Doctoral Dissertations 1896 - February 2014

1-1-1975

# Measuring self-knowledge development : construction of a preliminary scoring manual.

Roy T. Tamashiro
*University of Massachusetts Amherst*

Follow this and additional works at: https://scholarworks.umass.edu/dissertations_1

MEASURING SELF-KNOWLEDGE DEVELOPMENT:

CONSTRUCTION OF A PRELIMINARY SCORING MANUAL

A Dissertation Presented

By

Roy T. Tamashiro

Sumitted to the Graduate School of the
University of Massachusetts in parital
Fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

December                                    1975

Education

This document is not copyrighted.

The use of any part of this document for
education, research or other "humane" purposes
is encouraged.  To facilitate these ends, an
exchange of ideas and energies with the author
or the Self-Knowledge Education Project, Univer-
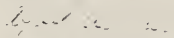sity of Massachusetts would be appreciated.

MEASURING SELF-KNOWLEDGE DEVELOPMENT:
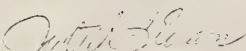
CONSTRUCTION OF A PRELIMINARY SCORING MANUAL
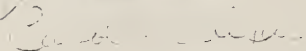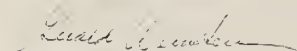
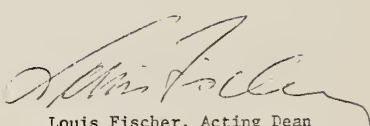A Dissertation

By

Roy T. Tamashiro

Approved as to style and content by:

Alfred Alschuler, Chairperson of Committee

Judith Evans, Member

Carole Oglesby, Member

Gerald Weinstein, Member

Louis Fischer, Acting Dean

School of Education

December 1975

MEASURING SELF-KNOWLEDGE DEVELOPMENT: CONSTRUCTION

OF A PRELIMINARY SCORING MANUAL

(December 1975)

Roy T. Tamashiro

B.A. University of Hawaii

M.Ed., University of Hawaii

Directed by: Dr. Alfred Alschuler

## ABSTRACT

This study attempted to create a defensible theoretical and empirical foundation for humanistic-psychological education. The present lack of such a foundation has resulted in four major goal problems, including: (1)The goals are not operationally clear., (2)They are of questionable educational value., (3)They are not ethically justifiable., and (4)They·cannot be adequately evaluated or empirically assessed.

The structural-developmental perspective, represented by the thinking of J. Piaget, L. Kohlberg, J. Loevinger and others, was used as the theoretical frame for the proposed foundation. It appeared that educational goals derived from the structural-developmental perspective would be operationally clear, empirically assessible, and educationally and ethically viable.

"Self-knowledge" was identified as the domain of psychological education and a working definition for the concept "self-knowledge" was constructed. This definition involved three parts: (A) Experiences (i.e. one's conscious thoughts, sensations, feelings and actions); (B) Theories or verbalized conceptualizations of experiences (i.e. oral

or written reports of one's own experiences); and (C) Mental operations (i.e. mental processes that transform experiences into theories).

This study focused only on people's theories or verbalized conceptualizations of their experiences (Part B). Specifically, this study aimed to identify the developmental stages of self-knowledge theories. Identifying these stages involved both theoretical and empirical attack. Theoretically, three stages were derived after reviewing the works of J. Piaget, L. Kohlberg, J. Loevinger (et.al.) and L. Van den Deale. These stages were named Pre-Operational, Concrete Operational and Formal Operational self-knowledge theories, following Piagetian titles.

The empirical approach involved finding an instrument that elicits a sample of a person's self-knowledge theories, collecting responses using this instrument, and analyzing the responses for developmental stage characteristics. A new instrument, "The Experience Recall Test," was created to obtain samples of people's self-knowledge theories. The responses of 72 subjects, whose ego development levels ranged from I-2 to I-6, were chosen for analysis. The responses were examined for semantic characteristics that would potentially differentiate the responses into developmental stages. These characteristics were defined and compiled into a "Preliminary Scoring Manual." The characteristics in the manual were subjected to the Guttman Scaling Technique to determine which characteristics formed a developmental hierarchy. Forty-one characteristics scaled and these 41 were inductively grouped into four stages. These four stages, named Elemental, Situational, Patterned, and Transformational, represented the empirically-derived stages of self-knowledge theories.

The four empirically-derived stages were compared with the three theoretically-derived stages. An overall consistency was found between the two versions. The discrepancies and inconsistencies found between the two versions appeared correctable with further work.

The empirical version of the stages was evaluated by several statistical procedures. Percent agreement between two scorers rating responses independently was low (72%, 69%, 84% and 50%). This implied that the manual is presently not sufficiently objective. The degree of scalability among the stages was within standards of acceptability (coefficient of reproducibility = .97; coefficient of scalability = .84). The stage scores were also correlated with ego levels and with age. The correlations (+.73 for ego levels; +.47 with age) suggested that the four stages were consistent with these indicators for structural-development.

The four stages of self-knowledge theories enable psychological educators to derive their goals systematically. These goals would probably be operationally clearer and empirically more assessible than present goals. Goals based on the self-knowledge stages would have a consistent theoretical foundation; namely the structural-developmental perspective. This would tend to make the goals educationally justifiable and ethically defensible. Of course, additional data and further debate are required for a more definitive clarification of psychological education goals.

PREFACE

It was very timely that my personal desire for understanding "true" self-knowledge paralleled a similar search in the field of humanistic-psychological education. Psychological educators, whose overall aim was to increase students' self-knowledge, desperately needed clarification and definition of their goals; they needed a reliable and valid method of evaluating their courses, and their goals needed educational and ethical justification. Personally by understanding how other people know themselves and their experiences, perhaps I could gain insight into my own "self".

It was also opportune that my efforts could be coordinated and linked with the efforts of other individuals on the Self-Knowledge Education Project, in conducting this study. I wanted to produce a document that reflected a truly cooperative, rather than individualistic, venture. Much of the merits of this dissertation is the product of our joint efforts, rather than mine alone.

In this study we attempted to identify the developmental levels of how people conceptualize their own experiences. The delineation of these levels of "self-knowledge" clarifies the major goals of humanistic-psychological education. Hopefully the knowledge of the stages will allow educators to make wiser, more appropriate choices for the deliberate psychological growth of students. The definition of the stages also makes possible precise evaluation of students' personal, psychological learnings. But gaining familiarity with the stages of self-knowledge is not just an academic exercise. It is a way of deepening one's

understanding and appreciation of human personality and mental processes.

The term "self-knowledge," as used in this document, is partially a misnomer. In ordinary usage, the term refers to the total wealth of impressions, data, understanding, intuitions, glimpses one has about oneself or one's experiences. In this study, we focus only on people's reported or verbalized statements about their experiences. We had no access to people's intuitive sensitivities, unverbalized or autistic, primary knowledge of self.

The Experience Recall Test, presented in this report, was designed for obtaining a sample of a person's level of self-knowledge. It is appropriate both for classroom use and for research purposes. The method of scoring this test is still embryonic and rather complex. But this complexity may be the virtue of our approach: it seems to do justice in representing the breadth and multiplicity of people's actual self-knowledge statements.

We strongly recommend that a person who wishes to use the stages of self-knowledge, learn the details of the scoring method. It will probably involve six to 12 weeks of practice to gain some proficiency in using the manual. There may be other legitimate ways of identifying the stages, and we certainly encourage experimenting with these other approaches. In either case, we recommend that scorers work in teams of two or more, with extensive discussion in resolving discrepancies in their scoring. Given the present lack of satisfactory interrater reliability, we believe that objectivity in scoring can be maximized by scorers working in such teams. All research work and major or important curriculum applications should depend on the consensus of two

or more raters.

We feel that the Experience Recall test and its accompanying scoring manual are "humanistic." We have employed a sound and rigorous methodology while remaining faithful to the values and assumptions of humanistic education. This is contrasted with many previous workers who have sacrified one or the other. For example, completing the Experience Recall Test is generally a valuable experience for subjects. Some respondents have found the test enjoyable or "fun," some have found it a clarifying exercise for greater self-understanding ("I never thought about this experience carefully before."); and still others have found it therapeutic ("The question about the future made me realize that I could really change the way I am."). At the same time, the test can be administered in a standardized manner (in either oral or written format), and it can be administered so that the factors biasing people's responses are minimized or controlled.

The scoring manual does not confine and demean human subjects into pigeon-hole labeling and judging. Each stage of self-knowledge is assumed to serve a healthy and positive function for individuals. There is value in operating at each of the stages and no stage is considered to be "better" or "superior" to others. A stage score thus gives insight into, and appreciation of the qualities, functions and nuances of a person's self-knowledge. In this way, the scoring method is dignifying and respectful of individuals.

