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THE EFFECTS OF GENERAL SEMANTICS ON THE PERSONALITY ADJUSTMENT OF ELEMENTARY SCHOOL CHILDREN

by
Ruth S. Ralph

Dissertation submitted to the Faculty of the Graduate School
of the University of Maryland in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
1971

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APPROVAL SHEET

Title of Thesis: The Effects of General Semantics on the Personality Adjustment of Elementary School Children

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Doctor of Philosophy, 1971

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ABSTRACT

Title of Thesis: The Effects of General Semantics on the Personality Adjustment of Elementary School Children.

Ruth S. Ralph, Doctor of Philosophy, 1971

Thesis directed by: Dr. Leonard Woolf, Associate Professor of Education.

For the past thirty-eight years, general semantics, a way of dealing with language, has been advocated by some educators and psychologists. It is recommended as a content area to improve language arts instruction and as an instructional method that results in a more reasonable logic, a closer approximation between reality and symbols, and consequently, better personality adjustment. This study describes experimental projects that have evaluated the effects of general semantics and adds one more investigation to the body of evidence. It suggests that general semantics may contribute to personal and social adjustment, and that the scientific methods of objective evaluation should be used to investigate this.

The principles of general semantics are taught in many colleges and high schools, but they are not so frequently offered in elementary schools. However, one project using general semantics as a curricular base has been going on for the past four and one-half years at Fort Myer Elementary School, Arlington, Virginia. This may be the only American school so deeply committed to general semantics, and its results are therefore pertinent to this study.

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There have been a number of studies evaluating the effects of general semantics on both the psychological development and intellectual abilities of adolescents and adults; and in terms of such school performance factors as reading readiness, other language arts skills, and creativity, experiments using elementary school children trained in general semantics have been conducted. In such experiments, the emphasis was upon the intellectual rather than the emotional problems of the child. The present study considers for the first time the effect of general semantics on the personality adjustment of children.

There are two hypotheses in this study:

(1) There is a relationship between general semantics competency and personality adjustment in that subjects who score high on a test of general semantics competency will score low on a test for neuroticism and anxiety.

(2) A group of elementary school children trained in general semantics will score higher on a test of general semantics competency and lower on a test for neuroticism and anxiety than will an untrained group otherwise matched on race, home stability, age, sex, socioeconomic status, intelligence, reading ability, total language ability, and work-study skills.

A review of the research disclosed no wide-spectrum test of general semantics competency appropriate for elementary school children, although there were several single-factor tests suitable for adolescents and adults. Therefore, it was necessary to develop such a test. The General Semantics Competency Opinion Test (GSC) was written

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and partially validated as a tool for this study. It is hoped that with further refinement and additional validation, the GSC Test can become a useful instrument for general semantics teachers.

An item analysis based on this study's administration of the GSC Test to 153 subjects shows that the mean is 19.87 (out of 38 items), the standard deviation is 5.38, the Kuder Richardson Formula 20 estimate of internal consistency is .75, average difficulty of the test is 52.32, and average discrimination is .40.

This study used two groups of fifth and sixth grade children from U. S. army base schools. The group trained in general semantics at Fort Myer Elementary School totalled 46 subjects. The untrained group from Pershing Hill Elementary School, Fort Meade, Anne Arundel County, Maryland, totalled 107 subjects. These groups were found to be closely matched on all relevant variables.

In testing the difference between the two groups on general semantics competency and the Children's Personality Questionnaire factors of anxiety and neuroticism, the t test probability differences were: GSC, .02; anxiety, .00, and neuroticism, .05. Since the .05 level of probability was considered critical, these figures support hypothesis #2. In an analysis of the total group, the correlation coefficients between the GSC score, and the two factors of neuroticism and anxiety were -.24 and -.26 respectively, which are significant at the .01 level of probability. These figures support hypothesis #1, indicating that general semantics competency is related to some aspects of personality adjustment. Further investigation will be needed to determine the importance of this relationship.

The study, therefore, supplies experimental evidence leading

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to the following conclusions:

(1) General semantics competency is related to personality adjustment, in that subjects who score high on a general semantics competency test score low on a test of neuroticism and anxiety.

(2) General semantics instruction in elementary school is likely to improve pupils' emotional adjustment, since students trained in general semantics scored higher in general semantics competency and lower in anxiety and neuroticism than did another group matched with them on all other relevant variables.

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To her husband, Shalon Ralph, for his encouragement of this project and his patience during its pursuit, the writer is very grateful. But to her son, Kenneth Michael Ralph, for his assistance in designing the statistical analysis for this study, and the long hours he devoted to helping her work it out, the writer extends her deepest appreciation. This study is dedicated to him, with love, and with faith that his own program of doctoral studies, which he will begin in September, 1971, will be as meaningful and fulfilling to him as hers has been to her.

R. S. R.

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TABLE OF CONTENTS

CHAPTER		PAGE
I	The Problem and Its Scope	1
	Introduction	1
	The Present Status of General Semantics Instruction	2
	The Fort Myer Elementary School Project	3
	Justification	4
	Statement of the Problem	6
	Limitations	7
	Instrumentation	7
	Population and Sampling Procedures	8
	Data Collection	9
	Statistical Procedures	10
	Definitions	11
	Summary	15
II	Review of the Literature	17
	Introduction	17
	1933-1943: The First Decade of General Semantics	19
	General Semantics Research in the 1940's	22
	Studies, Tests and Experiments in the 1950's	25
	The Uncritical Inference Test	25
	The "Is of Identity" Test	27
	Intensionality-Extensionality of Clients in Therapy	31

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CHAPTER PAGE

General Semantic Training of Neuropsychiatric Patients 31

Teaching Newspaper Reading 33

General Semantics Research in the 1960's 34

Semantics and Communication Theory 34

General Semantics in High School English 34

Kottman's "I" Scales 35

General Semantics and Critical Reading Ability .. 38

Improving Composition 39

General Semantics Instruction in Elementary School 41

Relation of General Semantics and Creativity 42

Inductive and Expository Instruction in General Semantics 43

Studies of All-Inclusive "Conceptualization" 44

The Pennsylvania Conference 46

Conclusion - The Need for Research 47

III Materials and Procedures 49

Instrumentation 50

The General Semantics Competency Opinion Test ... 50

Item Design 51

First Version 52

Second Version 53

Third Version 54

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CHAPTER PAGE

Revision 54

The IPAT Children's Personality Questionnaire 55

A Rating of Socioeconomic Status 58

Standardized Scores from Cumulative Records 60

ITBS 60

CTMM 61

Lorge-Thorndike 61

Population and Sampling Procedures 62

Statistical Procedures 65

Summary 67

IV Results 68

Introduction 68

Analysis of the Total Group - Hypothesis #1 68

Comparison of Groups - Hypothesis #2 68

Conclusions 70

V Conclusions and Implications 71

Introduction 71

Conclusions 72

Discussion 72

Summary 77

APPENDIXES 79

Appendix A: GSC Opinion Test, Annotated 80

Appendix B: Tables II, III, IV; Item Analyses 98

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CHAPTER PAGE

Appendix C: Subjects' Comments on GSC Test 102

Appendix D: Experts in Language and General Semantics Who Assisted in Face and Content Validation of the GSC Test 110

Appendix E: Suggested Revisions of Some of the Items of the GSC Test 113

BIBLIOGRAPHY 115

Books 116

Articles 119

Dissertations, Research Proposals, and Papers 122

Tests, Test Manuals, and Testing Information 123

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LIST OF TABLES

TABLE		Page
I	Comparison of Groups: Standard Deviations, Means, t Values & Probabilities	69
II	Item Analysis: GSC Version #2	99
III	Item Analysis: GSC Version #3	100
IV	Item Analysis: GSC Version #4	101

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Chapter I

The Problem and Its Scope

Introduction

For thirty-eight years, general semantics, a way of dealing with language, has been advocated by some educators and psychologists. It is proposed as both a content area and an instructional method. As a content area, general semantics offers curricular material in the language arts intended to be more relevant than traditional disciplines such as grammar. As an instructional method, the application of the principles of general semantics is claimed to result in improved usage, more reasonable logic, a closer approximation between reality and symbols, and in consequence, better personality adjustment. Alfred Korzybski, the founder of general semantics, explained these objectives in Science and Sanity, an Introduction to Non-Aristotelian Systems and General Semantics (1933).

Korzybski's aim was to organize independent concepts into a system of interrelated propositions in order to provide a modern approach to epistomology that would complement the classical conceptual system of Aristotle. Thus he envisioned general semantics serving as a "non-A" system similar to the "non-E" and "non-N" modifications that were required to bring Euclid's and Newton's theories into accordance with modern scientific discoveries.

The present study is not designed to either attack or defend the premises of general semantics, but rather to describe experimental studies that evaluate its effects, and to add one more investigation

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to the body of evidence. It hypothesizes that general semantics may contribute to personal and social adjustment, and that the scientific methods of objective observation should be used to investigate this.

The Present Status of General Semantics Instruction

At the present time, courses of instruction called "general semantics" are offered in about two hundred colleges and universities. They are found in departments of philosophy, education, English, psychology, speech and journalism -- an indication of their interdisciplinary nature. In addition, many courses in language, linguistics, epistomology and the like incorporate some of the principles of general semantics.

In secondary schools, English and speech curricula sometimes include six or eight weeks units in general semantics, and occasionally a semester or full-year course is offered. Such units are not ordinarily projects of the whole school system, but rather optional additions selected by individual teachers or departments. Some modern theorists, however, have advocated that general semantics should be a basis of secondary curricula, not only in the language arts, but in science, mathematics, and social studies as well. (Postman & Weingarten, 1969)

In contrast to its use in colleges and secondary schools, general semantics has been found less frequently in elementary schools. Alfred Korzybski said,

> Perhaps, instead of keeping such discoveries for the few "highbrows" who never use them fully, we could introduce them as structural, semantic, and linguistic devices into

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> elementary schools with highly beneficial psycho-logical results. There is really no difficulty in explaining what has been said here about structure to children, and training them in appropriate semantic reactions. The effect of doing so, on sanity, would be profound and lasting.
> (Korzybski, 1958, p. 150)

But despite Korzybski's assertion that it is possible and desirable to use general semantics in the elementary school, this has seldom been done.

The Fort Myer Elementary School Project

During the 1965-66 school year, the staff at Fort Myer Elementary School, a public school located on an army base in Arlington, Virginia, was dissatisfied with their conventional language arts program. In seeking a more relevant approach, they became interested in ideas suggested by Dr. Neil Postman of New York University, and sought his help in "developing a truly effective language program." (Fort Myer, 1968, p. iii) During the fall semester, 1966-67, Dr Postman spent several days at Fort Myer Elementary School assisting the staff in setting up an in-service general semantics training program. In January, 1967, the teachers began applying general semantics principles to both content and method in the classroom. Sixteen staff members including the principal, the reading consultant, and about half the teachers were involved. During the summer of 1967, the Fort Myer staff compiled a resource booklet, Instant PEP for Language, (1968) which might be useful to teachers in other schools as well as their own. This booklet is now published and distributed by the International Society for General Semantics. The curricular project at Fort Myer, which is referred to as "Stuff," has continued through the 1970-71 school year and is included in plans for the future. Since Fort Myer

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is probably the only American elementary school in which general semantics is purposefully integrated in the curriculum, it is particularly appropriate for analysis in the pres study.

ification

Korzybski asserted that those who use the principles of general semantics are more likely to be psychologically adjusted than those who follow traditional patterns of verbal behavior. He also urged researchers to apply the scientific methods of objective observation, mathematical analysis, and operational definitions to the problems of language and reality. In discussing the possible outcomes of such investigations, Korzybski said,

> It would be desirable to experiment and introduce parallel classes in schools for a while; one group continuing in the old A-System, the other being trained in the Non-A System. We may expect that at the end of a year, the results would be fairly tangible. The ones which acquire the "consciousness of abstracting" should show a marked improvement in character, should behave better, and should also show better results in scholarship, not to mention in addition, the preventive semantic benefits in their future life and adjustment. (1958, p. 487)

Many of Korzybski's followers have written about the contributions that general semantics might make in both education and psychological adjustment. A much smaller number have actually set up experimental projects using case studies, controlled situations and groups, or tests and measurements.

The effects of general semantics on adolescents and adults in terms of such criteria as intelligence (Trainor, 1938), critical reading ability (Almy, 1957; Livingston, 1964), composition (Berger, 1965), and study skills (Wise, 1960) have been experimentally explored. In addition, studies particularly concerned with psychological

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adjustment were done by Weiss (1954, 1961), Hopkins (1958), Mitchell (1951), and Yormak (1956), but none of these dealt with children. Some studies of the effect of general semantics training on children were concerned with such components of school performance as language skills (Brown, 1938; Sies, 1954), reading readiness (Semmelmeyer, 1938), and creativity (True, 1964). The researchers in the studies that used children recognized that school skills are associated with psychological factors, but their main focus was not on emotional adjustment. Therefore, this study which deals with the effect of general semantics on the personality adjustment of elementary school children explores a new area.

The review of the literature discloses only one wide-spectrum test of general semantics competency (Yormak, 1956) but this General Semantic Information Test was designed expressly for adults trained in general semantics and familiar with its terminology. There are several other tests which sample only one, rather than most or all the basic principles of general semantics. Examples of these are Haney's Uncritical Inference Test (1953), Weiss's "IS-of-Identity" Test (1954), Kottman's "I" Scales which measure intensional orientation, and Snider's Word Preference Test (1969) which is concerned with "all-inclusive 'conceptualization'." Since no wide spectrum test for general semantics competency written expressly for elementary school children has heretofore existed, The General Semantics Competency Opinion Test for children eight to twelve years old, that has been designed and partially validated as a tool in this study, breaks new ground.

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Statement of the Problem

Since many of the principles of general semantics are also features of other systems of language instruction as well as attitude training in the home and school, can it be shown that persons competent in general semantics, regardless of where they learned it, also have good personality adjustment? Is it possible to demonstrate this relationship by means of a test of general semantics competency compared with a psychological test of personality? If part of the curriculum of an elementary school is based upon general semantics, can it be determined to what extent this instruction is reflected in the thought and behavior of the students? Are their scores on personality tests better than those of students in an untrained group matched on the variables of race, home stability, socioeconomic status, age, sex, intelligence, reading ability, total language ability, and work-study skills? In response to these questions, the following research hypotheses are proposed:

1. There is a relationship between general semantics competency and personality adjustment in that subjects who score high on a test of general semantics competency will score low on a test of neuroticism and anxiety.

2. A group of elementary school children trained in general semantics will score higher on a test of general semantics competency and lower on a test for neuroticism and anxiety than will an untrained group otherwise matched on the variables of race, home stability, intelligence, age, sex, socioeconomic status, reading ability, total language ability, and work-study skills.

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Limitations

Instrumentation

1. Since there had been no appropriate test for general semantics competency, The General Semantics Competency Opinion Test (GSC) was designed and partially validated for use in the present study. Procedures included the following:

a. Item design by the researcher with the assistance of members of the Fort Myer Elementary School staff.

b. A check for face validity based on the advice and suggestions of thirty-two experts in language and general semantics.

c. Two test runs on a total of 263 subjects.

d. Three revisions based on experts' advice, testees' open-ended responses, and two statistical analyses of previous versions.

e. An item analysis as well as statistical outcomes of the responses of the 153 subjects used in this study is provided.

The fact that The General Semantics Competency Opinion Test is only partially validated is recognized as a limitation in this study.

2. As a criterion instrument to measure personality adjustment in this study, The Institute for Personality and Ability Testing's Children's Personality Questionnaire (Porter & Cattell, 1963) was used. This test yields 14 primary scores on various factors of personality such as "reserved-outgoing," "phlegmatic-excitable," "expedient-conscientious," and "placid-apprehensive." From these are derived three scores for "neuroticism," "extraversion," and "anxiety." Since "extra-

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version" does not seem to be directly related to adjustment and maladjustment, the remaining two scores were used as the criteria for personality adjustment. It is recognized that stressing the undesirable rather than the desirable aspects of personality results in a definition which may imply that normal is the same as optimum personality adjustment.

Population and Sampling Procedures

Two groups of fifth and sixth grade students in public elementary schools located on army bases were used. The group from Fort Myer Elementary School, Arlington County, Virginia, consisted of 94 subjects whose teachers included general semantics as a part of their instruction. The group from Pershing Hill Elementary School, Fort Meade, Anne Arundel County, Maryland, consisted of 163 students who had a regular curriculum. From these groups, subjects in the following categories were eliminated:

1. Subjects considered by their teachers or other school officials to be emotionally disturbed because of home conditions or a history of personality problems that were unlikely to be improved by curricular treatment. (Fort Myer N=23; Fort Meade N=37)

2. Subjects considered by their teachers or the schools' reading specialists to be insufficiently familiar with the English language because of bilingual home background or poor reading ability to be able to comprehend the test. (Fort Myer N=16; Fort Meade N=13)

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3. Subjects for whom background information consisting of intelligence quotients or scores on other standardized tests of reading, total language, and work-study skills was not available, usually because they had only recently begun attending the school. (Fort Myer N=10; Fort Meade N=6)

The remaining groups finally used in the study were: Fort Myer N=46; Fort Meade N=107; total group N=153.

