# THE EFFECT OF INSTRUCTION OF E-PRIME COMMUNICATION ON LEVELS OF POTENTIAL FOR MALADJUSTMENT

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# CHAPTER I

## INTRODUCTION

Previous work concerning the relationship between the extent of the usage of the "is of identity" and maladjustment seems not to have generated the amount of additional research it may merit. The term "is of identity" represents a process whereby an individual uses a form of the verb "to be" as if it were an equal sign, implying in a non-aware manner an identity or sameness between two or more non-identical things or objects or processes, etc. For example, imagine a person speaking about politics who says "a republican is bad." The "is" which identifies the subject of the description with the label "bad" typifies what Korzybski (1958) and other general semanticians refer to as the "is of identity." As one of his main proposals, Korzybski (1958) has stated that "nothing is identical with anything else" (p. 205) and throughout his works he emphasizes that the structure of the language people use to describe the world around them should have a similar structure to that world. The acceptance of the idea that the structure of a useful language resembles closely the structure of the realities that the language symbolizes implies that language can have a powerful effect on the degree to which individuals "succeed" in interacting appropriately with their environment. Since the unthinking, unaware use of the "is of identity" implies identicalness in a world that contains no identical items, it leads

people into using language of a structure unsimilar to the structure of the world and hence to misevaluation and misunderstanding.

On the basis of the writing of Korzybski and other general semanticians, Bourland (1965) proposed a method by which the extent of the usage of the "is of identity" could undergo a consciously induced reduction. Bourland calls this method the language of E-Prime and defines it operationally by the notation "E' = E - e, where E stands for the English language, e stands for all forms of the verb 'to be', and E' stands for E-Prime" (p. 112). In a later publication, Bourland (1968) states that "by completely avoiding 'to be' we introduce an important psychological factor: a linguistic implementation of the non-Aristotelian assumption of non-identity" (p. 63). Although eliminating the verb "to be" totally from the English language may seem extreme, the employment of E-Prime in many situations would rarely constitute inappropriateness. For instance, when using the "is of identity" the statement "Tom is stupid" becomes possible. However, substituting and translating into E-Prime might render something much more meaningful such as "Tom scored at the 30th percentile on the X intelligence scale" or "Tom wrote incorrect answers for two of ten division problems" or "Tom behaved inappropriately when he refused to take the examination," etc.

Bourland's (1965) premise that by introducing an implementation of the non-Aristotelian assumption of non-identity into language in the form of E-Prime a reduction of the extent of the individual's usage of the "is of identity" can occur appears not to have undergone testing by empirical experimentation. Although the concept of E-Prime seems to have support in the available literature, the lack of more exacting

research does not support the use of E-Prime in the treatment of potential for maladjustment.

## Significance of the Study

This study aims at the important area of empirically evaluating certain concepts reached by thoughtful conjecture, but not rigorously tested experimentally. Several types of current therapy methods, such as Rational Emotive Therapy, base much of their theory content on non-Aristotelian assumptions, such as the law of non-identity, and make use of various techniques which, like E-Prime, seek to aid clients in growing more aware of their semantic misevaluations and to aid them in thinking about their problems rationally or as Bourland (1965) puts it, "Forcing us to use actional, functional, straightforward statements" (p. 122). Therefore, if instruction of E-Prime communication, which seeks to modify language patterns in a specific way, reduces levels of potential for maladjustment, then support will also accumulate for other types of therapy that seek to aid clients by encouraging them to more accurately perceive their problems and to act on the basis of those more accurate perceptions. As Rogers (1952) stated,

> the whole task of Psychotherapy is the task of dealing with a failure in communication. The emotionally maladjusted person, the 'neurotic' is in difficulty first because communication within himself has broken down, and second because as a result of this his communication with others has been damaged (p. 83).

## Limitations

1. The sample for this study included 80 Oklahoma State University student volunteers from freshman level English and sociology courses during the summer session of 1978.

2. Generalizability of this study will extend only to those persons who participate in this particular study; however, hopes exist that the results may suggest that the treatment may have applications for other groups.

3. Because the participants will have awareness of their involvement in a study, the "Hawthorne Effect" could play a role in their performance. To aid in combating this phenomena the "potential for maladjustment" assessment for each student will occur by using a standardized, yet indirect, methodology.

## Assumptions

Assumptions made about and pertaining to this study included the following:

1. random assignment of individuals within groups and random assignment of groups to either treatment or control conditions will occur;
2. although instrument administrations will not occur with students in a single group administration, the administration of the tests will occur in a uniform fashion;
3. although treatment session administrations will not occur with students in a single group treatment session, the administration of the instruction during the treatment sessions will occur in a uniform fashion;
4. students, randomly assigned to the treatment group, will have the ability to learn to use the E-Prime communication.

## Statement of Problem

Although the concepts set forth by Korzybski (1958) and others support the premise advanced by Bourland (1965) that implementation of E-Prime will reduce the extent of the usage of the "is of identity" and, thus, limit one possible factor contributing to the potential for maladjustment, no concrete evidence supports this notion at present. Bourland (1965) suggests that implementation of E-Prime will reduce levels of potential for maladjustment by limiting the extent of the use of language or language patterns of a structure dissimilar to the structure of the non-verbal world and the unawareness of that dissimilarity in the individual. If this suggestion has validity then the possibility of designing an experiment that will reflect this process empirically should exist. The primary concern of this project, therefore, centers on gathering evidence that will aid in determining if the introduction of E-Prime into language habits will have a significant effect on reducing levels of potential for maladjustment.

## Definition of Selected Terms

The following definitions will serve to clarify certain terms used throughout the study:

Scores obtained on the Is of Identity Test will serve as definition for extent of the usage of "is of identity."

E-Prime is defined as the English language minus all forms of the verb "to be."

Potential for maladjustment has to do with the general probability or risk of behaving ineffectively in personal interaction situations. Potential for maladjustment will here have as its definition the probable

extent of ineffective behavior in the area of interpersonal relationship orientations. To measure the extent of ineffective behavior in this area, scores on the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B), devised by Schutz (1967), will lead to the response (or criterion) measure.

Ryan (1977) presents nine clusters of scores (each cluster having a label) on the Inclusion Dimension of the FIRO-B, 10 clusters of scores (each cluster having a label) on the Control Dimension of the FIRO-B, and nine clusters of scores (each cluster having a label) on the Affection Dimension of the FIRO-B. Rank ordering these clusters by three judges on each of the dimensions resulted in three rank-ordered groupings of the Ryan clusters, one for each of the three dimensions. The judges' instructions asked them to order the Ryan clusters beginning with that cluster which suggested the lowest extent of ineffective interpersonal behavior and ending with that cluster which suggested the highest extent of ineffective interpersonal behavior. The judges' instructions also asked them to complete this task using their experiential and clinical judgement as criteria for the ordering. Each judge had extensively used the FIRO-B for a minimum of three years as part of their interaction and work with clients. A definition of potential for maladjustment, for purposes of this study, will therefore consist of rank scores provided by entering each individual's scores on each of the three FIRO-B dimensions into the rank-ordered groupings. The resulting score will constitute the criterion variable for each subject.

The organismic variable in this study refers to scores of each individual subject on the Is of Identity Test.

The stimulus variable in this study consisted of one of two conditions: treatment or no treatment. The treatment consisted of two one-hour sessions that had as their goal instruction of E-Prime. Subjects underwent random assignment to either treatment or control groups and an analysis of covariance balanced the groups on the organismic variable.

The dependent variable consisted of adjusted scores on the criterion (or response) variable on the FIRO-B.

## Hypothesis

The research hypothesis below underwent examination on each of the following three criterion variables as measured by the rank-order positions on the FIRO-B: the Inclusion Dimension, the Control Dimension, and the Affection Dimension.

$H_1$: A significant difference will exist between the adjusted mean scores on the three criterion variables for treatment and control groups.

## Organization of the Study

The present chapter includes an introduction to the problem, the significance of the study, limitations and assumptions, a statement of the problem, definition of terms, and the hypothesis. Chapter II contains a review of the research literature pertinent to this study. Chapter III describes the variables, subjects, procedures, treatments, instrumentation, and the statistical analysis of the data. Chapter IV contains the findings and a discussion of the results of the study. Chapter V includes a discussion of the results of the study, conclusions, and implications and recommendations for further research.

# CHAPTER II

## REVIEW OF LITERATURE

This chapter will focus on a review of pertinent literature related to this study. The studies and other literature selected for this review fall under three main sections. The first section will include a brief review of the ideas and principles which form the foundation of E-Prime communication. The second section will highlight the relevant literature and research concerning and including investigation into the relationships between language usage and that type of maladjustment defined as the probable extent of ineffective behavior in the area of interpersonal relationship orientations. The final section will describe the development and present utilizations of E-Prime communication.

### Historical Foundations of E-Prime Communication

Ideas which form the foundation of E-Prime communication probably began with the works of Heraclitus, a Greek contemporary of Aristotle. Heraclitus contended that "no man may step twice in the same river." Upon this foundation of a process-perception of reality, a system of thought known as General Semantics began to develop, most notably in the works of Alfred Korzybski. The central theme of this science depends on the notion "that no two things are identical and that no one

thing is ever twice the same, that everywhere is change, flux, process" (Johnson, 1946, p. 26).

The science of General Semantics aims primarily at studying the relationship between language and those things and processes which language represents. Korzybski (1941) provides the analogy of map and territory to explain the relationship between language and reality. Korzybski states, "A language is like a map; it is not the territory represented, but it may be a good map or a bad map" (p. 498). He also writes:

> Two important characteristics of maps should be noticed. A map is not the territory it represents, but, if correct, it has a similar structure to the territory, which accounts for its usefulness. If the map could be ideally correct, it would include, in a reduced scale, the map of the map; the map of the map, of the map; and so on, endlessly. . . . If we reflect upon our languages, we find that at best they must be considered only as maps. A word is not the object it represents; and languages exhibit also this peculiar self-reflexiveness, that we can analyse languages by linguistic means (p. 58).

Perception would seem to constitute an essential element of any communication. Present understanding of perception indicates that it occurs as an active interaction between the perceiver and the object or process of the perception. Within each individual perceiver there exists what Piaget refers to as schemata; the symbolic internal structure within an individual which contains and/or compares and/or assimilates and/or integrates the sensory data which he obtains from his environment and/or creates within himself (Wadsworth, 1971).

Individual humans begin developing this ability at an early age. According to Wadsworth (1971) in his introductory text about the work of Piaget:

> The single most important development during the preoperational period is the development of lanuage. Around two

> years of age, the child begins to use words as symbols in place of objects. A word comes to represent an object. Initially the child uses 'one-word' sentences, but his language facility expands quickly. By the age of four the typical child has mastered the use of language. He can speak and use most grammatical rules, and he can understand when he is spoken to. The rapid development of symbolic presentation (language) is instrumental in facilitating the very rapid conceptual development that takes place during this period (pp. 64-65).

Perhaps the most relevant point made in the above quote concerns the idea that children learn early in their lives to use words as symbols in place of objects. Lee (1941) expands on this important conceptualization as follows:

> Words may be considered as pointers, indicators, forms of representation, which are intended to correspond to anything whatsoever that may exist, that may be experienced, or that anyone might want to talk about. Or put another way, words may be used for the almost endless naming of the inexhaustible electronic events, objects, persons, situations, relations, etc., observed in the world outside-our-skins, along with the sensations, feeling, beliefs, opinions, values, tensions, affective states, etc., experienced inside-our-skins. Such an analysis of the work of words makes one point inevitable: the phenomenon of language is different from the non-verbal phenomena which we represent by it. We live in two worlds which must not be confused, a world of words, and world of not-words. If a word is not what it represents, then whatever you might say about anything will not be <u>it</u>. If in doubt, you might try eating the word <u>steak</u> when hungry, or wearing the word <u>coat</u> when cold. In short, the universe of discourse <u>is not</u> the universe of our direct experience (p. 15).

This distinction seems to validate a main postulate of General Semantics: that language will have its maximum usefulness when it adequately corresponds to the real events and objects it attempts to represent. This distinction can also lead back to the analogy between maps as they represent territories compared to language as it represents reality. Korzybski (1941) presents the analogy in the following way:

1.) The map is not the territory.
2.) The map represents not all the territory.
3.) The map is self-reflexive.

