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The linguistic representation: A measurement of progress.

Jacqueline Graham Marymee

THE LINGUISTIC REPRESENTATION: A MEASUREMENT OF PROGRESS

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Jacqueline Graham Marymee

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THESIS ACCEPTANCE

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Committee

Name	Department
Fred D. Sluth, Ph.D.	Psychiatry/Psychology
Elton L. Carter	Communication

Chairman

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Chapter I

Introduction to the Study

Introduction

Bandler and Grinder (1975) suggest that humans, when they speak, make a series of choices about the form they use to communicate their experience. Their experience of the world (a representation) is communicated in a "complete linguistic representation of their experience"--the Deep Structure (Bandler & Grinder, 1975, p. 35). The Surface Structure is the result of making the series of choices which Bandler and Grinder (1975) describe as "a sentence or sequence of words which we recognize as a well-formed group of words in our language" (p. 35). Thus, we have a Meta-representation--a representation (Surface Structure) of the full linguistic representation (Deep Structure).

Bandler and Grinder (1975) use this process to model what we do when we represent our experiences and communicate the experiences--a Meta-model. This model has been adapted to therapy. During therapy a series of verbal transactions takes place between the client and therapist. Bandler and Grinder (1975) state that "the therapist is attempting to find out what model of the world the client has" (p. 40). As described previously, the client describes in therapy his model of the world--the Surface Structure. Bandler and Grinder (1975) explain that "these Surface Structures will contain deletions (the missing parts of the world)" (p. 40). The client's model of experiences is impoverished if it has pieces missing, and this implies limited

choices for behavior (Bandler & Grinder, 1975). Perls (1973) discusses choice-limiting behaviors in relation to the inability to discriminate and states that when an individual's sense of orientation is disturbed "he has lost his freedom of choice, he cannot select appropriate means to his end goals, because he does not have the capacity to see the choices that are open to him" (p. 24).

The Meta-model of therapy can be used to recover the missing pieces of the client's experience. Bandler and Grinder (1975) further state that "in general, the effectiveness of a particular form of therapy is associated with its ability to recover 'suppressed' or missing pieces of the clients' model" (p. 43). Bandler and Grinder (1975) in Patterns of the Hypnotic Techniques of Milton Ericksen, M.D., discuss models as "maps of these complex patterns of behavior and these maps then allow other people to learn and use these behavior patterns" (p. 1).

In studying Bandler and Grinder's Structure of Magic I and Grinder and Bandler's Structure of Magic II, one is presented with a model of therapy--a technique called the Meta-model. Using this model of therapy assists the therapist in mapping the client's process of reasoning from the client's language. The premise of the Meta-model is that what a person actually experiences and how that experience is perceived, interpreted, and then verbally expressed, is usually different. Language is not the actual experience; language is a representation of that perception of an experience. Bandler and Grinder (1975) believe that persons in therapy block themselves from choices available to them and restrict their world. Using the

Meta-model as a therapeutic technique, one can change the client's model of the world by using the client's language as a map of his/her choice-limiting perception of the world. Once the map is discovered, new highways can be put into the map.

Choice-limiting behavior is accomplished by the use of "three universals of human modeling: generalization, deletion, and distortion" (Bandler & Grinder, 1975, p. 14). We use these general processes to accomplish extraordinary and unique growth-producing activities and yet the same processes can be used to block our growth. Bandler and Grinder (1975) describe generalization as "the process by which elements or pieces of a person's model become detached from their original experience and come to represent the entire category of which the experience is an example" (p. 14). We use this process to learn. For example, touching a hot burner will burn us and then we generalize this experience to recognize that hot things are not to be touched without caution. Overgeneralization of this experience to a perception that anything hot is dangerous and should be avoided would limit our choices in the world.

We can use the process of deletion and "selectively pay attention to certain dimensions of our experience and exclude others" (Bandler & Grinder, 1975, p. 15). Effectively using deletion, we can tune out noise which is distracting to concentration. On the other hand, deletion can be used to defeat ourselves. For example, we could block important and caring messages from our experience and eventually lower our self-worth. The power of deletion is exemplified when considered in relation to a statement by Miller, Galanter, and Pribram (1960):

> The essence of words is that they summarize many past experiences into a manageable unit; that is, they produce or represent a temporal integration of many diverse experiences. The use of words as a tool of thinking or reasoning or problem-solving, therefore, means that a huge number of past experiences are being effective in determing present behavior. (p. 139)

If these experiences are deleted, the ability to problem-solve and reason is limited.

The third process, distortion, "allows us to make shifts in our experience of sensory data" (Bandler & Grinder, 1975, p. 16). Fantasy helps us to be creative and is the process used by artistic geniuses. Using distortion to limit the experiences in our world is seen in the way a person perceives an event in a negative manner even though in reality the event was meant to be positive.

Survey of the Literature

From the survey of literature, investigations of schizophrenic language have yielded inconsistent results. For almost every study that demonstrated a difference in the performance of the subjects with schizophrenia and subjects without schizophrenia, contradictory evidence supporting similarities of the two groups was also found. Among the many aspects of language which have been tested are word meaning and association, disturbances of free and idiosyncratic speech, language perception, contextual cues, selective and inhibitory functions of attention, editing processes, referent communication disturbances, and semantic generalizations.

Laffal (1961) discussed the changes in the language of an individual with schizophrenia during psychotherapy. He examined the speech of a schizophrenic patient for one year during the course of therapy. His records demonstrated a change in the quality of language used after six months. The measurement of change was evaluated through contextual analysis (where words are categorized on the basis of similarity or synonymity of reference). This involved tabulation of frequencies of categories appearing in close association with each other. Laffal concluded that "psychological integration is accompanied by greater structuring of the category profile or by reduction of the diversity and dispersion of category choices in speech" (p. 427). Essentially, the patient's language structure changed in the direction of construction and organization during therapy.

Salzinger, Portnow, and Feldman (1964) studied verbal behavior of subjects with schizophrenia and subjects without schizophrenia. Salzinger et al. describe schizophrenic speech as "overly concrete or overly generalized speech" (p. 849). They tested the communication ability of individuals with schizophrenia by use of the Cloze procedure, which is described as a measure of readability where subjects guess the words which have been deleted from a given passage. Two factors determined a correct response--the syntactical structure and the content of surrounding words. Of the subjects used, 13 were diagnosed with schizophrenia and 12 were not. The measurement of all incorrectly guessed words (different from each other) showed little difference between the nonschizophrenic and schizophrenic groups.

Salzinger et al. (1964) concluded that "normals and schizophrenics do not differ from each other under all circumstances" (p. 858).

Moroz and Fosmire (1966) supported Salzinger et al.'s use of the Cloze procedure. Two groups of subjects (6 patients and 6 undiagnosed persons) were tested in a comprehensibility test in which every fifth noun, pronoun, verb, adverb, or adjective was deleted. Their results confirmed that individuals with schizophrenia were not grossly different than individuals without schizophrenia, in their ability to comprehend.

Laffal (1965) discussed the importance of verbal stimulation and deviant verbal response, acquisition of association, the rational function of language, and how the individual with schizophrenia distorts language. Laffal focused on word associations and disturbances in free speech. He used a system of category analysis in his studies of the schizophrenic speech. Categorization, in this case, is "on the basis of relatedness of reference, including, but not limited to synonymity" (p. 184).

