigation after litigation involving property and the marriage certificate... marriage license is documentation of the relationship that existed.

I suppose that the usual contention is...the usual implication is that shallow people do a lot of talking.

I would say it means that one incident doesn't result in a conclusion.

Protocol #23 (Schizophrenic)

Vocabulary Test

<table>
<thead>
<tr>
<th>Winter</th>
<th>Cold weather</th>
<th>Enormous</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repair</td>
<td>Fix something up</td>
<td>Hasten</td>
<td>Quicken</td>
</tr>
<tr>
<td>Breakfast</td>
<td>Morning meal</td>
<td>Sentence</td>
<td>An expression</td>
</tr>
<tr>
<td>Fabric</td>
<td>Cloth</td>
<td>Regulate</td>
<td>Control</td>
</tr>
<tr>
<td>Slice</td>
<td>A strip</td>
<td>Commence</td>
<td>Begin</td>
</tr>
<tr>
<td>Assemble</td>
<td>Assign</td>
<td>Ponder</td>
<td>Wonder-think</td>
</tr>
<tr>
<td>Conceal</td>
<td>Hide</td>
<td>Cavern</td>
<td>Cave</td>
</tr>
</tbody>
</table>
Designate Point out Edifice Building
Domestic Local Compassion Understanding
Consume Eat Tangible Within reach
Terminate End Perimeter Surrounding
Obstruct Block Audacious I don't know
Remorse Sorrow Ominous Endangering
Sanctuary Abode Tirade I don't know
Matchless Unique Encumber To hinder
Reluctant Unwilling Plagiarize I don't know
Calamity Catastrophe Impale To push
Fortitude Enduring Travesty A trespass
Tranquil Peaceful

Comprehension Test

Envelope Take it to the post office or just put it in a mailbox
Bad company I don't know what you mean...someone tells you not to. You don't always do it and keep going around with them.
Movies If it's a small fire, try to gas it out...get fire extinguisher...call the manager. If a big fire, everyone will see it anyway.
Taxes Run the government
Iron I don't know
Child labor So they can get educated, I think, and to avoid abuses. So they don't stunt.
Forest I never been in a forest. Look for a sign like a mountain or see what direction the sun is, or look for a trail, or make a fire.
I guess because they don't hear sound...so the brain don't tell them how to pronounce it...can't check themselves.

Because it's crowded.

To protect children.

Because a lot of rocks in it

Takes a lot of animals...lot of things besides one swallow...takes a lot of sounds and scenes.

Protocol #35 (Schizophrenic)

<table>
<thead>
<tr>
<th>Vocabulary Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
</tr>
<tr>
<td>Repair</td>
</tr>
<tr>
<td>Breakfast</td>
</tr>
<tr>
<td>Fabric</td>
</tr>
<tr>
<td>Slice</td>
</tr>
<tr>
<td>Assemble</td>
</tr>
<tr>
<td>Conceal</td>
</tr>
<tr>
<td>Enormous</td>
</tr>
<tr>
<td>Hasten</td>
</tr>
<tr>
<td>Sentence</td>
</tr>
<tr>
<td>Regulate</td>
</tr>
<tr>
<td>Commence</td>
</tr>
<tr>
<td>Ponder</td>
</tr>
<tr>
<td>Cavern</td>
</tr>
<tr>
<td>Designate</td>
</tr>
<tr>
<td>Domestic</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Consume</td>
</tr>
<tr>
<td>Terminate</td>
</tr>
<tr>
<td>Obstruct</td>
</tr>
<tr>
<td>Remorse</td>
</tr>
<tr>
<td>Sanctuary</td>
</tr>
<tr>
<td>Matchless</td>
</tr>
<tr>
<td>Reluctant</td>
</tr>
<tr>
<td>Calamity</td>
</tr>
<tr>
<td>Fortitude</td>
</tr>
<tr>
<td>Tranquil</td>
</tr>
<tr>
<td>Edifice</td>
</tr>
<tr>
<td>Compassion</td>
</tr>
<tr>
<td>Tangible</td>
</tr>
<tr>
<td>Perimeter</td>
</tr>
<tr>
<td>Audacious</td>
</tr>
<tr>
<td>Ominous</td>
</tr>
<tr>
<td>Tirade</td>
</tr>
<tr>
<td>Encumber</td>
</tr>
<tr>
<td>Plagiarize</td>
</tr>
<tr>
<td>Impale</td>
</tr>
<tr>
<td>Travesty</td>
</tr>
</tbody>
</table>

**Comprehension Test**

Envelopes: Turn it over to the government and post office.
Bad company

I don't want bad people...they offend me...I don't like them. By bad company I mean people who talk about sex...I don't have to associate with people like that.

Movies

It would depend on the nature of the fire...how involved it is. If possible, put it out...if not, call an usher.

Taxes

You mean federal taxes. For pensions when we got over 65...we need subsistence then. And for unemployment...also public things that must be taken care of.

Iron

It's best to get it done right now...depends upon the situation.

Child labor

Because child has to go through school for a certain while in my opinion. Everyone needs an education...harmful on his personality and physical well-being...yet it's O.K. to let him work awhile. I did as child.

Forest

First, don't become excited. If you do, you lose your sense of awareness and being alert. I would follow a path...depend on the nature of the surroundings.

Deaf

They can't hear. They're deaf. It's a normal reaction. They learn to read lips. Vocal is connected to vibrations...on a scientific level. Looks like it might have something to do with physical connections of the body.

City land

Is that a true question? Much more to the surroundings. In a city you're closer to everything...in the country you can't get out any place in bad weather. Everything that your physical existence depends on is closer.

Marriage

I would say...it's a state law.

Brooks

I never heard that expression before.

Swallow

One thing doesn't count for anything.
### Protocol #48 (Schizophrenic)

**Vocabulary Test**

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td>Cold</td>
</tr>
<tr>
<td>Repair</td>
<td>Fix</td>
</tr>
<tr>
<td>Breakfast</td>
<td>Eat...morning meal.</td>
</tr>
<tr>
<td>Fabric</td>
<td>Cloth</td>
</tr>
<tr>
<td>Slice</td>
<td>Piece</td>
</tr>
<tr>
<td>Assemble</td>
<td>Put together</td>
</tr>
<tr>
<td>Conceal</td>
<td>Hide</td>
</tr>
<tr>
<td>Enormous</td>
<td>Large amount</td>
</tr>
<tr>
<td>Hasten</td>
<td>To hurry</td>
</tr>
<tr>
<td>Sentence</td>
<td>Putting group of words together.</td>
</tr>
<tr>
<td>Regulate</td>
<td>To level something off.</td>
</tr>
<tr>
<td>Commence</td>
<td>Start</td>
</tr>
<tr>
<td>Ponder</td>
<td>I don't know how you'd use that.</td>
</tr>
<tr>
<td>Cavern</td>
<td>I don't know</td>
</tr>
<tr>
<td>Designate</td>
<td>Distance</td>
</tr>
<tr>
<td>Domestic</td>
<td>Domestic affairs...personal affairs.</td>
</tr>
<tr>
<td>Consume</td>
<td>Large amount</td>
</tr>
<tr>
<td>Terminate</td>
<td>To terminate a distance</td>
</tr>
<tr>
<td>Obstruct</td>
<td>Skip it</td>
</tr>
<tr>
<td>Remorse</td>
<td>I don't know</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>I don't know just how I'd use it.</td>
</tr>
</tbody>
</table>
Matchless  Something, you couldn't mistake it.
Reluctant  Reluctant to idea, or rules
Calamity   Something unusual
Fortitude  Fortitude the amount
Tranquil   I don't know. We get tranquilizers to change I guess.
Edifice    I don't know.
Compassion I don't know.
Tangible   Something that's, ah, it's a tangible item.
Perimeter  Certain kind of measurements.
Audacious  No
Ominous    I used it lots of time...I don't know.
Tirade     I don't know.
Encumber   I don't know.
Plagiarize I don't know.
Impale     I don't know.
Travesty   I don't know.

Comprehension Test
Envelope   Put it in a mailbox
Bad company Shouldn't associate yourself with it.
Movies    Holler "fire"...sound alarm.
Taxes     Run our country
Iron      Take advantage of it right now.
Child labor Because a child is not fully matured.
Forest    By the direction of the sun.
Because they can't hear sound of the words.

Used for dwellings instead of agriculture.

There's a law that you're married to one person.

There's more of a ripple or fall to a shallow brook.

One bird doesn't... is no sign that it's summer.

**Protocol #52 (Schizophrenic)**

<table>
<thead>
<tr>
<th>Vocabulary Test</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td>Season...between December and March 21...cold.</td>
</tr>
<tr>
<td>Repair</td>
<td>Mend</td>
</tr>
<tr>
<td>Breakfast</td>
<td>Meal...first of the day.</td>
</tr>
<tr>
<td>Fabric</td>
<td>Cloth</td>
</tr>
<tr>
<td>Slice</td>
<td>To cut with downward motion.</td>
</tr>
<tr>
<td>Assemble</td>
<td>To meet or put together</td>
</tr>
<tr>
<td>Conceal</td>
<td>Hide</td>
</tr>
<tr>
<td>Enormous</td>
<td>Large</td>
</tr>
<tr>
<td>Hasten</td>
<td>Speed</td>
</tr>
<tr>
<td>Sentence</td>
<td>Advance of an idea orally or literally</td>
</tr>
<tr>
<td>Regulate</td>
<td>Adjust</td>
</tr>
<tr>
<td>Commence</td>
<td>Begin</td>
</tr>
<tr>
<td>Ponder</td>
<td>Think</td>
</tr>
<tr>
<td>Cavern</td>
<td>Cave</td>
</tr>
<tr>
<td>Designate</td>
<td>Specify</td>
</tr>
<tr>
<td>Domestic</td>
<td>Tame, or form of servant</td>
</tr>
<tr>
<td>Consume</td>
<td>Eat</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Terminate</td>
<td>End</td>
</tr>
<tr>
<td>Obstruct</td>
<td>Dam</td>
</tr>
<tr>
<td>Remorse</td>
<td>Sadness</td>
</tr>
<tr>
<td>Sanctuary</td>
<td>Haven</td>
</tr>
<tr>
<td>Matchless</td>
<td>Perfect</td>
</tr>
<tr>
<td>Reluctant</td>
<td>Inaffable</td>
</tr>
<tr>
<td>Calamity</td>
<td>Tragedy</td>
</tr>
<tr>
<td>Fortitude</td>
<td>Nerve</td>
</tr>
<tr>
<td>Tranquil</td>
<td>Serene</td>
</tr>
<tr>
<td>Edifice</td>
<td>House</td>
</tr>
<tr>
<td>Compassion</td>
<td>Love</td>
</tr>
<tr>
<td>Tangible</td>
<td>Clear</td>
</tr>
<tr>
<td>Perimeter</td>
<td>Rim or edge...outer</td>
</tr>
<tr>
<td>Audacious</td>
<td>Loud</td>
</tr>
<tr>
<td>Ominous</td>
<td>Large</td>
</tr>
<tr>
<td>Tirade</td>
<td>Berate</td>
</tr>
<tr>
<td>Encumber</td>
<td>Load</td>
</tr>
<tr>
<td>Plagiarize</td>
<td>Happy</td>
</tr>
<tr>
<td>Impale</td>
<td>Spit</td>
</tr>
<tr>
<td>Travesty</td>
<td>I don't know</td>
</tr>
</tbody>
</table>

**Comprehension Test**

<table>
<thead>
<tr>
<th>Envelope</th>
<th>Mail it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad company</td>
<td>like the rotten apple in the barrel...some of it rubs off on you.</td>
</tr>
</tbody>
</table>
Talk to the usher.

Support the government and our way of life... fire and police protection.

Do something when its fresh in your mind.

Educational and health reasons

Position of the sun.

We learn to speak by imitating sound.