There is beauty in the Experience Recall Test, even when it is not used to identify self-knowledge stages. A sensitive person may read

responses to the test and be moved by the kaleidoscopic richness, variety and depth of people's conscious experiences. Responses to the test are sometimes humorous, sometimes dramatic or tragic, or sometimes very ordinary—invariably, though, they reflect unique qualities and distinctive "styles" of the persons behind those responses.

In working with our subjects' responses to the recall test, I personally have been touched, entertained, awed, bored, angered, confused and thrilled by their experience descriptions. But above all, I have learned a great deal from working with their personally meaningful memories. Thus, I wish to acknowledge the contribution of our respondents first. I extend appreciation for their cooperation and eagerness in sharing a part of their lives with us.

Central to every aspect of this study were the other individuals on the Self-Knowledge Education Project, who also served as members of this dissertation committee: Al Alschuler, Jerry Weinstein, and Judy Evans. The close co-operation and mutual supportiveness with which we worked make it difficult to clearly differentiate each person's role. Al was especially valuable in encouraging and insisting on a high-caliber of quality and excellence in all phases of both the research process and my writing. Jerry's special contribution was his alertness and persistence in keeping the human "self", especially the emotions, from getting lost in the psychometric research jungle. I am grateful for his counsel at numerous points throughout the dissertation process—he was very helpful in preserving my sanity through the journey. Judy was truly unselfish and generous in giving her time, energy and

ROY T. TAMASHIRO

TABLE OF CONTENTS

# C H A P T E R   I

## INTRODUCTION

What should be the goals of psychological education?  This may be
the most important question facing educators whose concern is
students' inner, psychological world.  Since they deal directly with
people's values, emotions, beliefs, and other areas of personal
experience, these educators are potentially very influential.  They
may be able to deliberately stimulate development toward the ideals
of human functioning; for example, to teach people to be "fully
integrated, healthy, and capable."  Virtually all psychological
educators endorse these ideals.  But, they disagree about what those
ideals and goals mean in practice.  They have conflicting notions
about the operational definitions of these goals.  They lack adequate
means for evaluating courses directed toward these goals.  And, they
have difficulty justifying the educational and ethical value of
psychological education.  Thus, it is hard to know if psychological
education goals and courses are truly worthwhile, if they serve no
benefit, or if they are actually harmful.

This study tries to address these goal problems in psychological
education.  Of course, any solution, in the last analysis, will be
limited by one's perspective and expertise.  But the investigators
in this study believe that solutions should be sought because
psychological educators have an obligation to insure that their goals
and courses are just and desirable.  To teach without rational,
justifiable goals magnifies the potential for violating a person's

rights, for making unwise decisions and for engaging in unwarranted actions. We believe that psychological educators should have a systematic foundation for their goals to reduce the potentiality for these unjust and undesirable consequences. Moreover, a strong theoretical and empirical foundation for goals would enable educators to make intelligent decisions and to implement effective and worthwhile curricula.

In this study, we make the case that the major current problems and difficulties in psychological education result from the lack of a comprehensive theoretical and empirical foundation. We propose that the structural-developmental perspective offers a framework that can fill the need for that lacking theoretical foundation in psychological education. On this premise, we proceed to define the domain of psychological education in terms of the structural-developmental perspective and to seek empirical data that support or clarify the theoretical definitions. This empirical search is conducted by creating a test instrument that elicits data relevant to the theoretical definitions, by collecting people's actual responses to the test and by constructing a method for scoring these responses. This dissertation is a documentation of these steps in the search for a sound theoretical and empirical foundation for the goals of psychological education. We begin by surveying the major unanswered questions or problems in the field of psychological education.

## Goal Problems in Psychological Education

In this section, we contend that the lack of an adequate theoretical

and empirical foundation in psychological education has resulted in some difficult and unanswerable questions; and that these difficulties and problems are solvable if such a theoretical and empirical foundation is developed for psychological education.

By "theoretical and empirical foundation" we mean a systematic perspective or position that involves the following characteristics:

(1) It makes a coherent and philosophically defensible statement about the nature of mental processes, their functioning and how learning occurs.

(2) It represents a consistent value position. That is, all aspects of the position are defensible in terms of a consistent educational and political or social value base. This value base should itself be morally justifiable.

(3) Its concepts can be defined operationally. This means that the concepts involved in the perspective are definable in terms of actions (or behaviors) without ambiguity or confusion.

(4) Its concepts are empirically verifiable. The concepts involved in the perspective can be clarified, corrected or otherwise evaluated by the various methods of empirical research.

Currently there is no comprehensive theoretical and empirical foundation in psychological education. The courses and programs are generally developed by ingenious, but individualistic educators whose philosophies, goals and orientations rarely coincide. Consequently, it is not surprising that there are some serious goal problems that plague psychological education. These problems include the following:

1. Psychological education goals are operationally confusing and misleading.

2. Psychological education goals are of questionable educational value.

3. Psychological education goals are ethically unjustifiable.

4. Psychological education goals cannot be adequately evaluated or empirically assessed.

Each of these problems are now explained in detail.

1. <u>Psychological education goals are operationally confusing</u>. A growing awareness of the importance of directly promoting psychological growth for students has stimulated a proliferation of humanistic and psychological education courses. The goals of these courses are almost as numerous as the courses themselves. Typical goals include: "becoming more open," "increasing creativity," "improving one's memory," "gaining greater awareness of oneself," "developing spontaneity or authenticity," or "clarifying one's values." Despite this wide array and diversity of goals, the goals themselves are ill-defined.

The vagueness of the goals becomes evident when one attempts to specify a goal with observable behaviors. Practically any bit of behavior could be interpreted either as a positive expression of one goal or as the failure to realize another related goal. For example, let us suppose a person strolls past an ice-cream parlor, and is tempted to buy a sundae, but decides not to buy it. This behavior could be interpreted favorably as an example of "practicing self-discipline," a typical goal in psychological education. The same behavior may be

explained in the negative light of another goal as the "lack of spontaneity." There is no foundation or criteria to appeal to to resolve the differences of interpretation. Labeling a behavior in positive or negative goal terms seems completely relative, "since one person's 'integrity' is another person's 'stubbornness,' one person's 'honesty in expressing your true feelings' is another person's 'insensitivity to the feelings of others' (Kohlberg & Mayer, 1972,p. 479)."

Typical psychological education goals are also misleading, because the behavioral expression of the goal may be appropriate in one situation, but not in another, i.e. the goals are situationally-determined. This problem can be illustrated with one such goal, "to increase spontaneity." Whereas spontaneity may be valuable in composing a piece of original music, it is probably dysfunctional and dangerous in landing an aircraft at O'Hare Airport without communicating with the control tower. The situationally-determined quality of most current psychological education goals cannot be clarified because there are no systematic rationales or theories supporting the goals.

The unmanageable number of psychological education goals also contributes to their confusion. On one hand, the numerous and diverse goals all seem to point to one superordinate goal: to help people increase and improve ways of knowing and understanding themselves and their experiences, i.e. increasing self-knowledge. Practically every program and goal claims to ultimately promote full humanness (Alschuler 1973). But, there is virtually no common understanding of what specifically constitutes self-knowledge or full humanness. These are mere platitudes, further confusing the

attempt to define the goals clearly.

Vague and misleading goals have several undesirable practical consequences. First, nebulous goals cannot be translated into meaningful curriculum objectives. Educators cannot reliably derive action plans or behavioral objectives from vague goals. Second, with psychological education goals unspecified, curricular sequencing becomes difficult. There is no method for deciding which goals should precede or follow other goals; which competencies are prerequisites for another competency. Consequently, the coordination of psychological learnings is impossible--educators cannot decide whether a goal is appropriate for six-year olds or for 16-year olds. Third, vague and misleading goals mean that educators cannot evaluate their programs, and hence are unable to obtain useful feedback to improve their effectiveness. They cannot learn from their mistakes, nor benefit from research findings when the goals are too vague to evaluate. In general, vague and misleading goals have led to difficulties in the implementation of psychological education programs. And, these practical problems need not exist if a systematic foundation adequately clarifies and defines the goals.

2. The educational value of the goals is questionable. Without a consistent foundation for their goals, psychological educators have been unable to resolve several issues regarding the educational value of their goals and programs. One unresolved issue is whether the goals can be considered educational if no behavioral differences result from teaching toward a goal. Most psychological education goals,

such as "self-disclosure," "body awareness," or "improving self-esteem," focus on internal states and feelings rather than observable skills or behaviors. These internal states are usually unrelated to specific behaviors (Wylie, 1961). Of what worth is a goal which makes no behavioral difference? Psychological educators might maintain that inner feelings and experiences are what is most relevant to students, and to ignore students' concerns is alienating and discourages learning (Fantini & Weinstein, 1968; Raths, Harmin & Simon, 1966). Granting that, the questions still remain: "What is really learned in a psycho-logical education course?" "Are there any behaviors to show the learnings?"