This study is therefore limited to fifth and sixth grade boys and girls most of whom are the dependents of non-commissioned officers. In both schools the racial make-up as estimated by the principals was approximately 80% Caucasian, 15% Black, and 5% Spanish-American, Oriental, or Eurasian. Since a high degree of homogeneity is found in "base schools," the results are probably generalizable to similar institutions. Further investigation would be required to determine how similar the results would be in different socioeconomic settings. It should also be noted that in the effort to make the groups as normal as possible, all subjects with recognized language or emotional problems were eliminated.

Data Collection

The tests described above were administered during the second and third weeks of March, 1971, in the subjects' classrooms by their regular teachers, in accordance with standardized instructions. The total testing time was one and one-half hours, arranged in three half-

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hour sessions. The test answer sheets were hand scored, and raw scores on the Children's Personality Questionnaire (CPQ) were converted for age and sex as provided in the test manual. These scores, together with each subject's 38 responses on the GSC Test were entered on individual cards. Also recorded was data from the subjects' cumulative records: age, sex, father's rank or occupation (SES) and standardized scores for IQ, reading ability, total language ability, and work-study skills. For the Fort Myer group, these were the California Test of Mental Maturity percentile intelligence ratings and the Iowa Tests of Basic Skills percentile ratings for reading, total language and work-study. These tests had been administered in October, 1968 for the fifth grade, and September, 1970 for the sixth grade. For the Fort Meade group, intelligence quotients derived from the Lorge-Thorndike Intelligence Test and the Iowa Tests of Basic Skills percentile ratings for reading, total-language, and work-study were recorded. These tests had been administered to all subjects in January, 1971. Thus, for each subject, 62 variables were recorded on cards and these data were then key-punched on Fortran cards for comupter processing.

Statistical Procedures

1. For analysis of the total group (hypothesis #1) correlation coefficients were computed between GSC score, and CPQ neuroticism and anxiety scores.

2. For the comparison between the trained and untrained groups (hypothesis #2), means and standard deviations for the variables of GSC score, and anxiety and neuroticism were computed, and Fisher's t test of

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difference between means was found. The variables of age, socio-economic status, IQ, reading ability, total language ability, and work-study skills were identified as relevant variables; and means, standard deviations, t test values, and probability levels for these factors were computed, to verify matching of the groups. The probability value of .05 was considered critical.

3. For analysis of the GSC test, means and standard deviations were computed for each of three versions, as well as range and Kuder Richardson Formula 20 estimates of internal consistency. An item analysis was also performed to determine average difficulty, range of discrimination, average discrimination, and individual difficulty and discrimination indexes for each item.

Definitions

1. Semantics -- that part of the study of language that deals with its cognitive and affective meanings in contrast to its etymology, grammar, syntax, or usage.

2. General Semantics -- The particular system of interrelated propositions organized by Alfred Korzybski "resulting from a General Theory of Time-binding which supplies the scientists and the laymen with a general modern method of orientation, which eliminates the older psycho-logical blockages and reveals the mechanisms of adjustment" (Korzybski, 1958, p. 8). Some of the pertinent terms and concepts of general semantics are:

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a. Non-Aristotelian Systems -- methods devised by Korzybski to complement, or in some cases to supersede, the traditional logical system of Aristotle. Also referred to as "Non-A" or "$\overline{A}$."

b. Semantic reactions -- "psycho-logical responses to words and other stimuli in connection with their meanings." (Korzybski, p. 9)

c. Structure -- the degree to which the language of a society relates to reality. This is compared to the relationship of a map to a territory, or a word to a thing.

d. The Structural Differential -- a graphic model of language structure designed by Korzybski to demonstrate the difference between human and animal responses to stimuli, to show how man uses different levels of abstraction in verbal response to reality, and to emphasize the circular or self-reflexive nature of language.

e. Levels of abstraction -- various degrees of specific reference. First order abstractions consist of sense impressions at the un-speakable (not named) level. Second order abstractions describe, name and categorize. Third level abstractions include inferences, assumptions, conclusions, and value judgments. Higher levels contain creeds, faiths, beliefs, and loyalties. Much of man's disorientation is seen in his confusion of the levels of abstraction so that he acts as if higher level abstractions were as specific as lower ones, or generalizes from one lower level abstraction to a high level judgment.

f. Multiordinality -- the characteristic of language that makes it possible for the same word to be used at different levels of abstraction, thus causing confusion. A word like table which refers to a piece of furniture, a water level, a graphic representation, the

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postponement of a committee action, and so forth, is multiordinal.

g. Intension and Extension do not mean the same things as "intention" and "extention." Intension refers to the activities that go on inside an individual, particularly in his cerebral cortex. Intensional operations manipulate verbal symbols (words) rather than the real objects which exist only in the extensional world at the unspeakable level of abstraction. Errors result from intensional operations when users confuse words with their referents and act as if the words were in themselves things.

h. Extensional Devices -- techniques with which people can modify the structure of their language without modifying the language itself. Some of these are:

1. Indexing -- adding a mental subscript to differentiate members of a class from one another. For example, dog_1 may bite, while dog_2 does not. Jew_1 is seen as an individual more unlike than like Jew_2.

2. Dating -- adding a mental superscript to provide a time referent for each incident or name. For example, $Cambodia^{1969}$ is distinguished from $Cambodia^{1971}$.

3. Etc. -- is added mentally to any statement to indicate that all verbal labels are incomplete.

4. Quotation Marks -- are added actually or mentally to terms in common usage to denote the vagueness of their definitions. Examples are "government," "democracy," and "good."

5. Hyphens -- are used mentally or actually for two purposes: to separate into their components commonly used combinations such as "socio-economic" or "psycho-logical," and to connect

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supposedly dichotomous pairs such as "space-time" and "mental-physical" to indicate that they are not mutually exclusive, but actually related.

i. The "Is of Identity" -- "Identity defined as "absolute sameness" necessitates absolute sameness in all aspects, never to be found in this world . . . all world pictures, speculations, and semantic reactions based on such premises must build for us delusional worlds, and an optimum adjustment to an actual world, so fundamentally different from our fancies must, in principle, be impossible." (Korzybski, 1958, p. 194) "I accept the absolute individuality of events on the un=speakable objective levels, which necessitates the conclusion that all statements about them are only probable in various degrees, introducing a general principle of uncertainty in all statements." (p. 93)

j. Time-binding -- man's unique ability to pass on his experiences so that one generation can begin where the previous one left off, using language as a tool for recording, thinking, and reasoning. In negative terms it also explains man's predilection for perpetuating his misunderstandings and mistakes.

k. The multi-valued orientation is contrasted with the "either-or" dichotomy which asserts that things are either right or wrong, good or bad, sinful or virtuous, etc. The multi-valued orientation asserts that most questions have more than two sides, and that realistic judgments fall on an infinite-valued continuum between the extremes.

l. The Non-Elementalistic principle (non-el) asserts that most judgments and categories are unrealistically simplified.

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m. The Organism-as-a-Whole Concept asserts that because of interaction, organisms are always more than the sum of their parts. For example, "'emotion' and 'intellect' cannot be divided [since] this division structurally violates the organism-as-a-whole generalization." (Korzybski, 1958, p. 189)

3. Operational Definitions for This Study

a. General Semantics Competency -- the ability to apply the principles of general semantics to verbal behavior as defined by a score on the GSC test.

b. Personality Adjustment -- the ability to deal adequately with personal and social problems as defined by low scores on the derived factors of anxiety and neuroticism of the IPAT CPQ test.

Summary

General semantics has been recommended as both a content area and an instructional method to improve verbal behavior and personality adjustment. This study describes experimental projects that have evaluated the effects of general semantics and adds one more investigation to the body of evidence. It hypothesizes that general semantics may contribute to personal and social adjustment, and asserts that the scientific methods of objective observation should be used to investigate this.

The principles of general semantics are taught in many colleges and high schools, but they are not used as often in elementary schools. However, one project using general semantics as a curricular base has been going on at Fort Myer Elementary School, Arlington, Virginia, for the past four and one-half years. Since this may be the only American

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school of its kind with such an extensive commitment to general semantics, an evaluation of its outcomes is pertinent to this study.

The effects of general semantics on the psychological adjustment and intellectual development of adolescents and adults have been the subject of a number of studies and experiments. Elementary school children's responses to general semantics training have also been evaluated in terms of creativity, language skills and measures of intelligence. But the emotional adjustments of children have not been directly explored. Thus, the present study which focuses upon the effect of general semantics on the personality adjustment of elementary school children, investigates a new area.

There are two hypotheses in this study: the first asks if general semantics competency and personality adjustment are related -- the second asks if general semantics competency can be taught in school. The limitations of the study are described in terms of its instrumentation, population and sampling procedures, data collection, and statistical procedures. In providing definitions for the terminology used in this study, it was possible to state the significant principles of general semantics which were used in constructing the General Semantics Competency Test.

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Chapter II

Review of the Literature

Introduction

The general semantics system was developed by Korzybski during the 1920's and officially presented in Science and Sanity in 1933. Its relative position in the areas of language study and education is delineated in Richard Dettering's dissertation, The Contributions of Semantics to the Philosophy and Practice of Education (1956). Dettering divides the field into two categories, "philosophical semantics" and "behavioral semantics," in which the former refers to critical and analytical developments in logical and linguistic philosophy including syntactics (linguistics, grammar, and logic) and designastics (the study of the naming and denotative function of symbols). The second category, "behavioral semantics," relates most directly to pragmatics (the relation of symbols to organisms). As such it includes not only the general semantics movement, but also touches upon allied studies like role-playing, interpersonal relations, anthropological linguistics, and information theory, all of which involve symbolically determined behavior. (Dettering, p. 24) He explains that "behavioral semantics" evolved

> when through the work of Russell and Whitehead especially traditional logical formulations were shown to be not only inadequate, but to lead to paradoxes. Our ordinary language itself was seen in certain respects to be formally deficient, while the language of classical philosophy was observed to have exploited rather than have remedied these deficiencies. The new insistance on the logical analysis of philosophical concepts thus led to logical analysis of philosophical language, and this, in turn, exposed many hopeless ambiguities and confusions in the discourse of traditional metaphysics. (p. 164)

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Although Korzybski and his followers might not agree that "philosophical semantics" is not their concern, they would probably concede that they are most interested in the empirical and pragmatic effects of language usage. General semantics deals with the way in which linguistic structures are related to the basic structures of the universe. Reality is seen as consisting of physical and electrical energies in a constant state of flux providing environmental stimuli to the human nervous system. The nervous system, in turn, abstracts or selects certain aspects of the stimuli to which it responds symbolically -- in language. But the symbolic structure is not the same as the structure of the basic energies that form the world. "The closer the relation between the language structure and the basic energies, however, the closer the relation between mankind and reality." (True, p. 2) General semantics proposes that by language reorientation, individuals can develop a more realistic relationship to themselves and the universe, and can function better as a result.

The particular concern of this study is elementary school children's competency in general semantics and its effect on psychological adjustment. Experiments reported in the literature have not dealt with both children and psychological adjustment, although many of them deal with one or the other. The studies described in this chapter evaluate the effects of general semantics in terms of such criteria as reading readiness, critical thinking, creativity, and intelligence. These are essentially intellectual concerns, but they interact with emotion. Korzybski insisted that the organism is a whole, and that arbitrary separation of human qualities into exclusive categories is "false-to-fact." Studies of any human function in its relationship

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with general semantics is therefore pertinent to this study.

1933-1943: The First Decade of General Semantics

During the ten years following the publication of Science and Sanity, a great deal of activity took place among those attracted to its premises. The First American Congress for General Semantics was held in 1935, and its Papers (1938) included reports of several experimental studies. The Papers from the Second American Congress on General Semantics (1943) continued with additional reports of scientific studies, along with many articles of a purely theoretical nature.

In 1935, Dona Brown explored the effect of general semantics in teaching the language skills to her class of eighth grade girls. (Brown, p. 524-527) Using a pretest-treatment-posttest research design, she administered the Nelson Denney Reading Test, Form A, at the beginning of the school year. She then instructed her students in the theoretical concepts of Korzybski's Semantic Differential in a course of study emphasizing concrete (extensional) experiences. Although Brown did not specify the total number of subjects nor report quantified cumulative outcomes, she did select eight subjects whom she considered representative of the group because their test scores covered the full range from high to low, and she reported on these. Their posttest gains on Form B of the reading test averaged 38 percentile ranks, with subjects at all levels of ability showing marked improvement.

Madeline Semmelmeyer, principal of the Reilly Elementary School in Chicago, Illinois, was another early general semantics experimenter

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who maintained a continuing interest in its effects on the school performance of children for some twenty years. Beginning in 1935, she explored general semantics and reading readiness, using a group from her school classified "not ready to read" because of low scores on the Kuhlman Anderson Intelligence Test and the Metropolitan Reading Readiness Test. Her subjects were further described as of low socioeconomic status with problems of bilingualism and verbal deprivation. Semmelmeyer's experiment consisted of training these pretested students in the extensional devices including dating and indexing. On retests with the same instruments at the end of the 1935-36 school year, her subjects scored an average improvement of 13 IQ points, together with personality and behavior gains subjectively noted by their teachers. Encouraged by these results, Semmelmeyer continued teaching general semantics to additional classes for the subsequent period 1936-1941, with generally favorable but unquantified results. (Semmelmeyer, 1938; 1943) Later she wrote additional articles for the General Semantics Bulletin (#13-14, 1950-51; #18-19, 1955-56) describing the use of general semantics in teaching eighth grade arithmetic and "What's Wrong with Johnny's Reading: A Semantic Look at the Problem." Both articles were descriptive of procedures subjectively judged successful, but not supported by test results.

Somewhat similar to Semmelmeyer's work was that of Harold Potts (1938) who tried training 17 mentally retarded boys and girls (IQ's 56-80, but ages not given) in the public schools of Olympia, Washington. At the time of his report, Potts had administered daily

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lessons of one-half to one hour on the extensional devices, over a period of four months. His subjective observation was that general semantics concepts were being internalized and projected in improved cognitive behavior and personality adjustment.

A more complete experiment keyed to both personality and intelligence was that of Joseph Trainor at the Washington State Normal School, Ellenberg, Washington. His experimental group consisted of 30 college sophomores in a class in beginning psychology. A control group was referred to in the report, but not identified. Both groups were pretested on the Detroit Intelligence Test as well as the Pressey X-O Test to measure emotional maladjustment. Then the experimental group was trained in general semantics. Details of this course of study were not given. At the end of the semester, both groups were posttested with the Detroit instrument. The mean increase was 6 points for the control group and 36 points for the experimental group. The raw score mean for the experimental group increased from 129 to 165, a gain in percentile rank from 62 to 96. In addition, Trainor reported that "three cases of inferiority maladjustment were resolved." He concluded that his experiment supported the hypothesis that "certain non-Aristotelian training practices will increase personal adjustment and free the basic intelligence of students when blockages are removed." (Trainor, p. 59)

In 1937, two psychiatrists from the Cook County Psychopathic Hospital, Douglas C. Campbell and Charles B. Cogden, wrote in an open letter to Alfred Korzybski: "there is no doubt that we have in general semantics a procedure of great merit in preventive work, utilizable in the elementary schools as well as colleges." (Papers, 1943, p. 47)

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Subsequently, Dr. Campbell wrote a number of articles detailing the benefits he believed general semantics offered for psychiatric treatment, but these were not reports of experiments and they did not provide statistical research support (Campbell, 1937; 1939; 1943, pp. 88-89 & 129. Many other articles by psychiatrists and psychologists recommending general semantics for use in their fields can be found in the literature, but most of them are not cited here because they express opinions better reflected in later citations. Our Language and Our World (Hayakawa (ed.) 1959, Section II, "Education and Re-Education," pp. 113-202) provides a collection of reprinted articles of this kind by such authorities as Carl R. Rogers, Earl C. Kelley, and A. H. Maslow.

M. Kendig edited the 1943 Papers and has been intimately connected with general semantics since its inception. At the present time she is Acting Director of the Institute for General Semantics. In 1935, she wrote a research proposal, "Language Reorientation of the High School Curriculum and Scientific Control of Neuro-Linguistic Mechanisms for Better Mental Health " (Papers, pp 65-70). In it, she described a two year program of instruction and evaluation. Although this project was never carried out by M. Kendig, it provided research ideas for many subsequent scholars.