Police and fire protection... various services... water, sewage.

I've always wondered... just a source of revenue.

What makes the most noise knows the least.

Earliest indication doesn't mean the whole thing will be that way. First hint is not true picture of the whole thing.


35. Mosak, H. Personal communication.


54. Wechsler, D. The measurement of adult intelligence. (3rd ed.) Baltimore: Williams & Wilkins, 1944.


DIAGNOSTIC CUES

diagnostic Cue Code

Each of the cues listed on the following pages is followed by a code enclosed in parentheses. The following information will prove helpful in understanding the code.

Clinical: The cue was found in textbook descriptions of the diagnostic group. No empirical evidence supports the cue belonging to a particular diagnostic category other than clinical experience with patients from the group.

Clinical--proj. tests: The cue was found in descriptions of how patients in various diagnostic groups perform on projective tests in general. The basis for associating the cue with a particular diagnostic group is clinical experience.

Clinical--WB, WAIS, Rorschach, Binet: The cue was found in descriptions of how patients in various diagnostic groups perform on a particular test. The basis for associating the cue with a particular diagnostic group is clinical experience.

Empirical--personality study: The cue is the result of an empirical personality study in which the cue was found to be associated with a particular diagnostic category.

Empirical--experimental task: The cue is the result of an empirical study in which patients from the different diagnostic groups had to do some experimental task: define words, solve a problem, take a perceptual test, etc.

Empirical--WB, WAIS, Rorschach, Binet: The cue was found in descriptions of how patients in various diagnostic groups perform on a particular test. The basis for associating the cue with a particular diagnostic group is empirical evidence.

After the above information in the parentheses is the following:

Sub-category of the general diagnostic group: This information is included only if the cue was mentioned as belonging to a sub-category of the general group.

Subjects: If children were used as subjects in the study, then mention is made of this.
Reference: A number is the last entry in the parentheses. The number refers to the source of the cue listed in the "Diagnostic Cue References."
Normal Cues

1. There is evidence for personal responsibility and social responsibility. The person is able to engage in socially considerate behavior and show a democratic social interest, conform to social demands, be in harmony with cultural standards. But to some degree he shows an individuality, independence of thought, and has not surrendered individual spontaneity—he is emancipated from the group (Clinical--11, 12, 48, 49, 51).

2. There is an even, appropriate, emotional tone. The person is neither constricted in his emotional involvement nor overwhelmed by his reactions (Clinical--11, 12, 51).

3. Unity and integration of the personality; a coordination of needs and goal-seeking behavior into a smoothly functioning interaction with the environment (Clinical--51).

4. There is a gradual tapering off of efficiency and accuracy of responses. Initial responses are well articulated and intact. These give way to responses that indicate that the level of the item is beyond the person's capacities. This tapering off in efficiency is gradual and relatively regular (Clinical--WAIS--1).

5. Self-Control: Person's behavior is subject to his wishes. He chooses freely to prevent or produce a particular behavior at will. The motives for his behavior are understandable. He deals with problems by rational decision (Clinical--25, 29, 47, 48).

6. Competence: He shows a sense of competence. He masters his environment. He has the physical, intellectual, emotional, and social skills to solve problems efficiently and effectively (Clinical--2, 11, 29, 57).

7. There is consistency to the performance which would make prediction possible (Clinical--12, 29, 51).

8. There is an absence of rigidity; he is flexible and adaptive under stress (Clinical--11, 25, 34, 47, 49).

9. The person uses appropriate concepts. His performance is expected and ordinary (Clinical--29; Clinical--WB--32).

10. He seems happy most of the time (Clinical--11; Empirical--personality study--5).
11. The person is not defensive. He seems free from conflict. His performance does not have a "driven" quality. There is little anxiety or a need to prove himself (Clinical--11,49; Empirical--personality study--5).

12. He is dependable in relating to others and he acknowledges the need for others (Clinical--48; Empirical--personality study--5).

13. The person shows interpersonal and intrapersonal adjustment. There is a socially acceptable and personally satisfying level of functioning (Clinical--11; Empirical--personality study--5).

14. The person shows self-insight; he accepts his limitations and has a realistic idea of his assets (Clinical--11,25,49; Empirical--personality study--5).

15. The person shows good judgment (Clinical--WB--32; Empirical--personality study--5).

16. The person perceives reality correctly. His perceptions are efficient, accurate, and realistic. He has a realistic view of himself and his environment. He does not bend reality to fit his needs and fantasies (Clinical--2,11,12,57; Empirical--personality study--5).

17. Class, synonym, or explanation type definitions in Vocabulary (Empirical--experimental task--children--17; Empirical--experimental task--adults--9). Examples: Winter is a season; an apple is a fruit; skill means to do something well.

18. The person is average or above average in intelligence; and he does just about as well on the Vocabulary as he does on the Comprehension (Clinical--WB--42; Empirical--WB--41).

19. There is an absence of nonsensical answers (Empirical--Binet--children--13).

20. There is an absence of ambiguous answers (Empirical--Binet--children--13).

21. The person responds "don't know" or the equivalent when he reaches his level of competence (Empirical--Binet--children--13; Empirical--WAIS similarities--adults--50).

22. Person passes the 6 easy Comprehension items (Clinical--WB--42; Empirical--WB--41).
23. The person shows many of the following traits: self-assurance, interest in many things, inner peace and serenity (Clinical--49); sense of self-esteem (Clinical--57); security (Clinical--2,12,57); self-acceptance (Clinical--2,11); adequate self-identity, self-reliance, self-direction (Clinical--11).

24. The person shows many of the following traits: trust, character, integrity, seriousness, balance, maturity (Empirical--personality study--5).
Organic Cues

1. **Rigid**: Stereotyped and reserved. Lacks initiative and spontaneity. Inability to shift attention or change mode of responding. Reduction in behavioral flexibility (Clinical--6,21; Empirical--WB--subdural hematoma, 19).

2. **Concrete**: person cannot carry out inductive reasoning or formulate an abstract principle. He cannot recognize that a group of objects has a common characteristic. Descriptive definitions. Memory for objects at a concrete, sensory level. The concreteness is of a simplified and inane form. Examples: An apple is red; a horse is a thing with 4 legs. (Clinical--8,20; Empirical--experimental task--39,50).

3. **Cooperation**: Willing to cooperate and interest in personal achievement. This is manifested by thorough answers and attempts to improve replies. He is not indifferent. (Clinical--4,40).

4. **Perseveration**: repetitious giving of one answer to several questions especially when the task is difficult for him (Clinical--21; Clinical--Rorschach--4,8; Empirical--WB--subdural hematoma--19; Empirical--Rorschach--40).

5. **Automatic Phrasing**: frequent use of pet phrase indiscriminately. The repetition of the same phrase. Example: "It's some kind of work...It's good work...this is some work..." (Piotrowski, 1969, p. 226)." (Empirical--Rorschach--40).


7. **Fatigue**: person gets easily fatigued, especially when the task gets difficult or after having done continuous work within his capabilities. May be indicated by worsening speech, poorer memory and concentration, vague, fragmented responses (Clinical--Rorschach--4).

8. **Impotence**: person cannot improve his response even after he recognizes it is inadequate or not appropriate. He cannot think of a new and better response. He does not withdraw the poor response. (Clinical--Rorschach--4,8; Empirical--Rorschach--40).
9. **Failure:** Catastrophic reactions during and after failure. The person cannot sustain organized behavior during and after frustration or failure. He may become agitated, fumbling, unfriendly, aggressive, evasive. (Clinical--21,36,57).

10. **Emotion:** Lability and shallowness of affect. Emotional over-sensitivity. Arousal of laughter or tears with little provocation (Clinical--7, 10, 34).

11. **Distortions** seem to be the result of confusion or an attempt to "cover up" an inability to perceive the environment. The person is struggling to approximate a reality (Clinical--44).

12. **Signs of inadequacy and insecurity.** Person expresses feelings of weakness, uncertainty, and inadequacy in trying to deal with test materials (Clinical--Rorschach--4).


14. Person has problems in retaining instructions, understanding their meaning, and following directions (Clinical--10, 25).

15. When delusional ideas are expressed, the connections between the delusion and concrete reality are usually readily apparent and understandable (Clinical--Rorschach--4).

16. Person cannot **synthesize** many details into one good concept. He is poor in sorting out the essential parts from those which are unessential (Clinical--Rorschach--40; Empirical--WB--subdural hematoma--19).

17. **Temporal orientation** is disturbed (day of week or month) (Clinical--6).

18. The person is aware of his impairment in functioning and dreads making mistakes (Clinical--34).

19. **Impaired consciousness:** Blurring and haziness of perception; clouded consciousness. Person is difficult to reach. He finds it difficult to attend to external stimuli; to think clearly; to express a coherent train of thought; to maintain a consistent focus on one set of ideas or events. Drifts off into dream like state. Fearful, bewildered, confused, incoherent, disoriented. Finds it difficult to think on a higher conceptual level. (Clinical--10,25,34).
20. **Distractible**--difficulty concentrating. Attends in rapid succession to one or another element of the many stimuli in the environment. They are unable to focus on anything for too long a period of time.

21. Tend to respond "don't know" when they do not know an answer. (Empirical--WAIS similarities--50).

22. Agitated hyperactivity (Clinical--34).

23. **Blocking and Marked Word Finding Difficulty**: the person speaks and gets caught on a word or cannot find the word. He stammers and cannot recover (Clinical--21,35; Empirical-experimental task--3; Empirical--WB--subdural hematoma--19).

24. **Repetition**: Giving at least three similar responses in a record regardless of the stimuli (Clinical--Rorschach--4,8; Empirical--experimental task--3).

25. **Circumstantiality**--rambling responses bringing in whatever comes to the patient's mind in response to the question whether it is relevant or not (Empirical--WB--subdural hematoma--19).

26. **Speech Distortion**--slurring, syllable transpositions (Empirical--WB--subdural hematoma--19).

27. **Over-particularization**: too much attention to unimportant details (Empirical--subdural hematoma--WB--19).

28. **Impaired memory**: rapid forgetting of recent events. Poor retention, poor short-term memory (Clinical--6,7,25).

29. **Uniformity of response** is apparent. Consistent, poorer work occurs as the difficulty of the task increase. The person usually does not miss the easier items and pass the more difficult ones (Clinical--WAIS--8).

30. Person complains of inability to produce memories and associations (Clinical--25).

31. Comprehension is not lower than Vocabulary (Clinical--WAIS--56; Empirical--WAIS--14,36).
**Psychoneurotic Cues**

1. "...verbalization is over-detailed and doubt-laden... (italics mine; Schafer, 1948, p. 25)." (Clinical--WB--obsessive compulsive neurosis--47).

2. Minimum use of independent and active thinking as a way of coping with problems (Clinical--proj. tests--hysteria--47).

3. There is no sense of choice: the person feels he has to do something or has to omit it (Clinical--23).

4. Unhappiness: little joy, lonely, pessimistic about future, despair, dissatisfaction, misery, suffers, has feelings of being hurt and of missing the good things in life. Low mood. (Clinical--10, 12, 27, 44, 57).

5. Ego-centric: constantly self-preoccupied and primarily concerned with his own feelings, hopes, and ambitions (Clinical--10, 12, 44).

6. Functions below capacity: inefficiency, fails in achievements efforts, does not realize potential (Clinical--12, 27, 57).

7. Hypersensitivity: high level of tension that is easily mobilized; over-reacts to small annoyances and minor setbacks; irritable; cannot tolerate criticism; complains of minor physical discomfort; over-reacts to praise and flattery (Clinical--10, 12; Clinical--WB--32).