It should be noticed that what has been said about map-territory relationship applies mostly to other forms of representation, and certainly applies point by point to the language-fact relationship. Thus:

1.) A word is not the fact, feeling, situation, relation, etc.
2.) A word covers not all the characteristics of an object, fact, feeling, etc.
3.) Language also is self-reflexive in the sense that in language we can speak about language (p. 205).

In many ways the men (Korzybski, Hayakawa, Johnson, Whorf, Lee, and others) who have outlined the importance of the structure of language perceive language as a metaphor of experience. An excerpt from the abstract of a paper by Murray (1972) clarifies this idea:

> Metaphor is considered the most economical and useful method of verbal communication. The creation of metaphor is based upon comparison, which becomes analogy, which condenses into metaphor. The perception of similarities of similarities is corrected by the perception of the differences in the fact-processes to give language a working predictability. Predictability is necessary to serve adequate evaluating in a world of change and complexity, of unseen and unheard structures and variables, or orderings and successions, and of their interactions. In speaking and writing, the comparisons underlying metaphor are similar to the comparisons made by the map-maker. Both are trying to bring semantic structures into correspondence with structures of fact-territories (p. 1).

Considering language as acting as a metaphor of experience belongs to disciplines other than General Semantics. For instance, Jaynes (1976) states, "Indeed, language is an organ of perception, not simply a means of communication" (p. 50). Later, in the same source, Jaynes expands his statement as follows:

> Subjective conscious mind is an analog of what is called the real world. It is built up with a vocabulary or lexical field whose terms are all metaphors or analogs of behavior in the physical world. Its reality is of the same order as mathematics. It allows us to shortcut behavioral processes and arrive at more adequate decisions. Like mathematics, it is an operator rather than a thing or repository (p. 55).

This section of the review of literature has aimed at establishing the idea that at least some similarity exists between the structure of language and the structure of the world. It attempted to examine and review the importance of the existence of the relationship between language and all it represents. It also aimed at presenting a brief overview of the theory and thought which provides the basis and justification for E-Prime communication.

## Relationships Between Language Usage and Maladjustment

This section will present relevant literature and research concerning investigation of the relationships between language usage and the potential for maladjustment. Attention will center on a specific type of language usage: the utilization of passive verbs to "imply identity" between two or more non-identical objects, processes, or events.

The potential for maladjustment has as its definition the probable extent of ineffective behavior in the area of interpersonal relationships. Ineffective behavior in the area of interpersonal relationships can include those behaviors which can lead a person to misunderstand, misevaluate, or misintepret the responses he evokes from others. It can also include the individual's ability to mistakenly attribute misunderstanding, misevaluation, and/or misinterpretation to others rather than to himself. In the words of Rogers (1952):

> the whole task of psychotherapy is the task of dealing with a failure in communication. The emotionally maladjusted person, the 'neurotic' is in difficulty first because communication within himself has broken down, and second because as a result of this his communication with others has been damaged (p. 83).

Goldfield (1973) notices the difficulties one may encounter when he states:

> the little word 'is' can mislead us into thinking that the noun on one side of 'is' equals the noun on the other side, much the same as 1 + 1 = 2. This false to fact identity obscures the differences between the written statement and life fact situations (p. 312).

Goldfield and others refer to this use of the passive verb as the "is of identity."

Weiss (1959) has shown in several studies that there exists a significant relationship between the extent of the usage of the "is of identity" and maladjustment defined in several ways. One of the contributing elements of maladjustment seems to include the range of the "is of identity." The habitual utilization of the "is of identity" clearly supports the use of language or language patterns of a structure dissimilar to the structure of the non-verbal world and the unawareness of that dissimilarity. Weiss (1961) notes that "identification can be defined as the inability of an individual to differentiate between operations in the universe and his descriptions of those operations" (p. 115).

Weiss (1959) states, "if the unthinking use of the 'is of identity' can lead to misevaluation and misunderstanding, then it may be both a precursor and a symptom of maladjustment" (p. 70). More elegantly, in the words of Santayana (1936):

> the little word <u>is</u> has its tragedies; it marries and identifies different things with the greatest innocence; and yet no two are ever identical, and if therein lies the charm of wedding them and calling them one, therein too lies the danger (p. 71).

The "danger" referred to above most likely occurs when the "is of identity" usage occurs habitually and unthinkingly. Weiss (1956) hypothesized that this danger also contributed powerfully to states of

maladjustment. He reasoned that by measuring the extent of the usage of the "is of identity" with an instrument he devised called the Is of Identity Test he would find a significant relationship between this measurement and maladjustment.

Weiss (1956) investigated the relationship between the extent of the usage of the "is of identity" (as measured by the Is of Identity Test) and maladjustment. Subjects for this study included a group of 250 individuals in correctional institutions and 250 students in the Lansing Public Schools. The study presented findings that show that as a group the institutionalized boys used the "is of identity" to a greater degree than those not institutionalized.

Several years later, Weiss (1959) reviewed his earlier work and presented two additional experiments. In the first experiment, he tested the hypothesis that the Is of Identity Test could aid in determining whether individuals habituated to the use of the "is of identity" showed less efficiency in problem solving than those who showed more efficiency. Using the time it took subjects to solve a test of spatial relations as one criteria and scores on the Is of Identity Test as the other criteria, Weiss achieved a positive correlation of .85. However, Weiss stated that because of the limitations and assumptions of the study "no conclusion can be reached except that a larger study is justified" (p. 185).

In the second experiment, Weiss (1959) constructed a "myth" scale composed of such items as "barking dogs do not bite" and "smoking stunts growth." Weiss administered the "Myth" scale and the Is of Identity Test to 34 students in a freshman orientation class and found a positive correlation of .96 between the two measures.

Weiss (1961) designed yet another study investigating the Is of Identity Test. Subjects for this study consisted of 200 college students. The purposes of the research included comparing Is of Identity Test scores with the following: a measure of intelligence, college levels, and scores from a test measuring likelihood of thinking in operational terms. A fourth purpose aimed at discovering whether the true-false nature of the Is of Identity Test led to fallacious results. Results of this research indicated no significant relationship between Is of Identity Test scores and the intelligence measure, and no significant differences between Is of Identity Test scores and college level (after an adjustment omitting students who had taken a previous course aimed at training in non-identification). A highly significant difference existed between those subjects who thought in operational terms and those habituated to the use of the "is of identity." The test designed to compare Is of Identity Test scores and random true-false tests showed no significant correlation.

The main contribution of Weiss seems to center primarily in the area of designing a paper-and-pencil test aimed at measuring the extent of a person's or group of persons' usage of the "is of identity." Using this measure, Weiss demonstrated a relationship between the extent of "is of identity" usage and certain types of social maladjustment and adjustment.

## Development and Utilization of E-Prime Communication

The final section of this review centers on the literature which concerns itself directly with the topic of this study: E-Prime communication. Very little writing exists on the subject, and no specific

studies, with the exception of this one, have investigated empirically the relationship between the use of E-Prime and maladjustive ways of relating interpersonally. Only five major references dealing specifically with E-Prime seemed relevant to this review.

Scott (1971) had the following to say about the use of an "is-less" grammer:

> More specific active verbs such as equals, differs from, measures, find, can replace the amiguous is, and we need them to distinguish between its four uses here. In arithmetic, for instance, 1 + 1 = 2, but in fact, add two one-pound forces and the result may measure anything from zero to two pounds, depending upon the angles involved and possible two other factors: statements about self-contained systems of signs differ from statements of facts.
>
> Linguists often list is as one of the ten most-used words, and the most-used verb, in English, but to say 'Grass is green' can blind us to the complex and changing cause-result relationships between the light, the air, the grass, and our eyes, which may make some grass seem what we but not everyone calls 'green' to some observers. To say 'I'm sad' may seem a report, but it judges sensations, we can say it without cause, and it may prove a deceptive or a destructive self-fulfilling prophecy: say it often enough, and you may make it true by a process of self-hypnosis (p. 47).

Bourland (1965) first coined the term E-Prime. He offered the following operational definition for E-Prime: E - e = E' when E represents the whole of the English languge, e represents the linguistic element "to be" in all its inflectional forms, and E' stands for E-Prime. Bourland (1965) states:

> This subtraction may appear trivial, but consideration will show that it introduces important structural changes. Grammatically speaking, we have given up most of the passive voice, much of the subjunctive mood, and some participial usages. More significantly, however, subject-predicate language has become impossible, the 'is' of identity cannot rise up to debilitate our statements, and we become forced to use actional, functional, straightforward statements (p. 112).

Bourland (1968), in a later publication, continued his description of E-Prime and discusses possible consequences of utilizing it:

> Certain questions vanish. One cannot ask, in E-Prime, 'What is life?' 'What is Man?' etc. We regard these as poorly structured questions. These questions involve the use of what some critics have called 'is of identity.'
>
> Some misleading elegant abbreviations become impossible, as implied in such statements as, 'We know this is the right thing to do.' These abbreviations usually involve what some call the 'is of predication.'
>
> Some verbally suppressed, but nevertheless active, role-players return to the scene. Statements reflect the fact that some human originated, repeated, stated, etc., them. The frequency of such low content forms as: 'It has been found that . . .,' 'It is known that . . .' goes to zero. E-Prime tends to invite attention to the agents involved in information transactions (p. 60).

In the same source, Bourland sums up the services offered by E-Prime as follows:

> E-Prime completely removes the insidiously easily available and culturally acceptable handmaidens of subject-predicate language and is-of-identity forms.
>
> E-Prime forces the issue by tending to make fallacious constructions more noticeable and hence more obviously needful of revision.
>
> By introducing the constraint of avoiding all forms of an all-too-commonly used linguistic form, a heightened degree of verbal consciousness becomes forced upon the given individual writer. This consciousness can lead to two particularly beneficial developments: (1) greater care in presentation through an increase in linguistic sensitivity; (2) consciousness of abstracting on a more general level (p. 62).

Several well known books in the field of psychotherapy have recently undergone revision in order to appear totally written in E-Prime. Examples include How to Live with a Neurotic (Ellis, 1975), A New Guide to Rational Living (Ellis & Harper, 1975), and Sex and the Liberated Man (Ellis, 1976).

In the introduction to A New Guide to Rational Living, Ellis and Harper (1975) make the following statement:

> The use of E-Prime itself does not completely rid writing of all kinds of overgeneralization. But it does go a long way in this direction and tends to prove most helpful. Whether, when people get used to thinking and speaking in this kind of language, they will tend automatically to do significantly less over- and under-emotionalizing and to behave more sensibly and less self-defeatingly, we cannot at the moment prove. But that remains our hypothesis (pp. xiv-xv).

## Summary

The studies and other literature reviewed in this chapter fell into three categories. The first section concentrated on a brief review of those parts of a discipline known as General Semantics which forms the foundation of E-Prime. The second section focused on the studies and literature which have investigated the usage of the "is of identity" and the relationship of that usage to several forms of maladjustment. The final section described E-Prime in terms of its possible contributions, justifications, and present utilizations.

# CHAPTER III

# DESIGN AND METHODOLOGY

## Variables

The purpose of this study consisted of determining if the introduction of E-Prime into language habits will have a significant effect on reducing levels of potential for maladjustment. Variables in this study fall under four categories: stimulus variable, organismic variable, response (or criterion) variable, and dependent variable.

### Stimulus Variable

The stimulus variable consisted of one or the other of two conditions: treatment or no treatment. The treatment consisted of two one-hour sessions that had as their goal the instruction of E-Prime communication. A detailed description of the two one-hour sessions follows under the heading "Treatment."

### Organismic Variable

The organismic variable in this study consisted of scores obtained for each subject on the Is of Identity Test, an instrument which measures the extent of a subject's usage of the "is of identity." Administration of the Is of Identity Test occurred for all subjects on June 8 and 9, 1978.