General Semantics Research in the 1940's

During its second decade, much of the work in general semantics was in the form of texts intended to assist teachers in presenting training courses. Outstanding among these is S. I. Hayakawa's Lan-

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guage in Action (1939) revised in 1949 and 1964 and retitled Language in Thought and Action. About two and a half million copies of the three editions of this book have been sold. Another major book of the 1940's is Wendell Johnson's People in Quandaries, the Semantics of Personal Adjustment (1946) which stresses the psychological applications of general semantics.

Research in the 1940's was focused at the University of Iowa where Wendell Johnson, Head of the Speech Department, designed an intricate program to investigate language behavior. His objectives were to:

1. Develop reliable and differentiating measures of specified aspects of language behavior.

2. Determine the degree to which the resulting measures are intercorrelated.

3. Determine the degree of correlation between these measures and such other pertinent variables as those involved in environmental influences, physiological conditions, intelligence, and personality adjustment.

4. Apply the measures to a comprehensive investigation of language development.

5. Determine the degree to which modification in language behavior is possible under specified conditions.

6. Determine the degree to which modification in language behavior is associated with modifications in other aspects of behavior or adjustment.

7. Indicate the normal characteristics of language development and language behavior, and the varieties of disorder or abnormality in such behavior in terms of the measures used.

(Johnson, W. 1946, p. 510)

In order to implement these objectives, Johnson designed many measures and scales. For example, his Type-Token Ratio measures

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vocabulary flexibility by computing the ratio between the number of different words (types) to the total number of words (tokens) in a given language sample. Johnson further divided the category of "types" to isolate particular kinds of words such as self-references, "allness" terms, negatives, positives, qualifiers, and so forth. He also devised indexes to reflect particular kinds of verbal behavior such as the Extensional Agreement Index and the Extensional Synonymy Index which analyze degrees of vagueness in word usage. His Intensional Agreement Index reflects the degree to which subjects use dictionary-type definitions rather than operational or extensionally-oriented ones.

Although Johnson did not report any complete research projects of his own involving his scales, he envisioned an extensive research effort by a group of scholars who would work toward accumulating a body of research findings. To this end, he sponsored at least twenty projects, eleven of them University of Iowa master's theses, that were done between 1939 and 1945. These were primarily concerned with counting types and tokens, measuring word length, and similar mechanical analyses of writing or speech samples. The emphasis was apparently upon mechanics rather than the substantiation of meaningful hypotheses or the practical application of findings. They are listed at the end of his appendix, "Research in Language Behavior" (pp. 499-518) to People in Quandaries, but follow-up reports do not appear in general semantics, education, or psychological journals, despite Johnson's faith in his research plan and his hopes for its implementation (Johnson, 1944).

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During World War II, it appears that general semantics made significant contributions to the psychological treatment of soldiers in Europe. In 1946, Korzybski wrote "A Veteran's Re-Adjustment and Extensional Methods" (ETC., 1946, 3) which is a case study of one veteran's use of general semantics to solve his war-engendered neurosis. The main interest in this article for the present study is found in its introduction by Douglas M. Kelley, Chief Consultant in Clinical Psychology and Assistant Consultant in Psychiatry to the European Theater of Operations. His comments indicate the extent of general semantics use and influence:

> Following the development of primary symptoms we find, as Korzybski puts it, the occurrence of second-order reactions "such as fear of fear, nervousness about nervousness, and worry about worry." General semantics as a modern scientific method, offers techniques which are of extreme value both in the prevention and cure of such reactive patterns. In my experience with over seven thousand cases in the European Theater of Operations, these basic principles were daily employed as methods of group psychotherapy and as methods of psychiatric prevention. It is obvious that the earlier the case is treated the better the prognosis, and consequently hundreds of battalion-aid surgeons were trained in the principles of general semantics. These principles were applied (as individual therapies and as group therapies) at every treatment level from the forward area to the rear-most echelon, in front-line aid stations, in exhaustion centers and in general hospitals. That they were employed with success is demonstrated by the fact that psychiatric evacuations from the European Theater were held to a minimum.
>
> (pp. 254-255)

Studies, Tests, and Experiments in the 1950's

The Uncritical Inference Test

In 1953, William V. Haney defined "uncritical inference behavior" as the making of conjectures, suppositions, guesses

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and assumptions, and thinking and acting as if one had actually observed or experienced the extensional event. His research was designed to determine if people do have a proneness to infer uncritically, and if such behavior is similar to other factors such as critical thinking ability, verbal intelligence, and reading comprehension. He designed a test consisting of several anecdotes followed by a series of questions to be answered true, false or ?. The following is an example:

> A black car is parked in front of 619 Oak St. The words "James M. Curley, M. D." are spelled in small gold letters across the door of the car.
>
> 1. The color of the car in front of 619 Oak St. is black. (T)
> 2. There is no lettering on the door of the car. (F)
> 3. Someone is ill at 619 Oak St. (?)
> 4. The black automobile in front of 619 Oak St. belongs to James M. Curley, M. D. (?)

Haney pilot-ran his test on 350 subjects and checked it for face validity by consulting experts. His official test run used students in two speech classes at Northwestern University as an experimental group. The control group consisted of 87 students not in speech classes. Pretesting was done with one form of the Uncritical Inference Test, one form of the Watson-Glaser Critical Thinking Test, and standardized measures of verbal reasoning and reading comprehension abstracted from group intelligence tests. The experimental group was then given 16 fifty-minute lecture-discussion lessons in general semantics with emphasis upon the confusion of inference and description. Both groups were posttested on alternate forms of the pretest instruments.

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Haney concluded that the Uncritical Inference Test is sufficiently reliable for discrimination between groups, and for grosser discrimination among individuals, since the posttest scores for the experimental group were significantly higher than their pretest scores and both pretest and posttest scores of the control group. Poor-to-moderate correlations between the Uncritical Inference Test and the other criteria led Haney to the conclusion that his instrument explores a hitherto unmeasured factor.

Haney's test can be criticized because of its narrow spectrum, since it explores only one principle of general semantics, and in so doing apparently violates another principle -- that the word is not the thing. In order to respond correctly to the Uncritical Inference Test, testees must assume that the exact wording, and none other, is usable. Therefore, nothing not explicitly stated can be inferred, no matter how logical it might be.

Haney considers the Uncritical Inference Test "a unique instrument that is helpful in stimulating discussion, in learning about an important and insidious behavior pattern -- jumping to conclusions, and for training in inference awareness " (Haney, 1953, p. 4). It is published and distributed by the International Society for General Semantics, and in terms of its modest objectives, it is commonly used in schools and industry today.

The IS-of-Identity Test

Thomas M. Weiss's doctoral dissertation, "An Experimental Study Applying Non-Aristotelian Principles in the Measurement of Adjustment and Maladjustment" (1954), together with Robert Hopkins' replication

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study (1958) and Weiss's further research (1961) are particularly pertinent to the present study because they deal directly with the question of psychological adjustment, and because they represent the most thoroughly researched test instrument in the field of general semantics. Weiss's objective was to develop a test that would discriminate between well-adjusted individuals and those poorly adjusted on the basis of the extent to which the "is-of-identity" was used. He defined "is-of-identity" as any form of the verb to be used in such a way as to imply "false-to-fact" identity between class names and individual members of such classes.

A one hundred item test was developed with three pilot runs using 200 subjects, in which the reliability was above .90 and the discrimination at the .01 level of probability. For his experiment, Weiss used 236 boys and girls from high schools in Lansing, Michigan, and 280 males from the Boys' Vocational School and the Ionia State Reformatory. As criteria, Weiss used data from the subjects' cumulative records for IQ, sex, and age, and he secured from the subjects themselves reports on religious affiliation, church attendance, and an estimate of self-concept. In addition, criteria for the high school group consisted of teacher ratings as available -- in some cases only one or two, for other subjects as many as ten. For the group in institutions, Mooney Problem Check List scores as well as diagnostic and prognostic ratings by the institutional authorities were used. Weiss found no significant differences between the groups on age, sex, church attendance, religious affiliation, self-ratings, or the diagnostic and prognostic ratings when compared by analysis of variance procedures with his "IS-of-Identity" Test.

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He did find a significant difference in the mean scores on his test between those who were in institutions and those who were not.

In discussing the limitations of his experiment, Weiss mentioned several relatively minor technical points, such as the restricted age and geographical location of the subjects, and the possibility that the instructions for administration might be misunderstood. But he did not discuss what may be its greatest drawback -- the all-false pattern of the test, which consists of such statements as "women are mothers," "a circle is round," and "time is money." The right answer is always false, although ? does not count against the testee. The score is the number of wrong true responses. Weiss contends that this pattern is not detected by subjects, but this does not seem likely.

The "IS-of-Identity" Test can also be criticized because it measures only a single principle of general semantics, because one of his groups consisted of males only while the other contained both sexes, and because there were only one or two teacher ratings available for some of the subjects. The use of subjective teacher ratings as a major criterion is also open to question. Weiss himself also noted that another limitation was that the test had not been tried on seriously maladjusted subjects, such as those in mental hospitals.

In 1958, Robert Hopkins replicated Weiss's experiment at Michigan State University, using the same instrument with some similar and some different groups. His sample included 214 students from five Detroit, Michigan, high schools, 116 adolescents from the Wayne County Juvenile Detention Home, and 57 mental patients from the Wayne County General Hospital. Scrupulously following Weiss's

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procedures, Hopkins found that the "IS-of-Identity" Test did discriminate among subjects in the three groups. To mitigate some of the limitations of the original experiment, Hopkins' sample of delinquents included girls as well as boys, and his use of psychotic subjects added a totally new sample. Since Hopkins' purpose was to validate the "IS-of-Identity" Test through further testing, he did not use any additional criterion instruments, although he conceded that teacher rating is not a very reliable evaluator. He concluded that the "IS-of-Identity" Test does discriminate between those in and those out of institutions, but that the variables of age, sex, religious affiliation, and church attendance are not associated with the use of the "is of identity." He felt that the use of this concept is vital in the individual's view of the world and his adjustment to it. Hopkins therefore advised that counselors should study general semantics and that they would find Weiss's test valuable for diagnostic purposes.

In 1961, Weiss reported on "Additional Experimental Evidence Supporting Korzybskian Principles " (Weiss, 1961, p. 118), Using 200 college students (90 freshmen, 50 sophomores, 36 juniors, and 24 seniors) he compared scores on the "IS-of-Identity" Test and IQ's from the Nelson Henman Test of Mental Maturity. He concluded that those who score high on his test also have higher IQ's and are more likely to think in operational terms than those who score low. He claimed to find no distortion because of the all-false test pattern. And he also hypothesized that "if an experimental group of children were trained in non-identity compared with a

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control group not so trained, it might be possible to discover whether intelligence can be improved by training in non-identity."

Intensionality-Extensionality of Clients in Therapy

In 1951, Francis Mitchell at Wabash College, Crawfordsville, Indiana, explored certain general semantics hypotheses by application to client-centered counseling cases. Using audio tapes of ten subjects in a series of counseling sessions covering a period of several months, he traced their shift from intensional to extensional orientation. His experimental evidence consisted, not in test scores, but rather in quotations from various counseling sessions. Mitchell concluded that the cases that terminated successfully were characterized by a shift in point-of-view from intensional to extensional, and that clients who were unable to reach a successful termination of their psychotherapy had been unable to make this shift.

General Semantics Training of Neuropsychiatric Patients

In 1956, Bernard Yormak at Pennsylvania State University based his doctoral dissertation on an investigation of behavioral changes following general semantic training of neuropsychiatric patients. His subjects were open-ward patients at the Pittsburgh, Pennsylvania, Veterans Administration Hospital. From a population of 180 psychoneurotic, but not psychotic, patients, Yormak randomly selected 20 "acute" and 20 "chronic" cases, so categorized by the hospital. He subdivided these into two classes each, so that there was a control and an experimental group of ten in each category. His tests included several standardized intelligence and personality instruments as well as the General Semantic Information Test which he wrote himself.

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His treatment consisted of a series of lecture-discussion lessons on the principles of general semantics which he conducted for several months with the two experimental classes. He then posttested the four classes of 40 subjects and found that the experimental groups scored significantly higher on his General Semantic Information Test, as well as Mitchell's Intensionality-Extensionality Rating Scale. These findings supported his first two hypotheses that general semantics information can be acquired by means of lessons, and that a group that has acquired general semantics knowledge will show an increase in accuracy for non-verbal "reality testing." His remaining three hypotheses, however, were not supported: that a group that has acquired general semantics knowledge will manifest an increase in adequate language usage, personality adjustment, or intelligence. It should be noted that Yormak's groups were small, and that his conclusions should probably be rechecked on larger samples.

Yormak's General Semantic Information Test is of interest in the present study because it is the only wide-spectrum test of general semantics principles to be found in the literature. This test, however, is in the nature of a school achievement test that evaluates the amount of information subjects can demonstrate having acquired from a course of study. It consists of 60 true-false statements about language and general semantics (half of which are "true" and half "false") together with 20 multiple-choice questions. These items deal essentially with concepts rather than behavior. The following is an example:

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When you tell a person about an incident or something that happened, you are actually presenting a

A. Complete picture of the incident.

*B. Verbal and mental map to him with some details left out.

C. Photograph of the exact incident.

D. Detailed account of what you feel.

A Semantic Approach to the Teaching of Newspaper Reading

In 1957, at the University of Illinois, Theodore Almy devised instructional materials and procedures for newspaper reading skills based on the principles of general semantics and tested their effectiveness. His population consisted of 100 tenth graders from the Illinois State Normal University High School, 72 of whom received the instruction, and 28 of whom did not. From this group, he selected 20 matched pairs by pretests with the Iowa Silent Reading Test. The treatment consisted of 20 55-minute class periods during four consecutive weeks, with principles of inference, extensional devices, and "allness" receiving emphasis. The groups were then posttested on Almy's Reading the Newspaper Test and the Watson-Glaser Critical Thinking Appraisal. Almy concluded that the ability to perform on his informal test is positively related to achievement on the Watson-Glaser test, since the experimental group significantly exceeded the control group on both measures. Statistical understanding of his findings is hampered because he did not give t test probability differences, but only mean and standard deviations for each group. His Reading the Newspaper Test is imaginative but dependent upon contemporary references. Revised in accordance with current events, it could probably be used profitably with other groups as

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both an instructional tool and an evaluation.

General Semantics Research in the 1960's

A Study Procedure Based on Semantics and Communication Theory

In 1960, at the University of Iowa, Harold Wise used the ladder of abstraction and some parts of communication theory to try to develop an effective procedure for studying. His subjects were juniors and seniors in educational psychology classes at the university. Wise identified three ability levels from scores on entrance examinations and selected 45 students in each ability level. These were then sorted into groups of 45 with 15 students of each ability level in each of three groups. The training period was brief, consisting of two 50-minute sessions during which various treatments were administered. Group #1 received instruction in levels of abstraction and communication theory. Group #2 was given ordinary study-skills training such as identifying main and subordinate ideas, and making outlines, while Group #3 received no treatment.

Wise found that the lessons in general semantics and communication theory did not increase the subjects' comprehension and recall of underlying principles or factual data, that they were much more time-consuming than the ordinary methods, and that they may actually interfere with learning. It should be noted that Wise's brief treatment and the small amount of general semantics technique he used were probably not suited to the purpose of quickly improving students' study skills.

General Semantics in High School English

In 1960, Charles Hicklin at the University of Illinois, exam-

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ined the relationship between the theories of Alfred Korzybski and those of various of his followers upon which are based most programs for general semantics instruction in high school English classes. His work is of value in demonstrating the differences between Korzybski's original postulations and the modifications made by such interpreters as S. I. Hayakawa, Wendell Johnson, and Irving L. Lee. Using a non-judgmental point-of-view, Hicklin described some of the educational and experimental work done by each of the theorists, and the opinions of their critics. Beyond this, the dissertation does not attempt to report any original research.

Kottman's "I" Scales

E. John Kottman's doctoral dissertation at the University of Iowa in 1963 was entitled "A Quantitative Study of the Relationship between Linguistic Command, Degree of Intensional Orientation, and Authoritarianism." By "linguistic command" Kottman meant the expertness with which persons recall, relate, identify, and arrange language symbols. "Intensional orientation" referred to the extent to which a person relies on words rather than observations of reality for his definitions and judgments. It has four subcategories: (1) attention to who said it rather than what was said, (2) treating words as more than symbols, (3) reliance on superstitious practices, and (4) permitting the influence of words to direct a person's evaluations. Kottman used Adorno's definition for "authoritarianism" -- the tendency to be undemocratic, a conventionalized submissive uncritical attitude toward idealized moral authorities, and so forth.

Kottman designed his "I" Scales to measure the various sub-

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categories of intensional orientation. His original research involved four of these scales which were administered to 104 men and women in five classes at the University of Iowa. Two weeks later, a revised part of one of the scales was administered to the same group again. This scale consisted of 14 statements by Samuel Johnson which were attributed on the scale to various other writers -- some, like Shakespeare, Jefferson, and Churchill, considered "positive" and others, like Hitler, Mussolini, and Benedict Arnold, considered "negative." The revised scale switched the attributions around. This measures how much the subjects would pay attention to who said something rather than what was said.