8. Over-emphasis on security and safety (Clinical--10, 23, 57).

9. Hesitancy and uncertainty (Clinical--23).

10. Low stress tolerance (Clinical--10).

11. Indecisive (Clinical--27, 57).

12. Frustrated (Clinical--44, 57).

13. Feelings of inferiority and inadequacy (Clinical--10, 25, 27, 44; Empirical--WB--43).

14. Obsessive, compulsive, unreasonable doubts, phobic (Clinical--12, 27, 37).
15. **Conflict**: between conscious and unconscious forces; between contradictory desires, drives, needs (Clinical--27).

16. Feelings of **weakness** and mental or physical **fatigue**; lack of enthusiasm, zest; withdrawal reactions (Clinical--27; Clinical--proj. tests--neurasthenia--47).

17. Behavior that controls, discharges, or reduces **anxiety**. (Clinical--34).

18. Inability to express any **anxiety** (Empirical--WB--41).

19. Anxiety: a feeling of danger, of being threatened, of dread (Clinical--10, 12, 23, 25, 27, 37; Empirical--WB--41).

20. Temporary **word finding difficulty** which ends with the person finding the word or a substitute word. "Impulsive **blurting out** of unfinished or unchecked responses, **fumbling** for proper formulations... (Schafer, 1948, p.43)." (Clinical--WB--anxiety state--47). Example: "There are four pints in a quart...No! Two! Wait a minute...that's right! Four! (or) If I were the first to see a fire in a movie I'd...er...I'd...get out as fast as I could...that is, I'd tell the...what do you call them?...Oh!...ushers...first and then I'd...er...I'd get out (Schafer, 1948, p. 43)."

21. "...**pedantic intellectualizing** (perfectionism and ostentatious, circumlocutory, circumstantial display of erudition),... (Schafer, 1948, p.24.)." (Clinical--WB--obsessive compulsive neurosis--47) Examples: "A cedar is a coniferous tree, yields fragrant wood, generally used to make chests. (or) A diamond is a carboniferous stone, formed deep in the earth under high pressure, mined and sold as a gem or for industrial purposes (Schafer, 1948, p. 25)."

22. "...**rationalizing and doubting** (rumination, excessive qualification, overcautiousness)...(Schafer, 1948, p.24)." (Clinical--WB--obsessive-compulsive neurosis--47).

23. Monosyllabic, self-critical, or uncertain responses. Very little spontaneous qualification or elaboration of a response (Clinical-WB-neurotic depression--47).

24. Stutter, omission, sentence incompletion, tongue slips, sentence change, repetition (Clinical--30).

25. Concern about the **correctness** of a response; asks for correct answer (Empirical--WB--43).
26. Asks about the purpose of the test (Empirical--WB--43).

27. Everything seems an insurmountable task which person does not want to approach (Clinical--23).

28. Hurried, rushed, driven—an inner restlessness; a continual sense of strain (Clinical 23).

29. Impaired attention and concentration; person has difficulty in focusing attention on the task (Clinical--anxiety state--27; Clinical-WB-anxiety state--47).

30. "...responses have a naive, utterly unreflective and highly "moral" quality. (Schafer, 1948, p. 33)." Sexual naivete. Examples: "We should keep away from bad company because they have an evil influence; it's not proper! (or) People who are born deaf are usually unable to talk because God wanted it that way. (Schafer, 1948, p. 34)." (Clinical--WB--hysteria--47).


32. Immaturity: dependency, strong need for affection and social approval, clings to others for support, impatient, helpless. Frustration leads to sullenness, temper tantrums, pouting (Clinical--10, 12, 23, 44).

33. Histrionics: a tendency toward being dramatic, theatrical, affected (Clinical--proj. tests--hysteria--47).

34. Feelings of guilt and despair that are not delusional (Clinical--proj. tests--neurotic depression--47).

35. Fearful and timid (Clinical--10, 12).

36. Fear of impending disaster, of death, vague apprehension, general excitement, severe insecurity, restlessness, tremulousness (Clinical--12, 27; Clinical--WB--anxiety state--47).

37. The person feels the world is a threatening place where he will not be able to meet the demands (Clinical--anxiety reaction--27).

38. Sadness, inertia, self-directed anger, feelings of worthlessness (Clinical--proj. tests--neurotic depression--47).
39. Person acutely and unrealistically sensitive to slightest setback (Clinical--anxiety reaction--27).

40. Reliance on conventional standards as guides to behavior (Clinical, proj. tests, hysteria, 47).

41. Feelings of shame and guilt (Clinical 25, 44).

42. Behavior which manages to solicit support, nurture, or sympathy (Clinical--34).

43. Impulsive and emotionally labile (Clinical--proj. tests--hysteria--47).

44. Defenses of isolation, intellectualization, magical thinking, denial (Clinical--obsessive compulsive--27; Clinical--WB--obsessive compulsive--47).

45. Temporary inefficiencies in performance due to anxiety, incorrect choices between right and wrong alternatives, uncertainty, quick or delayed correction of incorrect answers. Failures on easy items will be few. Answers will not be so incorrect as to be absurd or bizarre (Clinical--WB--32).

46. Blocking of thought processes when faced with threatening items on the test (usually sexual or aggressive) (Clinical--proj. tests--hysteria--47).

47. Somatic Complaints: multiple, vague somatic complaints. Uncomfortable or disabling physical symptoms (Clinical--12).

48. Performance somewhat worse on Comprehension compared to Vocabulary (Empirical--WB--41).
Retardate Cues

1. Difficulty in following verbal instructions (Clinical--52).

2. Poor auditory retention span (Empirical, experimental task--52).

3. Distractible: short attention span; difficulty in focusing attention; attention focused on irrelevant aspects of the learning situation (Empirical--experimental task--11,52,58).

4. Suggestible (Empirical--personality study--58).

5. Has greater expectancy of failure; more motivated to avoid failure than to achieve success (Empirical--experimental task--11,58).

6. Frustration in communication activities leads to withdrawal (Empirical--experimental task--52).

7. Affable, dull, vacuous personality (Clinical--10).

8. Social adjustment--like that of adolescent but without the normal adolescent's imagination, inventiveness, and judgment (Clinical--10).

9. Level of concepts they can handle is extremely limited. Intellectual level comparable to 4 to 11 year old child (Clinical--10).

10. He distrusts his own solutions to problems and seeks guides in the environment (Empirical--personality study--58).

11. Person wants to interact with the examiner: he is more interested in interacting with the examiner than he is in taking the test (Empirical--personality study--58).

12. Unsatisfied affectional needs: high motivation for attention, praise, encouragement (Empirical--personality study--58).

13. Passive, excessive dependency, little initiative, relies on examiner too much (Empirical--personality study--11,58).

14. Circumstantiality--many unnecessary trivial details and digressions. Associated ideas are mentioned. Person does not form sharply defined concepts; he is unable to distinguish essentials from non-essentials (Clinical--37,38).
15. **Syntax:** Sentences are shorter and grammar is poor (Empirical--experimental task--children--53).

16. **Speech:** Incorrect and indistinct speech; poor articulation; unclear, slovenly, slurring, jerking, substitution of one consonant for another (Clinical--25,52; Empirical--experimental task--children--52,53).

17. **Speech:** "...Our patient's talk reminds us rather of the broken speech of uneducated people who have learned a foreign language very imperfectly and by ear alone. Thus, he explains, when asked how old he is: 'If you once know how old I am, listen: how much old, am twenty-three old now—that is, 23 August month, add one month....' ...He often inserts meaningless words and phrases that he has often heard when he is being taught.... (Kraepelin, 1904, p.276-277)." (Clinical--26).

18. Abstraction is not common (Empirical--experimental task--53).

19. Presence of naivete and infantilism (Clinical--8).

20. Does not have strong motivation to be correct (Empirical--experimental task--children--58).


23. Perseveration in oral expression (Empirical--experimental task--52).

24. **Emotionally immature, socially incompetent, poor social adjustment** (Clinical--55; Empirical--personality study--58).

25. **Evasive:** he tries to avoid the task, especially the difficult items. He gives an answer tangentially related to the question. Avoids "don't know" response. Example: "How many weeks in a year? 365 days. Why are shoes made of leather? You put them on (Mc Pherson & Fisch, 1955, p.56)." (Empirical--experimental task--11; Empirical--WB--children--33).

26. **Absence of self criticism:** Person reluctant to say "don't know." Responds whether he knows the correct answer or not. He will not admit that he cannot cope with the situation. (Empirical--Binet--children--13; Empirical--experimental task--52).
27. Limited intra-test variability. He gets the easier items and misses the harder ones. (Clinical--WAIS--55).

28. Vocabulary and Comprehension are low and he does about as poorly on the one as he does on the other (Clinical--WAIS--55,56; Empirical--WAIS--22).

29. Some of the following personality traits may be present: fearfulness, mistrust of strangers and desire to avoid them, suspicion, mistrust, anxiety, jealousy, hyperactivity, poor self-evaluation, failure to follow orders even within the range of his intellectual capacity (Empirical--experimental task--58).
schizophrenic Cues

1. "Ideas of reference. Through ideas of reference, remarks or actions on the part of other persons, although in no way referring to the patient, are interpreted by him as being significantly related to himself and often as expressing accusation or depreciation (Kolb, 1968, p. 100)." (Clinical--10,12,28).

2. The person has no appreciation of the disorganization in his personality (Clinical--25).

3. Withdrawal: Estrangement from self and others; deficient in social competence; distant from others; indifferent; apathetic; aloof. (Clinical--8,10,12,34).

4. Blandly associates "to vocabulary words, such as fur-'soft' and diamond--'pretty' (Schafer, 1948, p. 65).

5. Does not respond "don't know" or the equivalent in response to an item that is too difficult for him (Empirical--WAIS similarities--50).

6. Unusual symbolism (Clinical--25).

7. Concreteness: cannot formulate an abstract general principle from a group of particular items. Defines things at sensory level (An apple is red; a horse is a thing with four legs); uses function, example and usage type definitions of low conceptual level (an apple is something you eat; a horse is something you ride on) (Clinical--7,20; Empirical--experimental task--9,39; Empirical--WAIS--12).


9. Non-verbal behavior: giggling, smiling, frowning, grimacing, peculiar movement, gesture, posture, or expression (Clinical--10,46).

10. Circumstantial--unnecessary and trivial details deter him from making his point (Clinical--37).

11. Perseveration: the repetition in the expression of an idea. Redundant quality to definitions (Clinical--37; Clinical--WB--47,54).
12. **Echolalia**—repetition of the examiner's statements (Clinical--25,56).

13. Distractible and slow to respond (Clinical--25; Empirical--experimental task--39).

14. **Negativism**: person says or does the opposite of what is requested or responds with opposites (Clinical--25,28; Clinical--WB--47,55).

15. Sequences of ideas are disjointed and fragmented. One idea runs into another with no logical connections. **Incoherence**. (Clinical--34,37).

16. **Irrelevance**: intrusive injection of irrelevant remarks or phrases or trivial and uninformative remarks. Irrelevant preoccupations or intellectualizing (Clinical--25,34; Clinical--WB--32-47).

17. **Severe Flocking**: interruption of a train of thought after which there appears a completely new thought, especially if it happens when associations approach conflict material, painful topics, or abstract matters (Clinical--7,25,37; Clinical--WB--47).

18. **Loose Communications**: connections are vague or involved. The person loses his focus and drifts into abstractions and generalities which have little significance. There is a lack of relationship among ideas (Clinical--25,34,56).

19. The idea is communicated by properly chosen words but it is distorted by the structure of the sentence (Clinical--7).

20. "**Bizarreness**. Definitions involving markedly idiosyncratic associations or the juxtaposition of disconnected ideas. Thus, for 'plural', 'A way of thinking in grammar.' (Matarazzo, 1972, p. 487)." (Clinical--WAIS--55) Metaphorical statements, stereotyped phrases, unusual thoughts and responses. Abstract speculations or metaphysical comments on subjects like creation or casualty. Concern about meaningless problems, religious doubts, mysticism. (Clinical--7, 34; Clinical--WAIS--25, 31).
21. **Autistic:** Subjective needs interfere with person's dealing with the external world. There is an excessive focusing on the internal mental life (fantasies, daydreams, delusions, hallucinations). Person concentrates on what is within and not on what is outside. Reality and fantasy mixed together. Dream like thinking. (Clinical--7,12,15,25,28,37,46; Empirical--WAIS similarities--150).