Following Salzinger et al.'s study, de Silva and Hemsley (1977) used the Cloze procedure to look at language perception in schizophrenia. One aim of the study was to investigate how the amount of context provided affected language perception. Three prose passages were used as the instrument of the Cloze task on 30 individuals with schizophrenia and 20 without schizophrenia. The findings showed that individuals with schizophrenia failed to improve on the Cloze task and didn't do as well as individuals without schizophrenia with increasing

context. The conclusions drawn, after comparing this study with others, are essentially unclear (de Silva, 1977).

Lawson, McGhie, and Chapman (1964) studied perception of speech in individuals with schizophrenia after gathering words in meaningful relationship to each other. Lawson et al. hypothesized that "schizophrenic patients will be less able than normal subjects to improve their performance by utilizing increasing degrees of contextual organization" (1964, p. 376). They also hypothesized that with randomly selected words the schizophrenic group would do about as well as the normal group. The subjects (14 patients and 14 staff members) were presented with three passages of various degrees of contextual constraint and asked to write down what they could remember. In overall difference in performance between the two groups, the schizophrenic group performed at a lower level. Interaction between length of passage and group was not significant. The main result in the area of organization (contextual constraint) demonstrated that individuals with schizophrenia show an inability to use the increasing levels of organization to improve. Lawson et al. proposed that individuals with schizophrenia are deficient in selective and inhibitory functions of attention.

Levy and Maxwell (1968) stressed the fact that individuals with schizophrenia appear to have difficulty in speech perception and need more cues to reproduce verbal material accurately. Levy and Maxwell (1968) in their literature survey noted that Lawson, McGhie, and Chapman (1964) found nonschizophrenic subjects were more able to make use of contextual cues. In a word task, individuals with

schizophrenia, depression, and "normals" were compared. Results showed that "normals" did better than "schizophrenics and depressives" (Levy & Maxwell, 1968, p. 312). Levy and Maxwell concluded that individuals with schizophrenia showed impairment in the ability to make use of contextual cues.

Johnson, Weiss, and Zelhart (1964) looked at similarities and differences between nonpsychotic and psychotic subjects in response to verbal stimuli. The subjects were 150 college students and 40 psychotic males. From the Thorndike-Large word frequency tables, 50 words were selected and rated on a good-bad scale. The results showed "a remarkable similarity in their ordering of words along a good-bad continuum" (p. 223). Johnson et al. (1964) concluded that "verbal response habits do not break down in psychosis to as large a degree as is generally believed" (p. 225).

Cromwell and Dokecki (1968) explain schizophrenic language as being a disattention interpretation. During therapy, "what a person says and the way he says it" is the major basis for diagnosis (Cromwell & Dokecki, 1968, p. 209). The thought process of the patient is inferred from his/her language. Cromwell and Dokecki discussed the differences in opinion existing as to whether all individuals with schizophrenia reveal deviances in language. They stressed that a "great portion of the language of schizophrenics is coherent and indistinguishable from the language of normal individuals" (p. 212). Dokecki, Polidoro, and Cromwell (1965) reported that in studying idiosyncratic associative response, "poor premorbid schizophrenic groups consistently have lower mean levels of

commonality" of response than nonschizophrenic groups but "good premorbid schizophrenic groups did not differ" from the control group (p. 213). They described how individuals with schizophrenia, in dealing with categories, included elements that do not belong or excluded an element that did belong. Cromwell and Dokecki (1968) proposed a theory that "in schizophrenia is the inability to disattend from stimuli" (p. 249). This disattention factor causes associative interference which leads to uncommon associations. This theory relates to Silverman's (1964) filtering of stimuli (high and low stimuli output).

In 1967, Cohen and Camhi demonstrated the performance of subjects with schizophrenia in a word-communication task. The performance of 72 subjects with schizophrenia and 72 subjects without schizophrenia in the speaker and in the listener roles were compared. Cohen and Camhi (1967) found that "schizophrenic speakers were inferior to normal speakers" but that "schizophrenic listeners were approximately as accurate as were their normal counterparts" (p. 243).

Smith (1970) studied associative and editing processes in schizophrenic communication. Smith wanted to expand on Cohen and Camhi's study (1967) so he designed a study to determine whether the speaker deficit reflected the malfunctioning of an edition process. Smith (1970) used 12 males with schizophrenia and 12 without for a control group. The subjects were given two speaker tasks, one of which required only an editing process. Results indicated that subjects without schizophrenia communicated better than subjects with schizophrenia in both the editing and associative tasks. Smith (1970)

concluded that speakers with schizophrenia could not effectively edit their messages.

Krauss and Weinheimer (1967) experimented with the effect of referent similarity and communication mode on verbal encoding. Stimulus materials (24 Munsell color chips) were shown to 30 subjects in two groups (the Monologue condition and the Dialogue condition). Results showed that the:

> way in which a referent is encoded in communication is affected by factors extrinsic to the referent itself. Encoding should also be affected by the speaker's emotional state and the relative stress placed on accuracy vs. speech of communication. (p. 363)

Fuller and Kates (1969) compared word associations of 20 subjects without schizophrenia and two groups of 20 subjects with schizophrenia. The Ken Rosanoff word association list was used. The subjects were evaluated on their responses to stimulus words. Results showed that the commonality of response data and the number of idiosyncratic associations did not differ significantly between the groups. Fuller and Kates (1969) concluded that the verbal response repertoires of subjects with schizophrenia were very similar to those of subjects without schizophrenia.

Lisman and Cohen (1972) researched self-editing deficits in schizophrenia by using "free" and "idiosyncratic" instructions and stimulus words. All stimulus words were printed on 3 x 5 cards, randomized, and given to 48 subjects of two groups. Under idiosyncratic instructions, individuals with schizophrenia produced

more common responses than individuals without schizophrenia. Comparisons showed that the second group were faster than individuals with schizophrenia in responding to free instructions. The associative response frequency totals from all conditions emphasized that individuals with schizophrenia were equal to the control group.

Cohen, Nachmani, and Rosenberg (1974) tested referent communication disturbances in subjects with acute schizophrenia. The method involved a speaker being shown an explicit set of objects and then instructed to describe one of the objects. A listener was then asked to pick out the referent (object) on the basis of the description. The subjects, 24 patients with schizophrenia and 24 nonpatients, were given stimulus items selected from the Farnsworth-Munsell 100-Hue Test. Results showed that the communication accuracy of speakers with schizophrenia was less than speakers without schizophrenia with an increase of intraset similarity.

Neuringer, Fiske, Schimdt, and Goldstein (1972) tried to verify Chapman, Chapman, and Miller's (1964) work on individuals with schizophrenia being less responsive to contexts and disregarding cues to meanings of words. Neuringer et al. did three separate studies; the first two looked at the mean number of strong and weak errors, and the third at whether the individuals with schizophrenia would adhere to only strong meaning definitions. Three groups of 20 subjects were used (chronic schizophrenics, neuropsychiatric controls, and brain-damaged clients). The results indicated no significant differences in the first two groups. The individuals with schizophrenia were able to utilize weak meaning definitions and association as well as individuals

without schizophrenia. These findings do not support Chapman's studies from 1964. The primary reason given to explain the differences in results were the subject types. In Chapman et al.'s (1964) study, subjects without a mental disorder were the control group and in the current study all subjects were psychiatric patients.