Response Variable

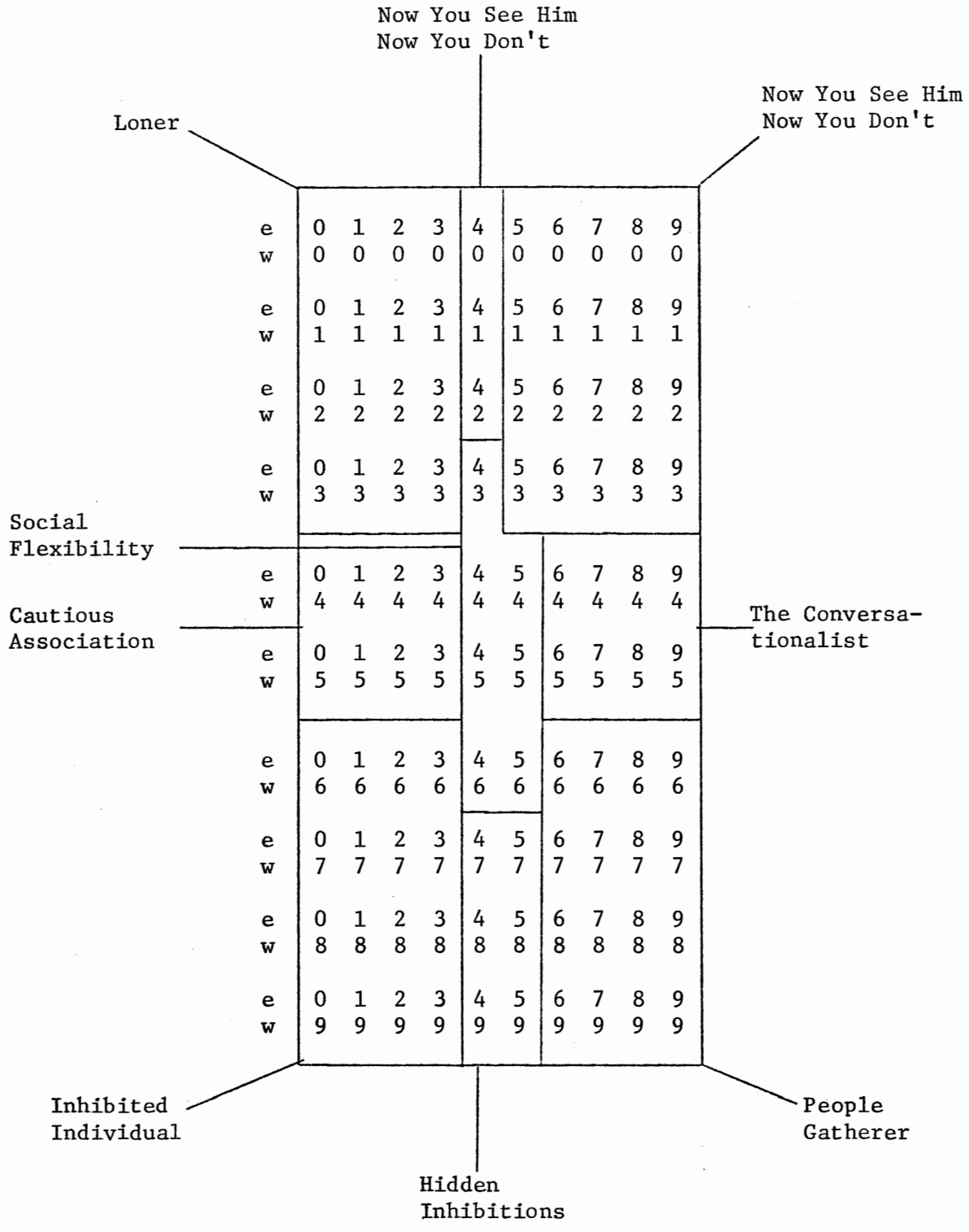
The response variables consisted of scores representing "potential for maladjustment." Determination of these scores occurred by utilizing the three-step procedure described below.

Step one consisted of obtaining scores on the Fundamental Interpersonal Relationship Orientation-Behavior (FIRO-B) scales for each subject. The FIRO-B yields scores on three dimensions: Inclusion, Control, and Affection. For each of the dimensions an "expressed" and a "wanted" score results.

Ryan (1977) organized all possible scores on each dimension of the FIRO-B into clusters. Each of these clusters of scores received a verbal label. Figures 1, 2, and 3 present the Ryan clusters for all possible scores on each of the three FIRO-B dimensions (Inclusion, Control, and Affection.)

Step two in the procedure for arriving at the value of the response variable consisted of locating the "raw" FIRO-B scores for each subject on each of the three dimensions within Ryan's (1977) clusters and transforming the numerical scores into the provided label.

The purpose of this study dictated the creation of a way to differentiate between levels of potential for maladjustment. Therefore, three well-qualified judges individually rank-ordered each of the Ryan clusters on each of the three dimensions (Inclusion, Control, and Affection). Rank ordering these score clusters by the three judges resulted in three rank-ordered groupings of the Ryan clusters, one for each of the dimensions. Because this study defined "potential for maladjustment" as the probable extent of ineffective behavior in the area of interpersonal relationship orientations, the judges' instructions asked them to rank order

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| w | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| e | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| w | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| e | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| w | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| e | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| w | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| e | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| w | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| e | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| w | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
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| w | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
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| w | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| e | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
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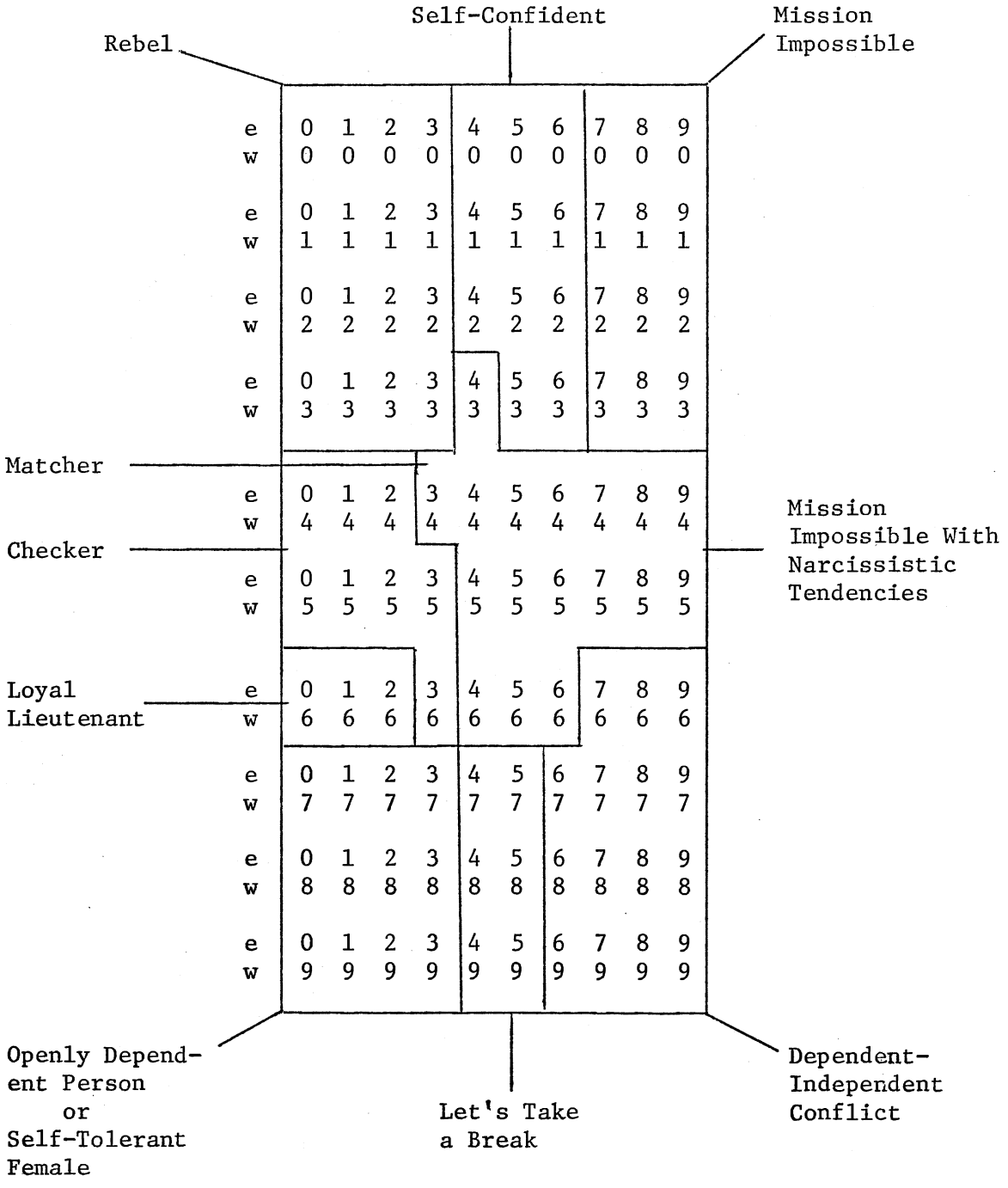
| e | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| w | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |

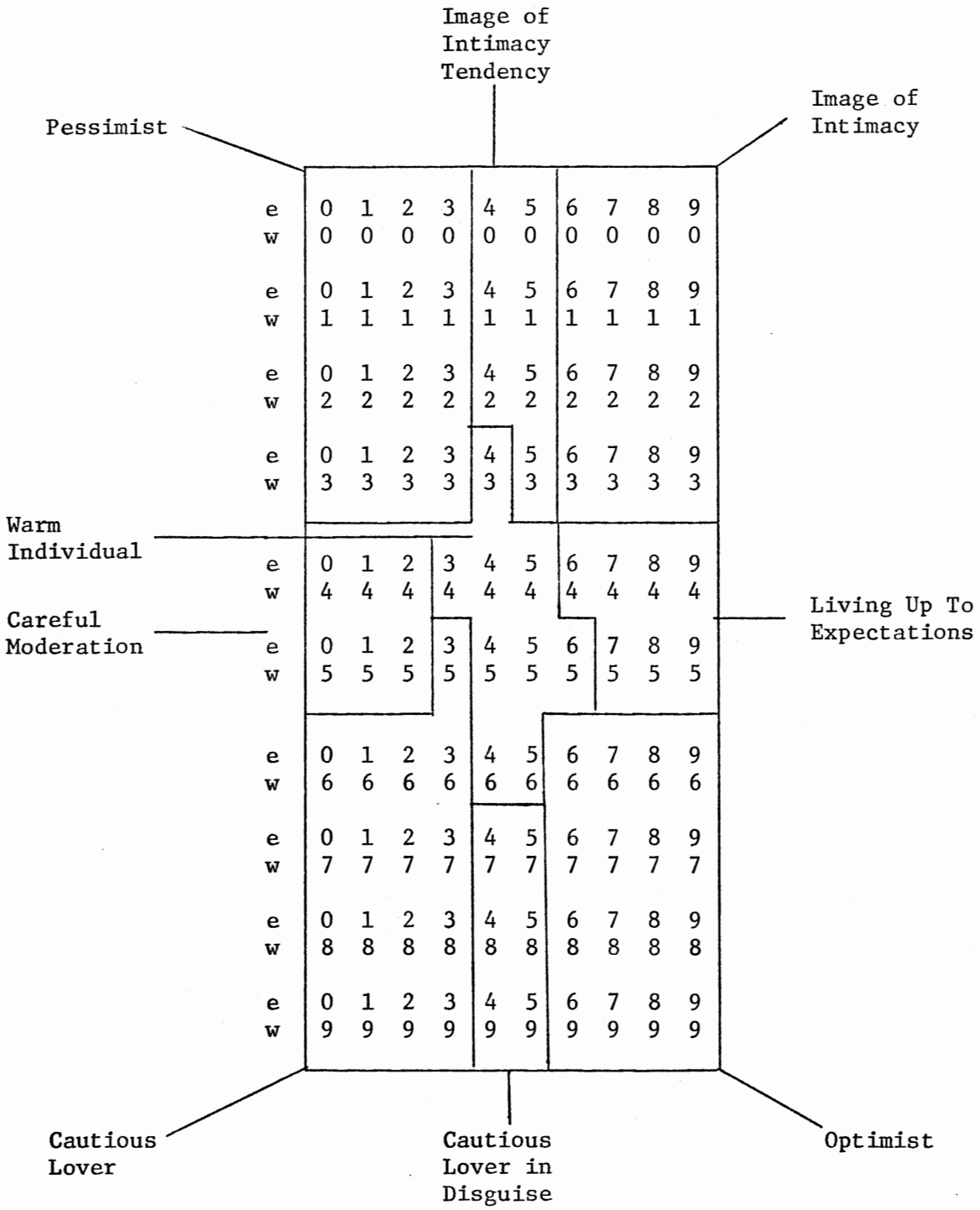
Source: Ryan (1977, p. 10).