Another issue is whether psychological goals achieved in a course or program are retained. Many empirical studies of workshops, training session and encounter groups report negative results on long-term effects (Back, 1972; Lieberman, Yalom & Miles, 1973; Campbell & Dunnette, 1968). Moreover, some psychological goals (e.g. on dimensions such as introversion-extroversion, and passive-active) have been shown to be linked to hereditary tempermental traits, that no amount of education is likely to change (Ausubel & Sullivan, 1970; Kohlberg, LaCrosse & Ricks, 1971). Thus, for many psychological education goals, behavior changes either cannot be effected or they cannot be retained. When learnings are so unretainable, it is questionable whether the goals have any genuine educational value.

Leaving the several issues involving the educational value of the goals unresolved has political implications. Since it is easy to overlook the valuable aspects of psychological education programs when these unresolved issues are foremost; legislatures, parents and educators

may remain doubtful and unconvinced that a course is any "good" or that it is worth supporting with time, money and other resources (Alschuler & Weinstein, 1973). Worthwhile programs may be abandoned simply because their less than adequate foundations could not address these issues.

3. The goals are ethically unjustifiable. Another difficulty of psychological education goals is that they are often entangled in ethical webs. The manner in which psychological education courses come into being illustrates these lacunae. Courses are often designed to promote the existing aims of education, especially psycho-social aims (Alschuler, 1969). Some of these courses are inspired by research results, such as deCharms' (1969; Shea & Jackson, 1970) "origin" training program. This program used the Coleman report (1966) (which found a significant correlation between students' attitude toward their own fate and how much they learned in school) as its rationale. Other courses appeal to predominant cultural norms or traditional values as their starting point. Achievement motivation training, for example, claims to encourage basic values such as independence, acceptance of personal responsibility and entrepreneural role responsibility (Alschuler, 1973). But appealing to either empirical facts or cultural traditions is ethically naïve. Deriving educational goals from facts confuses what is, with what is desirable. Facts may inform us about the way things are, but they do not tell us the way things should be. We may still ask, "Of what value is this fact?" (Kohlberg, 1971).

Appealing to cultural traditions is also ethically questionable. Within this country alone there are thousands of cultural groups—the Catholic Church, the Daughters of American Revolution, the Ku Klux Klan,

Ford Motor Company, the Black Muslims, the National Football League, the U.S. Air Force--which have conflicting or incompatible traditions. Which cultural tradition should be the basis for goals, and why? One may take a cultural relativist position and accord the different values of each group equal validity for members of that culture. But there is still no method for resolving differences when conflicts arise between the different cultures. In a diverse society, any goal derived from norms or traditions probably violates the traditions or norms of some parents, some sectors of the community or some teachers. This leaves educators unable to decide what should be the goals of psychological education.

In an attempt to avoid this dilemma, some psychological education goals focus on the processes which help students reach goals they choose. It is argued that emphasizing the processes minimizes imposing values on students and is non-indoctrinary. Thus, students in these courses are taught how to clarify values, not which values to hold (Rath, Harmin and Simon, 1966). They are taught how to work through self-chosen undesirable patterns, rather than being censured for them (Weinstein, 1971). Despite this shift in focus, the further question, "Why are process goals good? Under what criteria?" still is unanswered. Also, the question of justice remains when, in these courses, everyone (including the teacher) may express one's own views only as a perspective and not the right answer. Conflicts of values or goals cannot be resolved, because there are no principles or criteria of right. Without these principles, respect for human life and discrimination by sex or race are equally right; a murderer and a

saint have equal claim to freedom. The wisdom of teaching toward
this non-principled morality (i.e. amorality) is highly questionable.
In summary, the goals in psychological education seem to be based on
several, often inconsistent and indefensible ethical positions. There
is no theoretical foundation that one can appeal to for resolving the
conflicting value positions of the various goals in psychological
education.

4. <u>Psychological education goals cannot be adequately evaluated</u>. Still
another consequence of an inadequate theoretical and empirical foundation
for psychological goals is that the goals cannot be evaluated.

Many goals, in the first place, do not have accompanying validated
tools of measurements. Generally, psychological educators teach toward
their invented goals or concepts without carefully designing a test
or evaluation method for their goals or concepts. Thus, numerous well-
sounding goals, such as "self-reliance," "deliberateness," "openness,"
or "creativity" have no accompanying evaluative tools that can assess
whether students have learned these traits.

Where instruments do exist, their items are composed randomly
and arbitrarily because the constructs they evaluate have inadequate
theoretical clarity. For example, practically all instruments that
claim to evaluate self-esteem or self-concept (Butler and Haigh, 1954;
Schwartz and Tangri, 1965; Pervin and Lilly, 1967; Rosenberg, 1953; Secord
and Jourard,1953; Coopersmith, 1967; Gough and Heilbrun, 1965) may be
characterized in this way. In these tests, there is no clear relation-
ship between the test items and the concept the test purports to
measure (Wylie, 1961). Thus, there is also no clear relationship
between the test items and the goal that was derived from the concept.

Ultimately, one does not know whether the test measures the goal being tested.

In outlining the current goal issues in psychological education we have suggested that an inadequate theoretical and empirical foundation for those goals has led to practical difficulties, educational and ethical value questions, and problems in evaluating the goals. We now propose that the structural-developmental perspective offers a viable systematic foundation to address the problems of psychological education. This claim will be outlined after we sketch some key elements of the structural-developmental perspective.

## The Structural-Developmental Perspective

The structural-developmental perspective is a philosophical and psychological system which emerges from several sources, including the dialectics of Hegel and the modern pragmatism of John Dewey (1938). The major exponents of this perspective include Jean Piaget (Flavell, 1963), James Mark Baldwin (1906; 1908; 1911), Lawrence Kohlberg (1964, 1972), O. J. Harvey, David Hunt and Harold Schroder (1961); and Jane Loevinger (1966, 1970). The reader is referred to these sources for a more complete description of the structural-developmental perspective. Here, we shall attempt to summarize the essence of this perspective by briefly describing some of its main features.

The core of the structural-developmental perspective is its view of mental growth and development. Most other psychological theories assume that mental development is either determined primarily by hereditary, biologically given factors or determined primarily by environmental and social influences. The first sees the mind as

organic, like a plant or animal which matures according to an a priori plan. The other sees the mind as essentially mechanistic, like a passive machine upon which data from the environment is transmitted and impressed (Langer, 1969). The structural-developmental perspective avoids this irreconcilable debate by using a different metaphor to illustrate mental processes. It views mental development as a dialectical progression of ideas in a conversation or discussion. In this perspective, individuals develop as they redefine and reorganize ideas. These redefinitions and reorganizations occur as the ideas are acted out in experiences and are confronted with opposing ideas in discourse and argument (Kohlberg & Mayer, 1972).

Central to understanding the nature and dynamics of mental processes as viewed by the structural-developmentalists, is the concept of structure. Structure has several properties. First, there is a unitary thought-organization or wholeness which characterizes structure. This means that behind any thought that a person expresses there is a logical consistency, an integration and an organized system of relationships. For all persons at a given level of mental development these characteristic thought-organizations would have the same qualities. But the qualities would differ at another level of development.

Second, structures are characterized by several kinds of mental activities which are called transformations. Transformations are the abilities of the mind to take elements given in an experience and change them in various ways. For example, given two elements, the mind

might combine them, reverse them, assign sequentiality to them, assign causality to them, or make hypothetico-deductive considerations with them. At a given level of development, some kinds of mental processes or transformations would be possible, while other transformations would not be possible.

A third property of structure is that it is self-regulating. This means that a structure is able to maintain a balance or equilibrium, preserve its own properties, and follow coherent principles of operation. It does so as if the mind were governed by rules for the processing of information and for the connecting of events.

Thus, a structure "is a systematic whole of self-regulating transformations (Piaget, 1970, p. 44)." It is an organized thought-pattern which undergoes transformations in its transactions with the environment. It maintains equilibrium and stability by functioning in a self-regulating manner.

Developmental growth is defined as a movement from one of these mental structures to another. These changes are _not_ inevitable maturational changes. Experiences are crucial for structural-development to occur. However, "learning" in the usual sense of acquiring knowledge of the environment through training, instruction or practicing, does not necessarily constitute structural development either. Rather, structural development involves changes in the overall, general patterns of thinking about the self and the world. By definition, these structural changes occur in a sequence of stages, which have the following characteristics:

> 1. There are distinct, qualitative changes in a
>    person's modes of thinking, or modes of solving
>    a problem from one stage to another.

2. These different modes of thinking form an
   <u>invariant</u> <u>sequence</u>, order or succession in
   individual development. No stage can be
   skipped; and while cultural factors may
   speed up, slow down, or stop development,
   they do not change the sequence.

3. Each of these different and sequential modes
   forms a "<u>structural</u> <u>whole</u>." A given stage
   response on a task does not just represent a
   specific response determined by knowledge and
   familiarity with that task or tasks similar
   to it; rather it represents an underlying
   thought-organization.