22. **Imprecise labeling**—person hits "at the periphery rather than the bull's eye (Redlich & Freedman, 1966, p. 468)." (Clinical--44) For example, a person defines breakfast as a "menu" rather than a "meal". (Example after Redlich & Freedman, 1966, p. 468).

23. **Overinclusion**—over-abstraction and over-generalization which leads to ideas that are not easily understood. Broad, idiosyncratic generalizations. Words are defined so broadly that they include elements that are not relevant or only distantly associated for the normal person. Statements are vague and imprecise. (Clinical--12,25; Empirical--experimental task--39,56; Clinical--WAIS--31; Empirical--WAIS similarities--50).

24. **Word Salad:** nouns and verbs with no apparently meaningful connection or structure (Clinical--25).

25. **Neologisms**—person makes up his own word. Sometimes these are condensations of other words. The person may select the correct root but change its meaning by incorrect suffixes, conjunctions, etc. (Clinical, 7,25,34).

26. **Clang Associations**—responds to sound of the word rather than the meaning (Clinical--7,56; Clinical--WB--47). Examples: "Traduce means three deuces when you play cards; belfry means a kind of bell boy (Schafer, 1948, p.47)." "Head-bed; diamond-dynamo; room-boom (Winer, 1966, p.56)."

27. **Peculiar use of words** (Clinical--46; Empirical--WAIS--58) Examples: Bad Company on Comprehension: "May have a deteriorating influence (Weiner, 1966, p.58)." Deaf: "Aren't able to be familiar with the audible part of their own anatomy (Weiner, 1966, p. 58)."

28. **"Self-Reference."** Incorporation into a definition of personalized elements or of details reflecting self-involvement. Thus, for 'conceal', 'To hide away from peeking eyes' (Matarazzo, 1972, p. 487)." (Clinical--55).
29. **Queer Verbalizations**: an unusual way of responding to the task (asked to define penny, patient says he was hoping for a dollar); language inappropriate to a professional situation (use of 'cunt'); stilted and formal phrasing with little apparent substance (Clinical--25,58).

30. **Contaminated Response**: person gives good response but then spoils it by an eccentric or irrelevant addition (Clinical--WAIS--54).

31. Communications seem meaningful to the person but the significance cannot be grasped by others (Clinical--25).

32. "Ellipsis. The omission of one or more words (sometimes only syllables) necessary to complete the meaning in a phrase or sentence. Thus, for 'microscope,' 'Germs' (omitted or implied, an instrument for magnifying small objects, as germs) (Matarazzo, 1972, p. 487)." (Clinical--55).

33. "Comprehension: failing one or more items and passing the difficult ones; bringing in irrelevant preoccupations such as syphilis on the born deaf item; consistently egocentric responses offered seriously, such as neglecting the letter in the street because 'it's not my business' or reading the letter because of 'curiosity'; elaborating clearly inappropriate courses of action, such as singing the national anthem from the stage of the burning theater to prevent panic, or building a hut in the forest 'until someone found me'; inappropriately intense moralistic reactions to the bad company, laws, and marriage license items; irrelevant intellectualizing, such as (on the taxes item, 'It all began with the idea of no taxation without representation'; answering other questions than those put by the examiner, such as explaining why people should be 'good' on the bad company item (Schafer, 1948, p. 64-65)." (Clinical--47).

34. The person is not just confused or attempting to hide an inability to deal with the environment. He lacks a goal directed set. He is not struggling to approximate a reality (Clinical--44).

35. There is intact and normal functioning in certain areas that are not affected by autistic and delusional material (Clinical--44).

36. Suspicious over-cautiousness; delusions (false beliefs) of persecution or grandeur (Clinical--10,12; Clinical--WB--paranoid schizophrenia--47).
37. **Hallucination**: a perception that has no basis in external reality (Millon, 1969, p. 633)." (Clinical--10,12,25,34,44).

38. "**Delusion**: A false belief maintained despite objective evidence to the contrary (Millon, 1969, p. 632)." (Clinical--10,12,25,34,44).

39. Person does more poorly on the Comprehension subtest than he does on Vocabulary (Clinical--WB--47; Empirical--WB--41, 45; Empirical--WAIS--14,42,56).

40. **Intra-test Scatter**: Comprehension--complete failures on first 6 items and passing more difficult items. Vocabulary--Missing easy items and passing more difficult items. Fluctuations in performance due to specific concerns or preoccupations. (Clinical--WB--25,42,47; Empirical--WB--24,41).
Listed on the following pages are cues, signs, or symptoms that may be associated with the diagnostic categories under which they are listed. We are interested in determining the usefulness of these cues for identifying the various diagnostic groups. We are also interested in knowing whether you think it would be possible to detect these cues in a person's responses to the Comprehension and Vocabulary subtests of the WAIS. Therefore, assume that you have only a person's responses to both the Comprehension and Vocabulary subtests of the WAIS. Then, on the basis of your experience, examine each cue in terms of the following:

1. Is the cue associated with the category under which it is listed. (It does not make any difference if it is also associated with other categories.)

2. Does the cue appear on the WAIS Comprehension and Vocabulary so that if you had only the person's responses from both the Comprehension and Vocabulary you could detect it.

If conditions (1) and (2) apply to a cue, then in the space provided before the cue, rate how often the cue appears according to the following scale:

1—Almost never appears
2—Occasionally appears
3—Frequently appears
4—Very frequently appears
5—Almost always appears

Your specific judgments will be treated with the highest degree of confidence. No one connected with this research project will know which specific judgments you made and no written report will make any connections between your name and your specific judgments.

Please do not talk to your colleagues about this study since they may be asked to be judges. A complete report of the findings will be sent to you.
Thank you for your cooperation and participation in this study.
ALTERNATE INSTRUCTIONS FOR DIPLOMATES

If you do not feel that you have had enough experience with a particular diagnostic group, then make your judgments on the basis of the following:

(1) Your acquired knowledge about persons in the diagnostic group instead of your experience with persons from the group.

(2) Your knowledge and experience with the WAIS and how you might expect that group of persons to perform on the Comprehension and Vocabulary subtests.

Rate each item in terms of the possibility that it could appear and be detected using the following scale:

1--Almost never could appear or be detected
2--Occasionally could appear or be detected
3--Frequently could appear or be detected
4--Very frequently could appear or be detected
5--Almost always could appear or be detected
APPENDIX E
PERCENTILE RANKS OF CUES BASED ON DIPLOMATES' RATINGS

Three Diplomates rated each cue in terms of how often it appeared in the WAIS Comprehension and Vocabulary test responses of patients from the diagnostic category the cues were used to define. Their ratings were made on a 5-point scale and these ratings were transformed into standard scores. Each cue was then given a percentile rank on the basis of how all three diplomates rated it. Each cue preceded by its percentile rank is listed below.

Normal Cues

1. 50 There is an even, appropriate, emotional tone. The person is neither constricted in his emotional involvement nor overwhelmed by his reactions.

2. 42 There is evidence for personal responsibility and social responsibility. The person is able to engage in socially considerate behavior and show a democratic social interest, conform to social demands, be in harmony with cultural standards. But to some degree he shows an individuality, independence of thought, and has not surrendered individual spontaneity—he is emancipated from the group.

3. 77 Self-control: person's behavior is subject to his wishes. He chooses freely to prevent or produce a particular behavior at will. The motives for his behavior are understandable. He deals with problems by rational decision.

4. 50 The person shows good judgment.

5. 51 Unity and integration of the personality; a coordination of needs and goal-seeking behavior into a smoothly functioning interaction with the environment.

6. 57 The person is not defensive. He seems free from conflict. His performance does not have a "driven" quality. There is little anxiety or a need to prove himself.
7. 57 The person perceives reality correctly. His perceptions are efficient, accurate, and realistic. He has a realistic view of himself and his environment. He does not bend reality to fit his needs and fantasies.

8. 35 There is an absence of rigidity; he is flexible and adaptive under stress.

9. 42 The person shows many of the following traits: trust, character, integrity, seriousness, balance, maturity.

10. 77 Class, synonym, or explanation type definitions in Vocabulary. Examples: Winter is a season; an apple is a fruit; skill means to do something well.

11. 45 The person shows interpersonal and intrapersonal adjustment. There is a socially acceptable and personally satisfying level of functioning.

12. 28 There is a gradual tapering off of efficiency and accuracy of responses. Initial responses are well articulated and intact. These give way to responses that indicate that the level of the item is beyond the person's capacities. This tapering off in efficiency is gradual and relatively regular.

13. 9 The person shows many of the following traits: self-assurance, interest in many things, inner peace and serenity, sense of self-esteem, security, self-acceptance, adequate self-identity, self-reliance, self-direction.

14. 9 He seems happy most of the time.

15. 67 There is an absence of nonsensical answers.

16. 18 He is dependable in relating to others and he acknowledges the need for others.

17. 83 The person responds "don't know" or the equivalent when he reaches his level of competence.

18. 45 The person passes the 6 easy Comprehension items.

19. 73 The person uses appropriate concepts. His performance is expected and ordinary.
20. **30** The person shows **self-insight**; he accepts his limitations and has a realistic idea of his assets.

21. **30** He shows a sense of **competence**. He masters his environment. He has the physical, intellectual, emotional, and social skills to solve problems efficiently and effectively.

22. **77** There is **consistency** to the performance which would make prediction possible.

23. **59** The person is **average or above average in intelligence**; and he does just about as well on the **Vocabulary** as he does on the **Comprehension**.

24. **83** There is an absence of **ambiguous answers**.
**Organic Cues**


2. **22** Over-particularization: too much attention to unimportant details.

3. **22** Comprehension is not lower than Vocabulary.

4. **36** Circumstantiality: rambling responses bringing in whatever comes to the patient's mind in response to the question whether it is relevant or not.

5. **85** Impaired memory: rapid forgetting of recent events. Poor retention, poor short-term memory.

6. **77** Impaired consciousness: blurring and haziness of perception; clouded consciousness. Person is difficult to reach. He finds it difficult to attend to external stimuli; to think clearly; to express a coherent train of thought; to maintain a consistent focus on one set of ideas or events. Drifts off into dream like state. Fearful, bewildered, confused, incoherent, disoriented. Finds it difficult to think on a higher conceptual level.

7. **39** Person cannot synthesize many details into one good concept. He is poor in sorting out the essential parts from those which are unessential.

8. **63** Fatigue: person gets easily fatigued, especially when the task gets difficult or after having done continuous work within his capabilities. May be indicated by worsening speech, poorer memory and concentration, vague, fragmented responses.

9. **55** The person is aware of his impairment in functioning and dreads making mistakes.


11. **39** Person complains of inability to produce memories and associations.
12. **39** Automatic Phrasing: frequent use of pet phrase indiscriminately. The repetition of the same phrase. Example: "It's some kind of work...It's good work...this is some work..."

13. **70** Signs of inadequacy and insecurity. Person expresses feelings of weakness, uncertainty, and inadequacy in trying to deal with test materials.

14. **70** Cooperation: willing to cooperate and interest in personal achievement. This is manifested by thorough answers and attempts to improve replies. He is not indifferent.

15. **39** When delusional ideas are expressed, the connections between the delusion and concrete reality are usually readily apparent and understandable.

16. **52** Uniformity of response is apparent. Consistent, poorer work occurs as the difficulty of the task increases. The person usually does not miss the easier items and pass the more difficult ones.

17. **92** The person has problems in retaining instructions, understanding their meaning, and following directions.

18. **63** The person tends to respond 'don't know' when they does not know an answer.