Part II of the "I" Scales explored subjects' attitudes toward mystical happenings and superstitions, and Part III consisted of riddles and puzzles in which words tend to screen the essential facts of the problems. Part IV required the subjects to provide synonyms for "homosexual," "illegitimate child," "sexual intercourse," "prostitute," and the like, which they would be willing to read out loud. The degree of discomfort the subjects experienced in doing this was interpreted by Kottman to indicate the degree to which they tended to treat words as things.

Kottman's original project involved a complicated group of eight hypotheses in which he explored the interrelationships between intensional orientation, intelligence, linguistic command, authoritarianism, and sex. He found that men and women do not differ significantly on any of the factors studied, that language does influence perception and behavior, and that intensional orientation

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is negatively correlated with linguistic command and positively with authoritarianism.

Since his original work in 1963, Kottman has revised the "I" Scales at least eight times, and together with several of his colleagues, he has used the various versions to explore language internalization (1964), religious attitudes (1966) and uncritical inference behavior (1969). His subjects in these experiments were University of Iowa students, and his criterion instruments included standardized group intelligence tests, Adorno's "F" Scale for authoritarianism, the Watson-Glaser Critical Thinking Appraisal, Haney's Uncritical Inference Test and Weiss's "Is-of-Identity" Test. He also used subjects' self-reports of family history, religious affiliation, and church attendance.

Kottman's work can be criticized because his projects are complicated, involving the interrelationship of many diverse factors at the same time. In addition, his sampling is confined to university students rather than more diverse groups. And some of the "I" Scales seem to be based on the assumption that since words are not things, subjects who react emotionally to such words as "vomit," or "whore" are more intensionally oriented than those who do not. This is not in accord with Korzybski who, while asserting that the word is not the thing, nevertheless recognized the power of descriptive labels. Realizing that man cannot escape connotation, Korzybski did not counsel developing a lack of affect, but rather stressed techniques to deal with semantic reactions. Despite these criticisms, however, Kottman's continuing efforts to develop and try practical and meaningful measurements should be recognized as creative

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contributions to the experimental literature of general semantics.

General Semantics and Critical Reading Ability

At New York University in 1964, Howard Livingston evaluated the effects of instruction in general semantics on the critical reading ability of tenth grade students. Unlike Weiss, Haney, and Kottman, Livingston did not construct a test instrument. Instead, he concentrated on the treatment. His experimental group consisted of three classes of tenth graders in high schools in the suburbs of New York; the control group consisted of three other classes taught by the same teachers. The experimental classes were given a unit covering abstracting, the two-valued orientation, the "is of identity," denotative and connotative language, reports, inferences, and judgments, and the extensional devices. These units had been prepared by the teachers based upon two general semantics texts which Livingston had the teachers read. He did not observe the classes or confer with the teachers on content in order to reduce the effect of his own influence in the experiment. The control groups were given the regular tenth grade English grammar and usage units.

Livingston pretested all six classes using the Watson-Glaser Critical Thinking Appraisal, Form Ym, and posttested with Form Zm. From the posttest scores, he randomly eliminated 34 subjects in order to make the two groups equal in number. With the remaining 54 subjects in each group, Livingston found a *t* test difference in favor of the experimental group at the .01 level of probability. And from this he concluded that lessons in general semantics are beneficial "with respect to the kind of difficulties encountered

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by the students and teachers; the kind of student reaction to the subject matter; and other factors related to the aims of the English department, the school, and education in general."

Livingston did not note that the possibility of contamination was great in the case of teachers using a particular technique in one class and withholding it in another. An additional threat to validity lay in the relationships of the students in the same school discussing their classroom experiences in the hall or at lunch. Since Livingston's emphasis was avowedly on treatment, a question might also be raised concerning the different content and techniques that might be developed by three teachers guided only by their background reading in two texts.

Improving Composition Through Emphasis on Semantics and Critical Thinking

At Yeshiva University, New York, in 1965, Irwin Berger suggested that traditional methods of teaching English composition are unsatisfactory, and that instruction in general semantics might have salutory effects on language and thinking skills. He designed special units dealing with (1) awareness of the abstractive-figurative nature of language, (2) avoidance of "allness" and the two-valued orientation and (3) control of semantic problems. Using eight classes of 30 students each in English 7 (first semester, twelfth grade) at Evander Childs High School, New York, Berger divided his sample into an experimental group consisting of two "regular" and two "honors" classes, with a like control group. The "honors" classes had earned grades of 85% or higher in the two previous terms of English. The average IQ for the "honors" group was 131, and for the "regular"

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group it was 112. This is explained by the fact that at that high school, average pupils were tracked in "general" English, so that both "honors" and "regular" groups were actually superior.

The 110 high school seniors in the experimental group were taught composition using Berger's special units, and without formal grammar instruction, while 108 control subjects were taught composition with a conventional emphasis on traditional grammar and usage. The groups were randomly assigned to two teachers, each of whom taught four classes: an experimental "honors" and "regular" and a control "honors" and "regular." This eliminated the variable of teacher personality, but it did not remove the problem of contamination as discussed in the Livingston study. Composition instruction was carried on for sixteen weeks and was given equal time and attention in all the classes. Before and after the period of instruction, each subject wrote an essay as if for the New York State Regents Examination. Teacher-judges unacquainted with the nature or aims of the experiment rated the essays using "Regents Standards." Analysis of variance factorial design was applied to the data, and revealed a significant difference in favor of the experimental "honors" groups. There was not, however, a decisive difference between the "regular" experimental and control groups. Berger reasoned that since the instruction had been for only sixteen weeks, exposure might have been insufficient for differences to become manifest with these "slower" students.

Berger's careful preparation of the material to be offered in his treatment is an improvement over some previous studies, and

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his use of "Regents Standards" for evaluation, while less objective than test scores, is probably more accurate as an indication of real achievement. His sample was unusually intelligent and might therefore be criticized as atypical, but his overall research design has sufficient merit to recommend it for use with other groups including "average" and slower subjects.

General Semantics Instruction in Elementary School

The research of Rachel Lauer, Chief Psychologist of the Bureau of Child Guidance of the New York Public Schools, differs from that of most of the other writers discussed here because hers did not pretend to be other than an informal study. Noting that "our children daily emit the most dismaying nonsense . . . reflecting the adult world which resounds with communications which are illogical, irrational, dogmatic, and prejudiced, but which are nevertheless quite acceptable to the thinking and behavior of large numbers of people," Dr Lauer designed a course in general semantics that she taught to 28 children of a fifth grade class in Valley Stream, New York. It consisted of 26 lessons presented over a five-month period, stressing the analysis of common sayings such as "You can't fight City Hall," "Woman's place is in the home," and "Better dead than red." Fifty-six children from the same school and grade served as control subjects, and except for the general semantics content, both groups had the same curriculum. Before and after the instruction, the subjects wrote an unstructured composition which was subjectively evaluated by the instructor based on a ten item scoring "continua." Dr. Lauer reported that

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> striking differences appeared in favor of the experimental group. 85% improved some or a lot. Only 14% stayed essentially the same, and none got worse. Of the control group, 32% improved some or a lot, 46% stayed essentially the same, and 22% got worse, as rated in the above manner." (Lauer, 1965, pp 8-9)

In a more recent article (General Semantics Bulletin, 1969, pp 56-77) Rachel Lauer discusses the roles of school psychologists urging them to use general semantics in categorizing and identifying "problems" as well as in solving them. She also deals with direct classroom teaching of general semantics, and citing her own experience as well as that of others, concludes that "general semantics as a subject has been and can be effectively taught to children and adults."

The Relation of General Semantics and Creativity

Probably the outstanding general semantics experiment in terms of methodology is that performed by Sally True in 1964 at the University of Wisconsin. Using 36 sixth grade classes in 22 different Madison, Wisconsin, elementary schools, Dr. True trained 18 teachers for the experimental classes, and devised a standard course of study for a six-weeks, one-half hour a day instructional unit, totalling 30 sessions. Fearing sensitization, she did not pretest; instead, she provided scrupulously randomized groups. In none of the 22 schools involved in the experiment were there both experimental and control groups. This eliminated the problem of contamination on the part of either teachers or students. At the end of the course of instruction, all 36 classes were given the Torrance Creativity Scales for "ideational fluency" and "spontaneous flexibility." Since these are projective measures that must be scored by trained raters, Dr. True randomly selected ten subjects from each class and only these

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360 Torrance Scales were actually scored.

Dr. True found levels of t test significance far in excess of .001, indicating that general semantics training had dramatically improved the creativity, or at least the free expression thereof, for the experimental group. Her study demonstrates that with careful methodology, the findings are not only more convincing, but likely to be more significant than other studies, as well.

Inductive and Expository Instruction in General Semantics

At New York University in 1968, Raymond Arlo investigated the relative effectiveness of inductive and expository teaching of the principles of general semantics on the critical reading ability of ninth grade students. The research involved three English teachers at the Isaac Young Junior High School, New Rochelle, New York, each of whom taught three classes, one in general semantics inductively, a second in general semantics expositorily, and a third with a traditional English curriculum. The experiment ran for ten weeks and 15 lessons were given in each mode. For background information, the teachers read several general semantics texts, and in addition Dr. Arlo prepared lesson plans and course guides for them to use. These materials employed two patterns, inductive and expository, of instruction. An audio tape recording was made of every lesson in order to insure the integrity of the two approaches, and these were evaluated by the Amidon-Flanders Interaction Analysis System. Pretesting and posttesting was done with the Watson-Glaser Critical Thinking Appraisal, Forms Ym and Zm. A one-way analysis of variance and an analysis of covariance were computed to determine whether there was a significant difference between changes in the groups

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and Arlo found that at the .05 level, the scores of the inductive group were significantly higher than those of the expository group. Both experimental groups scored higher than the control group at the .05 level, and the inductive group's advantage over the control group was significant at the .01 level. Arlo concluded, therefore, that inductive teaching of the principles of general semantics is more effective than expository techniques, but that either method results in more improvement in critical reading ability than does a traditional curriculum. Although Arlo's experiment is similar to that of Livingston, his control over content is better because he, like Berger, prepared the instructional materials and lesson plans that were used. He was also able to eliminate the problem of contamination in the same teacher teaching different content and with different techniques because he monitored and scientifically analyzed the presentations.

Studies of All-Inclusive "Conceptualization"

In the 1969 General Semantics Bulletin, James G. Snider reports on a group of experiments conducted at the University of Calgary, Alberta, Canada. Most of them were conducted by Dr. Snider in cooperation with various associates. The purpose was to measure objectively "a variable which is usually considered one of the main concerns of general semantics, and which variously has been called allness, all-inclusiveness, or all-inclusive 'conceptualization.'" To measure this variable, Dr. Snider devised the Word Preference Test based on the theory that all-inclusive 'conceptualization' would be revealed by expressed preference for one word in a pair where one

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is an all-inclusive term and the other is not. Examples are "never-seldom" and "always-sometimes." Three versions of this test were constructed, each of which has half "crucial" items, and half "distractors" (words similar in meaning, neither of which was a term of all-inclusiveness). Snider also describes a second test he developed consisting of 100 statements like "teachers are strict" and "ministers are good men," to which the testee is to respond true or false. The score is simply the total number of statements answered (incorrectly) true. Snider comments that "this test might more exactly be called an 'is-of-identity' or an 'is-of-predication' test, since it is concerned with the individual's tendency to identify." (p. 51) He does not seem to be aware that Weiss in 1954 called almost the identical test by one of those titles.

Snider reports that one of his studies used the two tests to measure "stereotyping" behavior in 292 tenth grade pupils from a large urban high school in Calgary. Since all-inclusive 'conceptualization' and stereotyping seem to be names for the same kind of behavior, it is not surprising that he found a high correlation. In another study, he examined the relationship of all-inclusive 'conceptualization' with delinquency using 23 delinquent boys "chosen from the most severe cases available at the Calgary Juvenile Court" and matched on age, intelligence, and educational level with 23 non-delinquent boys from the Calgary Public School Board. Again his work is reminiscent of Weiss's. Snider concluded that all-inclusive 'conceptualization' "would seem to be at least a correlate and per-

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haps also a determinant of delinquency." In still another study, this time of academic underachievers, he selected 72 "achievers" and a like number of "underachievers" matched from the total pupils of grades 10, 11, and 12 in the Calgary Public Schools. He concludes that "all-inclusive 'conceptualization' is very likely one of the habits of underachievers which interferes with the efficiency of their performance." (p. 53) Although Snider uses such statistical techniques as factor analysis, he considers that his studies are 'non-experimental' in the strict sense of the word because they involve paper-and-pencil tests. Verification of Snider's group of research studies is difficult because the sources he cites are in Canada, while he, at the present time is in Lagos, Nigeria. It is recognized that this summary, based on a brief article, is unsatisfactory for such an extensive group of studies.

The Pennsylvania Conference

In March, 1969, the Institute for General Semantics sponsored a Conference on Research Designs in General Semantics at Pennsylvania State University. A number of papers were presented there which describe research possibilities, but no completed projects. Among them were William Arnold's suggested investigation of perception distortion and the extensional device of dating, Kim Giffin's proposed exploration of the conceptualization and measurement of personal trust, and Paul Hunsinger's idea that general semantics might be used as a critical tool in literary research. So far none of the conference proposals have yet been made available as completed projects.

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Conclusion -- The Need for Research

A movement in modern education must be evaluated through research if it is to survive and grow, otherwise its values are always in question. Research in general semantics has been sporadic and not always conclusive. During the 1930's there were many papers asserting the values of general semantics, but only a few informal experiments to support them. In World War II it appears that general semantics was extensively used to treat casualties in the European Theater, but few records of this activity survive. During the 1940's Wendell Johnson began the development of a group research project at the University of Iowa, but it seems that his work was too heavily dependent upon mechanical analysis of language samples, so the work done then has not contributed to the solution of modern problems. There was increased activity using modern methods of research and analysis during the 1950's when Weiss's and Haney's still-current tests were written, and studies of neuropsychiatric patients were done by Mitchell and Yormak. In 1957, Almy's work on the teaching of newspaper reading presaged several subsequent studies exploring the role of general semantics in improving various high school English skills. These were written during the 1960's by Hicklin, Wise, Livingston, Berger, and Arlo. At the college level, John Kottman developed his "I" Scales, while in elementary schools Lauer and True explored the effects of general semantics on children's composition and creativity. In Calgary, Canada, Snider supervised a group of experiments on all-inclusive 'conceptualization,' and at Pennsylvania

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State University a group held a conference on research designs.

But the field of research in general semantics is far from crowded. There is ample need for a new experiment, particularly one that investigates the effects of general semantics on the personality adjustment of elementary school children -- a combination not previously explored. The General Semantics Competency Opinion Test which was developed for this study, is the first wide-spectrum general semantics competency test for children. Following further validation and revision, it may prove useful for elementary school teachers who are now offering general semantics, or who are considering including it in their programs of instruction.

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Chapter III

Materials and Procedures

Introduction

In essence, general semantics is a system of interrelated propositions, most of which were adapted from earlier ideas and combined into their distinctive from by Alfred Korzybski. Thus, it shares concepts with other kinds of instruction, like critical thinking training (Livingston, Haney, Berger, Almy). It has also been associated with a liberal or democratic attitude towards politics and society (Kottman, 1964); and it is, therefore, likely that some of the principles of general semantics could be learned by children in their homes, schools, or social experiences without formal instruction.

The first objective of this study, therefore, is to find out if a "general semantics orientation," regardless of its source, results in good personality adjustment. To answer this question, a group of 153 elementary school children were tested for general semantics competency and neuroticism and anxiety, two factors of personality adjustment.

The second objective of this study is to determine the effect of formal instruction in general semantics. At Fort Myer Elementary School, children have been trained in general semantics for the past four and one half years. How do they compare with an untrained group closely matched with them on age, sex, race, home stability, intelligence, reading ability, total language ability, and work-study skills? To answer this question, the 46 Fort Myer students and the 107 children

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from Fort Meade who made up the total group of 153 were treated separately. Means and standard deviations of their test scores were used to determine Fisher t test values and probability levels.

Instrumentation

The main instruments for the study are The General Semantics Competency Opinion Test for children eight to twelve years old, and the derived scores for neuroticism and anxiety of the Institute for Personality and Ability Testing's Children's Personality Questionnaire. In addition, measures of relevant variables include a rating of socio-economic status, intelligence quotients, and standardized scores for reading ability, total language ability, and work-study skills. These will now be discussed in detail.