Figure 1. One Hundred Combinations of Expressed and Wanted Inclusion Scores




Source: Ryan (1977, p. 15).

Figure 2. One Hundred Combinations of Expressed and Wanted Control Scores




Source: Ryan (1977, p. 23).

Figure 3. One Hundred Combinations of Expressed and Wanted Affection Scores

the Ryan clusters beginning with that cluster which suggested the lowest extent of ineffective interpersonal behavior and ending with that cluster which suggested the highest extent of ineffective interpersonal behavior. The judges had extensively used the FIRO-B for a minimum of three years as a part of their interaction and work with clients at the Oklahoma State University Counseling Service. The instructions to the judges asked them to complete the task of ranking the clusters using their experiential and clinical judgment as criteria for the ordering. A Kendall's Coefficient of Concordance determined for the judges' rankings on each of the dimensions showed that no significant difference at below the .02 level of probability existed between the judges' ratings. Tables I, II, and III portray and demonstrate that the judges rank-ordered the clusters in an extremely consistent manner. Each table includes a Kendall's Coefficient of Concordance for the rank-orderings across judges.

TABLE I

SUMMARY TABLE OF JUDGES' RANK ORDERINGS OF RYAN CLUSTERS ON THE INCLUSION DIMENSION WITH KENDALL'S COEFFICIENT OF CONCORDANCE FOR RANK-ORDERINGS ACROSS JUDGES

| | Ryan Clusters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Judges | A | B | C | D | E | F | G | H | I |
| 1 | 8 | 2 | 3 | 4 | 9 | 7 | 6 | 5 | 1 |
| 2 | 5 | 3 | 4 | 1 | 8 | 9 | 7 | 6 | 2 |
| 3 | 5 | 4 | 3 | 2 | 7 | 9 | 6 | 8 | 1 |

$w = .867$ (Kendall's Coefficient of Concordance).

$p < .01$.

TABLE II

SUMMARY TABLE OF JUDGES' RANK ORDERINGS OF RYAN CLUSTERS ON THE CONTROL DIMENSION WITH KENDALL'S COEFFICIENT OF CONCORDANCE FOR RANK-ORDERINGS ACROSS JUDGES

| | Ryan Clusters | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Judges | A | B | C | D | E | F | G | H | I | J |
| 1 | 1 | 4 | 2 | 10 | 5 | 7 | 3 | 6 | 8 | 9 |
| 2 | 1 | 5 | 4 | 10 | 3 | 6 | 2 | 7 | 8 | 9 |
| 3 | 1 | 8 | 3 | 9 | 4 | 6 | 2 | 5 | 9 | 10 |

$w = .927$ (Kendall's Coefficient of Concordance).

$p < .01$.

TABLE III

SUMMARY TABLE OF JUDGES' RANK ORDERINGS OF RYAN CLUSTERS ON THE AFFECTION DIMENSION WITH KENDALL'S COEFFICIENT OF CONCORDANCE FOR RANK-ORDERINGS ACROSS JUDGES

| | Ryan Clusters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Judges | A | B | C | D | E | F | G | H | I |
| 1 | 8 | 3 | 6 | 4 | 2 | 9 | 5 | 7 | 1 |
| 2 | 8 | 9 | 4 | 2 | 3 | 7 | 5 | 6 | 1 |
| 3 | 5 | 7 | 4 | 3 | 2 | 9 | 6 | 8 | 1 |

$w = .804$ (Kendall's Coefficient of Concordance).

$p < .02$.

Finally, combining the results of the rank-orderings by the individual judges yielded a single table of rank-ordered clusters for each of the three FIRO-B dimensions. Tables IV, V, and VI portray each of the named clusters within the three dimensions and the corresponding rank-ordered numerical value for each named cluster.

Step three in the process of arriving at the value of the response variable for each subject on each of the three dimensions of the FIRO-B consisted of finding the rank score for the label yielded by step two.

In summary, the response variable, also referred to as the criterion variable, on each dimension of the FIRO-B for each subject occurred by utilizing a three-step procedure. Step one consisted of obtaining a "raw" FIRO-B score on each dimension; step two consisted of transforming that "raw" score into a nominal label representing the score-cluster into which it fell; and step three consisted of transforming that nominal label into an ordinal numerical representation of the rank of that cluster within the judge-ordered set of clusters.

### Dependent Variable

The dependent variable in this study resulted from the response (or criterion) variable. Analysis of covariance techniques removed from the response variable that variance explainable by scores on the organismic variable (Is of Identity Test scores) yielded the dependent variable. Thus, the dependent variable represents only that part of the response variable not in common with the Is of Identity Test scores.

## Subjects

Subjects for this study consisted of 80 Oklahoma State University

TABLE IV

RANK-ORDERED CLUSTERS FOR THE INCLUSION DIMENSION OF THE FIRO-B

| Name | Rank |
|---|---|
| Social Flexibility | 1 |
| Conversationalist | 2 |
| Now you see him, now you don't (1) | 3 |
| Now you see him, now you don't (2) | 4 |
| Loner | 5 |
| Hidden Inhibitions | 6.5 |
| Cautious Association | 6.5 |
| People Gatherer | 8 |
| Inhibited Individual | 9 |

TABLE V

RANK-ORDERED CLUSTERS FOR THE CONTROL DIMENSION OF THE FIRO-B

| Name | Rank |
|---|---|
| Self Confident | 1 |
| Matcher | 2 |
| Rebel | 3 |
| Checker | 4 |
| Mission Impossible | 5 |
| Let's Take a Break | 6 |
| Loyal Lieutenant | 7 |
| Mission Impossible with Narcissistic Tendencies | 8 |
| Dependent-Independent Conflict | 9 |
| Openly Dependent | 10 |

TABLE VI

RANK-ORDERED CLUSTERS FOR THE AFFECTION DIMENSION OF THE FIRO-B

| Name | Rank |
|---|---|
| Warm Individual | 1 |
| Living Up to Expectations | 2 |
| Image of Intimacy Tendency | 3 |
| Image of Intimacy | 4 |
| Careful Moderation | 5 |
| Cautious Lover in Disguise | 6 |
| Optimist | 7 |
| Pessimist | 8 |
| Cautious Lover | 9 |

students enrolled in either a freshman level English composition course or a freshman level sociology course in the summer session of 1978. These subjects volunteered to take part in the study after a brief explanation of the study by the experimenter. Each subject later received a small amount of credit in their English or sociology class for their participation in the study.

Ages of subjects ranged from 17 to 38 years. The sample of all subjects included 31 males and 49 females. After the administration of the Is of Identity Test, the subjects underwent division into treatment and control groups randomly by means of a coin-toss procedure. The treatment group subjects' ages ranged from 17 to 37 years with 14 males and 26 females. The control group subjects' ages ranged from 17 to 38 years with 17 males and 23 females.

More than 80 students initially volunteered for the study, but only 80 completed all portions of the experiment. The term "subjects" in this study refers only to those participants who completed all portions of the experiment.

## Procedures

The procedures for conducting the experimental portion of this study followed a seven-step outline. The seven steps were: (1) collection of subjects, (2) administration of the organismic variable instrument, (3) division of subjects into treatment and control groups, (4) contacting subjects in the treatment group to arrange for treatment sessions, (5) implementing the treatment sessions, (6) administration of the response variable instrument to all subjects, and (7) determining the scores for each subject on both the organismic and response variable instruments

and organizing the resulting data for analysis by the Oklahoma State University computer.

Step one of the procedure involved collecting subjects for the study. In order to accomplish this step, the experimenter visited freshman level English composition classes and freshman level sociology classes during the summer session of 1978 at Oklahoma State University. The experimenter presented a short explanation of the study that included only the information that the research aimed at studying communications. The experimenter then informed the potential volunteers about the maximum amount of time that participation in the study would require of them and asked volunteers to indicate their willingness to participate by listing their names on a sign-up sheet and to appear for an initial test administration.

Step two of the procedure consisted of administering the organismic variable instrument (the Is of Identity Test) to the volunteers. A list consisting of these respondees constituted the subjects of the study.

Step three outlined the resulting list of the subject pool from step two. A simple coin-toss method led to a random division of these subjects into two groups. Following these group assignments for each subject, the coin-toss method designated one group as the treatment group and the other as the control group. No effort occurred to match subjects on any other variables.

Step four required the experimenter to contact all subjects in the treatment group by telephone or mail to arrange locations and times for the two treatment sessions. Because of scheduling differences, six subgroups of the treatment group became necessary. Later analysis of the

data showed no significant differences on any of the variables between these six subgroups of the treatment group.

Step five (which occurred on June 13, 14, 15, and 16, 1978) consisted of implementing the treatment sessions for all subjects in the treatment group. Owing to the division of the treatment group into six subgroups, each of the two structured treatment sessions occurred six times, once for each of the subgroups.

Step six involved testing all of the experimental subjects on the response variable instrument (the FIRO-B). This occurred approximately one week after completion of the treatment sessions on June 22 and 23, 1978.

Step seven of the procedure consisted of determining the scores on both instruments for all the subjects in the study. These scores appear in Appendix A. Continuing this step, the data underwent the organization necessary for computer analysis.

## Treatment

As mentioned previously, the treatment in the study consisted of two structured sessions designed to introduce E-Prime communication into the language habits of the subjects. As a result of the inability for subjects in the treatment group to meet simultaneously, six subgroups of the treatment group proved necessary. To raise the probability that each subgroup received the same treatment the two presentations which constituted the treatment followed a highly detailed written outline (see Appendix B). Each subject in the treatment group received a copy of each page of this outline at the corresponding time during the presentations.

Each presentation had as a part of its design a section in which each subject practiced transforming standard English into E-Prime. This "practicing" component constituted a part of the written outline.

Session I of the treatment included four components. Briefly, these four components consisted of (1) a section concerned with maps and territories, (2) a section concerning a model of reality, assumptions about reality, and a parallelism between language and maps and reality and territory, (3) a section that utilized the first two sections as a rationale for employing E-Prime communication along with an illustrating example, and (4) a section that provided each subject with a number of sentences to translate from standard English into E-Prime.

Session II of the treatment included three components. Briefly, these three components consisted of (1) a section which reviewed all the material presented in Session I, (2) a section aimed at giving each subject more practice at translating sentences into E-Prime, and (3) a section which utilized two hypothetical types of frustration to illustrate how the use of E-Prime could lead to more effective communication both intrapersonally and interpersonally.

Each treatment session took 50 minutes and each occurred in the same classroom on the Oklahoma State University campus. Appendix B includes the detailed written outlines for each of the two treatment sessions.

## Instrumentation

This study employed two instruments: the Is of Identity Test and the Fundamental Interpersonal Relationship Orientation-Behavior (FIRO-B). All subjects in this study responded to both instruments. Scores on the FIRO-B led to the value of the response (or criterion) variable and

scores on the Is of Identity Test resulted in the values for the organismic variable. Scores obtained on both instruments contributed to the value of the dependent variable as described in the variables section of this chapter.

The Is of Identity Test, constructed by Weiss (1954), has as its purpose the measurement of social adjustment. The author describes the general objective of the test as:

> to measure one important underlying reason for an individual's lack of adjustment, namely, his use of language or language patterns of a structure dissimilar to the structure of the non-verbal world, and his unawareness of the dissimilarity (p. 3).

The Is of Identity Test consists of a format that includes 100 written statements. A subject responds to each statement by endorsing one of the following three possible choices: True, False, or Undecided. Scores on the test consist simply of the number of statements which a subject endorses as False or Undecided.