4. Stages are <u>hierarchical</u> <u>integrations</u> which
   form an order of increasingly differentiated
   and integrated structures to serve a common
   function. Each stage is more complex than
   the previous one and prepares for the suc-
   ceeding one; every stage builds on, incor-
   porates and transmutes the previous stages.
   (From Tanner and Inhelder, 1956; 1960)

Unlike many views of development, the concept of structural stage
development is theoretically independent of chronological age (Kohlberg,
1969; Loevinger, 1966). Structures and stage sequence are defined
without reference to age-specific or culture-specific problems such as
entry into kindergarten, adolescence, or marriage.

In summary, some essential features which typify the structural-
developmental perspective are: (1) its view of mental development
as the dialectical encounter of an inquiring human mind with itself
and environmental experiences; (2) its concept of structure as a
systematic whole of self-regulating transformations; and (3) its
sequence of stages which are qualitatively distinct, invariant in
succession, structurally whole and hierarchically ordered.

In understanding these characteristics, there is a tendency to
confuse <u>principles</u> and <u>facts</u>. It should be noted that the features of

the structural-developmental perspective represent <u>principles</u> <u>and</u> <u>criteria</u> which underlie the theories. Whether a particular developmental theory <u>in</u> <u>fact</u> meets these criteria is a question open to empirical research. For example, according to the structural-developmental perspective, the sequence of stages do not vary from culture to culture. This does not necessarily mean that the sequence of stages in a specific theory, say Kohlberg's sequence of moral reasoning, is actually culturally universal. Although he aims to develop a culturally universal theory, Kohlberg can claim that his sequence of moral reasoning stages is <u>truly</u> universal only after empirically verifying the stages in all past and present cultures. Until then, his theoretical stage sequence is open to revision. In the same manner, Loevinger's and Piaget's developmental sequences are culturally universal to the extent each has been tested in different cultures. Simply stated, stage sequence is culturally universal by definition and principle; stage sequences of actual theories are approximately universal (to the degree they have been empirically researched).

We shall turn now to reviewing how this structural-developmental perspective offers a viable framework for addressing the goal problems of psychological education.

### A Potential Foundation for Psychological Education Goals

Advocates of the structural-developmental perspective claim that an educational ideology derived from it would have a systematic philosophical and psychological foundation supportable by empirical research (Kohlberg and Mayer, 1972; Sprinthall, 1973; Stewart, 1972). We have reviewed how the goal problems of psychological education

result primarily from the lack of this kind of systematic foundation. Here we outline how the structural-developmental perspective contains the necessary characteristics that make it a potentially fruitful theoretical and empirical foundation for psychological education.

First, the structural-developmental perspective is rooted in a philosophically coherent ideology, termed "progressivism," associated mainly with Dewey (1938) and developed as part of the pragmatic-functional-genetic philosophies of the late nineteenth and early twentieth centuries. From this philosophic base stems a defensible learning theory, viz., the dialectical-interactional notion of mental processes, elaborated most recently by Dewey and Piaget (See previous section). This dialectical-interactional perspective seems to be a more useful assumption about learning for educators than either the maturational-organic perspective or the mechanistic, data-acquisition perspective. In the maturational-organic view, the role of educators in a person's learning is minimal because individuals learn mostly by maturation, regardless of educational intervention. In the mechanistic, data-acquisition view, the function of education is also minimal. This is because, in that view, significant learning can occur in any environment; thus, educational settings (and the role of educators) are no more significant than other "non-educational" environments. In the dialectical-interactional view, educators can provide important opportunities for learning, which are not available either in the natural, maturational process or in data from external environments. The role of the educator in this view is to structure selective, stimulating problems that challenge learners according to their developmental levels.

The learning that occurs involve increasingly adequate reorganizations in the individuals' mental operations. Thus, it seems that educators' roles in the learning process is clearer, broader and more significant in the dialectical-interactional view, than in the other two perspectives.

Second, the structural-developmental perspective represents a consistent value position. Ethically, the structural-developmental perspective rests on the value postulates of ethical liberalism, identified mainly with J. S. Mill, Tufts, Dewey and Kant. This ethical position rejects cultural or traditional standards and also rejects value-relativism. Instead it recognizes ethical universals, which are formulated and justified philosophically, not simply by appealing to facts, to the status quo, or to empirical evidence. These ethical universals can define and clarify the educational, ethical and politico-social value of educational goals. For example, let us suppose that "individual liberty" was defined as an ethically universal principle. For the structural-developmentalist,

> ...the principle of respect for liberty is itself defined as a moral aim of education. Not only are the rights of the child to be respected by the teacher, but the child's development is to be stimulated so that he may come to respect and defend his own rights and the rights of others.... Consistent application of ethical principles to education means that education should stimulate the development of ethical principles in students.(Kohlberg and Mayer, 1972,pp. 473-474)

If the structural-developmental perspective is applied to psychological education, the ethical and educational value of the goals in psychological education courses could also be defined and clarified by making the goals consistent with these ethically universal principles. This would mean also that psychological education goals would not be defined according to culture-specific standards nor would they be value-relative.

Third, the concepts involved in the structural-developmental perspective can be operationally defined. As discussed above (see previous section), the central concepts of structure and sequence of stages have explicit definitions. These definitions serve as clear criteria for identifying what phenomena are related to structures or stages. And, once these phenomena (relating to structures or stages) are identified, the definitions can be used for translating structural and stage characteristics into curriculum objectives. For example, a developmental objective based on the definition of structure must stimulate behavior change which is irreversible, general over a field of responses and relevant to the sequential-hierarchical stages. Irreversible behavior changes implies that learnings would not be extinguishable nor situationally-determined. Given the explicit operationalizable definitions, the concepts in the structural-developmental perspective make possible relatively clear and unambiguous translation of those concepts into educational practice.

Finally, theories, concepts and goals derived from the structural-developmental perspective are empirically verifiable. Since each concept or educational goal in theories based on the structural-developmental perspective would have theoretical and operational meanings independent of test items (Kohlberg and DeVries, 1971; Pinard and Laurendeau, 1964), test items need not be composed randomly or arbitrarily. The concept or goal can guide the composition and selection of test items. Hence tests can truly evaluate the concepts they purport to assess. Moreover, the test items can, in turn, clarify and correct the concept or goal they measure (Cronbach and Meehl, 1955; Loevinger, 1957).

Another educational use of developmental tests is that they can assess the superordinate ends of education. This is because goals based on general and fundamental concepts such as structures and stages would also be fundamental and basic (Kohlberg and Mayer, 1972). In short, developmental tests are potentially useful in choosing specific objectives and also in clarifying fundamental and superordinate goals of psychological education.

In general, compared to present goals in psychological education, the goals derived from the structural-developmental perspective are potentially more defensible and coherent in its philosophical base including its position on how people learn and develop, and in its educational and ethical value position. Given a structural-developmental framework, psychological education goals and concepts can become more definable operationally, i.e. they can become clearer in terms of actual practice and implementation. And the structural-developmental perspective could provide a method for adequately evaluating the goals in psychological education. If approached with the systematic theoretical and empirical foundation of the structural-developmental perspective, it appears that the present goal problems plaguing psychological education can be solved.

## Plan Of This Study

Having reviewed the persistent problems of goals in psychological education and how they might be untangled by approaching them from the structural-developmentalist perspective, what were our steps in this untangling process?

The first step was to stake out the content domain of psychological education, to which the structural-developmental perspective would be applied. This domain was tentatively labeled, self-knowledge development. The meaning of "self-knowledge development" needed to be sufficiently clarified. This step is reported in Chapter II.

This study focused on the aspect of self-knowledge as defined in Chapter II, namely on people's theories or verbalized conceptualizations of their experiences. We hypothesized a set of stage characteristics from existing structural-developmental theories, including Piaget, Kohlberg, Loevinger and Van den Deale. Then an instrument that elicited people's verbal reports of experiences (the Experience Recall test) was created. We used that instrument to collect a sample of people's self-knowledge theories and used these collected responses to construct a scoring method for identifying the developmental stages of self-knowledge. These steps comprise the major focus of this dissertation and are outlined in detail in Chapter III.

Chapter IV summarizes the hypothesized stage characteristics derived from other developmental theories. These characteristics were used as a guide in the early phases of constructing the socring manual.

Chapter V describes the four stages and their characteristics, which are derived by having analyzed the responses to the Experience Recall test.

We assessed the reliability of the scoring methodology and the construct validity of the four empirically-derived stages. The results of these evaluations are reported in Chapter VI.

In the final chapter, the entire study is reviewed and critiqued. This is done by comparing the theoretically-derived stages to the empirically-derived stages, and by evaluating the technical specifications of the Experience Recall test and its scoring manual. The final chapter also contains recommendations for future studies and a conclusion.