The General Semantics Competency Opinion Test

Since the review of the literature disclosed that no wide-spectrum test of competency in general semantics appropriate for elementary school children is available, such a test was designed as a tool for this study. In responding to the test, subjects should not simply parrot maxims, but rather indicate how they would think or behave in everyday situations. The obvious drawback of this type of test is that it is a self-report inventory subject to "faking good" and other distortions. If the subjects can be reassured, however, that their answers will not "count against them," this problem can be minimized. Although the instructions do not state that there are no right or wrong answers, children who have taken the test generally seem to assume that it is "only their free opinions" that are being sampled. Subjects' opinions about the test as a whole and many of its specific parts

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were secured from comments they were encouraged to write on the bottom of their answer sheets. A listing of the comments that were made on the final test run is provided in Appendix C page 102.

The reading level of the test was approved by the Fort Myer Elementary School reading consultant as appropriate for the age group. In addition, further validation of the reading level was insured in the final administration by giving it to fifth and sixth graders only, and from this group subjects with recognized reading difficulties were eliminated.

Item design was devised, for the most part, by the researcher, and was based upon principles and examples from such texts as Science and Sanity (Korzybski, 1958), Language in Thought and Action (Hayakawa, 1964), People in Quandaries (Johnson, 1946), and Words and What They Do to You (Minteer, 1953), as well as Fort Myer's own publication, Instant PEP for Language (1968). A few items were provided by the Fort Myer staff members based on their classroom experiences.

An editorial board consisting of four teachers, the principal, and the reading consultant of Fort Myer Elementary School assisted the researcher in screening item drafts. This board met twice during March, 1970, and several additional screenings were made by the principal, the reading consultant and the researcher. A listing of the principles sampled in each test item, together with source citations and difficulty and discrimination indexes for the final administration are provided in Appendix A, page 80. Since many of the principles of general semantics overlap, it was seldom possible to

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isolate a single principle for each item. In some instances, selecting the keyed correct response would indicate that a subject had learned a principle of general semantics, but if he chose a distractor this would indicate non-learning of a different principle. For example, the following item tests the idea that experience is not divided into "either-or dichotomies," but instead that it is likely to be good, bad, and neutral at the same time depending on point-of-view.

(27) I know I should always love my brother, but sometimes I hate him.

A. You are a mixed-up kid. You should see a doctor.

B. You shouldn't say "hate". "Dislike" is a better word.

C. It's not O.K. to hate your brother, but lots of kids do anyway.

D. You can sometimes love and hate your brother at the same time.

The correct response is "D", but if a subject selected "A" he was using the "is of identity" and "is of predication" considered fallacious in general semantics. If he selected "B", he would be implying that words per se have values, and that one word is "better" than another.

The First Version of the GSC Opinion Test was compiled in March, 1970, and consists of 38 items. The test is arranged so that the various principles it samples are unordered, rather than in factor groups. There are either 9 or 10 of each A, B, C, and D keyed correct response irregularly arranged throughout the test, which is divided into two sections, "Questions" and "Something You Overheard." In Part I, testees are instructed to select the answer closest to what they would say if someone asked them that question. Part II takes into consideration that subjects' unspoken reaction might be different from what

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they would be likely to utter. They are instructed to "imagine you overhear someone say each of the following things. You don't say anything out loud, but which of the answers might you think in your mind? Pick the answer closest to what you really think."

The approximate time required for the test is 35 minutes. Each section has 19 items, with a test total of 38. The test is usually administered without a break, although five minutes can be given the testees between the two parts.

The first version of the GSC was not administered to testees; instead it was used to check content and face validity. Copies were sent to specialists throughout the United States, as well as local experts. Covering letters requested these knowledgeable persons to comment on the project plan, the test format, and particular items they felt should be improved. They were also asked to suggest additional items or areas that might have been overlooked in the draft. Thirty-eight experts replied to this request, thirty-two of them at length. Many wrote more than one letter or made themselves available for personal or telephone conferences. A list of the specialists who assisted with this validation of test content will be found in Appendix D page 109.

A Second Version of the GSC Opinion Test based on the comments and criticisms of the experts was prepared in April, 1970. It was administered to 113 seventh-grade boys and girls in a junior high school in Montgomery County, Maryland. The total group consisting of five classes taught by one teacher represented the school's range of intellectual ability (IQ 84-146). This version provided, in addition to the four multiple choices, the opportunity for testees to write in

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their own responses. These were helpful in identifying the following:

1. Items lacking a full range of alternatives.
2. Items in which the language was unnatural for children.
3. Items in which colloquial connotations affected the meaning.
4. Items children might understand differently from adults.
5. Items in which a logical response had been left out.

An item analysis of this test run is shown in Appendix B, Table II, page 99. The test had an average difficulty of 53.3; M=20; S.D.=5.4 and the Kuder-Richardson Formula 20 estimate of internal consistency was .67. The discrimination range was -.13 to .50 and average discrimination was .27.

The Third Version of the GSC Opinion Test, based on the results of the above trial and additional expert's suggestions, was prepared in May, 1970. It was administered to a group of 149 elementary school children: 68 Fort Myer students in four classes, one at each grade level 3-6, and 82 similarly assigned students from Glencarlyn Elementary School, also in Arlington County, Virginia. In both instances, the groups were selected by the schools' principals. An item analysis of this trial is shown in Appendix B, Table III, page 100. The test had an average difficulty of 44.5; M=17, S.D.=5.21, and the Kuder-Richardson Formula 20 estimate of internal consistancy was .72. The discrimination range was -.37 to .61 and average discrimination was .25.

Revision of the GSC Test, Version #4 was done in February, 1971, based on data from the two previous trials (total N=263) and further experts' advice. An item analysis for the final administration of this version (N=153) is provided in Appendix B, Table IV, page 101. The test had an average difficulty of 52.32; M=19.87; S.D.=5.38, and the

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Kuder Richardson Formula 20 estimate of internal consistency was .75. The range of discrimination was .05 to .89 with an average discrimination of .40. Eight items from the previous version were discarded and eight new items inserted. The remaining 30 items were revised more or less extensively. A copy of the test annotated to show the principles sampled, the source citations, and the difficulty and discrimination indexes is provided in Appendix A, page 80.

The IPAT Children's Personality Questionnaire

In selecting a criterion instrument for personality adjustment, reliability and validity had to be considered, as well as the time needed for administration, the simplicity of administration, and the scoring procedures. The test had to be appropriate for the age of the subjects, current in its references, and suitable to the testees' social experiences in that it would evoke situations familiar to them. It should not be disturbing to the subjects because of value-laden judgments implicit in its items.

The IPAT Children's Personality Questionnaire (CPQ) by Porter and Cattell, (1963) was selected because it met these criteria. It is described by the publisher as follows:

> The Children's Personality Questionnaire (CPQ) is a new aid for the elementary school guidance specialist and for the teacher in the classroom. Recent advances based on extensive psychological research have made possible this instrument to give an objective analysis of the individual personality which may supplement the teacher's personal evaluation. The CPQ is a standardized test with two forms, A and B, each divided into two parts. Each part can be given in a class period to a single individual or to groups ...

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> The CPQ yields a general assessment of personality development by measuring fourteen distinct dimensions or traits of personality which have been found by psychologists to approach the total personality. By working with these fourteen scores individually and in combination, the psychologist can obtain predictions of school achievement, particularly under-achievement, the tendency toward delinquency, the likelihood of leadership potential, emotional disturbances, and so forth. The test is designed for children ages eight to twelve with reading level properly adapted and with appropriate age and sex norms. Scoring is easily and rapidly done by using a stencil key.
>
> (CPQ Test Manual, p. 2)

The CPQ is entitled "What You Do and What You Think" and consists of 70 questions in a forced-choice format. The following are item examples:

1.	Would you like to play with mechanical toys	or	with friends
2.	Does everyone like you	or	only some people
7.	Would you rather be a minister in a church	or	a doctor in a hospital

(CPQ, Form B, p. 1)

Only partial reliability and validity data are available from CPQ's interim test manual, and the final technical report has not yet been published. The interim manual reports reliability on parallel forms as .32-.67, while test-retest (18-days) reliability is shown as .52 to .83. Internal consistency is low, .20 to .45 in view of the fact that the test samples 14 different factors.

Since the CPQ is an adaptation of the IPAT Sixteen Personality Factors Test for adults, data on that test are relevant to an evaluation of the CPQ. For the factor of anxiety in the 16PF, reliabilities of .80 to .93 were computed by several methods. The

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16 PF was correlated with scores on the Edwards Social Desirability Scale with a coefficient of -.60. When scores on the 16PF for "normals" were compared with those of 174 "anxiety neurotics," a correlation of .65 for the latter was found (Buros, 1222).

The IPAT Anxiety Scale Questionnaire, another in the company's battery of personality tests based on the same principles as the CPQ and the 16PF, has construct validity for the factor of anxiety of .85 to .90 when computed in various ways, and a test of internal consistency for the five factors yields correlations of .60 to .63. (ASQ Test Manual, p. 17)

It is important to note that in the data cited above, statistical evidence is reported for the factor of anxiety only, while research support for the factor of neuroticism is lacking except for its correlation with anxiety.

The CPQ is appealing when compared with some other personality tests because it does not invite critical introspection. Its choices are, in most cases, equally acceptable socially, and it avoids making the subjects feel self-conscious or guilty. A detailed description of the 14 CPQ personality factors (such as "reserved-outgoing," "phlegmatic-excitable," and "shy-venturesome") is not included here, since the primary concerns in this study are the derived scores for anxiety and neuroticism. These are computed in the form of stens with the mean at 5.5. Higher scores indicate emotional disorder, while lower ones show good adjustment. For this reason, a negative correlation between GSC and CPQ scores would support the hypotheses. Separate norms for younger and older children (8-10½ and 10½-13) are provided, as well as separate norms for boys and girls.

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A Rating of Socioeconomic Status

The subjects in this study were assigned a socioeconomic status based on their fathers' ranks or occupations as revealed by cumulative school records. Categories were based on guidelines from Social Class in America (Warner, Meeker, & Eells, 1960) and modified to include military ranks and federal civilian ratings. This scale does not purport to be all-inclusive, but it does serve to classify all the subjects of this study.

It should be noted that the subjects used in this study could reasonably be assumed to be socioeconomically homogeneous, since they were all attending army base schools, but such an assumption is not necessarily justified. Public schools located on army bases often serve children from nearby civilian neighborhoods as well, and the nature of such neighborhoods can affect the overall socioeconomic rating. In addition, some military bases provide more housing for various ranks of officers or enlisted men than others, and this can also affect the socioeconomic make-up of the group.

For any replication of this study, particularly if it is broadened to other populations, a rating of socioeconomic status is essential. Apparently similar suburban neighborhoods only a street or two apart can, upon analysis, turn out to be as much as one and one-half ratings different. And in the inner city, urban renewal has often produced contiguous neighborhoods even more divergent.

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A Rating of Socioeconomic Status

Level	Class	Rank or Occupation
1	upper	Army and Air Force generals Navy admirals Superintendents of schools Chairmen of boards of corporations U.S. government officials GS 17 or above
2	upper middle	Army and Air Force colonels, lieutenant colonels, and majors Navy captains, commanders and lieutenant commanders. School supervisors and administrators Doctors, lawyers, dentists Owners of large businesses U.S. government officials GS 13-16
3	lower middle	Army and Air Force captains, lieutenants and warrant officers Navy ensigns, lieutenants senior and junior grade, and warrant officers Classroom teachers, counselors, librarians Owners of small businesses Salesmen, office managers, executive secretaries U.S. government employees GS 7-12
4	upper lower	Army and Air Force sergeants of all grades Navy petty officers Maintenance engineers and apartment house managers Clerks in stores or offices Skilled or semi-skilled workers such as carpenters, plumbers, mechanics Stewards, waiters, cooks U.S. government employees GS 3-6
5	lower lower	Army and Air Force privates and corporals Navy seamen or airmen Janitors, porters, farm laborers U.S. government employees GS 1-2

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Standardized Scores from Cumulative Records

The Iowa Tests of Basic Skills (1963) was part of the regular testing program at both of the schools in this study. Tests had been administered at Fort Myer in October, 1968 for the fifth graders, and in September, 1970 for the sixth graders. At Fort Meade, ITBS had been administered to both fifth and sixth grade classes in January, 1971. The ITBS is a general achievement battery for grades 3-9, providing an educational achievement profile. The subtest scores for reading ability and work-study skills and the composite subtotal score for total language ability (combining spelling, capitalization, punctuation, and usage) were selected as most pertinent to this study. Scores had been reported in the form of percentiles, and were converted to standard T-scores for purposes of analysis and comparison. ITBS reliability is reported in its manual based on the split-halves or parallel forms methods as follows:

	Grade 5 (G/H)	Grade 6 (F/F)	
Reading	.93	.91	
T. Lang.	.96	.96	
Work-Study	.92	.92	(ITBS Manual, p. 37)

On a measure of internal consistency, the following reliability correlations are provided:

	Grade 5*	Grade 6*	
Reading	.78	.77	
T. Lang.	.90	.86	
Work-Study	.79	.78	(ITBS Manual, p. 49)

*K-R 21

For predictive validity, the ITBS is correlated with the Iowa Test

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of Educational Development for the same subjects in grades 6 and 12, .76. For their four-year high school grade point average, the correlation was .59. (ITBS Manual, p. 47) The normative sample was 20,000 subjects for each grade level (p. 51).

The California Test of Mental Maturity (1963) was Fort Myer's intelligence measure. Tests had been administered to the fifth graders in October, 1968, and to the sixth graders in September, 1970. The CTMM is of the scholastic aptitude battery type, differentiated as to five factors: logical reasoning, spatial relationships, numerical reasoning, verbal concepts, and memory. Scores are reported in the form of percentile ratings, and were converted to deviation IQ's for the purpose of comparison and analysis in this study. For grades 4-6, reliability correlations for total mental factors of .95 are reported. For the reliability of mental ages and IQ's, CTMM has correlations of .931 and .934. (CTMM Technical Report, 1963, pp. 26-27) For validity, CTMM's correlations with the following similar group intelligence tests are provided:

Hemmon-Nelson	.80	Miller Analogies	.78
Kuhlman-Anderson	.81	Otis	.70

(CTMM Tech. Report pp. 20-23)

The Lorge-Thorndike Intelligence Test (1964) was the intelligence measure used at Fort Meade. Tests had been administered to all subjects in January, 1971. The L-T Levels C and D used for this group contain five verbal and three non-verbal tests including vocabulary, sentence completion, arithmetic reasoning, verbal classification, and verbal reasoning. Reliability is reported for even-odd analysis as .945 and for parallel forms as .927. Validity correlations are reported

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at .80 with the Stanford-Binet individual intelligence test. The verbal part of the L-T battery compared with three similar group tests correlates at .77, .79, and .84. Scores are expressed as deviation IQ's with a mean of 100 and a standard deviation of 15 (L-T Manual, pp. 43-49).

Population and Sampling Procedures

Two groups of fifth and sixth grade students from Fort Myer Elementary School, Arlington, Virginia, and Pershing Hill Elementary School, Fort Meade, Anne Arundel County, Maryland, were used. These are public schools located on army bases, serving students who live on or near the base. They are almost all military dependents, usually the children of non-commissioned officers.

Table I, page 69 shows the degree to which these groups were matched on the variables of age, socioeconomic status, IQ, reading ability, total language ability, and work-study skills. The average age of both groups was 149 months. At Fort Myer, there were 24 boys and 22 girls; at Fort Meade there were 52 boys and 55 girls. The average socioeconomic status at Fort Myer was 3.41, and at Fort Meade, 3.31 -- both within the lower middle class range. The mean IQ at Fort Myer was 112; at Fort Meade 108. For reading and work-study skills the differences between the groups were non-significant. On total language ability, the untrained Fort Meade group scored significantly higher than the Fort Myer trained group (.0125). As estimated by the principals, racial composition at both schools was the same: 80% White, 15% Black, and 5% Spanish-American, Oriental, or Eurasian.

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In a study of personality adjustment, home stability is important. Examination of the students' cumulative records reflected the high stability of the military family, since only two homes broken by death or divorce were found in the Fort Myer group, and three in the Fort Meade group.

The Fort Myer group consisted of 95 subjects whose teachers included general semantics in their instruction. These were from three and one-half classes, divided as follows: one regular sixth grade, two fifth-sixth grade combinations, and one fourth-fifth grade combination, of which only the fifth graders were used. This was the total of fifth and sixth graders at Fort Myer currently being instructed in general semantics, although there were two other fifth and sixth grade classes. From this group, the following categories of subjects were eliminated in order to make the group as "normal" as possible.

1. Subjects considered by their teachers or the pupil personnel specialist to be emotionally disturbed because of home conditions or a history of personality problems that were unlikely to be ameliorated by curricular treatment. N=23.

2. Subjects considered by their teachers or the reading consultant to be insufficiently familiar with the English language because of bilingualism or poor reading ability to be able to comprehend the test. N=16.