19. **22** Blocking and Marked Word Finding Difficulty: the person speaks and gets caught on a word or cannot find the word. He stammers and cannot recover.

20. **10** Agitated hyperactivity.

21. **22** Failure: catastrophic reactions during and after failure. The person cannot sustain organized behavior during and after frustration or failure. He may become agitated, fumbling, unfriendly, aggressive, evasive.
Concrete: person cannot carry out inductive reasoning or formulate an abstract principle. He cannot recognize that a group of objects has a common characteristic. Descriptive definitions. Memory for objects at a concrete, sensory level. The concreteness is of a simplified and inane form. Examples: An apple is red; a horse is a thing with four legs.

Impotence: person cannot improve his response even after he recognizes it is inadequate or not appropriate. He cannot think of a new and better response. He does not withdraw the poor response.

Perseveration: repetitious giving of one answer to several questions especially when the task is difficult for him.

Vagueness, uncertainty, hesitancy in response to questions.

Distractible: difficulty concentrating. Attends in rapid succession to one or another element of the many stimuli in the environment. They are unable to focus on anything for too long a period of time.

Distortions seem to be the result of confusion or an attempt to 'cover up' an inability to perceive the environment. The person is struggling to approximate a reality.

Temporal orientation is disturbed (day of week or month).

Repetition: giving at least three similar responses in a record regardless of the stimuli.

Speech Distortion: slurring, syllable transpositions.

Rigidity: stereotyped and reserved. Lacks initiative and spontaneity. Inability to shift attention or change mode of responding. Reduction in behavioral flexibility.
psychoneurotic Cues

1. 62 Feelings of guilt and despair that are not delusional.

2. 63 There is no sense of choice: The person feels he has to do something or has to omit it.

3. 47 The person feels the world is a threatening place where he will not be able to meet the demands.

4. 47 Somatic complaints: multiple, vague somatic complaints. Uncomfortable or disabling physical symptoms.

5. 47 Monosyllabic, self-critical, or uncertain responses. Very little spontaneous qualification or elaboration of a response.

6. 18 Conflict: between conscious and unconscious forces; between contradictory desires, drives, needs.

7. 36 Verbalization: stutter, omission, sentence incompleteness, tongue slips, sentence change, repetition.

8. 64 Feelings of inferiority and inadequacy.

9. 18 Defenses of isolation, intellectualization, magical thinking, denial.

10. 79 Anxiety: A feeling of danger, of being threatened, of fearful anticipation, of apprehension, of dread.

11. 18 Immaturity: dependency, strong need for affection and social approval, clings to others for support, impatient, helpless. Frustration leads to sullenness, temper tantrums, pouting.

12. 42 Asks about the purpose of the test.

13. 70 Hypersensitivity: high level of tension that is easily mobilized; over-reacts to small annoyances and minor setbacks; irritable; cannot tolerate criticism; complains of minor physical discomfort; over-reacts to praise and flattery.
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<tr>
<td>14.</td>
<td>47</td>
<td><strong>Egocentric:</strong> constantly self-preoccupied and primarily concerned with his own feelings, hopes, and ambitions.</td>
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<td>15.</td>
<td>36</td>
<td><strong>Histrionics:</strong> a tendency toward being dramatic, theatrical, affected.</td>
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<td>16.</td>
<td>58</td>
<td>Feelings of <strong>shame</strong> and <strong>guilt</strong>.</td>
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<td>17.</td>
<td>70</td>
<td><strong>Hesitancy</strong> and <strong>uncertainty</strong>.</td>
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<td>18.</td>
<td>58</td>
<td><strong>Low stress tolerance</strong>.</td>
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<td>19.</td>
<td>36</td>
<td><strong>Fear</strong> of impending disaster, of death, vague apprehension, general excitement, severe insecurity, restlessness, tremulousness.</td>
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<td>20.</td>
<td>47</td>
<td><strong>Sadness, intertia, self-directed anger, feelings of worthlessness</strong>.</td>
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<td>21.</td>
<td>40</td>
<td><strong>Rationalizing and doubting</strong> (rumination, excessive qualification, overcautiousness).</td>
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<td>22.</td>
<td>58</td>
<td><strong>Fearful and timid</strong>.</td>
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<td>23.</td>
<td>60</td>
<td>Feelings of <strong>weakness</strong> and mental or physical <strong>fatigue</strong>; lack of enthusiasm, zest; withdrawal reactions.</td>
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<td>24.</td>
<td>53</td>
<td><strong>Verbalization</strong> is over-detailed and doubt-laden.</td>
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<td>25.</td>
<td>40</td>
<td><strong>Pedantic intellectualizing</strong>; perfectionism and ostentatious, circumlocutory, circumstantial display of erudition. <strong>Examples:</strong> A cedar is a coniferous tree, yields fragrant wood, generally used to make chests. or A diamond is a carboniferous stone, formed deep in the earth under high pressure, mined and sold as a gem or for industrial purposes.</td>
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<td>26.</td>
<td>18</td>
<td>Performance somewhat worse on <strong>Comprehension</strong> compared to <strong>Vocabulary</strong>.</td>
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<td>27.</td>
<td>49</td>
<td><strong>Frustrated</strong>.</td>
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<td>28.</td>
<td>60</td>
<td>Blocking of thought processes when faced with threatening items on the test (usually sexual or aggressive).</td>
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<td>29.</td>
<td>18</td>
<td><strong>Inability</strong> to express any <strong>anxiety</strong>.</td>
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30. 60  Unhappiness: little joy, lonely, pessimistic about the future, despair, dissatisfaction, misery, suffers, has feelings of being hurt and of missing the good things in life. Low mood.

31. 51  Responses have a naive, utterly unreflective and highly "moral" quality. Sexual naivete. Examples: We should keep away from bad company because they have an evil influence; it's not proper! or People who are born deaf are usually unable to talk because God wanted it that way.

32. 38  Obsessive, compulsive, unreasonable doubts, phobic.

33. 79  Behavior that controls, discharges, or reduces anxiety.

34. 18  Minimum use of independent and active thinking as a way of coping with problems.

35. 18  Everything seems an insurmountable task which person does not want to approach.

36. 47  Functions below capacity: inefficient, fails in achievements efforts, does not realize potential.

37. 25  Impaired attention and concentration; person has difficulty in focusing attention on the task.


39. 60  Hurried, rushed, driven—an inner restlessness; a continual sense of strain.

40. 79  Temporary inefficiencies in performance due to anxiety, incorrect choices between right and wrong alternatives, uncertainty, quick or delayed correction of incorrect answers. Failures on easy items will be few. Answers will not be so incorrect as to be absurd or bizarre.

41. 36  Person acutely and unrealistically sensitive to slightest setback.

42. 47  Impulsive and emotionally labile.
43. Over-emphasis on security and safety.

44. Behavior which manages to solicit support, nurture, or sympathy.

45. Concern about the correctness of a response; asks for correct answer.

46. Indecisive.

47. Reliance on conventional standards as guides to behavior.

48. Temporary word finding difficulty which ends with the person finding the word or a substitute word. Impulsive blurting out of unfinished or unchecked responses, fumbling for proper formulations. Example: There are four pints in a quart... No! Two! Wait a minute... that's right! Four! or If I were the first to see a fire in a movie I'd... er... I'd... get out as fast as I could... that is, I'd tell the... what do you call them?... Oh!... ushers... first and then I'd... er... I'd get out.
Retardate Cues

1. **47** Vocabulary and Comprehension are low and he does about as poorly on the one as he does on the other.

2. **40** Poor auditory retention span.

3. **54** Distractible: short attention span; difficulty in focusing attention; attention focused on irrelevant aspects of the learning situation.

4. **81** Level of concepts they can handle is extremely limited. Intellectual level comparable to 4 to 11 year old child.

5. **44** Unsatisfied affectional needs: high motivation for attention, praise, encouragement.


7. **47** He distrusts his own solutions to problems and seeks guides in the environment.

8. **80** Person wants to interact with the examiner: he is more interested in interacting with the examiner than he is in taking the test.

9. **47** Speech: Incorrect and indistinct speech; poor articulation; unclear, slovenly, slurring, jerking, substitution of one consonant for another.

10. **69** Some of the following personality traits may be present: fearfulness, mistrust of strangers and desire to avoid them, suspicion, mistrust, anxiety, jealousy, hyperactivity, poor self-evaluation, failure to follow orders even within the range of his intellectual capacity.

11. **37** Emotionally immature, socially incompetent, poor social adjustment.
12. **67** Speech: Person's language reminds one of the broken speech of uneducated persons who have learned a foreign language very imperfectly and by ear alone. For example, when asked how old he was a retardate responded: 'If you once know how old I am, listen: how much old, am twenty-three old now—that is, 23 August month, add one month.

13. **50** He often inserts meaningless words and phrases that he has often heard when he is being taught.

14. **50** Nonsensical answers.

15. **47** Frustration in communication activities leads to withdrawal.

16. **25** Evasive: he tries to avoid the task, especially the difficult items. He gives an answer tangentially related to the question. Example: How many weeks in a year? 365 days. Why are shoes made of leather? You put them on.

17. **25** He avoids the "don't know" and equivalent responses.

18. **85** Syntax: Sentences are shorter and grammar is poor.

19. **14** Social adjustment: like that of adolescent but without the normal adolescent's imagination, inventiveness, and judgment.

20. **85** Abstraction is not common.

21. **39** Difficulty in following verbal instructions.

22. **69** Absence of self-criticism: person reluctant to say 'don't know.' Responds whether he knows the correct answer or not. He will not admit that he cannot cope with the situation.

23. **85** Affable, dull, vacuous personality.

24. **54** Suggestible.

25. **67** Passive, excessive dependency, little initiative, relies on the examiner too much.
26. **62** Limited *intra-test variability*. He gets the easier items and misses the harder ones.

27. **14** *Circumstantiality*: many unnecessary trivial details and digressions. Associated ideas are mentioned. Person does not form sharply defined concepts; he is unable to distinguish essentials from non-essentials.

28. ^**40** Presence of *naivete and infantilism*.

29. **54** Does not have strong *motivation to be correct*.

30. **26** Perseveration in oral expression.

31. **47** Has greater *expectancy of failure*; more motivated to avoid failure than to achieve success.
schizophrenic Cues

1. Irrelevance: intrusive injection of irrelevant remarks or phrases or trivial and uninformative remarks. Irrelevant preoccupations or intellectualizing.

2. Autistic: subjective needs interfere with person's dealing with the external world. There is an excessive focusing on the internal mental life (fantasies, daydreams, delusions, hallucinations). Person concentrates on what is within and not on what is outside. Reality and fantasy mixed together. Dream like thinking.

3. Word Salad: nouns and verbs with no apparently meaningful connection or structure.

4. The person is not just confused or attempting to hide an inability to deal with the environment. He lacks a goal directed set. He is not struggling to approximate a reality.

5. Withdrawal: estrangement from self and others; deficient in social competence; distant from others; indifferent; apathetic; aloof.

6. Loose Communications: connections are vague or involved. The person loses his focus and drifts into abstractions and generalities which have little significance. There is a lack of relationship among ideas.


8. Concreteness: cannot formulate an abstract general principle from a group of particular items. Defines things at sensory level (An apple is red; a horse is a thing with four legs); uses function, example, and usage type definitions of low conceptual level (an apple is something you eat; a horse is something you ride on.)


10. Suspicious over-cautiousness; delusions of persecution or grandeur.
Peculiar use of words. Examples: Bad Company on
Comprehension: May have a deteriorating influence.
Deaf: Aren't able to be familiar with the audible part of their own anatomy.

Comprehension: failing one or more items and passing the difficult ones.

Comprehension: bringing in irrelevant preoccupations such as syphilis on the born deaf item.

Comprehension: consistently egocentric responses offered seriously, such as neglecting the letter in the street because 'it's not my business' or reading the letter because of 'curiosity'.