Weiss (1954) determined the reliability of this test by:

> first making an item analysis, then equating two halves of the test by including parallel items of equal difficulty in each of the halves. The correlation between scores on the two halves indicated the reliability of the 50-item test. Reliability on the full-length (100 item) test was determined by the Spearman-Brown prophesy formula.
>
> The item analysis showed that with few exceptions the individual items discriminated consistently at the .01 level of confidence, which in turn made the total test a highly discriminating instrument. The coefficient of reliability for the Is of Identity Test is .94 (p. 2).

Studies by Weiss investigating the validity of the Is of Identity Test have shown results that suggest that the test can discriminate between groups categorized as either socially adjusted or maladjusted. In one such study Weiss (1959) compared sample groups in correctional institutions with non-institutionalized groups. In the same study he compared

samples differentiated on the basis of teacher-ratings on the Is of Identity scores. Using analysis of variance techniques in these comparisons, Weiss found highly significant ($p = .01$) differences between groups of Is of Identity Test scores. Tables VII and VIII present Weiss's findings.

In the same study, Weiss (1959) also investigated the possibility that several other factors might influence scores on the Is of Identity Test. He reported finding no significant differences between groups sorted on the basis of age, sex, church attendance, diagnostic and prognostic ratings, and three self-rating items appearing at the end of the test.

Weiss (1959) concluded that the Is of Identity Test "gives a satisfactory indication of social adjustment or maladjustment; that a person's use of the 'is of identity' is related to his degree of social adjustment" (p. 79).

The letters FIRO-B represent the words Fundamental Interpersonal Relations Orientation-Behavior. Developed by Schutz (1967), the FIRO-B has the following primary purposes: "(1) to measure how an individual acts in interpersonal situations, and (2) to provide an instrument that will facilitate the prediction of interaction with people" (p. 4).

The FIRO-B provides measurement on three dimensions of interpersonal relations orientations. These three dimensions have the labels Inclusion, Control, and Affection. Schutz (1967) defined these dimensions as follows:

> I. The interpersonal need for inclusion is the need to establish and maintain a satisfactory relationship with people with respect to interaction and association . . .
>
> C. The interpersonal need for control is the need to establish and maintain a satisfactory relationship with

TABLE VII

"IS OF IDENTITY" TEST SCORES BY TYPE OF INSTITUTION
("INS" VS. "OUTS")

| | Total | Within | Between |
|---|---|---|---|
| Sums of products xy | 51,082 | 36,445 | 14,637 |
| Sums of squares of x's | 143,739 | 122,490 | 21,249 |
| Sums of squares of y's | 122,165 | 101,719 | 20,446 |
| d.f. | 514 | 513 | 1 |
| Adjusted $\Sigma x^2$ | 122,380 | 109,422 | 12,958 |
| d.f. | 513 | 512 | 1 |
| M.S. | | 213.71 | 12,958 |

Source: Weiss (1959, p. 78).

F = 60.6 (highly significant).

TABLE VIII

"IS OF IDENTITY" TEST SCORES BY TEACHER RATINGS (EASTERN, SEXTON, AND WALTER FRENCH SCHOOLS)

| | Total | Within | Between |
|---|---|---|---|
| Sum of products xy | 15,757 | 9,662 | 6,095 |
| Sum of squares of x's | 56.969 | 38,664 | 18,305 |
| Sum of squares of y's | 51,595 | 38,957 | 2,638 |
| d.f. | 224 | 221 | 3 |
| Adjusted $\Sigma x^2$ | 52,157 | 19,595 | 32,562 |
| M.S. | | 89.07 | 10,854.00 |

Source: Weiss (1959, p. 78).

F = 121.85 (highly significant).

> people with respect to control and power. Control behavior refers to the decision-making process between people . . .
>
> A. The interpersonal need for affection is the need to establish and maintain a satisfactory relationship with others with respect to love and affection . . . (pp. 4-5).

Ryan (1977), in his manual for clinical interpretation of the FIRO-B, provided the following brief definitions for the three dimensions of the instrument:

> Inclusion assesses the degree to which a person associates with others. Karen Horney's concept of 'moving toward people' or 'moving away from people,' and the Jungian concepts of 'introversion' and 'extraversion' are similar to inclusion. Control measures the extent to which a person takes responsibility, makes decisions, or dominates people. The Affection score reflects the degree to which a person becomes emotionally involved with others (p. 5).

Subjects who respond to the FIRO-B obtain two scores on each of these three dimensions. One score on each dimension, represented by the letter "e," measures the subject's expressed or overt behavior in that dimension. The other score, abbreviated by the letter "w" on each of the three dimensions, represents the person's wanted behaviors. These "w" scores represent the behaviors (within each of the dimensions) that the subject wants to experience from others. Table IX presents the names and symbols for the FIRO-B scales along with examples for each of the six scales.

Statistical data on the reliability of the FIRO-B includes measurements of internal consistency and measures of stability. The usual test for internal consistency consists of a split-half method; however, FIRO-B takes the form of Guttman scales and, therefore, reproducibility constitutes a more appropriate measure of internal consistency. Reproducibility "is a more stringent criterion than the usual internal consistency measures . . . the usual criterion for reproducibility is that 90 percent

TABLE IX

NAMES AND SYMBOLS FOR FIRO-B SCALES

| | Expressed Behavior | Wanted Behavior |
|---|---|---|
| Inclusion | $e^{I}$ I make efforts to include other people in my activities and to get them to include me in theirs. I try to belong, to join social groups, to be with people as much as possible. | $w^{I}$ I want other people to include me in their activities and to invite me to belong, even if I do not make an effort to be included. |
| Control | $e^{C}$ I try to exert control and influence over things. I take charge of things and tell other people what to do. | $w^{C}$ I want others to control and influence me. I want other people to tell me what to do. |
| Affection | $e^{A}$ I make efforts to become close to people. I express friendly and affectionate feelings and try to be personal and intimate. | $w^{A}$ I want others to express friendly and affectionate feelings toward me and to try to become close to me. |

of all responses are predictable from knowledge of scale scores" (Schutz, 1967, p. 5). Table X represents the coefficients of internal consistency in terms of reproducibility provided by Schutz in the FIRO Scales Manual.

Schutz also provides coefficients of stability based on test-retest procedures for establishing reliability. Table XI presents "test-retest reliability coefficients among Harvard students over a one-month period (except for $e^A$ and $w^A$ which were based on an interlude of one week)" (Schutz, 1967, p. 5).

Schutz also investigated the reliability of the FIRO-B when the scores obtained by subjects constituted a criterion for placing those subjects in groups. Subjects assigned to "Hi," "Low," and "Medium" groups on the basis of scale scores later received the test again and on the basis of this retest again underwent assignment to one of the three groups. Table XII presents the results.

> Seventy percent of the highs and lows remain in the same category on the retest, whereas half of the middles retain their status. The probability of an individuals jumping from high to low or a low to high, is very slight--about 10 percent (Schutz, 1967, p. 6).

The FIRO-B, as opposed to many other personality tests, does not report results in reference to norms. While many other personality tests compare individual scores to large sample norms, for interpretative purposes, the FIRO-B concentrates attention on the interrelations of behaviors within each individual. In essence, rather than evaluating results on the basis of an external reference (normalized data on a population sample), the FIRO-B evaluates results on the basis of the interaction of "wanted" and "expressed" behaviors within an individual subject. This difference (evaluating results on the basis of behavior within an individual rather than on the basis of a "reference" group)

TABLE X

REPRODUCIBILITY OF FIRO-B SCALES

| Scale | Reproducibility | Number of Subjects |
|---|---|---|
| $e^I$ | .94 | 1615 |
| $w^I$ | .94 | 1582 |
| $e^C$ | .93 | 1554 |
| $w^C$ | .94 | 1574 |
| $e^A$ | .94 | 1467 |
| $w^A$ | .94 | 1467 |
| Mean | .94 | 1543 |

Source: Schutz (1967, p. 5).

TABLE XI

STABILITY (TEST-RETEST) OF FIRO-B SCALES

| Scale | Stability | No. of Subjects | Mean | | Standard Error | |
|---|---|---|---|---|---|---|
| | | | Test | Retest | Test | Retest |
| $e^I$ | .82 | 126 | 5.21 | 5.00 | 1.90 | 2.19 |
| $w^I$ | .75 | 126 | 3.88 | 3.42 | 3.20 | 3.30 |
| $e^C$ | .74 | 183 | 3.14 | 2.94 | 2.22 | 2.19 |
| $w^C$ | .71 | 125 | 4.44 | 4.58 | 1.91 | 2.13 |
| $e^A$ | .73 | 57 | 3.42 | 3.19 | 2.43 | 2.71 |
| $w^A$ | .80 | 57 | 3.95 | 3.54 | 2.74 | 2.88 |

Source: Schutz (1967, p. 5).

TABLE XII

DISTRIBUTION OF TEST-RETEST CLASSIFICATION BY FIRO-B*

| $e^I$ | | Retest Low | Md | Hi |
|---|---|---|---|---|
| | Low | 57 | 37 | 06 |
| Test | Md | 13 | 54 | 33 |
| | Hi | 00 | 08 | 92 |
| N = 126 | | | | |

| $w^I$ | | Retest Low | Md | Hi |
|---|---|---|---|---|
| | Low | 71 | 27 | 02 |
| Test | Md | 33 | 45 | 23 |
| | Hi | 02 | 31 | 67 |
| N = 126 | | | | |

| $e^C$ | | Retest Low | Md | Hi |
|---|---|---|---|---|
| | Low | 64 | 26 | 10 |
| Test | Md | 34 | 46 | 20 |
| | Hi | 10 | 31 | 59 |
| N = 126 | | | | |

| $w^C$ | | Retest Low | Md | Hi |
|---|---|---|---|---|
| | Low | 67 | 29 | 04 |
| Test | Md | 10 | 63 | 27 |
| | Hi | 00 | 50 | 50 |
| N = 126 | | | | |

| $e^A$ | | Retest Low | Md | Hi |
|---|---|---|---|---|
| | Low | 83 | 06 | 11 |
| Test | Md | 24 | 52 | 24 |
| | Hi | 11 | 06 | 83 |
| N = 57 | | | | |

| $w^A$ | | Retest Low | Md | Hi |
|---|---|---|---|---|
| | Low | 78 | 17 | 05 |
| Test | Md | 33 | 28 | 39 |
| | Hi | 05 | 10 | 85 |
| N = 57 | | | | |

All Scales Combined

| | | Retest Low | Md | Hi |
|---|---|---|---|---|
| | Low | 70 | 24 | 06 |
| Test | Md | 24 | 50 | 27 |
| | Hi | 04 | 26 | 70 |

Source: Schutz (1967, p. 6).

*By percentage.

has implications for potential straight-forward statements concerning the predictive validity of the instrument. According to Bluxom (1972):

> Validity studies on the FIRO-B questionnaire suggest that its subscales are related to nontest interpersonal behavior as well as to personality measures. Scale scores have been found to be correlated with: rated effectiveness of supervisors, production of good ideas in brain-storming groups, rated creativity, freshman grades, and the diagnosis of schizophrenia. The number and strength of these relationships are not great enough to validate the use of the FIRO-B for counseling and guidance, but they indicate it is definitely a worthwhile instrument for research (p. 170).

## Statistical Analysis

The computer at the Oklahoma State University Computer Center performed the operations necessary for the statistical analysis of the data generated by this study. The aim of the analysis consisted of determining if a difference between the adjusted means of treatment and control groups existed at the .05 level of probability.

Utilizing analysis of covariance techniques resulted in the removal of variance in the response variable explainable by scores on the organismic variable (Is of Identity Test scores). Thus, the dependent variable became that portion of the response variable not in common with the organismic variable scores. This procedure resulted in predicted residuals (or adjusted scores and, thus, adjusted means) of the response variable on the organismic variable. The continuing analysis of covariance tested the difference between these adjusted means of the treatment sample and the control sample for statistical significance.

## Summary

This chapter has presented an explanation and description of the variables, subjects, procedures, treatments, instrumentation, and

statistical analysis used in this study.