Silverman (1972) studied the speech of psychiatric subjects using the Cloze procedure but testing the differences of deleting every fourth word as opposed to every fifth. Silverman hypothesized that "in schizophrenia (sic) speech, disorganization occurs as a result of omission of 'appropriate' words . . ." (1972, p. 255). Monologues of 14 subjects (only two nonpatients) were taped and every fourth word was deleted and from a copy of the tape every fifth was deleted. Four raters tried to restore the blanks in the monologues. Silverman stated that due to the modest number of subjects, definitive conclusions were not drawn although he felt the study did support his first hypothesis--as a result of omission of certain words, disorganization occurs.

Mourer (1973) compared the response of subjects with schizophrenia and without schizophrenia to a word meaning task. Mourer was investigating the excessive errors of semantic generalizations of the subjects with schizophrenia. A list of words was presented in four stages and in various orders to 26 males with schizophrenia and 26 male aides (controls). Mourer's prediction that subjects with schizophrenia would exhibit a greater number of generalized errors was supported only in one of the four stages of the task--the initial training stage. In the other three tasks, both groups were either

parallel or differences were accounted for on the basis of other than subject group.

Purpose of the Study

From the survey of literature, investigations of schizophrenic language have yielded inconsistent results. For almost every study that demonstrated a difference in the performance of the subjects with schizophrenia and subjects without schizophrenia, contradictory evidence supporting similarities of the two groups was also found. Among the many aspects of language which have been tested are word meaning and association, disturbances of free and idiosyncratic speech, language perception, contextual cues, selective and inhibitory functions of attention, editing processes, referent communication disturbances, and semantic generalizations.

Laffal (1965) focused on how the individual with schizophrenia distorted language. de Silva and Hemsley (1977) and Levy and Maxwell (1968) found that the schizophrenic groups failed to improve their perception with increasing context. Lawson et al. demonstrated that subjects with schizophrenia were unable to use increasing levels of organization to improve performance. Smith (1970) and Cohen et al. (1974) found that subjects without schizophrenia communicated better than subjects with schizophrenia in both the speaker and listener role.

Other studies demonstrated fewer differences in the language of the two groups. Salzinger et al. (1964) and Moroz and Fosmire (1966) showed little difference in subjects with and without schizophrenia. Johnson et al. (1964) found a remarkable similarity in ordering of words within the groups. Cohen and Camhi (1967) examined word-

communication tasks and found that listeners with schizophrenia were as accurate as the listeners without schizophrenia. Fuller and Kates (1969) found the two groups to be similar in word associations. In a self-editing deficit study, Lisman and Cohen (1972) emphasized that subjects with schizophrenia were equal to subjects without schizophrenia. Neuringer et al. (1972) discussed that subjects with schizophrenia used weak meaning definitions as well as subjects without schizophrenia.

In reviewing these studies, the results obtained tend to add a degree of ambiguity regarding a significant difference in the language behavior of the psychiatric subject versus the nonpsychiatric subject. One major issue is that of judging therapeutic progress by assessing a change in verbal behavior. Although using the patients' language as a representational map of their world seems logical, and is recommended by Bandler and Grinder, it seems prudent to investigate its actual usefulness. Bandler and Grinder's guide to therapy--the Meta-model--uses the patients' structure of language, their map of the world, as a therapeutic tool which is helpful in tracing the Surface Structure back to the Deep Structure. In the survey of literature for this study, research was not found which focused on comparing the particular diagnostic group of schizophrenic and nonschizophrenic groups and their use of generalization, deletion, and distortion, as postulated by Bandler and Grinder (see Appendix A). If one is to continue to judge therapeutic progress by the decreasing maladaptive use of these three processes, it would seem essential to have a guide for appropriate and inappropriate usage of the three universals of human modeling.

Hypotheses

H_1 Subjects with schizophrenia use the process of generalization as do subjects without schizophrenia.

H_2 Subjects with schizophrenia use the process of distortion as do subjects without schizophrenia.

H_3 Subjects with schizophrenia use the process of deletion as do subjects without schizophrenia.

H_4 Subjects with schizophrenia will identify accurate statements as do subjects without schizophrenia.

Chapter II

Research Design and Procedures

Subjects and Setting

In all, 60 subjects were included in this study. Twenty subjects with a primary diagnosis of schizophrenia from the Nebraska Psychiatric Institute (NPI) Day Treatment Center and 40 undiagnosed subjects--20 freshman students (major of study unknown) and 20 senior or graduate level students in the Department of Communication at the University of Nebraska at Omaha volunteered to participate (see Appendix B for the criteria used to classify subjects as having schizophrenia). Subjects with a secondary diagnosis of organic brain syndrome, mental retardation, or a known history of family violence were excluded from the study. These subjects were excluded because of the need to have subjects with an adequate memory to complete the procedure and to prevent distressing subjects further if they had experienced family violence. Subjects were assured of confidentiality and the University of Nebraska Institutional Review Board Guidelines for the Protection of Human Subjects in Research Studies were followed. A research proposal including a full description of the study, an informed consent form, and an exemption information form was approved (see Appendix C).

Instruments

NPI subjects were determined to have an ability to recall information if they (a) scored above 69 on the Wechsler Memory Scale or (b) successfully completed at least one semester of college as

documented in the patient file. The other subjects reported that they had completed one or more semesters of college.

Demographic data including age, educational level, and sex were obtained on all 60 subjects.

Interrater reliability was accomplished by asking seven members of the professional staff employed at the Nebraska Psychiatric Institute to participate as raters. Their professions included psychology, social work, psychiatry, nursing, and education.

The professionals were given the definitions below in order to foster their understanding of the four categories of linguistic representation as used in this study.

Rater Definitions

Accurate Statements--facts that are given in the news article.

Generalization Statements--statements which categorize a specific experience into representing an entire category of which it is a member; usually these statements are characterized by words such as always, all, everyone, never, anyone, etc.

Distortion Statements--statements in which the actual information is embellished on, to create a different relationship among the facts presented.

Deletion Statements--statements which contradict or differ from the facts which are given in the article (this is a way of identifying portions of the Deep Structure which were removed and did not appear in the Surface Representation).

The raters were then asked to read a news article (see Appendix D) and to judge which of 32 statements (see Appendix E) concerning the

article matched the respective categories of linguistic representation. Six of the seven raters were in 100% agreement. One rater judged three of the statements different from the other raters.

Procedure

The subject groups were asked to read four paragraphs of a news article taken from Newsweek magazine (see Appendix D). The subjects were asked to listen to a taped recording of the news article while reading the news article. Visual and auditory modalities were used to address the possibility of the test becoming one of reading comprehension. The same oral and written directions were given to all three groups. The subjects were given a list of 32 statements (see Appendix E) and, without referring back to the news article, were asked to check the statements that closely matched what they might say in their own words about the news article. The number of statements checked by the subjects were then categorized and counted. The statements were categorized to reflect their linguistic representation in the following areas: accuracy of statements, presence of deletions, presence of distortions, and the use of generalizations.

Chapter III

Results

In all, 60 subjects participated in this study (20 individuals diagnosed with schizophrenia, 20 undiagnosed second-semester freshman students, and 20 undiagnosed senior/graduate students majoring in communication). A study was made to determine the relationships between the dependent variables (the categories of representation) and the independent variables (the three groupings of subjects).

Frequency Distribution of Age, Sex, and Education

Basic demographic data concerning age, sex, and years of education were obtained on all subjects and presented below. No attempt was made to match subject groups according to these variables or to analyze the experimental data according to these classifications. However, the demographic data are presented for the purpose of potential study replication.