Comprehension: elaborating clearly inappropriate courses of action, such as singing the national anthem from the stage of the burning theater to prevent panic, or building a hut in the forest 'until someone found me'.

Comprehension: inappropriately intense moralistic reactions to the bad company, laws, and marriage license items.

Comprehension: irrelevant intellectualizing, such as on the taxes item, 'It all began with the idea of no taxation without representation; answering other questions than those put by the examiner, such as explaining why people should be 'good' on the bad company item.

Perseveration: the repetition in the expression of an idea. Redundant quality to definitions.

Imprecise labeling: person hits at the periphery rather than the bull's eye. Example: Breakfast is defined as a 'menu' rather than a 'meal'.

Clang Associations: responds to sound of the word rather than the meaning. Examples: Traduce means three deuces when you play cards; belfry means a kind of bell boy. Head-bed; diamond-dynamo; room-boom.
Ideas of reference: through ideas of reference, remarks or actions on the part of other persons, although in no way referring to the patient, are interpreted by him as being significantly related to himself and often as expressing accusation or depreciation.

The person has no appreciation of the disorganization in his personality.

Ideas are communicated by properly chosen words but are distorted by the structure of the sentence.

Blandly associates to vocabulary words, such as, fur-soft and diamond-pretty.

Does not respond 'don't know' or the equivalent in response to an item that is too difficult for him.

Negativism: person says or does the opposite of what is requested or responds with opposites.

Unusual symbolism.

Intra-test Scatter: Comprehension--complete failures on first 6 items and passing more difficult items.

Intra-test Scatter: Vocabulary--missing easy items and passing more difficult items.

Intra-test Scatter: fluctuations in performance due to specific concerns or preoccupations.

Delusion: a false belief maintained despite objective evidence to the contrary.

Self-Reference: incorporation into a definition of personalized elements or of details reflecting self-involvement. Thus, for 'conceal', "To hide away from peeking eyes".

Incoherence: Sequences of ideas are disjointed and fragmented. One idea runs into another with no logical connections.

Distractible and slow to respond.
Queer Verbalizations: an unusual way of responding to the task (asked to define penny, patient says he was hoping for a dollar); language, inappropriate to a professional situation (use of 'cunt'); stilted and formal phrasing with little apparent substance.

Person does more poorly on the Comprehension subtest than he does on Vocabulary.

There is intact and normal functioning in certain areas that are not affected by autistic and delusional material.

Circumstantial--unnecessary and trivial details deter him from making his point.

Contaminated Response: person gives good response but then spoils it by an eccentric or irrelevant addition.

Ellipsis: the omission of one or more words (sometimes only syllables) necessary to complete the meaning in a phrase or sentence. Thus, for microscope, 'Germs' (omitted or implied, an instrument for magnifying small objects, as germs).

Bizarreness: Definitions involving markedly idiosyncratic associations or the juxtaposition of disconnected ideas. Thus for 'plural', 'A way of thinking in grammar.' Metaphorical statements, stereotyped phrases, unusual thoughts and responses. Abstract speculations or metaphysical comments on subjects like creation or causality. Concern about meaningless problems, religious doubts, mysticism.

Overinclusion: over-abstraction and over-generalization which leads to ideas that are not easily understood. Broad, idiosyncratic generalizations. Words are defined so broadly that they include elements that are not relevant or only distantly associated for the normal person. Statements are vague and imprecise.

Severe Blocking: interruption of a train of thought after which there appears a completely new thought, especially if it happens when associations approach conflict material, painful topics, or abstract matters.
44. **Hallucinations**: a perception that has no basis in external reality.

45. **Neologisms**: person makes up his own word. Sometimes these are condensations of other words. The person may select the correct root but change its meaning by incorrect suffixes, conjunctions, etc.

46. **Communications** seem meaningful to the person but the significance cannot be grasped by others.

47. **Non-verbal behavior**: giggling, smiling, frowning, grimacing, peculiar movement, gesture, posture, or expression.
APPENDIX F
Normal Cues

1. _____ Self-control: person's behavior is subject to his wishes. He chooses freely to prevent or produce a particular behavior at will. The motives for his behavior are understandable. He deals with problems by rational decision.

2. _____ The person is not defensive. He seems free from conflict. His performance does not have a "driven" quality. There is little anxiety or a need to prove himself.

3. _____ The person perceives reality correctly. His perceptions are efficient, accurate, and realistic. He has a realistic view of himself and his environment. He does not bend reality to fit his needs and fantasies.

4. _____ Class, synonym, or explanation type definitions in Vocabulary. Examples: Winter is a season; an apple is a fruit; skill means to do something well.

5. _____ There is an absence of nonsensical answers.

6. _____ The person responds "don't know" or the equivalent when he reaches his level of competence.

7. _____ The person uses appropriate concepts. His performance is expected and ordinary.

8. _____ There is consistency to the performance which would make prediction possible.

9. _____ The person is average or above average in intelligence; and he does just about as well on the Vocabulary as he does on the Comprehension.

10. _____ There is an absence of ambiguous answers.
1. **Impaired memory**: rapid forgetting of recent events. Poor retention, poor short-term memory.

2. **Impaired consciousness**: blurring and haziness of perception; clouded consciousness. Person is difficult to reach. He finds it difficult to attend to external stimuli; to think clearly; to express a coherent train of thought; to maintain a consistent focus on one set of ideas or events. Drifts off into dream-like state. Fearful, bewildered, confused, incoherent, disoriented. Finds it difficult to think on a higher conceptual level.

3. **Signs of inadequacy and insecurity**. Person expresses feelings of weakness, uncertainty, and inadequacy in trying to deal with test materials.

4. **Cooperation**: willing to cooperate and interest in personal achievement. This is manifested by thorough answers and attempts to improve replies. He is not indifferent.

5. The person has **problems in retaining instructions**, understanding their meaning, and following directions.

6. **Concrete**: person cannot carry out inductive reasoning or formulate an abstract principle. He cannot recognize that a group of objects has a common characteristic. Descriptive definitions. Memory for objects at a concrete, sensory level. The concreteness is of a simplified and inane form. Examples: An apple is red; a horse is a thing with four legs.

7. **Perseveration**: repetitious giving of one answer to several questions especially when the task is difficult for him.

8. **Distractible**: difficulty concentrating. Attends in rapid succession to one or another element of the many stimuli in the environment. They are unable to focus on anything for too long a period of time.
9. **Repetition**: giving at least three similar responses in a record regardless of the stimuli.

10. **Rigidity**: stereotyped and reserved. Lacks initiative and spontaneity. Inability to shift attention or change mode of responding. Reduction in behavioral flexibility.
psychoneurotic Cues

1. _____ There is **no sense of choice**: The person feels he has **to** do something or has **to** omit it.

2. _____ **Anxiety**: A feeling of danger, of being threatened, of fearful anticipation, of apprehension, of dread.

3. _____ **Hypersensitivity**: high level of tension that is easily mobilized; over-reacts to small annoyances and minor setbacks; irritable; cannot tolerate criticism; complains of minor physical discomfort; over-reacts to praise and flattery.

4. _____ **Hesitancy and uncertainty**.

5. _____ Behavior that controls, discharges, or reduces anxiety.


7. _____ **Temporary inefficiencies** in performance due to anxiety. Incorrect choices between right and wrong alternatives; uncertainty, quick or delayed correction of incorrect answers. Failures on easy items will be few. Answers will not be so incorrect as to be absurd or bizarre.

8. _____ Concern about the correctness of a response; asks for correct answer.

9. _____ **Indecisive**.

10. _____ Reliance on **conventional** standards as guides to behavior.
Retardate Cues

1. Level of concepts they can handle is extremely limited. Intellectual level comparable to 4 to 11 year old child.

2. Person wants to interact with the examiner: he is more interested in interacting with the examiner than he is in taking the test.

3. Some of the following personality traits may be present: fearfulness, mistrust of strangers and desire to avoid them, suspicion, mistrust, anxiety, jealousy, hyperactivity, poor self-evaluation, failure to follow orders even within the range of his intellectual capacity.

4. Speech: person's language reminds one of the broken speech of uneducated persons who have learned a foreign language very imperfectly and by ear alone. For example, when asked how old he was a retardate responded: 'If you once know how old I am, listen: how much old, am twenty-three old now --that is, 23 August month, add one month.

5. Syntax: Sentences are shorter and grammar is poor.

6. Abstraction is not common.

7. Absence of self-criticism: person reluctant to say 'don't know'. Responds whether he knows the correct answer or not. He will not admit that he cannot cope with the situation.

8. Affable, dull, vacuous personality.


10. Does not have strong motivation to be correct.
SchiZophrenic Cues

1. Concreteness: cannot formulate an abstract general principle from a group of particular items. Defines things at sensory level (An apple is red; a horse is a thing with four legs); uses function, example, and usage type definitions of low conceptual level (an apple is something you eat; a horse is something you ride on.)

2. Peculiar use of words. Examples: Bad Company on Comprehension: May have a deteriorating influence.

A. Deaf: Aren't able to be familiar with the audible part of their own anatomy.

3. Ideas are communicated by properly chosen words but are distorted by the structure of the sentence.

4. Queer Verbalizations: an unusual way of responding to the task (asked to define penny, patient says he was hoping for a dollar); language inappropriate to a professional situation (use of 'cunt'); stilted and formal phrasing with little apparent substance.

5. There is intact and normal functioning in certain areas that are not affected by autistic and delusional material.

6. Circumstantial—unnecessary and trivial details deter him from making his point.

7. Bizarreness: Definitions involving markedly idiosyncratic associations or the juxtaposition of disconnected ideas. Thus for 'plural', 'A way of thinking in grammar.' Metaphorical statements, stereotyped phrases, unusual thoughts and responses. Abstract speculations or metaphysical comments on subjects like creation or causality. Concern about meaningless problems, religious doubts, mysticism.

8. Overinclusion: over-abstraction and over-generalization which leads to ideas that are not easily understood. Broad, idiosyncratic generalizations. Words are defined so broadly that they include elements that are not relevant or only distantly associated for the normal person. Statements are vague and imprecise.
9. Neologisms: person makes up his own word. Sometimes these are condensations of other words. The person may select the correct root but change its meaning by incorrect suffixes, conjunctions, etc.

10. Communications seem meaningful to the person but the significance cannot be grasped by others.
Normal Cues

1. ______ There is an even, appropriate, emotional tone. The person is neither constricted in his emotional involvement nor overwhelmed by his reactions.

2. ______ There is evidence for personal responsibility and social responsibility. The person is able to engage in socially considerate behavior and show a democratic social interest, conform to social demands, be in harmony with cultural standards. But to some degree he shows an individuality, independence of thought, and has not surrendered individual spontaneity—he is emancipated from the group.

3. ______ Self-control: person's behavior is subject to his wishes. He chooses freely to prevent or produce a particular behavior at will. The motives for his behavior are understandable. He deals with problems by rational decision.

4. ______ The person shows good judgment.

5. ______ Unity and integration of the personality; a coordination of needs and goal-seeking behavior into a smoothly functioning interaction with the environment.

6. ______ The person is not defensive. He seems free from conflict. His performance does not have a "driven" quality. There is little anxiety or a need to prove himself.

7. ______ The person perceives reality correctly. His perceptions are efficient, accurate, and realistic. He has a realistic view of himself and his environment. He does not bend reality to fit his needs and fantasies.

8. ______ There is an absence of rigidity; he is flexible and adaptive under stress.
9. _____ The person shows many of the following traits: trust, character, integrity, seriousness, balance, maturity.

10. _____ Class, synonym, or explanation type definitions in Vocabulary. Examples: Winter is a season; an apple is a fruit; skill means to do something well.

11. _____ The person shows interpersonal and intrapersonal adjustment. There is a socially acceptable and personally satisfying level of functioning.

12. _____ There is an absence of nonsensical answers.