Variables consisted of (1) the organismic variable represented by Is of Identity Test scores, (2) the stimulus variable consisting of treatment or no treatment, (3) the response (or criterion) variable derived by entering a rank-ordered table with scores obtained on the FIRO-B, and (4) the dependent variable represented by means of the response variable adjusted by the procedure of analysis of covariance using the organismic variable scores as a covariate.

Descriptions and explanations of the procedures followed appeared in this chapter in a seven-step outline. The treatment in this study consisted of two one-hour sessions described in detailed outlines for each of the sessions. Instruments used in this study consisted of the Is of Identity Test and the FIRO-B. This study utilized techniques of analysis of variance to test statistically the research hypothesis stated in the introduction.

# CHAPTER IV

# RESULTS AND DISCUSSION

## Introduction

This chapter includes two sections. The first section will present the results of the statistical analysis which examines the research hypothesis formulated for this study. The research hypothesis underwent examination on the three response (criterion) variables derived from the three dimensions of the FIRO-B scales adjusted by analysis of covariance techniques with the organismic variable (Is of Identity Test scores) as the covariate. The main emphasis of this study aims at determining the probability that instruction in E-Prime communication will reduce levels of potential for maladjustment. The second section in this chapter will consist of a discussion of the results of the statistical analysis.

## Tests of the Research Hypothesis on the Response Variables

The tests of $H_1$ on each of the three response (criterion) variables will undergo presentation in terms of the statistical results of the data generated by this study

$H_1$: A significant difference will exist between the adjusted mean scores on the three response (criterion) variables for treatment and control groups.

Inclusion Dimension Rankings (Response Variable 1)

Does a significant difference exist between the adjusted mean scores on the Inclusion Dimension Rankings between treatment and control groups? As shown in Table XIII, the main effect of treatment did not attain significance ($F = .579$, $p = .449$), indicating that the instruction of E-Prime did not affect levels of potential for maladjustment as measured by the Inclusion Dimension Rankings. Specifically, a significant difference between the adjusted means on the Inclusion Dimension Rankings for treatment and control groups did not exist. Thus, the statistical analysis warrants the rejection of the research hypothesis for Inclusion Dimension Rankings as a response variable.

TABLE XIII

SUMMARY TABLE FOR THE ANALYSIS OF COVARIANCE: INCLUSION DIMENSION RANKINGS

| Source | SS | df | MS | F | p |
|---|---|---|---|---|---|
| Covariate (Is of Identity Test scores) | .12 | 1 | .12 | .018 | .895 |
| Main Effects (Treatment) | 3.96 | 1 | 3.96 | .579 | .449 |
| Residual | 526.34 | 77 | 6.836 | | |
| TOTAL | 530.42 | 79 | | | |

Control Dimension Rankings (Response Variable 2)

Does a significant difference exist between the adjusted mean scores on the Control Dimension Rankings between treatment and control groups? As shown in Table XIV, the main effect of treatment did not attain significance ($F = 3.784$, $p = .055$), indicating that the instruction of E-Prime did not affect levels of potential for maladjustment as measured by the Control Dimension Rankings. Specifically, a significant difference between the adjusted means of the Control Dimension Rankings for treatment and control groups did not exist. Thus, the statistical analysis warrants the rejection of the research hypothesis for Control Dimension Rankings as a response variable.

TABLE XIV

SUMMARY TABLE FOR THE ANALYSIS OF COVARIANCE: CONTROL DIMENSION RANKINGS

| Source | SS | df | MS | F | p |
|---|---|---|---|---|---|
| Covariate (Is of Identity Test scores) | 5.502 | 1 | 5.502 | .972 | .327 |
| Main Effect (Treatment) | 21.422 | 1 | 21.422 | 3.784 | .055 |
| Residual | 435.961 | 77 | 5.662 | | |
| TOTAL | 462.884 | 79 | | | |

Affection Dimension Rankings (Response Variable 3)

Does a significant difference exist between the adjusted mean scores on the Affection Dimension Rankings between treatment and control groups? As shown in Table XV, the effect of treatment did not attain significance ($F = .707$, $p = .403$), indicating that the instruction of E-Prime did not affect levels of potential for maladjustment as measured by the Affection Dimension Rankings. Specifically, a significant difference between the adjusted means on the Affection Dimension Rankings for treatment and control groups did not exist. Thus, the statistical analysis warrants the rejection of the research hypothesis for Affection Dimension Rankings as a response variable.

TABLE XV

SUMMARY TABLE FOR THE ANALYSIS OF COVARIANCE: AFFECTION DIMENSION RANKINGS

| Source | SS | df | MS | F | p |
|---|---|---|---|---|---|
| Covariate (Is of Identity Test scores) | 2.739 | 1 | 2.739 | .431 | .513 |
| Main Effect (Treatment) | 4.490 | 1 | 4.490 | .707 | .403 |
| Residual | 488.966 | 77 | 6.350 | | |
| TOTAL | 496.195 | 79 | | | |

## Discussion

According to the analysis of covariance, no significant differences existed between treatment and control group adjusted means on any of the three response (criterion) variables. Table XVI presents the adjusted and unadjusted means and standard deviations for treatment and control groups on each of the response (criterion) variables along with the differences between treatment and control groups on the adjusted and unadjusted means and the standard deviations as well as the F and p values for the adjusted means.

Table XVI shows that while observed differences did exist between the adjusted means for treatment and control groups on the three response variables, those differences did not equal or exceed the magnitude required to infer statistically significant differences at the $p = .05$ level. Thus, the size of the observed differences did not equal or exceed a size that would preclude differences due to chance variation alone.

Referencing Table XVI once more, the difference between the adjusted means for treatment and control groups on the Control Dimension Rankings approaches significance. This finding ($p = .055$) suggests that the magnitude of the difference between the adjusted means for treatment and control groups on the Control Dimension Rankings approached closely a magnitude that would indicate a significant difference. Although the treatment of instruction in E-Prime did not have the effect of reducing levels of potential for maladjustment as measured by the Control Dimension Rankings in this study, the results did suggest that perhaps the treatment holds some promise given modification and/or intensification.

TABLE XVI

SUMMARY TABLE FOR ADJUSTED AND UNADJUSTED STATISTICS AND F AND P VALUES FOR TREATMENT AND CONTROL GROUPS ON THE INCLUSION, CONTROL, AND AFFECTION DIMENSION RANKINGS

| | Inclusion Dimension Rankings | | Control Dimension Rankings | | Affection Dimension Rankings | |
|---|---|---|---|---|---|---|
| | Adjusted | Unadjusted | Adjusted | Unadjusted | Adjusted | Unadjusted |
| Treatment Mean | 5.51 | 5.49 | 3.31 | 3.40 | 5.41 | 5.38 |
| Control Mean | 5.05 | 5.08 | 4.37 | 4.28 | 5.89 | 5.93 |
| Difference | .46 | .41 | 1.06 | .88 | .48 | .55 |
| Treatment S.D. | 2.86 | 2.86 | 2.08 | 2.16 | 2.69 | 2.70 |
| Control S.D. | 2.31 | 2.31 | 2.62 | 2.61 | 2.30 | 2.30 |
| Difference | .55 | .55 | .54 | .45 | .39 | .40 |
| F | .579 | | 3.784 | | .707 | |
| p | .449 | | .055 | | .403 | |

Table XVI also shows that the differences between the adjusted and unadjusted statistics across the three response variables did not result in a substantial adjustment. Observation of Tables XIII, XIV, and XV demonstrates that the p values for the covariate (Is of Identity Test scores) have coefficients of $p = .895$ for the Inclusion Dimension Rankings, $p = .327$ for the Control Dimension Rankings, and $p = .513$ for the Affection Dimension Rankings. These findings, reflected in Tables XIII, XIV, and XV, along with those findings presented in Table XVI, indicate that adjusting the means on the three response (criterion) variables on the covariate did not remove a substantial amount of the variation in the dependent variable. More specifically, an insubstantial amount of the variation in the rankings on the Inclusion, Control, and Affection Dimensions of the FIRO-B existed in common with variation in scores on the Is of Identity Test.

# CHAPTER V

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter will consist of three sections. The first section will summarize generally the purpose, the hypothesis, and the methods used to test that hypothesis for this study. The second section will concern the conclusions drawn from this study. The final section will discuss recommendations for further research concerning the present study.

### Summary

This study aimed at empirically evaluating the effect of instruction in E-Prime communication on levels of potential for maladjustment. In this study, potential for maladjustment has to do with the general probability or risk of an individual behaving ineffectively in personal interaction situations. In the present study, this potential for maladjustment had as its operational definition the position of an individual's FIRO-B scores on an ordinal scale, created with the help of three qualified professional counselors, highly skilled and experienced with the FIRO-B. On this ordinal scale, higher scores indicate higher levels of potential for maladjustment. The purpose of the present study consisted of an empirical investigation of the effect produced by instruction of E-Prime on levels of potential for maladjustment in the experimental subjects.

The subjects for the investigation consisted of 80 Oklahoma State University students enrolled in either a freshman level English composition course or a freshman level sociology course in the summer session of 1978 who volunteered to participate in the study. Ages of the subjects ranged from 17 to 38 years and the 80 subjects included 31 males and 49 females. The subjects underwent a random division into treatment and control groups and each group included 40 subjects.

Four types of variables existed for this study: a stimulus variable consisting of one of two conditions (treatment or no treatment), an organismic variable consisting of scores on the Is of Identity Test (also referred to as the covariate), a response (or criterion) variable consisting of scores representing levels of potential for maladjustment, and a dependent variable consisting of the response variable adjusted on the organismic variable (the portion of the response variable not in common with the organismic variable).

The following research hypothesis for this study underwent examination on each of the following three response variables as measured by rank-ordered positions of the FIRO-B scores: the Inclusion Dimension, the Control Dimension, and the Affection Dimension.

$H_1$: A significant difference will exist between the adjusted mean scores on the response (criterion) variables for treatment and control groups.

The statistical analysis employed in this study utilized analysis of covariance techniques to remove the variance in the response variable explainable by scores on the organismic variable. These procedures resulted in adjusted means for treatment and control groups on each of the three response variables and, thus, produced the dependent variable.

The continuing analysis of covariance tested the difference between treatment group and control group adjusted means for statistically significant differences at the $p = .05$ level.

## Conclusions

The results of the statistical findings and consideration of the limitations and assumptions of this study warrant the following conclusions concerning the research hypothesis. As noted previously, the research hypothesis stated that a significant difference would exist between the adjusted mean scores on the response (criterion) variables (Inclusion Dimension, Control Dimension, and Affection Dimension rank-order positions) for treatment and control groups.

### Inclusion Dimension Rank-Order Positions

No significant difference existed between the adjusted mean scores on the Inclusion Dimension rank-ordered positions for subjects in treatment and control groups. Instruction in E-Prime in this study did not affect the levels of potential for maladjustment as measured by the rank-ordered positions on the Inclusion Dimension of the FIRO-B.

### Control Dimension Rank-Order Positions

No significant difference existed between the adjusted mean scores on the Control Dimension rank-ordered positions for subjects in treatment and control groups. Instruction in E-Prime in this study did not affect levels of potential for maladjustment as measured by the rank-ordered positions on the Control Dimension of the FIRO-B.

### Affection Dimension Rank-Order Positions

No significant difference existed between the adjusted mean scores on the Affection Dimension rank-ordered positions for subjects in treatment and control groups. Instruction in E-Prime in this study did not affect levels of potential for maladjustment as measured by the rank-ordered positions on the Affection Dimension of the FIRO-B.

### Summary

In general, the findings of this study demonstrated that for the population investigated, the instruction of E-Prime did not affect a difference in subjects' levels of potential for maladjustment. The operational definition of levels of potential for maladjustment consisted of rank-ordered positions on the three dimensions of the FIRO-B.