Table 1

Age Ranges of All Subjects

Age Range	Frequency
1. 18-24	30
2. 25-34	19
3. 35-44	4
4. 45-54	4
5. 55-over	3
All Subjects	60

Essentially, these results say that most of the subjects were young, in fact, only 11 were over age 34 years. Thirty of the subjects were less than 25 years of age.

Table 2

Age Range Distribution by Subject Groups

Age Range	Groups I	II	III
1. 18-24	4	14	12
2. 25-34	9	4	6
3. 35-44	3	0	2
4. 45-54	4	0	0
5. 55-over	0	2	0
	20	20	20

In Group I, the most frequent age range was 25-34 years and in Groups II and III the most frequent age range was 18-24 years. In Group I, seven subjects out of a total of 20 were 35 years and older, while two of the 20 subjects in Group II were over 54 years. In Group III, only two subjects were over age 34.

Table 3

Sex Distribution by Subject Groups

	Groups		
Sex	I	II	III
Men	9 (.45)	18 (.90)	7 (.35)
Women	11 (.55)	2 (.10)	13 (.65)
	20	20	20

In Groups I and III there were more women than men, but in Group II the men outnumbered the women by 90%.

Table 4

Educational Level of All Subjects

Years of Education	Frequency
9	2
12	8
13	8
14	12
15	11
16	12
17	4
18	3
	60

Frequency Distribution of All Subjects	
Mean	14.28
Mode	14.00
Median	14.00
Std. Dev.	1.97
Range	9.00
Variance	3.87

Out of 60 subjects, results show that only three subjects did not have a high school diploma. The most frequent level of education was 14 years.

Table 5

Education Distribution by Subject Groups

	Groups		
Years of Education	I	II	III
9	2	0	0
12	7	1	0
13	6	2	0
14	3	9	0
15	0	5	6
16	1	2	9
17	0	1	3
18	1	0	2

Group III had the highest educational levels and Group II was somewhat higher than Group I in frequencies of higher educational levels.

Inferential Statistics

The results of the completed statements were analyzed utilizing the Kruskal-Wallis one-way ANOVA and the Mann-Whitney U test. Each of the categories of representation contained eight statements.

Table 6

Categories with Respective Statement Numbers

Category	Statement Number
Accuracy	5, 6, 10, 15, 17, 19, 21, 28
Generalization	2, 4, 7, 9, 13, 22, 24, 26
Distortion	8, 11, 18, 20, 23, 25, 29, 32
Deletion	1, 3, 12, 14, 16, 27, 30, 31

Multiple-Sample Test: Kruskal-Wallis. Nonparametric procedures are used in a multiple-sample case, such as this one, because assumptions in normality within populations or a lack of homogeneity of variances among populations are not required in these procedures. The Kruskal-Wallis test is used as an alternative method of analysis of variance. Mattson (1981) explains that the Kruskal-Wallis test uses more of the data than a median test and that it is appropriate when comparing several populations in a situation in which samples have been drawn independently of the population. Mattson (1981) goes on to say that the Kruskal-Wallis results in an H statistic: "[an] index of the magnitude of the discrepancies between the average ranks for samples and the overall average rank" (p. 365). The greater the discrepancies, the greater the evidence against the null hypothesis. In this study the hypotheses are stated in the positive form in order to delineate the results of each category of linguistic representation.

Two-Sample Test: Mann Whitney U. Two sample tests are used when two populations are to be compared based on independent samples from

each. The Mann-Whitney U is regarded as the best of the order tests for two samples. The Mann-Whitney is a test of the null hypothesis that two populations have distributions that are the same. The rejection of the null hypothesis implies only that the populations differ in some way. The value of U will be extreme when there is little overlap between samples. Mattson (1981) declares that the "Mann-Whitney U provides a powerful alternative to the independent sample t test for a difference between means" (p. 349). Every score from one sample is compared with every score from the other sample, and thus uses more of the information in the data.

The Kruskal-Wallis and the Mann-Whitney U demonstrated the following results in relation to each of the four categories.

Accuracy Category

Results. The results of a Kruskal-Wallis analysis of variance (Table 7) show no significant difference among the three groups of subjects' ability to identity accurate facts and information.

Table 7

Kruskal-Wallis Accuracy Category

Cases	Mean Rank	Groups
20	28.08	I
20	34.70	II
20	28.73	III
60		

chi-square = 1.85, significance level = 0.40

A frequency distribution of the responses of the three groups to the individual accurate statements is shown in Table 8.

Table 8

Frequency Distribution of Accuracy Statements

Statement Number	Groups		
	I	II	III
5	17	17	19
6	14	19	15
10	18	17	14
15	9	16	15
17	16	17	20
19	8	11	10
21	16	18	16
28	9	11	9

Statement 15 was somewhat difficult to identify for Group I. Groups I, II, and III had difficulty identifying Statements 19 and 28. With the exclusion of Statements 15, 19, and 28, the accuracy category shows a fairly even distribution among the three groups.

Analysis of the accuracy category indicates that individuals with schizophrenia are just as accurate in identifying facts and information as undiagnosed subjects. This particular category supports the hypothesis of no difference in subject groups.

Generalization Category

Results. The results of the Kruskal-Wallis analysis of variance (Table 9) show a significant difference between the three groups of subjects' use of generalization. This points to a significant difference between at least two of the subject groups.

Table 9

Kruskal-Wallis Generalization Category

Cases	Mean Rank	Groups
20	36.65	I
20	36.67	II
20	20.17	III
60		

chi-square = 11.19, significance level < 0.01

A follow-up Mann-Whitney U test (Table 10) shows the difference is between Groups II, III and I, III. No difference exists between Groups I, II.

Table 10

Mann-Whitney U Generalization Category

Groups	Mean Rank	Z	2-tailed p
I	21.20	-0.39	0.69
II	19.80		
II	25.38	-2.73	<0.01*
III	15.63		
I	25.95	-3.02	<0.01*
III	15.05		

A frequency distribution of the responses of the three groups to the individual generalization statements is shown in Table 11.

Table 11

Frequency Distribution of Generalization Statements

Statement Number	Groups		
	I	II	III
2	2	3	2
4	5	6	2
7*	14	14	6
9	0	0	0
13	6	0	1
22*	10	11	4
24	2	1	0
26*	14	12	7

From the frequency tables, it appears that Statement 9 was not chosen by any groups. This statement read "All motorcycle riders are violent." Perhaps the word "all" discouraged subjects from checking this item. Groups I and II had similar frequencies on Statements 7, 22, and 26. These items read as follows: (7) "Everyone feels that the father had it coming."; (22) "We all feel that the father deserved what he got."; and (26) Anyone who treats his children like Clyde Curly deserves what this man got." Essentially these statements say the same message and are judgmental statements.

The results of the frequency distribution show consistency in thinking of Groups I and II and possibly refutes the notion that subjects checked items indiscriminately. No significant differences were found in this study between the subjects with schizophrenia and freshman students in the use of generalizations. Group III (senior/graduate students) used a fewer number of generalizations compared to subject groups I and II.

Distortion Category

Results. The results of the Kruskal-Wallis analysis of variance (Table 12) show a significant difference between the three groups of subjects' use of distortion.

Table 12

Kruskal-Wallis Distortion Category

Cases	Mean Rank	Groups
20	36.05	I
20	32.97	II
20	22.48	III
60		

chi-square = 8.01, significance level = 0.02

A follow-up Mann-Whitney U test (Table 13) shows the difference is between Groups II, III and I, III. No difference exists between Groups I, II.