13. _____ The person responds 'don't know' or the equivalent when he reaches his level of competence.

14. _____ The person passes the 6 easy Comprehension items.

15. _____ The person uses appropriate concepts. His performance is expected and ordinary.

16. _____ The person shows self-insight; he accepts his limitations and has a realistic idea of his assets.

17. _____ There is consistency to the performance which would make prediction possible.

18. _____ The person is average or above average in intelligence; and he does just about as well on the Vocabulary as he does on the Comprehension.

19. _____ There is an absence of ambiguous answers.
**Organic Cues**

1. **Perplexity:** person distrusts ability and performance. Needs approval and reassurance.

2. **Circumstantiality:** rambling responses bringing in whatever comes to the patient's mind in response to the question whether it is relevant or not.

3. **Impaired memory:** rapid forgetting of recent events. Poor retention, poor short-term memory.

4. **Impaired consciousness:** blurring and haziness of perception; clouded consciousness. Person is difficult to reach. He finds it difficult to attend to external stimuli; to think clearly; to express a coherent train of thought; to maintain a consistent focus on one set of ideas or events. Drifts off into dream like state. Fearful, bewildered, confused, incoherent, disoriented. Finds it difficult to think on a higher conceptual level.

5. Person cannot synthesize many details into one good concept. He is poor in sorting out the essential parts from those which are unessential.

6. **Fatigue:** person gets easily fatigued, especially when the task gets difficult or after having done continuous work within his capabilities. May be indicated by worsening speech, poorer memory and concentration, vague, fragmented responses.

7. The person is aware of his impairment in functioning and dreads making mistakes.

8. **Emotion:** lability and shallowness of affect. Emotional over-sensitivity. Arousal of laughter or tears with little provocation.

9. Person complains of inability to produce memories and associations.

10. **Automatic Phrasing:** frequent use of pet phrase indiscriminately. The repetition of the same phrase. Example: "It's some kind of work...it's good work...this is some work...."
11. Signs of inadequacy and insecurity. Person expresses feelings of weakness, uncertainty, and inadequacy in trying to deal with test materials.

12. Cooperation: willing to cooperate and interest in personal achievement. This is manifested by thorough answers and attempts to improve replies. He is not indifferent.

13. When delusional ideas are expressed, the connections between the delusion and concrete reality are usually readily apparent and understandable.

14. Uniformity of response is apparent. Consistent, poorer work occurs as the difficulty of the task increases. The person usually does not miss the easier items and pass the more difficult ones.

15. The person has problems in retaining instructions, understanding their meaning, and following directions.

16. The person tends to respond 'don't know' when they do not know an answer.

17. Blocking and Marked Word Finding Difficulty: the person speaks and gets caught on a word or cannot find the word. He stammers and cannot recover.

18. Concrete: person cannot carry out inductive reasoning or formulate an abstract principle. He cannot recognize that a group of objects has a common characteristic. Descriptive definitions. Memory for objects at a concrete, sensory level. The concreteness is of a simplified and inane form. Examples: An apple is red; a horse is a thing with four legs.

19. Impotence: person cannot improve his response even after he recognizes it is inadequate or not appropriate. He cannot think of a new and better response. He does not withdraw the poor response.

20. Perseveration: repetitious giving of one answer to several questions especially when the task is difficult for him.

22. Distractible: difficulty concentrating. Attends in rapid succession to one or another element of the many stimuli in the environment. They are unable to focus on anything for too long a period of time.

23. Distortions seem to be the result of confusion or an attempt to 'cover up' an inability to perceive the environment. The person is struggling to approximate a reality.

24. Repetition: giving at least three similar responses in a record regardless of the stimuli.


Psychoneurotic Cues

1. ___ Feelings of guilt and despair that are not delusional.

2. ___ There is no sense of choice: The person feels he has to do something or has to omit it.

3. ___ The person feels the world is a threatening place where he will not be able to meet the demands.

4. ___ Somatic complaints: multiple, vague somatic complaints. Uncomfortable or disabling physical symptoms.

5. ___ Monosyllabic, self-critical, or uncertain responses. Very little spontaneous qualification or elaboration of a response.

6. ___ Verbalization: stutter, omission, sentence incompleteness, tongue slips, sentence change, repetition.

7. ___ Feelings of inferiority and inadequacy.

8. ___ Defenses of isolation, intellectualization, magical thinking, denial.

9. ___ Anxiety: A feeling of danger, of being threatened, of fearful anticipation, of apprehension, of dread.

10. ___ Asks about the purpose of the test.

11. ___ Hypersensitivity: high level of tension that is easily mobilized; over-reacts to small annoyances and minor setbacks; irritable; cannot tolerate criticism; complains of minor physical discomfort; over-reacts to praise and flattery.

12. ___ Egocentric: constantly self-preoccupied and primarily concerned with his own feelings, hopes, and ambitions.

13. ___ Histrionics: a tendency toward being dramatic, theatrical, affected.

14. ___ Feelings of shame and guilt.

15. ___ Hesitancy and uncertainty.
16. Low stress tolerance.
17. Fear of impending disaster, of death, vague apprehension, general excitement, severe insecurity, restlessness, tremulousness.
19. Rationalizing and doubting (rumination, excessive qualification, overcautiousness).
20. Fearful and timid.
21. Feelings of weakness and mental or physical fatigue; lack of enthusiasm, zest; withdrawal reactions.
22. Verbalization is over-detailed and doubt-laden.
23. Pedantic intellectualizing; perfectionism and ostentatious, circumlocutory, circumstantial display of erudition. Examples: A cedar is a coniferous tree, yields fragrant wood, generally used to make chests. or A diamond is a carboniferous stone, formed deep in the earth under high pressure, mined and sold as a gem or for industrial purposes.
24. Frustrated.
25. Blocking of thought processes when faced with threatening items on the test (usually sexual or aggressive).
26. Unhappiness: little joy, lonely, pessimistic about the future, despair, dissatisfaction, misery, suffers, has feelings of being hurt and of missing the good things in life. Low mood.
27. Responses have a naive, utterly unreflective and highly "moral" quality. Sexual naivete. Examples: We should keep away from bad company because they have an evil influence; it's not proper! or People who are born deaf are usually unable to talk because God wanted it that way.
28. Obsessive, compulsive, unreasonable doubts, phobic.
29. ____ Behavior that controls, discharges, or reduces anxiety.

30. ____ Minimum use of independent and active thinking as a way of coping with problems.

31. ____ Functions below capacity: inefficient, fails in achievements, efforts, does not realize potential.

32. ____ Impaired attention and concentration; person has difficulty in focusing attention on the task.


34. ____ Hurried, rushed, driven— an inner restlessness; a continual sense of strain.

35. ____ Temporary inefficiencies in performance due to anxiety. Incorrect choices between right and wrong alternatives; uncertainty, quick or delayed correction of incorrect answers. Failures on easy items will be few. Answers will not be so incorrect as to be absurd or bizarre.

36. ____ Person acutely and unrealistically sensitive to slightest setback.

37. ____ Impulsive and emotionally labile.

38. ____ Over-emphasis on security and safety.

39. ____ Behavior which manages to solicit support, nurture, or sympathy.

40. ____ Concern about the correctness of a response; asks for correct answer.

41. ____ Indecisive.

42. ____ Reliance on conventional standards as guides to behavior.
Temporary word finding difficulty which ends with the person finding the word or a substitute word. Impulsive blurt out of unfinished or unchecked responses, fumbling for proper formulations. Example: There are four pints in a quart... No! Two! Wait a minute... that's right! Four! or If I were the first to see a fire in a movie I'd... er... I'd... get out as fast as I could... that is, I'd tell the... what do you call them?... Oh!... ushers... first and then I'd... er... I'd get out.
Retardate Cues

1. _____ Vocabulary and Comprehension are low and he does about as poorly on the one as he does on the other.

2. _____ Poor auditory retention span.

3. _____ Distractible: short attention span; difficulty in focusing attention; attention focused on irrelevant aspects of the learning situation.

4. _____ Level of concepts they can handle is extremely limited. Intellectual level comparable to 4 to 11 year old child.

5. _____ Unsatisfied affectional needs: high motivation for attention, praise, encouragement.

6. _____ Ambiguous answers.

7. _____ He distrusts his own solutions to problems and seeks guides in the environment.

8. _____ Person wants to interact with the examiner: he is more interested in interacting with the examiner than he is in taking the test.

9. _____ Speech: Incorrect and indistinct speech; poor articulation; unclear, slovenly, slurring, jerking, substitution of one consonant for another.

10. _____ Some of the following personality traits may be present: fearfulness, mistrust of strangers and desire to avoid them, suspicion, mistrust, anxiety, jealousy, hyperactivity, poor self-evaluation, failure to follow orders even within the range of his intellectual capacity.

11. _____ Emotionally immature, socially incompetent, poor social adjustment.
12. Speech: person's language reminds one of the broken speech of uneducated persons who have learned a foreign language very imperfectly and by ear alone. For example, when asked how old he was a retardate responded: 'If you once know how old I am, listen: how much old, am twenty-three old now--that is, 23 August month, add one month.'

13. He often inserts meaningless words and phrases that he has often heard when he is being taught.


15. Frustration in communication activities leads to withdrawal.

16. Syntax: Sentences are shorter and grammar is poor.

17. Abstraction is not common.

18. Difficulty in following verbal instructions.

19. Absence of self-criticism: person reluctant to say 'don't know.' Responds whether he knows the correct answer or not. He will not admit that he cannot cope with the situation.

20. Affable, dull, vacuous personality.


22. Passive, excessive dependency, little initiative, relies on the examiner too much.

23. Limited intra-test variability. He gets the easier items and misses the harder ones.

24. Presence of naivete and infantilism.

25. Does not have strong motivation to be correct.

26. Has greater expectancy of failure; more motivated to avoid failure than to achieve success.
### Schizophrenic Cues

1. **Irrelevance:** intrusive injection of irrelevant remarks or phrases or trivial and uninformative remarks. Irrelevant preoccupations or intellectualizing.

2. **Autistic:** subjective needs interfere with person's dealing with the external world. There is an excessive focusing on the internal mental life (fantasies, daydreams, delusions, hallucinations). Person concentrates on what is within and not on what is outside. Reality and fantasy mixed together. Dream like thinking.

3. **Word Salad:** nouns and verbs with no apparently meaningful connection or structure.

4. **Withdrawal:** estrangement from self and others; deficient in social competence; distant from others; indifferent; apathetic; aloof.

5. **Loose Communications:** connections are vague or involved. The person loses his focus and drifts into abstractions and generalities which have little significance. There is a lack of relationship among ideas.


7. **Concreteness:** Cannot formulate an abstract general principle from a group of particular items. Defines things at sensory level (An apple is red; a horse is a thing with four legs); uses function, example, and usage type definitions of low conceptual level (an apple is something you eat; a horse is something you ride on.)

8. **Suspicious over-cautiousness:** delusions of persecution and grandeur.

9. **Peculiar use of words.** Examples: Bad Company on Comprehension; May have a deteriorating influence. Deaf: Aren't able to be familiar with the audible part of their own anatomy.
10. Comprehension: failing one or more items and passing the difficult ones.

11. Comprehension: Bringing in irrelevant preoccupations such as syphilis on the born deaf item.

12. Comprehension: consistently egocentric responses offered seriously such as neglecting the letter in the street because 'it's not my business' or reading the letter because of 'curiosity'.

13. Comprehension: elaborating clearly inappropriate courses of action such as singing the national anthem from the stage of the burning theater to prevent panic, or building a hut in the forest 'until someone found me.'

14. Comprehension: inappropriately intense moralistic reactions to the bad company, laws, and marriage license items.

15. Comprehension: irrelevant intellectualizing, such as (on the taxes item, 'It all began with the idea of no taxation without representation'); answering other questions than those put by the examiner, such as explaining why people should be 'good' on the bad company item.