## Recommendations

The present study has contributed to the area of investigating the affect of a very specific portion of the manner in which people linguistically represent internally and verbally the realities in which they live externally and nonverbally. Although the results of the present study lead to the conclusion that the instruction of E-Prime did not affect a significant difference in levels of potential for maladjustment, the finding did show that on one dimension (Control Dimension) of the response variable the difference between treatment and control groups closely approached significance ($p = .055$). Suggestions for further research based on the findings and conclusions of this study include at least the following four recommendations:

1. Consideration given to the statistical aspects of the present study lead to the suggestion that utilization of a larger sample may have resulted in the finding of significant differences between treatment and control groups on the Control Dimension rank-ordered positions portion of the response variable. Therefore, a recommendation for further research would include a suggestion to increase the size of the sample investigated.

2. The treatment in this study consisted of two sessions with the goal of instruction in E-Prime, each of which lasted one hour. Further research efforts should take into consideration the possibility of in some way intensifying the treatment by either a modification of the instruction sessions or an increase in the duration of the treatment, or by a mixture of both intensification and increased duration.

3. The present study assumed that subjects, randomly assigned to the treatment group, had the ability to learn the use of E-Prime communication. Consequently, recommendations for further research should include the suggestion that the validity of this assumption undergo examination. If instruction in the use of E-Prime communication does in fact affect levels of potential for maladjustment, but the subjects do not learn to insert E-Prime into their language habits, then no significant differences in levels for potential for maladjustment will appear, regardless of the merit of E-Prime. Therefore, further research should strongly attempt to ascertain that, because of the treatment, E-Prime enters and becomes a part of the language habits of the subjects.

4. In this study, an interval of one week occurred between the treatment sessions and the response measure. Further research should devote attention to the role that time may play in both the learning of

E-Prime communication and the extent of the induction and inclusion of E-Prime into subjects' language habits.

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# APPENDIXES

# APPENDIX A

## SCORES ON THE IS OF IDENTITY TEST AND RANK ORDER SCORES ON THE FIRO-B DIMENSIONS FOR INDIVIDUALS IN THE TREATMENT AND CONTROL GROUPS

TABLE XVII

SCORES ON THE IS OF IDENTITY TEST AND RANK ORDER SCORES ON THE FIRO-B DIMENSIONS FOR INDIVIDUALS IN THE TREATMENT AND CONTROL GROUPS

| Subject Number | Is of Identity Test Score | Rank Order Score on FIRO-B | | |
|---|---|---|---|---|
| | | Inclusion | Control | Affection |
| | Treatment Group | | | |
| 1 | 86 | 3 | 1 | 1 |
| 2 | 53 | 2 | 1 | 2 |
| 3 | 62 | 8 | 3 | 7 |
| 4 | 63 | 1 | 3 | 2 |
| 5 | 67 | 5 | 10 | 7 |
| 6 | 45 | 7 | 3 | 7 |
| 7 | 77 | 1 | 3 | 9 |
| 8 | 59 | 8 | 3 | 7 |
| 9 | 59 | 2 | 1 | 4 |
| 10 | 71 | 9 | 3 | 3 |
| 11 | 87 | 8 | 8 | 5 |
| 12 | 75 | 9 | 3 | 1 |
| 13 | 67 | 5 | 3 | 3 |
| 14 | 42 | 3 | 3 | 5 |
| 15 | 50 | 3 | 1 | 9 |
| 16 | 40 | 7 | 3 | 5 |
| 17 | 71 | 5 | 3 | 7 |
| 18 | 64 | 9 | 3 | 1 |
| 19 | 80 | 5 | 3 | 7 |
| 20 | 76 | 7 | 10 | 1 |
| 21 | 74 | 1 | 3 | 9 |
| 22 | 65 | 5 | 2 | 9 |
| 23 | 55 | 8 | 3 | 5 |
| 24 | 93 | 7 | 4 | 5 |
| 25 | 62 | 3 | 1 | 7 |
| 26 | 99 | 1 | 9 | 7 |
| 27 | 66 | 1 | 2 | 9 |
| 28 | 58 | 8 | 3 | 1 |
| 29 | 65 | 8 | 3 | 1 |
| 30 | 56 | 8 | 3 | 7 |
| 31 | 58 | 8 | 3 | 7 |
| 32 | 85 | 7 | 3 | 7 |
| 33 | 65 | 8 | 3 | 9 |
| 34 | 69 | 8 | 3 | 5 |
| 35 | 70 | 9 | 3 | 7 |
| 36 | 66 | 2 | 4 | 2 |
| 37 | 64 | 5 | 3 | 7 |
| 38 | 49 | 8 | 5 | 7 |
| 39 | 71 | 9 | 2 | 7 |
| 40 | 69 | 1 | 3 | 4 |

TABLE XVII (Continued)

| Subject Number | Is of Identity Test Score | Rank Order Score on FIRO-B | | |
|---|---|---|---|---|
| | | Inclusion | Control | Affection |
| | Control Group | | | |
| 41 | 50 | 4 | 3 | 7 |
| 42 | 59 | 1 | 3 | 1 |
| 43 | 39 | 7 | 3 | 5 |
| 44 | 55 | 4 | 10 | 2 |
| 45 | 39 | 3 | 5 | 3 |
| 46 | 46 | 3 | 3 | 7 |
| 47 | 66 | 3 | 3 | 5 |
| 48 | 68 | 4 | 7 | 9 |
| 49 | 74 | 5 | 1 | 7 |
| 50 | 93 | 3 | 3 | 7 |
| 51 | 64 | 5 | 3 | 9 |
| 52 | 78 | 5 | 1 | 9 |
| 53 | 47 | 8 | 3 | 7 |
| 54 | 46 | 3 | 4 | 1 |
| 55 | 52 | 9 | 3 | 7 |
| 56 | 80 | 8 | 4 | 7 |
| 57 | 54 | 5 | 3 | 7 |
| 58 | 51 | 1 | 3 | 7 |
| 59 | 53 | 7 | 6 | 9 |
| 60 | 51 | 8 | 3 | 5 |
| 61 | 84 | 5 | 9 | 3 |
| 62 | 46 | 1 | 4 | 7 |
| 63 | 62 | 5 | 4 | 1 |
| 64 | 75 | 5 | 2 | 5 |
| 65 | 52 | 8 | 3 | 5 |
| 66 | 44 | 3 | 1 | 5 |
| 67 | 68 | 1 | 1 | 7 |
| 68 | 46 | 5 | 3 | 7 |
| 69 | 56 | 8 | 4 | 7 |
| 70 | 45 | 3 | 2 | 7 |
| 71 | 51 | 5 | 8 | 7 |
| 72 | 65 | 3 | 10 | 5 |
| 73 | 67 | 5 | 9 | 7 |
| 74 | 77 | 7 | 4 | 7 |
| 75 | 84 | 7 | 3 | 1 |
| 76 | 67 | 7 | 3 | 7 |
| 77 | 67 | 8 | 6 | 7 |
| 78 | 49 | 9 | 10 | 7 |
| 79 | 47 | 7 | 8 | 9 |
| 80 | 63 | 8 | 3 | 5 |

# APPENDIX B

## DETAILED TREATMENT OUTLINES

Handout 1--Session I

Concerning Maps and Territories

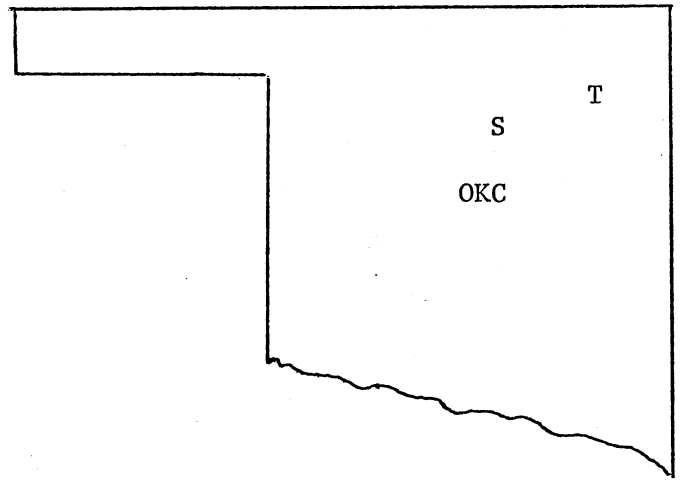
Point 1. Maps exist for the purpose of representing territories.

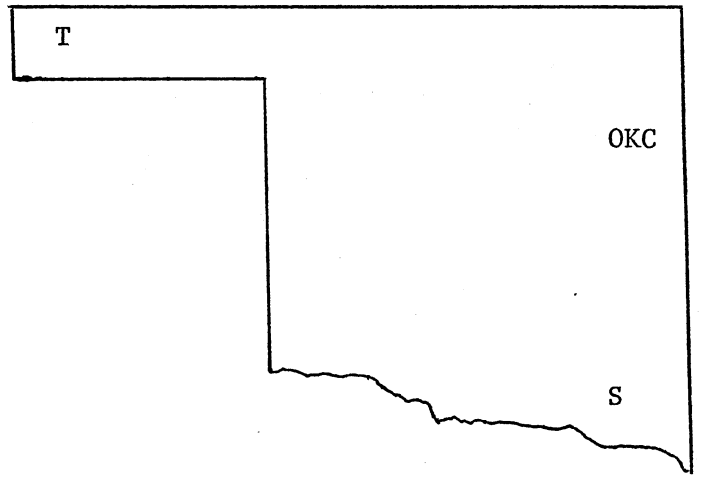
Point 2. A map only represents the territory it portrays, just as a mirror only reflects an image.

Point 3. As the accuracy of the representation of the portrayed territory increases, the usefulness of the map increases.

Point 4. As the accuracy of the representation of the portrayed territory decreases, the usefulness of the map decreases.

Point 5. A map can never represent all of the territory it portrays, all details cannot be included.



Handout 2--Session I

Concerning Reality

Hereclitus, a Greek philosopher, made the statement: "No man can step twice in the same river."

Two Assumptions About Reality

1. Although many things appear, feel, sound, smell, taste similar to each other, no two identical items exist in the universe.

2. Each item in the universe exists in at least two dimensions: time and space.

Concerning Language and Reality

Point 1. Languages exist for the purpose of representing realities.

Point 2. A language only represents the reality it portrays.

Point 3. As the accuracy of the representation of the portrayed reality increases, the usefulness of the language increases.

Point 4. As the accuracy of the representation of the portrayed reality decreases, the usefulness of the language decreases.

Point 5. A language can never represent all of the reality it portrays, all detailes cannot be included.

Handout 3--Session I

Concerning: A communication method congruent with the two assumptions about reality and the five points about language as it represents reality.

The Method: E-Prime

Operational Definition: E - e = E' where E stands for the English language, e stands for all forms of the verb "to be", and E' stands for E-Prime. (e = is, am, are, was, were, been, be, being, and becoming.)

Rationale: The use of the various forms of the verb "to be" conflict with both assumptions about reality and with the five points concerning language as it represents reality.

How??? In most cases the forms of the verb "to be" as they occur in our everyday language and speech seem replaceable by an equal sign. For example:

> A boy named George holds an open book upside down in front of his eyes. An observer states:

George is ignorant. (replaceable by): George = ignorant.