Table 13

Mann-Whitney U Distortion Category

Groups	Mean Rank	Z	2-tailed p
I	21.70	0.71	0.48
II	19.30		
II	24.17	-2.24	0.03*
III	16.83		
I	24.85	-.2.56	0.01*
III	16.15		

A frequency distribution of responses of the three groups to the individual distortion statements is shown in Table 14.

Table 14

Frequency Distribution of Distortion Statements

Statement Number	Groups		
	I	II	III
8	1	2	1
11*	13	13	8
18	1	0	0
20	1	0	0
23	1	0	0
25	1	0	0
29	5	3	0
32	0	0	0

Statement 11 was checked by all three groups and it read as follows: "One son was permanently brain-damaged because of the father's temper." Because of the information in the story, this was an easy assumption to make and perhaps a logical inference. This may be a poor statement and if thrown out would change the significance level.

There are no differences between subjects with schizophrenia and the freshman students in the distortion category.

Deletion Category

Results. The results of the Kruskal-Wallis analysis of variance (Table 15) show a significant difference between three groups of subjects' use of deletion.

Table 15

Kruskal-Wallis Deletion Category

Cases	Mean Rank	Groups
20	44.60	I
20	25.10	II
20	21.80	III
60		

chi-square = 23.55, significance level < 0.001

A follow-up Mann-Whitney U test (Table 16) shows the differences are between Groups I, II and I, III. No difference exists between Groups II, III.

Table 16

Mann-Whitney U Deletion Category

Groups	Mean Rank	Z	2-tailed p
I	27.35	-3.84	<0.01*
II	13.65		
II	21.95	-0.89	0.37
III	19.05		
I	27.75	-4.08	<0.01*
III	13.25		

A frequency distribution of responses of the three groups to the individual deletion statements is shown in Table 17.

Table 17

Frequency Distributions of Deletion Statements

Statement Number	Groups		
	I	II	III
1	7	3	0
3	8	2	2
12	10	3	3
14*	5	0	0
16	4	2	1
27*	3	0	0
30	1	0	1
31	9	3	3

Groups II and III did not mark Statements 14 and 27. These two items read as follows: (14) "The police are to blame because they ignored the situation."; and (27) "This is another gory story made up to scare people." Group I checked Items 14 and 27. Information which disputes these two statements is given in the story and in the directions given on the typed sheet and on the cassette tape.

It is of great import that no differences were found between Groups II, III (the freshman and graduate students). The significant difference in Group I (subjects with schizophrenia) and the findings strongly suggest that the use of the deletion process is statistically higher than subjects not diagnosed with schizophrenia.

Chapter IV

Conclusion to the Study

Review of the Purpose

According to the DSM III (described in greater detail in Appendix A), the individual with schizophrenia demonstrates symptoms of delusions, hallucinations, or a disturbance in thinking whereby that person would make statements completely unrelated to the subject and the statements would lack meaningful relationship--shifting from one frame of reference to another. Typically, the individual with schizophrenia would become preoccupied with illogical thinking and misperceives the environment. Once a set of symptoms have been identified and a diagnosis is attached to that person, other attributes may be lost or ignored. The result may be to think of all persons placed in the same class through evaluation to be similar for other variables, such as use of generalizations, deletions, and distortions. Such stereotyping may lead to faulty conclusions.

Discussion of the Four Categories of Linguistic Representation

Accuracy. In the accuracy category, the findings clearly supported the hypothesis of no difference among Groups I, II, and III; consequently, the conclusion is that subjects with schizophrenia are able to identify as many accurate facts of an event as freshman students and senior/graduate students.

Generalization. In the generalization category, the findings yielded a significant difference between the subjects with

schizophrenia and the senior/graduate students, but no difference between the subjects with schizophrenia and the freshman students. However, a significant difference was noted between the freshman students and the senior/graduate students. The senior/graduate students made fewer generalizations than either the individuals with schizophrenia or freshman students. One possible explanation of the differences found with the senior/graduate students, and rightly so, is that the senior/graduate students are majoring in communication and thus have more interest and specialization in identifying generalization phrases.

Since no significant difference was found between the freshman students and subjects with schizophrenia, the hypothesis of no difference is supported in this category. According to these results, persons with schizophrenia do not use more generalizations than undiagnosed persons.

Distortion. In the distortion category, there were no differences found between subjects with schizophrenia and freshman students, but both groups made more distortions than the senior/graduate students. The senior/graduate students were majoring in communication and thus had more interest and specialization in the area of linguistic representation; therefore, this may account for their ability to distort less.

These findings do not support the widely accepted assumption that individuals with schizophrenia distort reality, but do support the notion that schizophrenia is not the primary factor in distorting events. The area of distortion warrants further investigation.

These findings are in accord with the findings of several studies previously cited--that of no difference between subjects with schizophrenia and undiagnosed subjects participating in various verbal behavior tasks. For example, Cohen and Camhi's study described earlier stated, "schizophrenic listeners were approximately as accurate as were their normal counterparts." These findings question the accepted belief that a primary characteristic of a schizophrenic illness is a thought disorder which interferes with the individual's ability to concentrate and organize ideas.

The significance level of 0.32, as determined by the Kruskal-Wallis procedure, is supportive of the hypothesis of no difference. These results could have far-reaching effects in areas such as court testimony. Has, for example, pertinent information to a case been disregarded or discounted because the witness had schizophrenia or was under psychiatric treatment and; consequently, was not viewed as capable of accurately reporting events?

Deletion. In the deletion category, the findings are different than the findings previously discussed in the categories of generalization, distortion, and accuracy. The significance level for the deletion category, as determined by the Kruskal-Wallis, was <0.001. On further investigation between groups, the findings yielded a highly significant difference in the schizophrenic subjects' use of the deletion process as compared to the freshman subjects and the senior/graduate subjects. The Mann-Whitney U procedure in Groups I and II yielded an alpha level of <0.001 and between Groups I and III an

alpha level of <0.001. The subjects with schizophrenia were statistically different from the freshman group and senior/graduate groups.

The significance level of <0.001 is statistically impressive, so much so in the category of deletion, that the hypothesis of no difference is rejected. In this category, the subjects with schizophrenia differed from the freshman students and the senior/graduate students.

This result poses many questions. How could the subjects in with schizophrenia delete a significant portion of information and still remain as accurate as the other subjects in identifying information? Is the problem area deleting the information before it is received or is the problem an inability to retrieve the information for communication purposes? Bandler and Grinder imply that the "missing pieces" are there (that the information was processed). Their implied statement is "the effectiveness of a particular form of therapy is associated with its ability to recover 'suppressed' or missing pieces of the clients' model" (p. 43).

These results have implications for the practice of psychotherapy. For example, during a psychotherapy session, if deletion of information is a major concern, the therapist would need to continually assess how much of the session is being deleted and redundancy of pertinent therapeutic aspects would be in order, in an attempt to compensate for the deletion process. Furthermore, the therapist would not know how much information was deleted from the client's initial linguistic representation of his/her world. The therapist expects a distortion

of the events communicated during therapy. To expect the client to delete information to the degree these results show is a surprise.

These results suggest that the individual with schizophrenia would have difficulty making appropriate decisions when the decisions are based on partial information; in such instances, an erroneous decision would not be necessarily a lack of poor judgment, but rather a lack of information. An inability to make appropriate decisions relates to Bandler and Grinder's description of "limited choices for behavior" as stated in this study on page 1. The results of this study support Bandler and Grinder's concept of the way clients use the process of deletion and that "these Surface Structures will contain deletions (the missing parts of the world)" (p. 40).