16. Imprecise labeling: person hits at the periphery rather than the bull's eye. Example: Breakfast is defined as a 'menu' rather than a 'meal'.

17. Clang Associations: responds to sound of the word rather than the meaning. Examples: Traduce means three deuces when you play cards; belfry means a kind of bell boy. Head-bed; diamond-dynamo; room-boom.

18. Ideas of reference: through ideas of reference, remarks or actions on the part of other persons, although in no way referring to the patient, are interpreted by him as being significantly related to himself and often as expressing accusation or depreciation.

19. Ideas are communicated by properly chosen words but are distorted by the structure of the sentence.
20. ______ Blandly associates to vocabulary words, such as, fur-soft and diamond-pretty.

21. ______ Negativism: person says or does the opposite of what is requested or responds with opposites.

22. ______ Unusual symbolism.

23. ______ Intra-test Scatter: Comprehension--complete failures on first six items and passing more difficult items.

24. ______ Intra-test Scatter: Vocabulary--missing easy items and passing more difficult items.

25. ______ Intra-test Scatter: fluctuations in performance due to specific concerns or preoccupations.

26. ______ Delusion: a false belief maintained despite objective evidence to the contrary.

27. ______ Self-Reference: incorporation into a definition of personalized elements or of details reflecting self-involvement. Thus, for 'conceal', "To hide away from peeking eyes".

28. ______ Incoherence: Sequences of ideas are disjointed and fragmented. One idea runs into another with no logical connections.

29. ______ Distractible and slow to respond.

30. ______ Queer Verbalizations: an unusual way of responding to the task (asked to define penny, patient says he was hoping for a dollar); language inappropriate to a professional situation (use of 'cunt'); stilted and formal phrasing with little apparent substance.

31. ______ Person does more poorly on the Comprehension subtest than he does on Vocabulary.

32. ______ There is intact and normal functioning in certain areas that are not affected by autistic and delusional material.
33. **Circumstantial**—unnecessary and trivial details deter him from making his point.

34. **Contaminated Response**: person gives good response but then spoils it by an eccentric or irrelevant addition.

35. **Ellipsis**: the omission of one or more words (sometimes only syllables) necessary to complete the meaning in a phrase or sentence. Thus, for microscope, "Germs" (omitted or implied, an instrument for magnifying small objects, as germs).

36. **Bizarreness**: definitions involving markedly idiosyncratic associations or the juxtaposition of disconnected ideas. Thus for 'plural', 'A way of thinking in grammar.' Metaphorical statements, stereotyped phrases, unusual thoughts and responses. Abstract speculations or metaphysical comments on subjects like creation or causality. Concern about meaningless problems, religious doubts, mysticism.

37. **Overinclusion**: over-abstraction and over-generalization which leads to ideas that are not easily understood. Broad, idiosyncratic generalizations. Words are defined so broadly that they include elements that are not relevant or only distantly associated for the normal person. Statements are vague and imprecise.

38. **Severe Blocking**: interruption of a train of thought after which there appears a completely new thought, especially if it happens when associations approach conflict material, painful topics, or abstract matters.

39. **Hallucinations**: a perception that has no basis in external reality.

40. **Neologisms**: person makes up his own word. Sometimes these are condensations of other words. The person may select the correct root but change its meaning by incorrect suffixes, conjunctions, etc.

41. **Communications** seem meaningful to the person but the significance cannot be grasped by others.
Non-verbal behavior: giggling, smiling, frowning, grimacing, peculiar movement, gesture, posture, or expression.
APPENDIX G
This is primarily a study of clinical judgment and the ability of clinical judges to classify persons on the basis of a sample of behavior. We are not invested in the use of the traditional diagnostic categories nor do we wish to support pejorative labeling or the stigmatizing of people. However, the nature of this study requires the use of the traditional psychiatric nomenclature because our judges are most familiar with it.

We are presenting you with six booklets each of which will contain the WAIS Comprehension and Vocabulary test responses of a single person. Each person may be normal, organic, psychoneurotic, retarded, or schizophrenic. We are asking you to read the responses to the items in these subtests and to classify them on the basis of a global, subjective judgment as Normal, Organic, Psychoneurotic, Retarded, or Schizophrenic. Indicate your first choice of diagnosis (the one you feel most certain about) and your second choice of diagnosis on the first page of the protocol in the spaces provided. Please give a subjective, clinical judgment based on your impression of the record. Please do not attempt any objective scoring.

Important: There is no necessary relationship between the six protocols you have and the distribution of the five diagnostic types. You may not have one or more of the five types, you may have any combination of the five types, or you may have all of one type.

In no way will your name ever be connected with your specific judgments. Your responses will be recorded in a code. No one connected with this research project will be able to identify your choices or their accuracy.

Please do not talk to any of your colleagues about this study because they may be asked to serve as judges. When the study is finished, you will be sent a complete report.

Thank you for your cooperation.
INSTRUCTIONS - PARTIAL CUES AND FULL CUES CONDITIONS

This is primarily a study of clinical judgment and the ability of clinical judges to classify persons on the basis of a sample of behavior. We are not invested in the use of the traditional diagnostic categories nor do we wish to support pejorative labeling or the stigmatizing of people. However, the nature of this study requires the use of the traditional psychiatric nomenclature because our judges are most familiar with it.

We are presenting you with six booklets each of which will contain the WAIS Comprehension and Vocabulary test responses of a single person. Each person may be normal, organic, psychoneurotic, retarded, or schizophrenic. We are also presenting you with sets of cues or signs for each category that we want you to use in your decisions. We want you to use only the cues that we have given you in making your decisions.

This is the way we want you to proceed. First, read all the cues from the different diagnostic groups. Second, take your first protocol and read it. Third, go through the cues again marking the cues from the different categories that appear in the record. If a cue is present, indicate this by making a rating of your confidence in the presence of the cue in the space provided in front of the cue according to the following scale:

1---Not very confident
2---Somewhat confident
3---Fairly confident
4---Quite confident
5---Very confident

Then classify the protocol on the basis of the cues we have given you as Normal, Organic, Psychoneurotic, Retarded, or Schizophrenic. Indicate your first choice of diagnosis (the one you feel most certain about) and your second choice of diagnosis on the first page of the protocol in the spaces provided. Please make sure that you make your judgments only on the basis of the cues you have been provided with. You may weight the
cues in whatever way you choose: If you think that two cues from a particular category are strongly present in a record, you may choose to decide on a diagnosis dictated by those cues instead of a diagnosis indicated by the presence of three weak cues from another category. Please do not attempt any objective scoring.

**Important:** There is no necessary relationship between the six protocols you have and the distribution of the five diagnostic types. You may not have one or more of the five types, you may have any combination of the five types, or you may have all of one type.

In no way will your name ever be connected with your specific judgments. Your responses will be recorded in a code. No one connected with this research project will be able to identify your choices or their accuracy.

Please do not talk to any of your colleagues about this study because they may be asked to serve as judges. When the study is finished, you will be sent a complete report.

Thank you for your cooperation.
COMPREHENSION ITEMS

On the protocols we have indicated the particular item from the Comprehension test by a cue word following Wechsler's practice. For your convenience we are repeating below the cue words and the complete question to which each refers:

ENVELOPE  What is the thing to do if you find an envelope in the street that is sealed and addressed and has a new stamp?

BAD COMPANY  Why should we keep away from bad company?

MOVIES  What should you do if while in the movies you were the first person to see smoke and fire?

TAXES  Why should people pay taxes?

IRON  What does this saying mean? "Strike while the iron is hot."

CHILD LABOR  Why are child labor laws needed?

FOREST  If you were lost in the forest in the daytime, how would you go about finding your way out?

DEAF  Why are people who are born deaf usually unable to talk?

CITY LAND  Why does land in the city cost more than land in the country?

MARRIAGE  Why does the state require people to get a license in order to be married?

BROOKS  What does this saying mean? "Shallow brooks are noisy."

SWALLOW  What does this saying mean? "One swallow doesn't make a summer."
APPENDIX I.
CUE USAGE: PARTIAL CUES CONDITION

Below are listed shortened versions of the cues given to the judges in the Partial Cues condition (See Appendix F for entire cues). Following each cue is the number of times it was judged present in 18 judgments of six protocols representing each of the five categories. (N--Normal; O--Organic; PN--Psychoneurotic; R--Retarded; S--Schizophrenic)

<table>
<thead>
<tr>
<th>Normal Cues</th>
<th>N</th>
<th>O</th>
<th>PN</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-control</td>
<td>9</td>
<td>3</td>
<td>9</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>2. Not defensive</td>
<td>9</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>3. Perceives reality correctly</td>
<td>11</td>
<td>5</td>
<td>12</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>4. Synonym, explanation, class definitions</td>
<td>13</td>
<td>8</td>
<td>10</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>5. Absence of nonsensical answers</td>
<td>11</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>6. Responds &quot;don't know&quot;</td>
<td>11</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>7. Appropriate concepts</td>
<td>12</td>
<td>5</td>
<td>10</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>8. Consistency</td>
<td>11</td>
<td>5</td>
<td>11</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>9. Equal performance on C &amp; V Average in intelligence</td>
<td>13</td>
<td>6</td>
<td>13</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>10. Absence of ambiguous answers</td>
<td>10</td>
<td>3</td>
<td>10</td>
<td>2</td>
<td>6</td>
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<table>
<thead>
<tr>
<th>Organic Cues</th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Impaired memory</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>2. Impaired consciousness</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>3. Inadequacy and insecurity</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4. Cooperation</td>
<td>3</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Organic Cues</td>
<td>N</td>
<td>O</td>
<td>PN</td>
<td>R</td>
<td>S</td>
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<tr>
<td>------------------------------------------------------------------------------</td>
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<td>----</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5. Problems in retaining instructions</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>6. Concreteness</td>
<td>1</td>
<td>9</td>
<td>4</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>7. Perseveration</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>8. Distractible</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>9. Repetition</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>10. Rigidity</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>4</td>
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<th></th>
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</thead>
<tbody>
<tr>
<td>1. No sense of choice</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Anxiety</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Hypersensitivity</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>4. Hesitancy--uncertainty</td>
<td>3</td>
<td>8</td>
<td>10</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Behavior that controls anxiety</td>
<td>7</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>6. Rigid and inflexible</td>
<td>6</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>7. Temporary inefficiencies</td>
<td>7</td>
<td>8</td>
<td>11</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>8. Concern about correctness of response</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>9. Indecisive</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10. Conventional</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>1</td>
<td>6</td>
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<table>
<thead>
<tr>
<th>Retardate Cues</th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Limited level of concepts</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>2. Wants to interact with examiner</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
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</tr>
</tbody>
</table>
### Retardate Cues

<p>| | | | | |</p>
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<tr>
<th></th>
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<tbody>
<tr>
<td>3. Retardate personality traits</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>4. Broken speech</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>5. Poor syntax</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>10</td>
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<td>8. Affable, dull personality</td>
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<td>9. Passive, dependency</td>
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### Schizophrenic Cues

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<td>3. Distorted ideas</td>
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<td>5. Intact functioning in some areas</td>
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CUE USAGE: FULL CUES CONDITION

Below are listed shortened versions of the cues given to the judges in the Full Cues condition (See Appendix F for entire cues). Following each cue is the number of times it was judged present in 18 judgments of six protocols representing each of the five categories. (N--Normal; O--Organic; PN--Psychoneurotic; R--Retarded; S--Schizophrenic)

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The dissertation submitted by August J. Crivolio has been read and approved by the following Committee:

Dr. William A. Hunt, Chairman
Professor, Psychology, Loyola

Dr. Ronald E. Walker
Professor, Psychology and
Acting Dean, College of Arts and Sciences,
Loyola

Dr. Jeanne M. Foley
Associate Professor, Psychology, Loyola

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

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

Date 8/17/73

Advisor's Signature