C H A P T E R   I I

THE CONCEPT OF SELF KNOWLEDGE

Before applying the structural-developmental perspective to the
goal problems of psychological education, the content domain of these
goals needed to be sufficiently clarified. In the present chapter, this
domain is delineated and defined. This is done by first abstracting
what is the common concern among current goals and courses in psycho-
logical education. Then the common element, namely, self-knowledge,
will be defined to serve as a working construct for the present study.

### Common Ground Of Psychological Education Goals

It may seem futile to attempt a summary of the commonality among
ill-defined goals (described in Chapter I). However, it is legitimate
to ask, "What makes these diverse goals all part of psychological
education rather than part of another field? Is there any thread that
unifies all of these courses?"

One way of answering these questions is to group the goals according
to their broader underlying intentions or aims. Using this approach,
Alschuler (1973) found practically all existing courses and goals falling
into four categories. The categories are not mutually exclusive, but they
do help to organize the goals. He suggests that "the first broad goal
of psychological education is to promote the existing aims of education,
especially the often neglected psycho-social goals (Alschuler, 1973,
p. 205)." Included in this category are various courses which aim to
improve memory (Roth, 1952; Furst, 1960), to increase creativity
(Massialas and Zevin, 1967; Gordon, 1961; deMille, 1967), or to develop
one's mastery of the environment according to standards of excellence

(McClelland, 1965; Parsons, 1959). "Confluent" courses, integrating experiential and affective methods in the teaching of traditional academic topics (e.g., Brown, 1971), are also included in this group.

"The second basic goal of psychological education is to teach students effective and pleasurable processes to reach the goals they choose (Alschuler, 1973, p. 207)." Instead of focusing on specific outcomes such as increasing creative behaviors, these courses aim for students' understanding the methods and procedures that enable them to make their own decisions about those outcomes. Courses such as "values clarification" (Raths, Harmin and Simon, 1971; Simon, Howe and Kirshenbaum, 1972), "microcounseling"[1] (Ivey, 1971), and "education of the self"[2] (Fantini and Weinstein, 1970; Weinstein, 1971) are typical examples of this group.

"The third goal of psychological education is to teach positive mental health" (Alschuler, 1973, p. 209). Although mental health has a variety of meanings ranging from a healthy body to spiritual fulfillment, all of the courses in this category are concerned with "positive" human qualities rather than with pathologies or with adjustment. Alschuler gives some examples:

> One group of practitioners claims that the royal road to mental health is the body. You should stop betraying your body (Lowen, 1967), relax (Jacobson, 1962), awaken and relax your senses (Gunther, 1968,

---

1. "Microcounseling" teaches methods and techniques ("how-to's") for attending and listening to others, instead of telling students when to behave this way.

2. "Education of the self" teaches processes for students to work through self-selected "dissonant" patterns.

1970), find inner beauty and outer youth (Enelow, 1969), breathe properly (Proskauer, 1968), control your brain waves (Tart, 1969), have peak experiences in the nude (Bindrim, 1968) and ultimately achieve the sine qua non of mental health, a quivering, vibrating, pulsating, mind-boggling orgasm (Reich, 1942; Lowen, 1965).

At the other end of the continuum, there are those who describe positive mental health as the psychological equivalent of spiritual fulfillment: Individuation (Jung, 1959), Psycho-synthesis (Assagioli, 1965), Self-Actualization (Maslow, 1968)....In between the body and the spirit there is a large group of practitioners with theories and followers who espouse healthy interpersonal communication: how to fight fair with those you love (Bach and Wyden, 1970), how to communicate effectively with your children (Gordon, 1970), with your family as a whole (Satir, 1967)....
(Alschuler, 1973, pp. 209-210).

"The fourth major goal of psychological education is to promote normal development (Alschuler, 1973, p. 211)." Courses in this category include those which facilitate learning in stages of Piagetian cognitive abilities[3] (Smeldslund, 1961; Sigel, Roeper and Hooper, 1966; Gruen, 1965; Beilen, Kagan and Rabinowitz, 1966), develop reasoning about moral problems (Kohlberg, 1963, 1964, 1968) or stimulate ego development[4] (van den Deale, 1970; Sprinthall and Mosher, 1970).

In brief, by grouping courses and goals according to their underlying aim, they can be classified into one or more of four categories: (1) those courses promoting the existing psycho-social aims of education;

---

3. These abilities involve reasoning in several areas of physical reality including number, class, membership, length, mass and volume (Flavell, 1963).

4. "Ego development" stages parallel the stages of Piaget's cognitive development, but is more inclusive. Aspects of ego development include impulse control, interpersonal style, conscious preoccupation and cognitive complexity (Loevinger, et. al., 1970).

(2) those teaching students effective processes to reach goals they choose; (3) those teaching positive mental health; and (4) those promoting normal psychological development.

When the goals and courses are sorted into these four categories, some common concerns in all psychological education courses become apparent. One of these commonalities is that the courses all seem to recognize and directly address the experiences of learners. Whether the goal is to control your destiny or to be able to monitor your brain waves, the focus is on understanding _personal_ data. This is contrasted with the focus in other courses on learning facts or concepts that are often unrelated or only distantly relevant to oneself. Given a choice between emphasizing public, factual knowledge versus personal, experiential knowledge, psychological education courses would all select the latter. Another similar unifying element underlying the four categories is the phenomenological perspective. Specifically, the subjective aspect of the learners is important in the goals in all four categories. The students' perceptions, interpretations, values, meanings or choices are central to every goal in psychological education.

By collectively considering these unifying concerns (viz., the emphasis on the experiential, on personal knowledge, and on the subjective), one could identify the essential content domain of psychological education. Taken together, these common elements seem to point directly to the notion, "self-knowledge." "Self-knowledge" could be tentatively defined as the ways of knowing and understanding one's experiences. By this broad definition, "self-knowledge" accurately represents the domain of psychological education because the courses

and goals are all concerned with this subjective, experiential, personal self-knowledge.

<div align="center">*   *   *</div>

This preliminary conclusion that self-knowledge is the unifying concern among psychological education courses seems to be confirmed by the actual methods and procedures used in the courses. When the activities or procedures used in the courses are examined, the "rhetoric" of the stated goals becomes operationally specified. For example,

> ...Outward Bound courses attempt to promote "self-reliance" (Katz and Kolb, 1968). Most of the course exercises ask students to engage in physically difficult tasks like scaling a cliff or swimming 50 yards underwater in one breath. Outward Bound courses usually end with a solo survival experience in the wilderness in which the trainee lives off the land. Procedurally, "self-reliance" is defined as mastering these challenging physical tasks (Alschuler, 1969, p. 9).

Similarly, by focusing on course procedures, it is possible to summarize the _actual_ concerns of those courses, and then to see whether the term "self-knowledge" includes these concerns. Alschuler (1969) has identified four types of typical or common procedures.

> First, most courses contain procedures to develop a constructive dialogue with one's own fantasy life.
>
> A second set of extremely common procedures involves nonverbal exercises, such as silent improvisations, free expression dance movements, meditation, the exaggeration of spontaneous body movements, and a wide variety of games.
>
> A third set of typical procedures focuses on developing and exploring individual's emotional responses to the world.
>
> A fourth characteristic set of procedures emphasizes the importance of living fully and intensely "here and now" (Alschuler, 1969, pp. 9-11).

This summary of procedures, like the categories of goal statements, point in the direction of self-knowledge. The emphasis again is on experiential, personal knowledge, in constrast to external, public knowledge. The procedures also suggest that this experiential focus specifically involves a person's emotions, fantasy, communication patterns and actions. These focal characteristics further elaborate our broad definition of self-knowledge. We derived the following definition by incorporating these characteristics: Self-knowledge is understanding the immediate experience of one's own emotions, fantasy, communication patterns and actions.

Thus, we arrived at the notion of self-knowledge by abstracting typical characteristics of goals and courses in humanistic education. Although the concept of self-knowledge seems to adequately summarize the content domain of psychological education, the concept needed to be defined more exactly for purposes of the present study. To do this, we constructed a working definition of self-knowledge, which is detailed in the next section.

## Working Definition Of Self-Knowledge[5]

Ideally, a working definition of "self-knowledge" should be derived from reviewing and summarizing its previous conceptualizations in philosophy, psychology and psychiatry. But it would require a Herculean effort and prodigious scholarship to review relevant theories of self-knowledge over the 2,000 years of Western History and the 4,000

---

5. Parts of this section are adapted from Self-Knowledge Education Working Paper #3, "Towards a Theory of Self-Knowledge Development," unpublished paper, University of Massachusetts, January 1974.

years in the East. The investigators in this study surveyed some of these theories.[6] Along with this survey, a set of practical criteria guided the formulation of the working definition, so that it would be relevant to our aim of addressing the goal problems in psychological education (see Chapter I). These criteria are:

(1) The definition should be consistent with the content domain of psychological education. The definition should include and/or emphasize the various concerns, goals and procedures of the courses, such as those described in the previous section.