Limitations and Implications of the Study

Interpretations of the study's findings are limited as far as generalizing the results to a standard population.

The instrument of testing--the 32 statements categorized as accuracy statements, presence of distortions, presence of deletions, and the use of generalizations--should be accepted as tentative indicators of statistical findings because I believe the statements need some revision. Although the interrater reliability was 86%, the quality of the statements may not be definitive enough as to be without doubt, categorically. As summarized in the results, instrument analysis suggests that a few statements, to say the least, need changed. Comparing the statement analysis of the results to the one rater disagreeing with the six raters who were in 100% agreement,

the one rater's classification of statements should have been given more attention.

Also included as an instrument, the news article from Newsweek requires some mention. The emotional substance of the news article may have influenced the deletion process, as well as the other categories.

As it is virtually impossible to be without perceptual differences, the reader should be aware of two premises:
(a) what a person experiences and how that experience is verbally described by that same person is not exactly the same; and
(b) each person's perception of the same experience is not exactly the same. These perceptual differences correlate with the difficulty of interrater reliability.

Within the freshman student group and senior/graduate student group, one variable not accounted for was a guarantee that all subjects were actually psychiatrically undiagnosed. This information was not elicited.

An additional area of contention which should be noted is a disparity of definitions. The definitions given to raters as a basis for interrater reliability were not exactly the same as the definitions stated in Bandler and Grinder's Structure of Magic and used in the introduction of the study. This factor alone may have raised questions in understanding the results.

Recommendations for Future Research

Methodological recommendations for future study of linguistic representations between subjects with schizophrenia and undiagnosed subjects, would be to revise the statement's instrument and method for categorizing statements. Increasing the standards of interrater reliability to 100% agreement within raters would increase confidence in the instrument. Concise category definitions corresponding more closely with Bandler and Grinder's definitions of the three universals of human modeling would add consistency to the entire study.

A random sample of all subjects would increase the generalizability of the study. Also, an accountability of the variables (diagnosed subjects or undiagnosed subjects) would make the results clearer.

The outcome of the study was significant enough to warrant further investigation in the particular category of deletion. A study to compare the use of the deletion linguistic representation between other subject groups, such as subjects with schizophrenia and subjects with other mental disorders, would further test Bandler and Grinder's work.

A particular area of study would be deciphering whether the information is deleted before it is decoded or if it is lost before or during the encoding process.

By using a more sophisticated instrument, comparing subjects with schizophrenia and random samples of subjects other than a freshman class may yield significant evidence in the area of identifying accurate statements.

The relationship of Cromwell and Dokecki's disattention factor in schizophrenia and the deletion results of this study, although unclear, seems disturbing. What type of relationship do these two factors have and/or is one cause for the other?

A replication of the study covering all types of schizophrenia would be a positive step for the future.

References

American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.

Arieti, Silvano, M.D. (1955). Interpretation of schizophrenia. New York: Robert Brunner.

Bandler, R., & Grinder, J. (1975). Patterns of the hypnotic techniques of Milton Erickson M.D. (Vol. I). California: Meta Publications.

Bandler, R., & Grinder, J. (1975). The structure of Magic I. California: Science and Behavior Books.

Bandler, R., Grinder, J., & DeLozier, J. (1977). Patterns of the hypnotic techniques of Milton H. Erickson, M.D. (Vol. II). California: Meta Publications.

Brown, R. (1970). Psycholinguistics. New York: MacMillan.

Cohen, B. D., & Camhi, J. (1967). Schizophrenic performance in a word-communication task. Journal of Abnormal Psychology, 72(3), 240-246.

Cohen, B. D., Nachmani, G., & Rosenberg, S. (1974). Referent communication disturbances in acute schizophrenia. Journal of Abnormal Psychology, 83(1), 1-13.

Cooper, W. E. (1979). Speech perception and production. New Jersey: Albex.

de Silva, W. P., & Hemsley, D. R. (1977). The influence of context on language perception in schizophrenia. British Journal of Social and Clinical Psychology, 16, 337-345.

Fuller, G. D., & Kates, S. L. (1969). Word association repertoires of schizophrenics and normals. Journal of Consulting and Clinical Psychology, 33(4), 497-500.

Grinder, J., & Bandler, R. (1976). The structure of magic II. California: Science and Behavior Books.

Hays, W. L. (1963). Statistics for psychologists. New York: Holt, Rinehart, and Wilson.

Jackson, D. D. (1968). Therapy, communication, and change. California: Science and Behavior Books.

Johnson, R. C., Weiss, R. L., & Zelhart, P. F. (1964). Similarities and differences between normal and psychotic subjects in responses to verbal stimuli. Journal of Abnormal and Social Psychology, 68(2), 221-226.

Knapp, R. G. (1978). Basic statistics for nurses. Canada: John Wiley.

Korzybski, A. (1933). Science and sanity. Connecticut: The International Non-Aristotelian Library.

Krauss, R. M., & Weinheimer, S. (1967). Effect of referent similarity and communication mode on verbal encoding. Journal of Verbal Learning and Verbal Behavior, 6, 359-363.

Kviz, F. J., & Knafl, K. A. (1980). Statistics for nurses: An introductory text. Little, Brown.

Laffal, J. (1961). Case report: Changes in the language of a schizophrenia patient during psychotherapy. Journal of Abnormal and Social Psychology, 63(2), 422-427.

Laffal, J. (1965). Pathological and normal language. New York: Atherton Press.

Lawson, J. S., McGhie, A., & Chapman, J. (1964). Perception of speech in schizophrenia. British Journal of Psychiatry, 110, 375-380.

Levy, R., & Maxwell, A. E. (1968). The effect of verbal context on the recall of schizophrenics and other psychiatric patients. British Journal of Psychiatry, 114, 311-316.

Lisman, S. A., & Cohen, B. D. (1972). Self-editing deficits in schizophrenia: A word-association analogue. Journal of Abnormal Psychology, 79(2), 181-188.

Mattson, D. E. (1981). Statistics: Difficult concepts, understandable explanations. C. V. Mosby.

Miller, G. A., Galanter, E., & Pribram, K. (1960). Plans and structure of behavior. New York: Holt, Rinehart, and Winston.

Moroz, M., & Fosmire, F. R. (1966). Application of Cloze procedure to schizophrenia language. Diseases of the Nervous System, 27, 408-410.

Mourer, S. A. (1973). A prediction of patterns of schizophrenic error resulting from semantic generalization. Journal of Abnormal Psychology, 81(3), 250-254.

Neuringer, C., Fiske, P., Schmidt, M. W., & Goldstein, G. (1972). Adherence to strong verbal meaning definitions in schizophrenics. The Journal of Genetic Psychology, 121, 315-323.

Perls, F. (1973). The Gestalt approach: Eyewitness to therapy. California: Science and Behavior Books.

Poole, M. S., & Folger, J. P. (1981). A method for establishing the representational validity of interaction coding systems: Do we see what they see? Human Communication Research, 8(1), 26-42.

Salzinger, K., Portnoy, S., & Feldman, R. S. (1964). Verbal behavior of schizophrenic and normal subjects. Annals of the New York Academy of Sciences, 105, 845-860.

Satir, V. (1972). Peoplemaking. California: Science and Behavior Books.

Sentence by public opinion. (1984, March 5). Newsweek, p. 58.

Silverman, G. (1972). Psycholinguistics of schizophrenic language. Psychological Medicine, 2, 254-259.