This statement clearly violates the assumptions about reality since it infers:

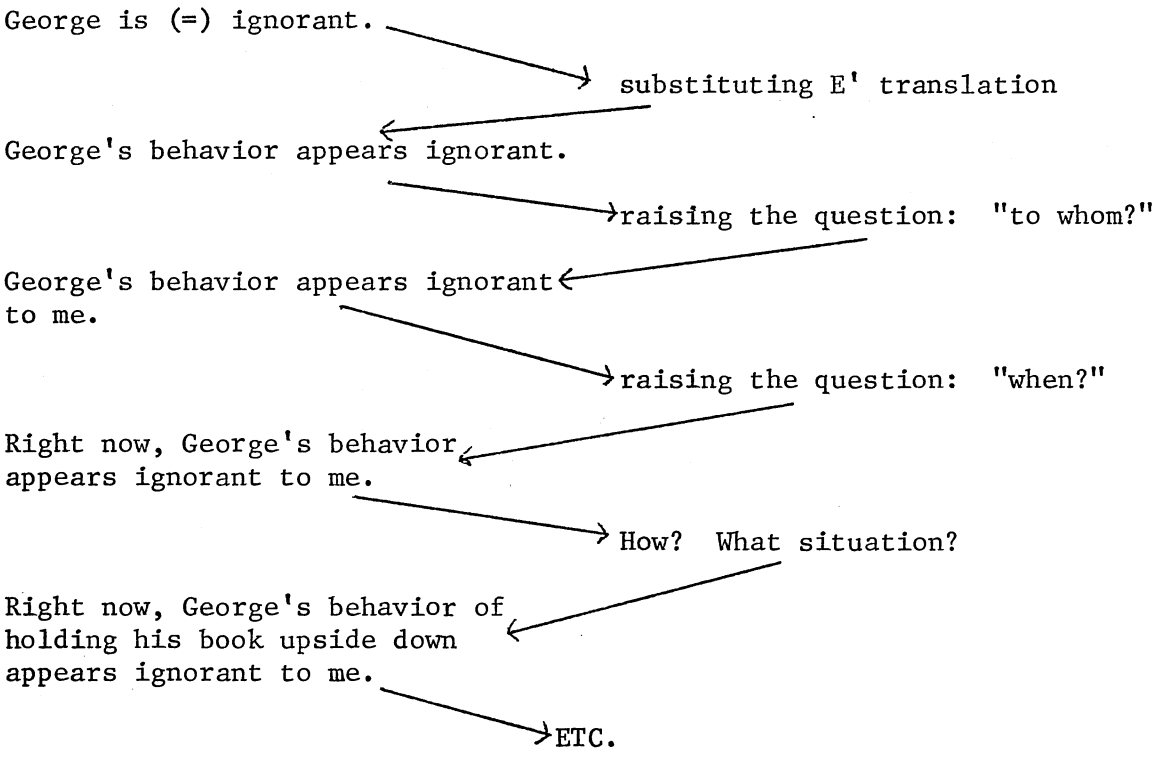
1. George and ignorant are the same (identical).
2. That George was ignorant yesterday as well as today and probably tomorrow.

George = ignorant (George is ignorant) also does not take into account the five points concerning language and reality.

Handout 4--Session I

The use of E-Prime forces the speaker to construct his "verbal maps" in accordance with the two assumptions and the awareness of the five points.

Example:




Compare the two statements below in terms of the assumptions about reality and the five points concerning language as it represents reality.

1. George is ignorant.

2. Right now, George's behavior of holding his book upside down appears ignorant to me.

Handout 5--Session I

Exercises in E'

Please translate the following statements into E'.

1. My roommate is lazy.

2. The sky is blue.

3. I want to be rich.

4. I have a friend who is an alcoholic.

5. Jack is so bull-headed that I am sick of trying to help him solve his problems.

6. Unconditional positive regard for students is sometimes a difficult attitude to maintain.

Handout 1--Session II

Thank you for making it the second of the three sessions you volunteered to participate in as a part of this research project. The first part of this session will involve a short review of the points that appear below. Please feel free to ask for clarification if necessary.

*The validity of this study hinges upon the attendance of each participant at both of the sessions and their responding to both tests.

*Please come on time for each session--each will start and end on time.

*Please DO NOT discuss the material presented in these sessions outside of the session.

| Maps and Territories | Language and Reality |
|---|---|
| 1. Maps exist for the purpose of representing territories. | Languages exist for the purpose of representing realities. |
| 2. A map only <u>represents</u> the territory it portrays. | A language only <u>represents</u> the reality it portrays. |
| 3. As the accuracy of the representation of the portrayed territory <u>increases</u>, the usefulness of the map <u>increases</u>. | As the accuracy of the representation of the porrayed reality <u>increases</u>, the usefulness of the language <u>increases</u>. |
| 4. As the accuracy of the representation of the portrayed territory <u>decreases</u>, the usefulness of the map <u>decreases</u>. | As the accuracy of the representation of the portrayed reality <u>decreases</u>, the usefulness of the language <u>decreases</u>. |
| 5. A map can never represent all of the territory it portrays. | A language can never represent all of the reality it portrays. |

Handout 2--Session II

Two Assumptions About Reality:

1. Although many things appear, feel, sound, smell, taste similar to each other, no two identical items exist in the universe.

2. Each item in the universe exists in at least two dimensions: time and space. (i.e., no one item remains identical with itself after an interval of time has passed.)

An Operational Definition: E' = E - e where E stands for the English language, e stands for all forms of the verb "to be" (is, am, are, was, were, been, be, being, and becoming), and E' stands for E-Prime.

Rationalization for the Use of E': The use of the various forms of the verb "to be" conflicts with both assumptions about reality and with the five points concerning language as it represents reality.

During the last session I mentioned an example about a boy named George who held his book upside down. The example included some statements in E-Prime about George. Other descriptions about George include that he just celebrated his ninth birthday, he goes to public school with other fourth grade students, his parents feel disappointed on report-card day, and his teacher experiences frustration when working with him. George's teacher sounds like this in the faculty lounge: "George is just stupid". The other teachers shrug and the subject of conversation changes. If George's teacher translates her statement to E-Prime the conversation might sound different:

1. "George acts stupidly in my reading class." (Question: How?)
2. "He holds his book upside down and pretends to read it." (Can he read?)
3. "Well, his reading scores fall at about a first grade level." (What will you do?)
4. "I think I will try to work with him, but if I don't see any improvement in a week or two I will refer him to the reading class."

The point I want to make here centers around the thought that very little gets done when "George is stupid" (George = stupid, George and stupid are the same). But when George has a reading problem some options exist around dealing with that problem.

Handout 3--Session II

More Practice at Translating into E-Prime

Please translate these sentences:

1. Since going to college is such nonsense I'm surprised people pay so much to be "educated".

2. Giving up the Panama Canal could be one of the biggest mistakes we have ever made.

3. It will be essential to the validity of this study that you attend all three sessions and that you take both tests. (Handout I for this session contains a strong hint for this one.)

4. Reports of vandalism on Streaker's night are so over-rated that the newspapers should be ashamed to print them.

Handout 4--Session II

Two Types of Frustration:

A. Non-Productive Frustration
B. Productive Frustration

A feeling loosely labeled "frustration" occurs when the accomplishment of a goal seems unlikely or impossible.

Non-Productive Frustration occurs when the difficulty leads to an attitude of giving-up on the solving of the problem.

Productive Frustration occurs when the difficulty stimulates the generation of new alternatives which will possibly lead to the solving of the problem.

Example: Non-Productive Frustration:

Herbert got a late start to work one morning. Already five minutes late he finds to his dismay that his car will not start. Several thoughts run through his mind; some of them sound like this:

*This car is undependable.
*I am going to get rid of this piece of junk.
*Now I'm really going to be late.
*This is terrible!
*ETC.

Now Herbert will most likely spend the next few minutes (or more) in an emotional uproar which will add to the amount of time it will take him to get to work and will add a considerable amount of stress to his day.

Handout 5--Session II

Example: Productive Frustration:

Herbert again, only this time his thinking sounds more like this:

*This is terrible!

(Herbert feels himself getting angry and frustrated and takes a minute to listen to himself):

*This is terrible!

(Herbert translates into E-Prime)

*I chose to see this situation as terrible.

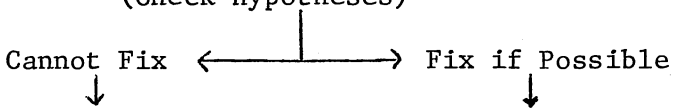
(Stimulating: What situation? Describe situation)

*The engine does not start when I turn the key.

(Stimulating: Hypothesis generation)

1. Dead battery?
2. Loose wire?
3. Wet distributor?

(Check hypotheses)




1. Get ride to work
2. Walk to work
3. Call in sick
4. ETC.

Drive to work

Point: Although it may take more initial time to translate the description of the situation into E-Prime, the end result will most likely occur sooner and with more success and less stress.

Handout 6--Session II

Example: Non-Productive Frustration:

Joe's girlfriend, Sally, broke up with him six months ago. Joe still feels bad and decides to speak about this to his good friend, Sam.

Joe: Gee Sam, I'm really depressed about Sally dumping me.

Sam: Yeah, it's really a bummer for you isn't it?

Joe: Really. Being down like this is awful. It's really draining my energy.

Sam: Well, why don't you look on the bright side. You know she was no good, you are lucky she's gone. Think about all the other fine ladies out there just waiting for you.

Joe: Yeah I try, but I'm just not up for that scene. It's so superficial.

Sam: I know what you mean. Trying to start going out with new girls can really be a drag.

ETC., ETC., ETC.,

Points:

1. Joe still feels depressed.

2. If Sam really empathizes with Joe he also feels depressed.

3. If Sam doesn't really empathize with Joe he will most likely eventually feel frustrated with the conversation since he hasn't helped Joe to feel better.

4. Sam has most likely only reinforced Joe's inaccurate representations of reality (i.e., inaccurate maps of phenomenological territories) with his pervasive use of forms of the verb "to be".

Note: Non-Productive Frustration contains one or more inaccurate maps (i.e., inaccurate representations of reality).

Handout 7--Session II

Example: Productive Frustration:

(Sam and Joe again)

1. Joe: Gee Sam, I'm really depressed about Sally dumping me.

2. Sam: You still feel depressed about Sally dumping you, huh?

3. Joe: Yeah, it's been six months and I'm still feeling bad.

4. Sam: So to add to everything else you feel bad about still feeling bad?

5. Joe: Yeah, I think it's like an endless cycle, etc., etc., etc.

6. Sam: So what you really want to do has more to do with changing your feelings right now than with what Sally did six months ago?

7. Joe: Yeah, I guess that's the main thing.

8. Sam: Well, I think you can probably do some things about that. How about . . .

Points:
1. Joe may or may not still feel depressed.
2. Sam did empathize with Joe but did not chose to "buy into" Joe's depression (frustration, i.e., inaccurate representations) so he does not validate these inaccurate representations.
3. Even if Sam does not empathize with Joe's depressed feelings he has stayed "honest" and can tactfully terminate the conversation when he chooses.

Example: Sam begins to feel frustration after Joe says sentence #3 and catches himself stating inwardly:

This conversation is a drag.

| Translating | Not Translating |
|---|---|
| I feel bored with this conversation. | But Joe is my friend so I have to put up with it. |
| What can I do to make it more bearable for me? | But it's starting to make me mad that he is such a whinning baby. |
| Options? 1) Tell Joe I find it boring, 2) tell Joe I don't know how to help him but somebody else might, 3) try to find out what problem really has Joe upset. | And I can't stand it anymore so I'll think of an excuse to leave. |

Handout 7--Session II (Continued)

At this point Sam choses option #3 and says at sentence #4: "So to add to everything else, you feel bad about feeling bad?"

Note: Productive Frustration contains and generates improved maps (or representations of reality) and the use of E-Prime descriptions facilitates the improvement of these maps.

# VITA[2]

Douglas Gentz

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE EFFECT OF INSTRUCTION OF E-PRIME COMMUNICATION ON LEVELS OF POTENTIAL FOR MALADJUSTMENT

Major Field: Applied Behavioral Studies

Personal Data: Born in Tulsa, Oklahoma, August 29, 1951, the son of Warren and Mary Gentz.

Education: Attended public schools in Tulsa, Oklahoma; graduated from Nathan Hale High School in May, 1969; attended Oklahoma State University and received the Bachelor of Science degree in May, 1973, with a major in Psychology; entered graduate school at Oklahoma State University and received the Master of Science degree in August, 1975; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in May, 1980.

Professional Experience: Counselor, Payne County Youth Services, Stillwater, Oklahoma, 1975-1976; Consulting Counselor, Payne County Youth Services, Stillwater, Oklahoma, 1976-1978; Intern, Counseling Service, Oklahoma State University, Stillwater, Oklahoma, 1977-1978; Graduate Teaching Assistant, Department of Applied Behavioral Studies, Oklahoma State University, 1977-1978; Intern in Counseling Psychology, Counseling Center, Southern Illinois University, Carbondale, Illinois, 1978-1979; Teaching Assistant, Department of Applied Behavioral Studies, Oklahoma State University, 1979.

Professional Organizations: Member of Phi Delta Kappa, Kappa Delta Pi, American Personnel and Guidance Association.