(2) The definition should be consistent with, and research-able from the structural-developmental perspective, because this study approaches the goal problems of psychological education from that perspective. This means that the definition should assume that the human mind develops through transactions in experiences, rather than as predetermined by nature or by the environment. Also, the definition should be consistent with the concepts of "structure" and "sequence of stages" (described in Chapter I), which are central to the structural-developmental perspective.

(3) The definition should contain a behavioral or otherwise observable component, so that (a) from this definition, an instrument and scoring method for the self-knowledge construct can be developed and empirically evaluated, and (b) educators can eventually use this definition for deriving and implementing psychological curricula.

---

6. This review is documented in Giles Hopkins', "From Descartes to Developmental Theory: A consideration of the definitional evolution of 'self-knowledge'," Self-Knowledge Education Working Paper #5, unpublished paper, University of Massachusetts, 1974.

To meet these criteria, a three-part definition of self-knowledge was constructed. "Self-knolwedge" was construed as including, (a) a person's direct experiences, (b) verbalized conceptualizations or theories that the person makes about these experiences, and (c) the mental operations enabling the person to transform the direct experiences into the verbalizations of those experiences (See Fig. 2-1).

FIGURE 2-1  SCHEMATIC MODEL:  WORKING
DEFINITION OF SELF-KNOWLEDGE

| A. Experiences (Definition A) | C. Mental Operations (Definition C) | B. Theories or Verbalized Conceptualizations of Experiences (Definition B) |
|---|---|---|
| One's conscious thoughts, sensations, feelings and actions. | Processes of the mind that transform experiences into theories. | Oral or written descriptions of experiences, hypotheses about experiences and assignment of value to experiences. |
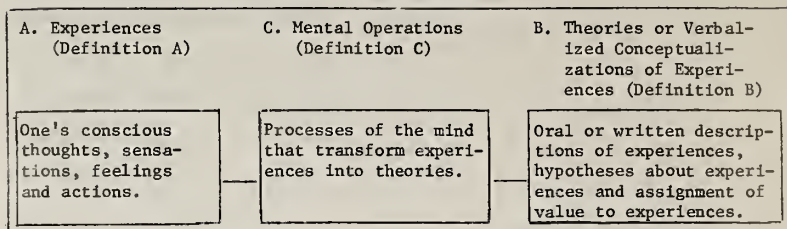
These three parts of self-knowledge are conceptually distinct, but are closely interrelated. This interrelationship can be illustrated by an example. Imagine a man and a neighbor watching a collegiate football game on television. The man is constantly experiencing a multitude of phenomena : the visual images of the game on TV; the furniture in the room; his neighbor; the smell of someone preparing a barbecue across the street; the stream of thoughts and emotions he has about the game, his neighbor and himself; and so on. All of these experiences constitute the man's direct experience, which is the first part (A, above) of the construct, self-knowledge. Part two (b, above) is illustrated by the man saying to his neighbor, "You know, Pete, every time I watch a football game, I get very frustrated wishing I were out playing instead of watching.

This statement is an example of a verbalized conceptualization about his experiences. Any statement about one's experiences such as this one, make up part two of the self-knowledge construct.

The third part of the self-knowledge construct (C, above) is less obvious in the man-watching-TV example. This part of the concept involves the intermediary mental actions or "operations" that selected, then transformed the man's experiential data and enabled him to make the verbal description about himself. We can infer from the way he expressed himself that he can make generalizations over time (e.g., "every time I watch..."). He can also name emotional states (e.g., he says, "I get frustrated") and he can make comparisons (e.g., "I wish I were out playing instead of watching."). These three mental capacities--i.e., the ability (1) to generalize over time, (2) to name emotional states and (3) to make comparisons--are examples of what enables this man to describe his experiences in the way that he did. Mental capacities or operations such as these constitute the third part (C, above) of the self-knowledge construct.

Our example has shown how the three parts of the self-knowledge construct--the experiential data, the explanations or hypotheses, and the mental operations--form an inter-connected whole, i.e., the concept of self-knowledge. Each of the three parts are described in further detail in the next sections.

1. Experiences.

    Definition A: Experiences consist of a person's own conscious
                  sensations, feelings, thoughts and actions.

Experience in this sense is anything in a person's immediate or present awareness. These experiences are private: No one else has

direct immeidate access to an individual's experienced sensations, feelings, thoughts or actions.

Experience is everything in one's conscious awareness, including that consciousness itself. This definition thus includes William James' notion of "pure ego" (1890), because "pure ego" is the consciousness, subject or knower of all awareness. Although this "contentless" awareness (i.e., what is "behind" a person's perceptions) is part of Definition A, this pure ego is not distinguished from the contents of consciousness by this definition. Both are included and often indistinguishable in experience.

According to Definition A, anything one is conscious of (or aware of) makes up experience. No distinction is made between the awareness of "self" and the awareness of external phenomena like events in the political, physical or biological world. This distinction between "self" and other ("non-self") is not given a priori in experience. The person conceptually differentiates "self" from "non-self" at some point in his/her ontogenetic development. In other words, a person must mentally construct the boundary between "I" and "the world." The individual may or may not be conscious of the "self"-"non-self" distinction. When one is conscious of the boundary, this awareness obviously is included in conscious experiences, i.e., Definition A. For a person who has not differentiated various aspects of self from non-self,[7]

---

7. This includes infants who have not yet mentally constructed the differentiation between self and non-self. A person who ontogenetically has made this differentiation can also have conscious experiences where self is indistinguishable from non-self. This occurs in some altered states of consciousness, for example in certain forms of mystical, meditative or drug experiences.

this distinction is <u>not</u> part of that person's experience. In essence, only what one is conscious of (i.e., aware of) constitutes experiences, according to Definition A.

Definition A does not include a collective or personal <u>un</u>conscious. Surely, unconscious motivations, or forgotten or suppressed past experiences are significant factors in understanding personality. But individuals can only construct theories of their experiences with data available to them; and unavailable, unconscious material is not useful to the person as long as it remains out of consciousness.

Experiences, defined as a person's conscious awarenesses, implies that these experiences need not be verbalized. Definition A includes all non-verbalized conscious thoughts. A distinction is made between verbalized statements and non-verbalized thought: When the experience is described or <u>expressed</u> by words in written or oral behavior, the descriptions themselves are <u>not</u> included in Definition A. These explanations are reserved for Definition B. However, any and all experiences conscious to the person, which they do not verbalize, are the domain of Definition A.

In summary, "experience" includes all the sensations, feelings, thoughts and actions in a person's conscious awareness. These experiences are the person's raw data about which one constructs explanations and theories for understanding and knowing oneself.

Before describing the other two parts of our self-knowledge construct, an epistemological concern about defining "self-knowledge" should be addressed. The notion, "self-knowledge," is paradoxically circular. In terms of <u>personal</u> experiences and knowledge, the "self"

is both (a) that which is experienced, perceived and known; but at the same time is (b) that which <u>does</u> the experiencing, perceiving and knowing. "Self" can be either the object of knowing (i.e., what is known) or the subject of knowing (i.e., the knower). This dicotomy has inspired some philosophers (e.g., Jaspers, 1963) to argue that self-knowledge is not possible at all, because the "I" that knows is always different in nature than the "I" that is known. The self, as soon as it is known, loses its subjectivity, i.e., its essence as the "I".

This dilemma was recognized in constructing this working definition. Definition A allows for the raw experiencing of both kinds of self (i.e., as subject and as object). In one's sheer experience, the knowing self and knowledge of self are often indistinguishable. The distinction between these two selves is not dismissed, however. The self-as-the object of knowledge (i.e., the "I"-as-it-is-known) is treated by Definition B, and the nature of the self as the subject of knowledge, (i.e., the "I"-as-knower) is the focus of Definition C.

2. <u>Theories or verbalized conceptualizations of experiences</u>.

> Definition B: Verbalized conceptualizations of experiences consist of oral or written statements which are: (1) descriptions or characterizations of one's experiences (as defined by Definition A); or (2) hypotheses or explanations about those experiences; or (3) assignments of value, significance or importance to those experiences. Together these three parts make up a theory about one's experiences.

Definition B states that any verbal statement about one's experiences is considered a verbalized conceptualization of experiences. Anything one says or writes about one's own experiences (as defined by Definition A) is considered a verbal report of experience and included in this definition.

Only <u>verbalized</u> statements are included in Definition B. This
means that other types of non-verbal behaviors, such as gestural,
unsymbolized vocal, and graphic expressions are excluded from these
definitions. While these non-linguistic behaviors may give important
clues to an individual's knowledge about self, we choose to focus on
verbal behavior only. This decision was made for practical reasons.
In principle, knowledge of self is more than verbal descriptions, but
in practice, no behavioral task (verbal or non-verbal test) can
guarantee a response of exactly what a person knows about self. Since
current psychometric methods are most applicable to symbolized verbal
behavior, this study defines the behavioral expression of self-knowledge
only as verbalized statements.