Smith, E. E. (1970). Associative and editing processes in schizophrenic communication. Journal of Abnormal Psychology, 75(2), 182-186.

Underwood, B. J., & Hughes, R. H. (1950). Gradients of generalized verbal responses. American Journal of Psychology, 63, 422-430.

Watzlawick, P., Beavin, J., & Jackson, D. (1967). Pragmatics of human communications. New York: W. W. Norton.

Watzlawick, P., Weakland, ?., & Fisch, ?. (1974). Change. New York: W. W. Norton.

Wilcoxon, F., & Wilcox, R. A. (1964). Some rapid approximate statistical procedures. New York: Lederle Lab.

Appendix A

Definitions

The purpose of this section is to define precisely all of the terms in the study in such a way as to prevent any possible misunderstanding about their meaning.

Deep Structure--the full linguistic representation from which the Surface Structures of the language are derived.

Deletion--the process by which selected portions of the world are excluded from the representation created by the person modeling; within language systems, deleting is a transformational process in which portions of the Deep Structure are removed and, therefore, do not appear in the Surface Structure Representation.

Distortion--the process by which the relationships which hold among the parts of the model are represented differently from the relationships which they are supposed to represent; one of the most common examples of distortion in modeling is the representation of a process by an event; within language systems, this is called nominalization.

Generalization--the process by which a specific experience comes to represent the entire category of which it is a member.

Meta-model--a representation of a representation of something; for example, language is a representation of the world of experience, transformational grammar is a representation of language and, therefore, a Meta-model.

Surface Structure--the sentences, derived from Deep Structure, which native speakers of the language speak and write.

Source. Bandler, R., & Grinder, J. (1975). The structure of magic I. California: Science and Behavior Books, pp. 215-217.

Appendix B

Diagnostic and Statistical Manual of Mental Disorders (DSM III)

The diagnosis of each subject with schizophrenia was determined by using the standard criteria from the DSM III manual. The first edition of the DSM appeared in 1952, and it was the first official manual of mental disorders to contain a glossary of descriptions of the diagnostic categories. DSM II went into effect in 1968. In 1974, the American Psychiatric Association appointed a Task Force on Nomenclature and Statistics and consequently developed the DSM III. The resulting glossary reflects the most current state of knowledge regarding mental disorders. In an attempt to resolve various diagnostic issues, the Task Force relied on research evidence relevant to various kinds of diagnostic validity. The evaluation of diagnostic reliability was achieved by having pairs of clinicians make independent diagnostic judgments of several hundred patients.

The diagnostic categories are classified as mental disorders. Each of the mental disorders is:

> conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is typically associated with either a painful symptom (distress) or impairment in one or more important areas of functioning (disability). (p. 363)

In DSM III, "there is no assumption that each mental disorder is a discrete entity with sharp boundaries (discontinuity) between it and other mental disorders, as well as between it and No Mental Disorder" (p. 6).

A classification of mental disorders does not classify individuals, rather, what are being classified are disorders that individuals have. Another factor worth considering is that all individuals described as having the same mental disorder are not alike in all important ways.

DSM III describes what the manifestations of the mental disorders are, and only rarely attempts to account for how the disturbances come about. The approach is descriptive in that:

> the definitions of the disorders generally consist of descriptions of the clinical features of the disorders. These features are described at the lowest order of inference necessary to describe the characteristic features of the disorder. (p. 7)

The mental disorders are grouped together on the basis of shared clinical features.

DSM III provides specific diagnostic criteria as guides for making each diagnosis since such criteria enhance interjudge diagnostic reliability.

Schizophrenic Disorders

Characteristic symptoms of schizophrenic disorders involve multiple psychological processes, deterioration from a previous level of functioning, onset before age 45, and a duration of at least six months. At some phase of the illness schizophrenia always involves delusions, hallucinations, or certain disturbances in the form of thought. The approach taken excludes illnesses without overt psychotic features. Schizophrenia always involves deterioration from a previous level of functioning during some phase of the illness in such areas as work, social relations, and self-care. The characteristic symptoms involve multiple psychological processes. The major disturbance in the content of thought involves delusions that are often multiple, fragmented, or bizarre (i.e., patently absurb, with no possible basis in fact). A disturbance in the form of thought is often present. This would include loosening of associations, in which ideas shift from one subject to another completely unrelated or only obliquely related to the subject, without the speaker showing any awareness that the topics are unconnected. Statements that lack a meaningful relationship may be juxtaposed, or the individual may shift idiosyncratically from one frame of reference to another. The major disturbances in perception are various forms of hallucination. The disturbance often involves blunting, flattening, or inappropriateness of affect. The sense of self that gives the normal person a feeling of individuality, uniqueness, and self-direction is frequently disturbed. Nearly always there is some disturbance in self-initiated,

goal-directed activity, which may grossly impair work or other role functioning. Frequently there is a tendency to withdraw from involvement with the external world and to become preoccupied with egocentric and illogical ideas and fantasies in which objective facts are obscured, distorted, or excluded. Various disturbances in psychomotor behavior are observed, particularly in the chronically severe and acutely florid forms of the disorder.

Source. American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author, pp. 181-187.

Appendix C

THE UNIVERSITY OF NEBRASKA

INSTITUTIONAL REVIEW BOARD GUIDELINES FOR THE PROTECTION OF HUMAN SUBJECTS IN RESEARCH STUDIES

Institutional Review Board
Conkling Hall #5008
University of Nebraska Medical Center
42nd and Dewey Avenue
Omaha, Nebraska 68105
(402) 559-6463
January 1, 1983

University of Nebraska

The University of Nebraska
Institutional Review Board
For the Protection of
Human Subjects

Office of the Executive Secretary, IRB
5008 Conkling Hall
University of Nebraska Medical Center
42nd & Dewey Avenue
Omaha, NE 68105
(402) 559-6463

EXEMPTION INFORMATION FORM

PROPOSAL TITLE: Distortion: A Measurement of Therapy

INVESTIGATOR(S): Jacqueline L. Marymee

DEPARTMENT/SCHOOL: Communication at UNO

ADDRESS: South 60th and Dodge

Omaha, NE 68132

TELEPHONE NUMBER: 554-2600

DESCRIPTION OF RESEARCH PROTOCOL. Include in lay language the purpose and procedures to be applied to human subjects.

The purpose of this study is to compare the degree of distortion in communication used by 2 groups--a group with psychiatric diagnoses and a group without psychiatric diagnoses. The psychiatric group will come from the NPI Day Treatment Center which include clients who are living independently in the community and not inpatients. Clients with diagnoses of organicity, mental retardation, declared mentally incompetent or sensitive to aspects of sexual behavior and violence will be excluded from the study.

Subjects will be asked to listen to a tape of a story and then asked to complete a statement checklist of their description of the story. If they have not had an intellectual evaluation they will be asked to complete the Wechsler Memory Test.

EXEMPTION CATEGORY: This proposal qualifies for exemption under 45 CFR 46:101(b) paragraph(s) _____ and is justified as follows:

This study involves human subjects in which the only activities of involvement are #2, and #3 under Categories of Research that Qualify for Exempt Status in the Institutional Review Board Guidelines.

(continued)

INFORMED CONSENT: Describe how subject consent will be obtained. If the study does not require consent, it should be so stated and justified:

Volunteers will be invited to listen to a tape of a story and then asked to complete a 32 statement check list about the story. Before listening to the tape, they will be given the consent form and asked to read and sign it.