3. Subjects for whom background information regarding IQ's and scores on the other standardized tests was not available, usually because they had only recently begun attending the school. N=10

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The Fort Meade group consisted of 163 students in three fifth grade and three sixth grade classes, the total enrollment for these grade levels except for special education classes. Pershing Hill Elementary School has a regular conventional curriculum except that it is on shortened morning and afternoon sessions because of temporary overcrowding. From this group, subjects in the following categories were eliminated:

1. Subjects considered by their teachers, the principal or the vice-principal to be emotionally disturbed because of home conditions or a history of personality problems. N=37

2. Subjects considered by their teachers or the assistant principal in charge of reading to be insufficiently familiar with the English language because of bilingualism or poor reading ability to be able to comprehend the test. N=13

3. Subjects for whom background information on IQ's and the other standardized test scores was not available, usually because they had only recently begun attending the school N=6

After adjustment of group numbers because of the removal of the above categories, the following were included in this study: Fort Myer N=46; Fort Meade N=107; Total N=153.

Data Collection

The General Semantics Competency Opinion Test and the IPAT Children's Personality Questionnaire were administered during the second and third weeks of March, 1971, in the subjects' classrooms, by their regular teachers, in accordance with standardized instructions. The total testing time was one and one-half hours, approximately, arranged in three half-hour sessions. The test answer sheets were

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hand scored and the raw scores on the CPQ were converted for age and sex as provided in the test manual. These scores, together with the subjects' 38 responses to the GSC test were entered on cards. The cumulative records were then examined and data were recorded for each subject including age, sex, parents' occupations or ranks, and the four standardized scores for IQ, reading, total language, and work-study skills. Thus,for each subject, 62 variables were noted and then key-punched on Fortran cards for computer processing.

Statistical Procedures

1. The null form of hypothesis #1 states that there is no relationship between general semantics competency and personality adjustment and that subjects who score high on a test of general semantics competency will score the same on tests for neuroticism and anxiety. To test this hypothesis, the following statistical procedure was used: correlation coefficients were computed between GSC scores and CPQ neuroticism and anxiety scores. The probability levels of these correlations were determined, with .05 being considered critical.

2. The null form of hypothesis #2 states that there will be no significant difference in scores on general semantics competency, anxiety and neuroticism between a group of elementary school children trained in general semantics and an untrained group otherwise matched on the variables of race, home stability, age, sex, intelligence, reading ability, total language ability, and work-study skills. To test this hypothesis, the following statistical procedures were used:

a. Means and standard deviations were computed for

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GSC score, CPQ neuroticism and anxiety scores, age in months, socioeconomic status according to the rating on page 59, IQ, reading ability, total language ability, and work-study skills scores for the separate groups: 46 trained and 107 untrained.

b. Fisher's t test of a difference between means was computed for the above variables for the two groups. A probability level of .05 was considered critical.

Note: Matching on the variables of race and home stability had been accomplished by direct comparison of principal's estimate of the racial make-up of the schools and examination of the pupil's cumulative records, so statistical analysis was not required for these variables.

3. In order to evaluate the partially validated General Semantics Competency Opinion Test, the following statistical procedures were used: item analysis, a measure of internal consistency, and difficulty and discrimination (biserial correlation) indexes were computed.

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Summary

This chapter reiterates the questions and hypotheses of the study and explains the materials and procedures that were used to answer them. The "Instrumentation" section includes a detailed explanation of the development and partial validation of The General Semantics Competency Opinion Test which was needed because no wide-spectrum test of competency in general semantics for children had heretofore existed. The second main instrument, the IPAT Children's Personality Questionnaire, was discussed in terms of its reliability, validity, and the other considerations for its selection. Relevant information on the other variables which was found in the subjects' cumulative records was discussed.

In analyzing the population and sampling procedures, it was shown that the two groups from army base schools are very closely matched on the variables of age, sex, socioeconomic status, home stability, intelligence and three school skills. Certain categories of students who might be emotionally disturbed or verbally deficient were eliminated, and the final group consisted of 46 subjects from Fort Myer Elementary School, 107 subjects from Fort Meade; a total of 153 subjects. For each hypothesis, the statistical methods for analyzing the data were explained. In the next chapter, the findings will be shown.

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Chapter IV

Results

Introduction

This chapter reports the findings of an investigation to determine if competency in general semantics is related to personality adjustment, and if instruction in elementary school in general semantics increases competency and improves scores on personality tests.

Analysis of the Total Group - Hypothesis #1

The null form of hypothesis #1 for the purpose of a statistical test is: there is no relationship between general semantics competency and personality adjustment in that subjects will score the same on a test of general semantics competency and on a test for neuroticism and anxiety. The correlation coefficients between GSC score and the CPQ scores for neuroticism and anxiety were -.236 and -.262 respectively (t 2.61; df=152). These correlations exceed the .01 level of probability.

Comparison of Groups - Hypothesis #2

The null form of hypothesis #2 for the purpose of a statistical test is: There is no significant difference in anxiety and neuroticism between a group of elementary school children trained in general semantics and an untrained group otherwise matched for race, home stability, age, socioeconomic status, intelligence, reading ability, total language ability and work-study skills, and they will score the same on a test for general semantics competency and personality tests for neuroticism and anxiety.

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Matching for race, sex, and home stability were already demonstrated as discussed in Chapter III. Table I compares the Fort Myer and Fort Meade groups in terms of the other variables, giving standard deviations, means, t values, and probabilities. The Fort Myer group's mean on the GSC test was higher than the Fort Meade group's at the .02 probability level. Their scores were lower for anxiety at the .00 level, and for neuroticism at the .05 level. With the exception of total language scores, in which case the untrained group scored higher, all of the differences in means on the other variables were non-significant, indicating that the groups were closely matched.

TABLE I

COMPARISON OF GROUPS

Standard Deviations, Means, t values, and Probabilities

Variable	S.D.		Means		t Value	p
	Myer	Meade	Myer	Meade		
GSC	5.75	5.07	21.43	19.25	2.34	.02
Anx	1.00	1.03	5.60	6.70	6.09	.00
Neu	.86	1.04	5.53	6.40	1.96	.05
Age	10.99	9.13	149.22	149.93	.42	.67
SES	.83	.85	3.41	3.31	.64	.52
IQ	10.99	13.42	112.02	108.02	1.78	.08
Read	12.45	13.15	107.11	105.23	.82	.41
T. Lang.	11.89	14.48	104.77	110.91	2.53	.01
W-S	11.66	10.45	104.39	107.26	1.24	.21

Note: Fort Myer df=45
Fort Meade df=106

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Conclusions

In both of the hypotheses of this study, the .05 level of probability was considered critical for statistical significance. In the analysis of the total group, correlations were found at the .01 level of probability between GSC scores and CPQ scores for neuroticism and anxiety.

In a comparison between the means of the scores of the two groups, the Fort Myer group scored higher on the GSC test at the .02 level, and lower on the variables of anxiety and neuroticism at the .00 and .05 levels respectively than did the Fort Meade group. With the exception of total language skills, where the Fort Meade group had significantly higher scores, the two groups were shown to be closely matched on all other relevant variables.

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Chapter V

Conclusions and Implications

Introduction

This study proposed to investigate the effects of general semantics on the personality adjustment of elementary school children. Two hypotheses were developed to explore the relationship between competency in general semantics and personality adjustment, and to evaluate the effects of training in general semantics.

The subjects were two groups of fifth and sixth grade children attending schools located on U. S. army bases, Fort Myer and Fort Meade. The former had received instruction in general semantics, while the latter had been taught by traditional methods. The groups were very similar in age, sex, race, socioeconomic status, and home stability, as well as intelligence and school performance skills. They were further "normalized" by eliminating all subjects known to have reading or emotional problems. They were tested for general semantics competency and personality adjustment, and information was secured from their cumulative records for other relevant factors.

The critical value used to determine significance was the .05 level of probability. Within the limits of (1) the instrumentation, (2) the population and sampling procedures, (3) the statistical procedures, and (4) the definitions employed herein, the results obtained support both of the hypotheses of the study.

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Conclusions

Hypothesis #1 states that there is a relationship between competency in general semantics and personality adjustment so that subjects who score high on a test of general semantics competency will score low on a test for neuroticism and anxiety. In an analysis of the total group N=153, correlations between the GSC test scores and CPQ scores for neuroticism and anxiety at the .01 level of probability demonstrate a significant relationship between general semantics competency and personality adjustment.

Hypothesis #2 states that a group of elementary school children trained in general semantics will score higher on a test of general semantics competency and lower on a test for neuroticism and anxiety than will an untrained group otherwise matched for race, home stability, age, sex, socioeconomic status, intelligence, total language ability, reading ability, and work-study skills. There was a significant difference between the groups at the acceptable level of probability on the three main variables, and therefore the hypothesis is supported. The comparison on the other relevant variables showed that the groups were matched.

Discussion

The above findings indicate that the inclusion of general semantics instruction in the elementary school curriculum might contribute to, if not immediately fulfill, Korzybski's prophecy that "the effect of doing so, on sanity, would be profound and lasting." In any event, there is reason to believe that additional research should be conducted to explore the kind and amount of contribution

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general semantics might make.

Both the instruments used in this study, the GSC and the CPQ tests, are paper-and-pencil exercises that might be measuring not what they purport to measure, but only test-taking ability -- reflecting just what the subjects say rather than what they would do in real situations. Such instruments have many advantages. They are administrable by regular classroom teachers in accordance with standardized instructions. They do not require trained raters for scoring, and they yield quantified objective scores or series of scores that can be manipulated numerically and compared with one another. But there is no question that such paper-and-pencil tests, in assuming that people can be represented by a few scores, are abstracting almost beyond the point of reason. When one uses such measures in connection with a system like general semantics, which insists upon the uniqueness of the organism in its individual environment, one cannot help being aware of a philosophical contradiction implicit in the procedure. The writer would,therefore, be happy to see new research designs to evaluate the effects of general semantics by direct behavioral measures. A beginning in this direction has already been made by Berger (1965) who used English compositions subjectively rated according to "Regents Standards," as his measure of general semantics achievement, and True (1964) who used the Torrance Creativity Scales as her criterion.

At the same time, the writer would like to see further research using the GSC test together with other already standardized objective measures, such as Weiss's "Is-of-Identity" Test and Haney's Uncritical

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Inference Test. Such studies would contribute to the validation of the GSC test. They would be appropriate at the junior high school level, and with some minor language modifications, they could also be conducted at the senior high school level or with adults. The writer has informally administered the GSC test to 10th, 11th, and 12th graders, using it as a discussion stimulant, and found that age makes very little difference in the response pattern. She also presented the GSC test to the New York Society for General Semantics in June, 1971, and found that the mean score for these subjects who are very familiar with the principles of general semantics was 34, out of 38 items. Other adult groups, however, have scored very similarly to the fifth and sixth graders used in this study.

In any replication of this study which explores personality adjustment, the writer would recommend that an additional or another instrument for the measurement of personality be used. The CFQ derived scores for neuroticism and anxiety imply that normal is synonymous with optimum performance. But it is questionable that such a definition is sufficient. A. H. Maslow, whose many contributions to the literature of general semantics indicate his accord with the movement, asserted (1968) that the "self-actualizing personality" is to be found on a continuum as far above "adjusted" as anxiety-neurosis is below that level. His concern for the recognition of personality traits better than "normal" is shared by many modern psychologists.

Since the groups selected as the population for this study are somewhat limited, it is suggested that new research be conducted in other kinds of neighborhoods, and at other socioeconomic levels.

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In this connection, it would be interesting to investigate whether the military dependent, as is often assumed, tends to be more conservative, authority-oriented, and inflexible in his responses than does his civilian counterpart. If this is the case, studies using civilian children as subjects should produce even more definitive results than this study.

Some measure of control was lost, in this study, because the four and a half year history of general semantics instruction at Fort Myer Elementary School precluded the possibility of pretesting. It is believed that the close matching of the Fort Meade group somewhat mitigates the objections, since it is assumed that they represent what the Fort Myer group would have been like without the influence of general semantics. But a pretest-treatment-posttest experimental design is preferable, and it is hoped that future studies, using the instrument of the GSC test, will be able to incorporate this design. Now that this study has shown that elementary school instruction in general semantics can contribute to improved personality adjustment, further research employing random sampling and random assignment to treatment groups would be desirable. In such studies, children with emotional or behavior problems who were eliminated in this study, could be included. It would be important to determine how effective general semantics instruction in the classroom might be in alleviating such problems.

In a study particularly focused upon the classroom treatment of behavioral problems through the use of general semantics techniques,

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a matched-pairs research design might be useful. Such an experiment would pair subjects with recognized emotional or behavior problems with "normals" on the basis of the decisions of teachers or other school officials. Such pairs would be similar in age, sex, and intelligence, as well as race and socioeconomic status. Pretests could consist of the GSC test and one or more standardized personality instruments. Treatment would be a fairly extensive unit in general semantics, preferably not less than one semester. Posttest results would reveal to what extent the treatment was effective in improving the performance of the "normals" and solving the problems of the maladjusted subjects.

Before the GSC test is used in any other study, or for any instructional purpose, it should be revised to eliminate the features that have made several items unusually difficult, or poor in discrimination. Six in particular stand out -- items 2, 7, 9, 17, 22, and 28. Suggested revisions for these are provided in Appendix E, page 113. It is probably not necessary to eliminate any of these tested items, but rather to modify the stem, or one or more of the choices. Although additional items would tend to make a test such as this more reliable, it appears that its present length is about right for the attention span of the group for which it is written. However, it would be desirable to develop an alternate form of the test using similar items, in order to provide parallel forms to use in pretest and posttest situations. It would also be desirable

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to have in reserve new contemporary items for replacement when references to Danny Thomas, Maxwell House coffee, "America, Love It or Leave It!" and the dilemma of American soldiers in Vietnam become obsolete.

Summary

There has recently been a great deal of dissatisfaction with traditional curricular content and teaching techniques in American schools. Many critics of education have suggested that major revisions in the school system will be required to prepare today's children for tomorrow's world. General semantics offers changes in approach, materials, and techniques. With its emphasis on meaning instead of mechanics, it suggests a point-of-departure for the language arts teacher. As a technique for "reality-testing," it offers a modification in instructional method in all subject areas. The writer does not assert that general semantics alone can cure all our educational ills, but she does believe that along with other modern insights in linguistics, language psychology, and the effects of cultural influences on verbal behavior, general semantics can be a relevant, useful, and significant contributor to modern education.

Prior research has already indicated that general semantics is helpful in improving students' critical thinking ability, composition, and creativity. In studies of its psychological applications, researchers have found a relationship between competency in general semantics and indicators of good personality adjustment in adolescents and adults. The findings of this study indicate that

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the sample of elementary school children examined herein scored higher on tests of general semantics competency and lower on personality tests for neuroticism and anxiety than did a similar untrained group, and that instruction to this end was apparently accomplished in the classroom.

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APPENDIXES

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APPENDIX A

The General Semantics Competency Opinion Test

Annotated to show principles sampled, source citations, difficulty and discrimination indexes*

*For complete statistical data on this test see Appendix B, Tables I, II, & III

For testees' comments, see Appendix C.

For the list of experts who assisted with face and content validation, see Appendix D.

For proposed revisions for some of the items, see Appendix E.

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APPENDIX A

This copy of The General Semantics Competency Opinion Test is annotated to show the principles sampled in each item, the sources where these principles are discussed, and the difficulty and discrimination percentages computed from the latest administration of the test in March, 1971. Definitions of the terms and concepts are provided in Chapter I, pages 11 to 14.

THE GSC OPINION TEST

PART I - QUESTIONS

These questions are to help us find out what boys and girls think. You may find that some of the questions are funny, and that's O.K. because we want you to enjoy the test. In the numbered spaces on your answer sheet, write the letter of the best answer you would give if someone asked you these things. Check every once in a while to make sure you are answering in the same space as the number of the question you are working on. Think about the questions a little while, but don't spend a lot of time on any one question. Answer every question. If you are not sure, pick the closest answer.

1. Do blondes really have more fun?

   A. Brunettes and redheads have more fun than blondes.

   B. Scientific research proves that blondes have 37% more fun.

   * C. No matter what color a girl's hair is, when she's happy she has fun.

   D. Blondes are prettier and more popular than other girls, so they do have more fun.

Principles	Citations	Difficulty	Discrimination
Levels of Abstraction Categories; Labeling Stereotyping Multiordinality Inferences & Reports	Korzybski, 1958, 371-468 Hayakawa, 1964, 40-46; 176-229 Johnson, 1946, 143-168 Fort Myer, 1968, 13-14; 35-48 Minteer, 1953, 42-60; 79-84	.90	.57

* Keyed Correct Response

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2. In front of Mary, her mother often says that Mary was a sickly baby and even now she is a delicate child. But the doctor can find nothing wrong with Mary. What is Mary likely to do?