We postulate that these verbalized conceptualizations of experiences
serve a similar function that scientific theories serve for natural
phenomena. Just as scientific theories enable one to understand, predict
and control phenomena, verbalized conceputalizations of experiences
enable one to understand, anticipate and be intentional about one's
experiences. Anticipation and intentionality are the psychological
equivalents to prediction and control in natural phenomena (Ivey, 1969;
Ivey and Rollen, 1972). Hence, Definition B may be called theories
about experiences.

Scientific theories generally contain three essential parts: (1)
the data, or descriptions of the phenomena to be explained, (2) the
hypotheses or explanations of the relationships among the variables
involved in the phenomena and (3) the statements describing the
significance of several variables in the theory. For the purposes of this

study, it seemed potentially useful to differentiate theories of experiences (i.e., the verbalized conceptualizations) into three parts that parallelled the three parts of scientific theories. Thus, we postulated that there are three parts or dimensions to theories about one's experiences: (1) statements that describe or characterize one's experiences, (2) statements that explain or hypothesize about the experiences, and (3) statements that assign or attribute value, significance or meaning to the experience.

The first dimension, i.e., the statements that describe or characterize one's experiences, involves the reporting of one's experiences as data. Any of various aspects of experiences are included in this dimension. For example, one may describe one's experiences in terms of: (1) one's body or its parts, (2) one's actions or behavior, (3) one's abilities or skills, (4) one's personality traits, (5) one's role in a social group, (6) one's possessions, (7) one's beliefs, values or other thought patterns or, (8) one's emotional responses. These or other aspects of experience, when reported, comprise the first dimension of theories of experiences, namely how experiences are described.

Statements that explain or hypothesize about one's experiences are the second dimension of people's theories of their experiences. These explanations are the ways in which various aspects of the experience are related to each other. For example, between two given aspects of the experience, there may be no relationship, there may be a correlational relationship, or there may be a causal relationship. How these and other relationships among the various aspects of experience are reported comprise the second dimension of theories of experiences.

The third dimension of experience theories is the nature of the reported value, meaning or significance assigned to one's experiences. This includes statements about the ways in which an experience (or aspects of an experience) is important or significant to a person. Often this includes attributing an emotional valence, positive or negative, to one's experience or aspects of one's experiences. This dimension may also include statements about one's significant learnings or meanings created from the events or incidents one experiences.

In sum, Definition B includes any statement, oral or written about one's experiences. These statements may be one of three types—descriptions or characterizations of the experiential data; explanations relating various aspects of the experience; or the assignment of value, significance or importance to one's experiences. These types of verbalized conceptualizations are the major dimensions that make up one's theory about one's experiences.

As part of the working definition of self-knowledge, Definition B plays a significant role. It represents the behavioral manifestation of the dialogue between mental processes and experiences. The verbalized conceptualizations or theories about experiences are the only aspect of the working definition which can be observed non-subjectively. That is, these verbal reports are the only part of one's experiences accessible to persons other than oneself. This observable or behavioral aspect had been a major criterion in constructing the working definition.

3. Mental operations.

Definition C: Operations are the mental processes that enable a person to transform experiences (Definition A)

into theories or verbalized conceptualizations
of those experiences (Definition B).

Mental operations are the essential processes of the mind that individuals use for making sense of their experiences. Every structural—developmental theory postulates mental operations as one of the critical properties of structure. As described earlier (Chapter I), structures are characterized by mental activities—abilities of the mind to take elements in experience and change them in various ways. These abilities to combine two elements, to assign causality, to analyze elements hypothetico—deductively, among others, are examples of mental operations (according to Definition C).

Operations transform conscious experience into verbalized statements and theories, much as a computer program organizes raw input data into print-outs. In the same way as a computer program is composed of many specific, systematically interrelated operations, mental operations are similarly interrelated in the structures. Structures are organized assemblies of operations. Another oversimplified analogy illustrates the relationship between operations and structures. The motor of a car (its structure) is composed of a number of interconnected, functioning mechanisms (its operations). It is this assembly of interrelated mechanisms, the structural whole, that enables the car to transport people and goods around the block or across the continent. Mental operations, like the engine's mechanisms, make up the "structural" motor that enables a person to transform conscious experiences into self-knowledge theories.

As part of the mental structures, the operations are also related to the structural—developmentalists' concept of stage sequence. At a

given stage of development, certain mental operations are possible and available. At the next stage, certain new operations become available-- making more complex thinking possible.

According to Definition C, operations are mental _processes_. These processes include both cognitive and affective mental activities. Cognitive operations are thought processes that are characteristically intellectual, logical or rational; including the mental processes of differentiation and integration.

The emotional or affective mental activities are also included in our definition of mental operations. Affect is the ability of the mind to "assign value" and "distribute energy" to one's experiences (Piaget, 1967). Loevinger (1966, 1970) describes these affective processes as an individual's mode of impulse control or character development, or a person's underlying core disposition-state. These current theoretical positions seem to suggest the existence of "affective operations," but characteristics of affective processes are not well-defined because structural-developmental theorists have, to date, focused primarily on cognitive, rather than affective, operations.

Although both cognition and affect are important aspects of mental operations, a compulsive distinction between the two is probably not useful. Affective processes are closely related to and often indistinguishable from cognitive processes. Loevinger and Piaget emphasize this point:

> A current theoretical dispute among some psychologists
> interested in ego development and related subjects concerns
> the relative importance of cognitive and affective factors
> in that development. This issue appears to be a relic of
> outworn categories of thought, for integration of observations
> into a coherent frame of reference is, obviously, cognitive,

> while anxiety is, obviously, affective. But the failure to
> attain a meaningful and cognitive integration is precisely
> what generates anxiety.
>
> (Loevinger, et.al., 1970, p.8)

> all behavior presupposes instruments and a technique:
> movements and intelligence. But all behavior also implies
> motives and final values (goals): the sentiments. Thus,
> affectivity and intelligence are indissociable and
> constitute two complementary aspects of all behavior.
> (Piaget, 1967 )

Thus, the intent of Definition _ is to the importance of
both affective and cognitive type operations in a person's
transforming conscious structures into theories about experiences.

Another property of operations (and the structures of which they
are a part) is that they are not observable in the same way that overt
behavior is observable. Operations are mental processes or internal
mechanisms. They function "inside the mind," and we cannot "watch"
operations in action. Only the products or results of mental operations
are observable. Verbal behaviors (i.e., the theories or verbalized concep-
tualizations of experience) are the manifest products of mental operations
Thus, given a verbal report or other behavior, it may be possible to
infer (hypothesize) the mental operations necessary to deliver that
explanation. But this behavior, verbal or otherwise, is not the
equivalent of, nor part of mental operations.

We postulated that mental operations are organized into structures,
or a systematic whole of self-regulating operations. We adopted the
structural-developmental position that these structures, or patterns of
mental operations, undergo developmental growth in a fixed sequence of
stages. This sequence of stages is characterized by distinct qualita-
tive changes in a person's mode of thinking from one stage to another.

The stages form a culturally invariant sequence, and they are
hierarchical integrations, wherein each stage builds on incorporates
and transmutes the previous (see Chapter I).

In brief, we have described mental operations in the following
ways:  (1) Operations are mental processes that enable a person to
transform conscious experience into theory and
conceptualizations of experience.  (2)                 interrelated
into organized wholes called structures that have the same properties
that other structural-developmental theorists attribute to them;
(3) Operations include both affective and cognitive activities; and
(4) Operations are not observable in verbal or other overt behaviors,
although their existence may be inferred from behaviors.

## Adequacy And Limitations Of The Working Definition

Let us return to our starting point, the concept of self-knowledge.
The working definition of self-knowledge presented here was constructed
in the context of the goal problems in psychological education.  By
staking out a territory that includes conscious experiences, including
personal thoughts and emotions (in Definition A), we have corralled
what is probably the central concern in psychological education courses.
Definition A recognizes the significance of personal experiences, in its
infinitely diverse, though privately subjective form.

But these experiences do not occur in isolation.  They interact
with mental processes (i.e. the mental operations), and the experiences
become transformed into theories about experiences.  The concept of

mental operations is consistent with the structural-developmental
perspective. In this view, a person's mental development is not
determined by environment [?] alone, nor by simple maturation; but
rather by continual transactions between mental operations and
conscious experiences. A person's theory about their experiences is
possible through the transactions between experiences and available mental
operations.

Individual's theories about their experiences represent the
behavioral manifestations [?] [?] of the interaction
between conscious experiences and mental operations. This observable
aspect of self-knowledge makes an empirical study of the self-
knowledge concept possible.