Jacqueline L. Marynee
SIGNATURE OF INVESTIGATOR

Jan. 31, 1985
DATE

SIGNATURE OF ADVISOR
(for student investigator)

Jan 31, 1985.
DATE

The IRB reserves the right to request the investigator provide additional information concerning the proposal.

University of Nebraska Medical Center

Nebraska Psychiatric Institute
602 South 45th Street
Omaha, NE 68106
(402) 559-5000

Merrill T. Eaton, M.D., Director

Distortion: A Measurement of Therapy

INVITATION TO PARTICIPATE

You are invited to participate in this research project.

PURPOSE OF THE STUDY

The purpose of this study is to compare how different people describe an event or situation.

EXPLANATION OF PROCEDURES

You will be asked to complete a check list of 32 statements after hearing a story on tape. If necessary you will be asked to take one memory test.

DESCRIPTION OF RISKS AND DISCOMFORTS

There are no known risks associated with these tests.

DESCRIPTION OF BENEFITS

You will not benefit from this study.

ASSURANCE OF CONFIDENTIALITY

Your name will not be used in the study, nor will there be any way to link your performance on the tests with you.

WITHDRAWAL FROM THE STUDY

Participation is voluntary. Your decision whether or not to participate will not affect your present or future relationship with the Nebraska Psychiatric Institute Day Treatment Center. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time.

OFFER TO ANSWER QUESTIONS

If you have any questions, please do not hesitate to ask. If you think of questions later, please feel free to contact me.

YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE. YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE HAVING READ THE INFORMATION PROVIDED ABOVE. YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP.

_____ _____

SIGNATURE OF SUBJECT DATE

_____ _____

SIGNATURE OF INVESTIGATOR DATE

REQUEST FOR REVIEW

ADDITIONAL COMMENTS:

Jacqueline L Maupin — January 28, 1985

SIGNATURE OF PRINCIPAL INVESTIGATOR* — DATE

Program Coordinator of Day Treatment Center

POSITION

*Signature certifies the investigator to the best of his/her knowledge is in full compliance with the Federal and University of Nebraska Regulations governing Human Subject Research as stated in the IRB Guidelines for the Protection of Human Subjects.

INVESTIGATOR CHECK LIST: Three copies (one original and two copies) of each of the following are submitted in the sequence listed:

1. **Request for Review** (Is the Request for Review form complete?)
2. **Informed Consent Form(s)** [Are Adult, Parental, Youth, Child consent/assent forms provided where appropriate?]
3. **Detailed Research Protocol** (Is the protocol sufficiently detailed and complete?)
4. **Investigational Drug Study Registry*** (Is the Drug Study Registry complete?)

*Investigational Drug Protocols Only

DEPARTMENTAL PEER REVIEW: The Chairperson, authorized delegate, or appointed peer review committee is responsible for review of the proposed investigation. Signature of approval certifies that the proposed investigation has been approved, and it is the opinion of the reviewer that the investigator is in full compliance with both Federal and University of Nebraska Regulations governing human subject research as stated in the IRB Guidelines for the Protection of Human Subjects.

SIGNATURE OF APPROVAL — 12 February 1985

DATE

Robert J. Ellingson, PhD, MD

NAME

Director of Research
Chairman, Research and
Publications Committee

POSITION

052388

Appendix D

News Article from Newsweek

You will be asked to answer some questions after hearing this tape. Although the names and dates have been changed, this is a true story. Please listen carefully.

Lester Coody thought that he should kill his father, but almost anyone who knew the man might have offered similar advice. Clyde Coody was in the words of one California lawman, "a man who could use some killing." He seduced two teen-age daughters and had recently begun fondling his 11-year-old girl. To help pay for a pleasure boat he forced his wife into prostitution. He was a child beater, and once sliced his older son's head open with a screwdriver (the boy now lives in an institution). In April of 1982, his younger son, then 18 and a professed born-again Christian, sighted him down the barrel of a 12 gauge shotgun and literally blew him apart. It was a slaying in cold blood, but public opinion approved: last week, with an outpouring of mail to help him, state Judge Mert Young sentenced Lester to two years' service as a missionary overseas.

This southern California Gothic tale showed again that the law stops at a family's front door all too often. Twice police investigated complaints that Coody was sexually abusing his daughters: twice the mother refused to verify the charges. Authorities managed to place one girl in foster care, but the terror continued. The morning of the shooting, young Coody awoke to find his father smashing his mother's head into a microwave oven. He tried to stop the assault, then frantically called police. When they arrived, Mrs. Coody refused to press charges. Clyde Coody said he would kill his son if he saw him again. So Lester lay in wait outside the house for his father, believing he had a duty to kill his father. Then he motorcycled to the police station to surrender: "I just killed my father," he said.

His lawyer, Alan Day, pleaded temporary insanity. Prosecutor Brent Biggs, eyeing the extraordinary family history, dropped the charges down to voluntary manslaughter. According to social service reports, Clyde Coody, the father, was himself the product of chaotic and violent home life. His father was an alcoholic and abused his wife and children. The senior Coody was continuing that violent pattern when he was stopped short by his son.

In January, Judge Young found Lester guilty of killing a man "the planet can rotate quite nicely without." What punishment fit the crime? From the start citizens had been writing him to urge leniency. A total of 700 letters arrived supporting the son's action. Only a few recommended prison. The judge did not disappoint his public. He placed Lester on probation for five years, two of which he must spend in "Peace Corps-like missionary work." The judge said in his chambers, "We're not talking about two weeks at the Hilton. We're talking about years of hard work." Prosecutor Biggs was dubious about the sentence, however, "Cody's father may have had a lot to do with it," he said, "but the fact remains that he is a violent person."

Appendix E

Check the following statements that closely match what you might say in your own words about this story.

1. De There is nothing that can explain Clyde Coody's (the father) behavior.
2. G Any wife who allows such abuse must enjoy it.
3. De The police ignored complaints when they were called.
4. G Anyone who kills another person should be severely punished.
5. Ac The father threatened his son's life.
6. Ac Public opinion, for the most part, supported the judge's decision for leniency.
7. G Everyone feels that the father had it coming.
8. Dis The judge was a pacifist.
9. G All motorcycle riders are violent.
10. Ac The son felt it was his duty to kill his father.
11. Dis One son was permanently brain-damaged because of the father's temper.
12. De A two-year sentence in "Peace Corps-like" duties was the total punishment for killing his father.
13. G You should never hurt anyone no matter what the situation.
14. De The police are to blame because they ignored the situation.
15. Ac The son was a born-again Christian.
16. De The Prosecuting Attorney was pleased with the judge's decision.
17. Ac The father's upbringing may have something to do with his behavior.
18. Dis Television is the cause of the violence which occurred in this family.
19. Ac Social agencies attempted to aid the daughters.
20. Dis The judge probably abuses his own children.
21. Ac The mother chose more than once not to press charges against the father.
22. G We all feel that the father deserved what he got.
23. Dis The family members were born-again Christians.
24. G People who live in California tend to be on the wild side anyway--this thing happens all the time.
25. Dis The mother was a prostitute before she married Clyde Coody.
26. G Any man who treats his children like Clyde Coody deserves what this man got.
27. De This is another gory story made-up to scare people.
28. Ac The older son was injured by the father.
29. Dis The son turned himself in because he thought it would go easier on him.
30. De If the son had been a religious person, this probably would not have happened.
31. De The judge found the son innocent of voluntary manslaughter.
32. Dis This murder would have been avoided if the mother had a decent job.