   A. She will go to school even when she isn't feeling well and try to get a 100% attendance record.

   B. She will be just as sick or healthy as any other child and she'll miss an average number of school days.

   * C. She will sometimes stay home even when she isn't really sick, and she'll miss more days of school than other kids.

   D. She will miss an awful lot of days of school and she will fail several subjects.

Principles	Citations	Difficulty	Discrimination
Is-of-identity & is-of-predication Projection Affective Language Self-Fulfilling Prophecy	Korzybski, 1958, 93, 214-222 Johnson, 1946, 439-465; 243-267 Minteer, 1953, 60-65 Fort Myer, 1968, 23-34 Hayakawa, 1964, 58-60; 118-143	.08	.05

3. You haven't seen Freddie, one of your friends, for some time. Today someone said that Freddie has not taken a bath for two weeks. What would you think?

   A. Either Freddie or the person who said it must be lying.

   B. Somebody has got to be kidding.

   C. I'll bet Freddie has become a hippie.

   * D. If it's true, there could be lots of reasons.

Principles	Citations	Difficulty	Discrimination
Facts vs Inferences & Judgments	Korzybski, 1958, 371-385 Fort Myer, 1968, 49-74 Minteer, 1953, 51-59 Johnson, 1946, 155-156 Hayakawa, 1964, 181-186	.52	.38

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4. Some people have been putting stickers that say "America, Love It or Leave It" on their cars. Would you use a sticker like that? What would it mean?

* A. I would NOT use it because our country is both good and bad.

B. I would NOT use it because it might change people's minds.

C. I would use it to tell everyone who doesn't like it here to go back where he came from.

D. I would use it to show everyone how much I love my country.

Principles	Citations	Difficulty	Discrimination
Multi-valued orientation vs "either-or" dichotomy. Non-elementalistic principle.	Korzybski, 1958, 93; 99-130 Fort Myer, 1968, 65-71;91-93 Minteer, 1953, 42-47; 95-99 Hayakawa, 1964, 214-262 Johnson, 1946, 3-20	.32	.29

5. What do you think about Billy who seems to have all the good luck?

A. He was born under a lucky star, or maybe he has a secret source for four-leaf clovers.

B. He makes his luck better because he carries a lucky charm.

* C. His luck is probably no better or worse than anyone else's.

D. He has more bad luck than good, but he just pretends to be lucky.

Principles	Citations	Difficulty	Discrimination
Projection Affective Language Word "Magic"	Lee, 1967, 239-243 Hayakawa, 1964, 102-123	.79	.56

6. What does COURAGE mean?

* A. Courage means doing the thing you think is right even when you are embarrassed or afraid.

B. Courage is the same as "heroism."

C. Courage means supporting your country and defending its ideals through thick and thin.

D. Courage means nothing because it is so general that you can't define it.

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Principles	Citations	Difficulty	Discrimination
Multiordinality Levels of Abstraction Operational Definitions.	Korzybski, 1958, 14-14 Johnson, 1946, 155-156 Hayakawa, 1964, 181-186	.65	.35

7. Some American soldiers in Vietnam are having trouble deciding which Vietnamese are friends and which are enemies. What should the soldiers do?

A. They should treat all people kindly no matter what they call them.

* B. They will have to decide each time, since what we call people makes a big difference in how we treat them.

C. They should be able to tell the difference between friends and enemies by how the people look and act.

D. They should treat all Vietnamese as enemies until they prove that they are friends.

Principles	Citations	Difficulty	Discrimination
Levels of Abstraction Categories; Labels Inferences & Reports	See Item #1	.09	.14

8. What are hippies?

A. They are very gentle people. You can tell they want peace.

B. They are dirty drug-addicts. You should stay away from them.

C. They are violent people. They are looking for trouble.

* D. They are long-haired people. You can't tell how they'll act.

Principles	Citations	Difficulty	Discrimination
Categories; Labels Inferences & Reports	See Items #1 & 7	.69	.10

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9. The Hinton Hotel is 20 stories high. In the elevator are buttons with numbers for each floor except the 13th. The buttons go from 12 to 14, skipping 13. What can you infer about the 13th floor?

A. The man who marked the elevator buttons made a mistake.

B. So many bad things happened on the 13th floor that the hotel stopped using it and closed it up.

C. There is a button missing in the elevator.

* D. The 13th floor is marked 14 because some guests are superstitious.

Principles	Citations	Difficulty	Discrimination
Structure: Word-Thing Map-Territory Word "Magic" Affective Language	Korzybski, 1958, 55-241 Johnson, 1946, 131-133 Minteer, 1953, 85-89 Hayakawa, 1964, 23-37 Fort Myer, 1968, 73-83 Lee, 1967, 239-243	.24	.16

10. What's the best way to find out the meaning of a word someone just said?

A. Go to the library and look it up in a dictionary.

B. Find another word that means the same thing.

* C. Ask the person who used it what the word means to him.

D. Figure out what the Greek or Latin parts of the word mean.

Principles	Citations	Difficulty	Discrimination
Multiordinality Operational Definitions	Korzybski, 1958 14-15 Johnson, 1946, 155-156 Minteer, 1953, 66-70 Hayakawa, 1964, 181-186	.41	.30

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11. One time while you were out driving with your father, he said, "There's a woman driving the car in front of us." What do you expect of a woman driver?

* A. She's a female, but that doesn't tell you anything about how she drives.

B. She'll probably make a right turn from the left lane, or some other dumb move.

C. She'll drive very slowly and carefully and make all the drivers behind her mad.

D. She'll turn out to be a more skillful driver than your father or any other man.

Principles	Citations	Difficulty	Discrimination
Judgments & Inferences Categories & Labeling Is-of-Identity	See Items #1, 2, & 3	.50	.60

12. While Mark's mother was putting away laundry in his bureau drawer, she found a brand-new catcher's mitt. Mark's allowance is only 50c a week. If you were Mark's mother, what would you think?

A. Someone must have given Mark this mitt.

* B. I wonder how Mark got this. I'll ask him.

C. Mark must have earned some extra money to buy this mitt.

D. I'll bet Mark shop-lifted this mitt from the Sports Center.

Principles	Citations	Difficulty	Discrimination
Uncritical inference	Minteer, 1953 51-60 Fort Myer, 1968 51-71	.68	.45

13. A teacher has already had three children from the Carson family in her classes. She says that Helen, Joan, and Kenny Carson are exactly alike in looks and actions. Next year when Bobby Carson comes into her class, she will know just how to treat him. What do you think of this teacher?

A. The teacher understands the Carsons very well and she should be a good teacher for Bobby.

B. The teacher knows that she should treat all the members of the same family the same.

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*C. The teacher doesn't understand that even people who look and act similarly are really very different individuals

D. The teacher doesn't know that Bobby Carson was adopted and therefore he isn't just like his brother and sisters.

Principles	Citations	Difficulty	Discrimination
Non-Identity Extensional device of indexing	Fort Myer, 1968, 23-34 Johnson, 1946, 208-227 Hayakawa, 1964, 199-213	.44	.49

14. Last year we had a great time in school. We had 27 kids in our class. Our teacher was Miss Graham, and we were in room #41 which is large and sunny. This year we have the same kids, the same teacher, and the same room. What will happen this year?

A. We will have the same great time this year.

* B. This year will be different from last year.

C. This year won't be so good, because you don't often get two good years in a row.

D. My father will probably get transferred, and I'll have to move away.

Principles	Citations	Difficulty	Discrimination
Non-Identity Extensional device of dating	Korzybski, 1958 412-425 Minteer, 1953, 79-84 Johnson, 1946, 23-34	.43	.27

15. Your teacher has told you that tomorrow a new student named Hyman Cohen will be coming into your class. What do you think will be true about Hyman?

* A. He is a boy about the same age as the rest of the kids.

B. He has a rich father and lives in a big house.

C. He is smart and gets good grades in school.

D. He can't play ball or run very well.

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Principles	Citations	Difficulty	Discrimination
Judgment & inference Stereotyping & categorization	See Items #1, 2, 3, 8	.75	.74

16. Two teachers you think are good disagree about how children should behave in school. Mr. Wilson thinks that they should be quiet and listen, while Mrs. Stanton likes them to talk a lot. What do you think about the teachers?

A. They can't both be good teachers.

B. They should ask the principal and do whatever he tells them.

C. They might argue for a while, but soon they will agree on the right answer.

*D. They may never agree, but they can still both be good teachers.

Principles	Citations	Difficulty	Discrimination
The Excluded middle Multi-valued orientation vs "either-or" dichotomy	Hayakawa, 1964, 230-262 Minteer, 1953, 95-99 Korzybski, 1958, 93; 99-130 Fort Myer, 1968, 65-71;91-93	.65	.69

17. Jimmy says, "All the other kids get to stay out till eleven o'clock at night, but I have to come home at nine." What about Jimmy?

A. He just likes to complain.

B. He's lying to get to stay out later.

C. He thinks his parents want to be like other parents.

* D. He doesn't know what all the kids get to do.

Principles	Citations	Difficulty	Discrimination
Allness vs Etc. Inference & judgment	Minteer, 1953, 52-50 Fort Myer, 1968 51-64 Hayakawa, 1964 38-44	.36	.20

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18. One day your neighbor, Mrs. Daniels told you that your brother is a "smart aleck." Now what do you think about your brother? (if you don't have a brother, pretend that you do.)

A. Your brother is too fresh -- he should be more polite to grown-ups.

B. Your brother is smart and he will get good grades in school.

* C. Mrs. Daniels doesn't like the way your brother speaks to her.

D. Mrs. Daniels is an "old bag!" Who cares what she thinks?

Principles	Citations	Difficulty	Discrimination
Projection Is-of-Identity	Korzybski, 1958, 93;194 Minteer, 1953, 60-65 Hayakawa, 1964, 58-60	.37	.44

19. In America, which is supposed to come first -- law and order or people's basic rights?

A. Law and order, because people abuse their rights by demonstrating and rioting.

* B. People's rights, because ideally the laws are made to protect those rights.

C. People's rights, because some people have not been treated fairly in this country.

D. It depends on which people you mean and what they are doing at the time.

Principles	Citations	Difficulty	Discrimination
Language Structure Map-Territory	Korzybski, 1958 "Higher Order Abstractions" 426-451	.19	.20

THIS IS THE END OF THE FIRST PART.
PLEASE WAIT TILL YOUR TEACHER TELLS
YOU WHAT TO DO NEXT.

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PART II - SOMETHING YOU HEARD

Imagine you overhear someone say each of the following things. You don't say anything out loud, but which of the answers might you THINK? Pick the answer closest to what you really think.

20. Without telling her brother Dennis, Marcia planted a lily in the garden. The next day, Dennis pulled it out because he thought it was a weed. Marcia got mad when she saw what Dennis had done.

A. Marcia was right to be mad. Weeds don't look a bit like lillies.

B. Dennis was right to pull it out. If he called it a weed, it was a weed.

* C. Marcia and Dennis treat the same plant differently when they call it different names.

D. There really isn't any difference between weeds and lillies which are both members of the onion family.

Principles	Citations	Difficulty	Discrimination
Categorization Judgments & Inferences	See Items #1, 3,7,8, & 11.	.41	.50

21. My aunt buys Maxwell House coffee because on TV Danny Thomas says that he likes it.

A. My aunt is right to think that Danny Thomas is very funny and he knows a lot about coffee.

* B. Just because Danny Thomas is funny doesn't make him an expert on coffee.

C. Danny Thomas doesn't even drink coffee, but he gets paid to say that Maxwell House coffee is good.

D. TV people drink a lot of coffee, so they know which one is best.

Principles	Citations	Difficulty	Discrimination
Advertising fallacies Authority fallacies Inference & judgment	Hayakawa, 1962, 164-174 Johnson, 1946, 65-69	.60	.38

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22. A history book should have all the facts about events in the past. It should not have opinions in it.

A. American students have a right to expect complete information in their school books.

* B. History books can't have all facts and no opinions in them.

C. A book with all the facts in it would let the students think for themselves.

D. People who write school books don't know enough facts to fill up a whole book.

Principles	Citations	Difficulty	Discrimination
The Inevitability of Abstracting Slanting by Selection Allness	Hayakawa, 1964, 176-199 Minteer, 1953, 42-50	.36	.19

23. Most people don't think Donnie is unusual, but his first grade teacher thinks he is great. She tells everybody that Donnie is a winner who will have a fine future.

A. He'll be a disappointment to everyone because he'll turn out to be ordinary after all.

* B. His teacher's opinions will encourage Donnie to do better than he might otherwise have done.

C. His teacher's opinions will give Donnie a "superiority complex" and make him act like a spoiled brat.

D. Donnie will grow up to be really outstanding. He will win the Nobel Prize.

Principles	Citations	Difficulty	Discrimination
Projection Affective Language Self-Fulfilling Prophecy	See Item #2	.66	.62

24. Kerry told Billy about a table he was using. Billy didn't understand.

* A. Billy should ask Kerry what kind of table he means.

B. Billy should look up table in the dictionary

C. Billy should tell Kerry that he is being confusing and ask him to use simpler language.

D. Billy must be pretty stupid because everyone knows what a table is.

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Principles	Citations	Difficulty	Discrimination
Multiordinality Operational Definitions Importance of Contexts	Fort Myer, 1968, 35-48 Korzybski, 1958, 14-15 Johnson, 1946, 155-156 Hayakawa, 1964, 183-190 Minteer, 1953 66-68	.54	51

25. My father says that President Nixon is a reprehensible reactionary.

*A. I don't know what a reprehensible reactionary is.

B. I agree with my father because he knows what he's talking about.

C. Since Nixon got to be President, I guess my father must be wrong.

D. My father likes President Nixon very much.

Principles	Citations	Difficulty	Discrimination
Intensional meanings Authority fallacy Inferences	Hayakawa, 1964, 325-326 Fort Myer, 1968 49-64	.73	.48

26. Roger said that when he got his last report card, he was so happy that he was higher than a kite.

A. Roger is a big liar because neither his house nor his school is more than two stories high.

B. Roger is using sloppy language to make the story bigger than it should be.

*C. Roger is using figurative language to show how happy his report card made him.

D. Roger is telling the truth because his father took him up in an airplane to celebrate.

Principles	Citations	Difficulty	Discrimination
Metaphor Judgments & Inferences	Fort Myer, 1964, 75-81 Hayakawa, 1964, 121-126	.81	.86

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27. I know I should always love my brother, but sometimes I hate him.

A. You are a mixed-up kid. You should see a doctor.

B. You shouldn't say "hate." "Dislike" is a better word.

C. It's not O.K. to hate your brother, but lots of kids do anyway.

*D. You can love and hate your brother at the same time.

Principles	Citations	Difficulty	Discrimination
Organism-as-a-Whole Allness Words as symbols	Korzybski, 1958, 123-130 Minteer, 1953, 42-47	.46	.17

28. There are two sides to every question.

A. One side is right and the other side is wrong.

* B. Many questions have more than two sides.

C. You should stick to your opinion, otherwise it's too hard to pick the right answer.

D. You should look at both sides of the question carefully.

Principles	Citations	Difficulty	Discrimination
Multi-valued orientation	See Items #4, 16	.06	.10

29. Two cars crashed at a corner. When the police asked the drivers what happened, each told a different story. Then the police asked a man who had been standing on the sidewalk when it happened. But his story did not agree with either of the other two. How can the police find out what really happened?

A. The police should believe the man on the sidewalk because they know he has nothing to gain or lose.

B. The police can believe only one of the drivers -- the other will lie because the truth will cost him money.

C. Because there is insurance money involved, the police cannot believe any of the witnesses. They will have to make up their own story of what happened.

*D. Each of the three witnesses could be telling the truth as he sees it. All three stories put together are likely to tell best what really happened.

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Principles	Citations	Difficulty	Discrimination
Judgment & Inference Abstracting Point-of-View Evidence	Korzybski, 1958, 371-385 Hayakawa, 1964, 38-54 Fort Myer, 1968, 49-74	.63	.60

30. If you find a four-leaf clover on the way to school, you'll have good luck all day.

A. You'll have wonderful luck all day.

B. You probably will have good luck, at least all morning.

*C. Your luck will be just the same as usual, but you may think that it's better.

D. Your luck will be bad rather than good.

Principles	Citations	Difficulty	Discrimination
Word "Magic" Affective Language	See Item #5	.81	.70

31. When Marge and Charles got a new puppy, they hoped that he would grow up to be a good watchdog, but they wanted him to be a nice playmate too. Marge thought they should name him Daffy, but Charles wanted to call him Spike.

A. If they call him Daffy, he will be a playful and friendly watchdog.

B. If they call him Spike, he will be a rough and fierce playmate.

C. They should name him Spaffy and then he will be a playmate and a watchdog.

* D. Since the puppy can't speak English, his name won't change the way he behaves.

Principles	Citations	Difficulty	Discrimination
Affective language Categories: Labels Organism-as-a-Whole	See Items #2,15,23 and 27	.73	.59

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32. If you use all the grammar rules, you will surely speak good English.

*A. Rules can't tell you how to speak. Good English depends on who you are talking to and where you are.

B. Rules are made to be broken, so it's not your fault if you sometimes make mistakes.

C. Teachers know all the rules, so they never make mistakes in speaking English.

D. If you grow up in a bad neighborhood, you will probably speak poor English even if you know the rules.

Principles	Citations	Difficulty	Discrimination
The Assumption of the cosmic validity of grammar Appropriate Usage	Korzybski, 1958, 93 Hayakawa, 1964, 92-94 Fort Myer, 1968, 85-87	.51	.26

33. Columbus discovered America in 1492.

A. The speaker is right. Everybody knows that's a true fact.

B. The speaker is mistaken since the Indians discovered America long before Columbus landed here.

*C. The speaker could be either right or wrong. It depends on what he means by "discovered."

D. The speaker has been lied to by dishonest people who write textbooks filled with misinformation.

Principles	Citations	Difficulty	Discrimination
Operational definitions Multiordinality	See Items #1, 6, 10	.62	.59

34. "Negro," "Colored," "Afro-American," and "Black" all mean the same thing.

A. Yes, because people are what they are called.

B. Yes, because everybody uses these words the same way.

C. No, because some of these words are better than others.

*D. No, because their meaning depends on who is talking to whom.

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Principles	Citations	Difficulty	Discrimination
Labeling; Stereotyping Operational Definitions Multiordinality	Korzybski, 1958, 14-15 Johnson, 1946, 155-156 Minteer, 1953, 60-70 Hayakawa, 1964, 181-186	.52	.24

35. Robert tried to talk, but he had a frog in his throat.

*A. When Robert tried to talk, he coughed and choked instead.

B. Robert was playing near a pond when a frog jumped into his mouth.

C. Robert started to tell a lie, but his conscience stopped him.

D. Robert didn't want to answer, so he pretended he couldn't.

Principles	Citations	Difficulty	Discrimination
Metaphor Figurative Language	Fort Myer, 1968 75-81 Hayakawa, 1964, 121-126	.71	.55

36. In Japan, the people are silly. They call a book a "hon."

A. Maybe they don't know the right name for it.

*B. Names aren't right or wrong, only different.

C. Maybe "hon" is the right word, and we are wrong.

D. Everybody should speak the same language.

Principles	Citations	Difficulty	Discrimination
Arbitrariness of language One-Meaning fallacy	Hayakawa, 1964 60-62	.69	.48

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37. Good people don't tell lies.

*A. Sometimes good people do tell lies.

B. Being good means not telling lies.

C. Sometimes liars can be good in other ways.

D. Bad people don't tell the truth.

Principles	Citations	Difficulty	Discrimination
Organism-as-a-whole Multi-valued orientation	See Items #4, 16, 27, 28	.56	.35

38. The front page of a newspaper should report all the facts. Opinions should appear only on the editorial pages.

A. The citizens of a free country have a right to expect all the facts in their news stories.

*B. Reporters can't help putting opinions into their news stories because they can't report all the facts and must leave some out.

C. It would be too much trouble for a reporter to put all the facts into a news story.

D. Newspapers could give the people unbiased news if they really wanted to, but they don't.

Principles	Citations	Difficulty	Discrimination
The Inevitability of Abstracting Slanting by Selection Allness	See Item 22	.41	.41

THIS IS THE END OF THE TEST. PLEASE WAIT TILL YOUR TEACHER TELLS YOU HOW SHE WANTS YOU TO HAND IN YOUR PAPERS.

DID YOU HAVE FUN TAKING THIS TEST? IF YOU WISH, YOU MAY WRITE A NOTE ABOUT THIS TEST ON THE BOTTOM OF YOUR ANSWER SHEET.

WHAT IS YOUR OPINION OF THE GSC OPINION TEST?

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APPENDIX B

Tables II, III, & IV

Item Analyses of Versions #2, 3, & 4

GSC Test

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TABLE II - ITEM ANALYSIS GSC VERSION #2
Seventh Grade, Kensington Junior High School
April, 1970

Item	Difficulty	Discrimination
1	.89	.25
2	.16	-.13
3	.28	.19
4	.76	.27
5	.47	.35
6	.42	.32
7	.58	.32
8	.28	.21
9	.68	.40
10	.48	.35
11	.18	.09
12	.75	.49
13	.76	.42
14	.18	.03
15	.79	.30
16	.42	.22
17	.29	.19
18	.58	.38
19	.36	.21
20	.58	.30
21	.49	.30
22	.47	.22
23	.88	.20
24	.79	.23
25	.52	.08
26	.73	.45
27	.68	.45
28	.15	.14
29	.59	.50
30	.86	.23
31	.60	.12
32	.35	.16
33	.55	.45
34	.18	.13
35	.79	.45
36	.73	.29
37	.65	.27
38	.30	.23

N=113
M=20
S.D.=5.4
Range=7-29
K-R 20=.65
Average Difficulty = .53
Range of Discrimination -.13 to .50
Average Discimination = .27

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TABLE III- ITEM ANALYSIS GSC VERSION #3
Total Group Third to Sixth Grades, Fort Myer and Glencarlyn Schools
May, 1970

Item	Difficulty	Discrimination
1	.86	.27
2	.17	-.15
3	.56	.23
4	.42	.20
5	.63	.47
6	.48	.13
7	.43	.17
8	.49	.35
9	.50	.31
10	.28	-.37
11	.32	.31
12	.62	.24
13	.20	-.04
14	.31	.23
15	.60	.46
16	.40	.44
17	.40	.21
18	.29	.25
19	.22	.06
20	.36	.45
21	.46	.15
22	.49	.15
23	.76	.55
24	.42	.32
25	.70	.35
26	.62	.41
27	.45	.34
28	.11	-.09
29	.15	.03
30	.60	.61
31	.63	.37
32	.36	.17
33	.49	.36
34	.34	.13
35	.54	.60
36	.71	.48
37	.42	.42
38	.12	.06

N=150
M=17
S.D.=4.87
Range=5-28
K-R 20=70
Average Difficulty=44.5
Range of Discrimination -.37 to .61
Average Discrimination .25

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TABLE IV - ITEM ANALYSIS GSC VERSION #4
Total Group Fifth and Sixth Grade, Fort Myer and Pershing Hill Schools
March, 1971

Item	Difficulty	Discrimination
1	.90	.57
2	.08	.05
3	.52	.38
4	.32	.29
5	.79	.56
6	.65	.35
7	.09	.14
8	.69	.10
*9	.24	.16
10	.41	.30
*11	.50	.60
12	.68	.45
*13	.44	.49
14	.43	.27
15	.75	.74
16	.65	.69
*17	.36	.20
18	.37	.44
19	.19	.20
20	.41	.50
21	.60	.38
22	.36	.19
*23	.66	.62
*24	.54	.51
25	.73	.48
26	.81	.86
27	.46	.17
28	.06	.10
*29	.63	.60
30	.81	.70
31	.73	.59
32	.51	.26
33	.62	.59
34	.52	.24
35	.71	.55
36	.69	.48
37	.56	.35
*38	.41	.41

* Indicates new item in this version

N=153
M=19.87
S.D.=5.38
Range=7-29
K-R 20=.75
Average Difficulty=52.32
Range of Discrimination .05 to .89
Average Discrimination .40

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APPENDIX C

Subjects' Comments on the GSC Test

(verbatim as written on answer sheets)

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SUBJECTS' COMMENTS ON THE GSC TEST

Fort Myer -- March, 1971

Sex	Age	GSC Score	Comment
girl	12	14	I think the test was fun and I liked it.
boy	10	13	Easy test!
boy	11	21	This was a good test.
girl	11	6	It was fun. I liked it a lot. It was a lot of fun for me. I really enjoyed it.
girl	11	18	You should let the students write what they think.
girl	12	26	The test was fun and I enjoyed it.
boy	12	8	I think the test is funny and different.
girl	10	27	I think some of the questions were really funny.
girl	12	24	I liked it very much and I think it's hilarious.
girl	12	28	I can't answer number 8 because I'm not a hippy. I think this test is O.K. to take.
girl	11½	27	I liked the test.
boy	10	27	I liked it because it was funny
girl	10	27	The test was fun and it gave you the right to give your opinions on things.
boy	11	8	It was fun reading questions.
girl	12	23	I guessed.
girl	11	19	It was a fun test but they weren't very personal. I want some personal questions.
girl	10	20	I didn't feel that I had the right to answer some of the questions, but the test was fun.

Note: 17 subjects commented; 29 subjects did not comment.

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SUBJECTS' COMMENTS ON THE GSC TEST

Fort Meade -- March, 1971

Sex	Age	GSC Score	Comment
girl	12	25	It was very fun to take, it wasn't boring, like many other tests.
boy	12	20	It was fun and I liked it.
boy	11	21	It is okay but you aren't proving much.
girl	12	15	I think the test was a good one for sixth graders.
boy	12	29	This book was fun, because it was all my opinions, so I couldn't be right and I couldn't be wrong.
girl	12	19	Number 38 didn't really make sense.
boy	11	16	The test didn't have some answers I would use but it was fun.
boy	11	22	I would like to have a test like this again. This test was fun and I liked it.
boy	12	6	This is the best test I ever had and I would very much like to take another.
girl	10½	26	This test was fun.
girl	11	20	11 and 35 were very funny.
girl	11	24	This test was fun, but some of the questions were a little difficult.
boy	11	13	It was the funniest test. I liked it very much.
boy	10	10	These are very funny questions to answer like when Robert swallowed the frog.
girl	11½	25	Some of it was funny. I enjoyed this test because there is nothing to get tense about and you're to know what you're doing to write a test pupils like. This test has succeeded.

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SUBJECTS' COMMENTS ON THE GSC TEST

Fort Meade -- March, 1971

Sex	Age	GSC Score	Comment
girl	12	18	Thanks a lot. I like people to know what my comments are.
girl	10½	15	It is fun working with this test.
girl	10½	12	Some were funny. There was one I really liked and it was in Section II 35 B. It was a real crackup.
girl	10½	13	It was the best test I've ever took.
girl	11	18	(#17) 11:00 is too late to stay out and play.
boy	11	18	It was fun to do.
girl	10	16	I like the test very much.
girl	11	15	I think this was a very very funny test.
girl	10	16	I liked this test very much.
girl	10	12	This was a good and funny test. I hope we have another one.
girl	10	20	This was a very funny yet interesting test.
girl	10	23	This test has been a very enjoyable one. It has given me a lot of thought.
boy	11	9	I thought 35 was funny -- a frog jumped into his mouth.
girl	11	24	"Wow!"
girl	11	15	Danny Thomas never really drinks coffee. He just loves money.
girl	11	28	I had fun doing this test.
girl	10	9	It was a very good story and it was a funny story.

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SUBJECTS' COMMENTS ON THE GSC TEST

Fort Meade -- March, 1971

Sex	Age	GSC Score	Comment
boy	10½	19	Some of the questions were silly. Otherwise it was good.
girl	11	12	Billy must be pretty stupid not to know what a table is.
girl	10	11	It was a very funny test. I like them both very much. Thank you for letting us do them.
boy	10	9	The stories were funny. I laughed so hard I cried.
boy	11	9	Funny, but "Wow weeee"
boy	11½	29	These tests were funny but a few made you stop and think.
girl	11½	19	I like this test a lot. It was fun and funny.
boy	10½	14	I like this test because it had some cool jokes.
girl	10	16	I liked this test because it had some funny jokes. From some of these jokes you learned things you didn't know.
boy	11	16	This test is very funny.
boy	11	26	I liked this test.
girl	11	15	I think it was fun and sometimes it made you think a little.
girl	11	22	It was a very nice and funny test but you should have given us more things to choose from for some answers.
girl	11	29	I didn't particularly like some of the questions.
boy	11	18	It is a nice chance to express yourself.

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SUBJECTS' COMMENTS ON THE GSC TEST

Fort Meade -- March, 1971

Sex	Age	GSC Score	Comment
boy	12	27	I liked it very much -- much more than other tests.
girl	12	20	I don't think number 34 was a good one, lot's of my friends are colored.
boy	12	23	Part II is very funny and I hope I did this all right.
girl	11	21	I think they most of them silly and not many of them made any sence.
boy	11	28	I had fun doing this test. I think it is a good test because you can tell what different peoples opinions are.
girl	11½	20	It's different from any other test's and it helps you to learn many things.
girl	11½	25	It is a fair test. I feel that to answer these questions you should answer freely insted of listening to someone else.
boy	11	16	I injoyed the test. It was fun and funny.
boy	11½	20	I found this test very funny.
boy	11	23	It was very good and there were sensible questions in it.
boy	11	18	On some of the questions you should have a "no opinion," these questions require a lot of thinking! Its hard to decide when time is running after you. P. S. Do you rate these right or wrong or does the title "Opinion" mean that there is no right or wrong? I noticed the word scores up there!
girl	11	17	Number 19 on Part I -- I really couldn't get the right idea because I don't know to much about laws and rights.

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SUBJECTS' COMMENTS ON THE GSC TEST

Fort Meade -- March, 1971

Sex	Age	GSC Score	Comment
girl	11	25	Some of the questions were really dumb and funny, but I liked the test.
girl	11	15	Some were not the answers I wanted.
girl	12	20	I think this test was a good test because it gave us a chance to show what we think.
girl	11	25	I thought the test was fun and I enjoyed taking it.
boy	12	24	I liked the GSC Test.
boy	12	18	I think the test was fun.
girl	12	25	You can do it without being right or wrong.
boy	11	18	Some Questions were lousy, but thats life!!!
girl	11	22	Part I, No. 8 none of these descriptions really fit a hippie because it depends on the person. I liked this test because it was fun and no answer was right or wrong. #34 - all of these names are wrong because we shouldn't really notice the difference in our color.
boy	12	18	Everybody has different opinions.
girl	11½	28	My opinion of the GSC Test is that it is a very nice way to find out about people.
boy	13	17	It was fun a little I would have talk about something.
girl	11	25	I never had anything like, but I'm glad I did cause I enjoyed it.
boy	11	14	It is cooky, different, and funny.

Note: 73 subjects commented; 34 subjects did not comment.

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APPENDIX D

EXPERTS IN LANGUAGE AND GENERAL SEMANTICS

WHO ASSISTED IN FACE AND CONTENT VALIDATION OF THE GSC TEST

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EXPERTS IN LANGUAGE AND GENERAL SEMANTICS

WHO ASSISTED IN FACE AND CONTENT VALIDATION OF THE GSC TEST

The following thirty-two experts provided detailed commentaries and/or conferences:

Mrs. Louise Alden, Head of the English Department, Kensington Junior High School, Kensington, Maryland.

Dr. Victor H. Baumann, Associate Professor of Education, Arizona State University, Tempe, Arizona.

Dr. Irwin Berger, Professor of English, Bronx Community College, New York.

Mr. James Bostain, Lecturer on Language, Foreign Service Institute, Department of State, Washington, D. C.

Mr. D. David Bourland, Editor, General Semantics Bulletin, McLean, Va.

Mrs. Karen Ruskin Bourland, Semantics Research Corporation, McLean, Va.

Mr. Frank Eldridge, Instructor in General Semantics, U. S. Department of Agriculture, author of The Itty Twit, Science Can Wage Peace, and other books on general semantics, Washington, D.C.

Dr. Weller Embler, Chairman (retired) and Professor Emeritus, Cooper Union, New York, New York.

Mr. Allen Flagg, Executive Director New York Society for General Semantics, New York, New York.

Mrs. Sylvia Hudes, Assistant Principal, Holiday Park Elementary School, Montgomery County, Maryland.

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The following six experts provided brief general comments:

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APPENDIX E

PROPOSED REVISIONS FOR SOME OF THE ITEMS OF THE GSC TEST

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APPENDIX E

Proposed Revisions for Some of the Items of the GSC Test

Item 2, p. 82. Rewrite distractor D: She will stay away from school most of the time and will finally drop out.

Item 7, p. 84. Rewrite stem question: What about the soldiers? Rewrite correct choice: They have a big problem because what we call people makes a big difference in how we treat them.

Item 9, p. 85. Rewrite correct choice D: The 13th floor is marked 14 because some guests think 13 is unlucky.

Item 17, P. 88. Rewrite distractor C: He is right and his parents are unfair.

Item 22, p. 91 Rewrite correct choice B: There are too many facts for any book. When writers pick some and leave others out, their opinions show.

Item 28, p. 93 Rewrite correct choice B: Some questions have many sides to them. Delete "carefully" from distractor D.

The above revisions were indicated because of poor difficulty or discrimination indexes. The following revisions are suggested even though there is no problem with the indexes, for purposes of clarity or logic.

Item 18, p. 89. Delete "about your brother" -- conclude question: "Now what do you think?" in stem.

Item 33, p. 95. Change distractor D: The speaker has been misled by cheaters who write textbooks that are full of lies.

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