In essence, the working definition seems to meet criteria we had
set for formulating a definition of self-knowledge for this study.
(1) The definition echoes the central concern in psychological
education--the emphasis on knowing personal, subjective experiences.
(2) The working definition is compatible with key structural-developmental
concepts of stage, structure and how human minds grow and develop.
(3) By postulating theories or verbalized conceptualizations of
experience, the definition specifies the behavioral or observable
component necessary for an empirical study of the self-knowledge
construct.

The intention of this study was not to identify mental operations
per se. Mental operations are not open to direct empirical observation.
Nor was the focus of this study on the content of conscious experiences,
since experiences are ultimately private and also unaccessible to

observation. Rather the aim of this study was to identify the

characteristics of theories or verbalized conceptualizations of

experience, which reflected development stages. That is, we wanted

to identify the stage characteristics of people's theories about their

experiences.

The working definition was a guide in this process. We focused our

efforts primarily on the topics of self theory, involving people's

theories or verbalized conceptualizations of experience. In

attempting to define the stages in people's theories about their

experiences, this study represents a first step in specifying the

stages in the development of self-knowledge, which in turn represents

a step toward answering the question, "What should be the goals of

psychological education?"

Several issues concerning this working definition remain unresolved

in this study because of current methodological limitations. These

limitations include the following:

1. There is no one-to-one correspondence between verbal

behaviors (i.e., the verbalized conceptualizations of experience)

and mental operations. Although the correspondence can be derived

inferrentially and shown to be statistically significant, the relation-

ship is, at best, a probablistic one.

2. Some unrelated or non-developmental variables cannot be

distinguished from characteristics of the stages we identify. For

example, verbal fluency and linguistic competence cannot be separated

from some characteristics of mental operations, because empirically we

rely only on verbalized statements. Likewise, characteristics

related to socio-economic levels, cultural contexts, educationsl levels,
and other non-developmental variables may confound characteristics
of the stages.

3. No psychological test can guarantee to reveal mental opera-
tions or the stage of development of the child. Objective tests impose
the experimenter's perspective on the subject. Projective tests
do not insure that the subject will mean the same to the
investigator. Also, there is no means for determining when subjects
have consciously or unconsciously concealed their actual developmental
stage characteristics.

4. In principle, one can speak of stages of development, but
in reality a person usually displays behaviors of more than one
stage. At present, there are various psychometric methods of assigning
a stage score for a person. But there is no final or definitive court
of appeal for deriving a stage score from behaviors corresponding to a
range of stages.

These (and other) methodological limitations are left for future
studies to tackle. For purposes to this study, the working definition
of self-knowledge appeared useful and it enabled us to proceed toward
identifying stage characteristics of people's theories about their
experiences.

## STRATEGIES FOR IDENTIFYING
## STAGES OF VERBAL
## DESCRIPTIONS OF EXPERIENCES

Viewing self-knowledge from the crow's nest of the structural-developmental perspective, how can we identify discrete stages and their developmental sequence? The aim of this study was to discover what characteristics in people's verbalized conceptual notions of experience (i.e. self-knowledge theories) reflect a developmental stage sequence. This chapter describes the strategies to determine these developmental changes.

In general, the task of identifying stages required both theoretical and empirical identification, with extensive dialogue between the two. It seemed impossible to empirically arrive at stages of experience descriptions without a theoretical framework that guided such observation. The role of a theoretical frame had been previously recognized by Cronbach and Meehl (1955) and Loevinger (1957). They emphasized beginning with a strong theoretical or philosophical foundation that guides the observation of behaviors. Observations are conducted using this theoretical frame, and the observations in turn, are used to correct and refine the theory. This dialogue--theory-to-observation and observation-to-theory--results in increasingly accurate and adequate conclusions.

This study proceeded along this general path. We began by formulating a theoretical stage sequence. This formulation guided the development of an instrument, the selections of the sample, and the collection and analysis of the data. Subsequently, the data from these steps clarified and revised the theory. In the remainder of this

chapter, the details of these steps will be outlined.

## Deriving A Theoretical Frame

Initially the theoretical frame for this study involved two aspects: (a) a working definition of the self knowledge construct; and (b) potential stage characteristics of several developmental constructs. The formulation of the working definition was discussed in Chapter II. A theoretical frame of stage characteristics was constructed by deducing from four structural developmental theories: Piaget's theory of cognitive development, Kohlberg's theory of moral reasoning development (Kohlberg and Turiel, 1971,1973), Loevinger, et.al.'s ego development theory (1970), and Van den Daele's theory of ego-ideal development (1968). These theories conceptually represent four aspects of structural development. Although their content is distinct from the self-knowledge construct, the underlying framework is the same. Kohlberg and Mayer explain the relationship among the four developmental theories we draw from.

> According to cognitive-developmental theory there is
> always a cognitive component to development, even in social,
> moral and aesthetic areas. Development, however is
> broader than cognitive-logical development. One central
> area is moral development, as defined by invariant stages
> of moral reasoning (Kohlberg and Turiel, 1971,1973)....These
> stages have a cognitive component; attainment of a given
> Piaget cognitive stage is a necessary, though not
> sufficient, condition for the parallel moral stage.
>
> ....there is a still broader unity, called ego development,
> of which both cognitive and moral development are a part
> (Loevinger, Wessler and Redmore, 1970). Particularly in
> the earlier childhood years, it is difficult to distinguish
> moral development from ego development. Cognitive development,
> in the Piagetian sense, is also related to ego development,
> since both concern the child's core beliefs about the
> physical and social world. (Kohlberg and Mayer, 1972, p. 491)

It is possible to overlay each theory upon the others according

to the similarity of the stages. Table 3-1 outlines this overlaying
procedure.

Having aligned the four selected theories, we deduced hypothetical
stage characteristics relevant to Piaget's three basic stages. These
[illegible] frame preliminary concepts [illegible] potential
self knowledge stage (see Chapter IV) [illegible] sufficiently
provided enough detail to guide the [illegible] of instrument
development and data analysis. Eventually, after analyzing
the collected data and deriving stage characteristics empirically
(detailed in Chapter V) the more valid derived stages could be
[illegible] compared and [illegible] (discussed in Chapter VII)

---

1. Specifically, the cognitive (Piaget's) stage is a prerequisite for,
i.e. a necessary, but not sufficient condition for its parallel moral
stage (Kohlberg's). For example, a person at the Interpersonal
Concordance Orientation Moral stage must have attained Concrete
Operational cognitive thinking; but a person at Concrete Operational [illegible]
may not reason from an Interpersonal Concordance Orientation in the
moral-ethical domain.
   Van den Daele's ego-ideal stages are similarly related to Piaget's
stages. A given Piagetian stage is a necessary, but not sufficient
condition for achieving the parallel ego-ideal stage.
   Loevinger's ego development stages are an even broader unity.
Parallel moral, cognitive and ego-ideal stages are all part of, hence
prerequisites for, a given ego development stage. "All children at
a given ego stage must have attained the parallel cognitive (and moral
reasoning) stage but not all children at a cognitive stage will have
organized their self-concept and social experience at the corresponding
ego state" (Kohlberg and Mayer, 1972, p.491)
   The specific relationship between Van den Deale's ego-ideal
stages and Kohlberg's moral reasoning stages appear to be equal
in scope, but mutually exclusive. That is, neither seem to be a
prerequisite for the other.

TABLE 3-1:  COMPARISON OF STAGE SEQUENCES OF FOUR
STRUCTURAL-DEVELOPMENTAL THEORIES

| Piaget: Cognitive Stages | Kohlberg: Stages of Moral Reasoning | Van den Deale: Ego-Ideal Stages | Loevinger: Ego Stages |
|---|---|---|---|
| Pre-operational thinking | 1. Punishment-obedience orientation | 1. Undifferentiated incorporation of powerful or glamorous figures | I-2: Impulsive |
| Concrete operational thinking | 2. Instrumental relativist orientation | 2. Naive identification with parental role | Delta: Self-protective |
| | 3. Interpersonal concordance orientation | 3. Social conformity to expectations & evaluation by others | I-3: Conformist |
| Formal operational thinking | 4. Law & order/ conscientious orientation | 4. Self-affirmation through internalized values and beliefs | I-4: Conscientious |
| | 5. Social contract/ legalistic orientation | 5. Integrated world view through reflective consideration of personal or human situation | I-5: Autonomous |
| | 6. Universal ethical principles orientation | | I-6: Integrated |

In summary, three stages characterizing verbal descriptions of experiences were hypothesized by drawing from four selected structural-developmental theories. The characteristics of these three theoretically derived stages are outlined in Chapter IV. These stage characteristics, along with the working definition of self-knowledge, comprised the first portion of the theory-observation dialogue. The next portions involved developing an instrument, sele     sample, analyzing data collected from that sample and   riving at stage characterizations from this empirical analysis. The strategies for each of these empirical steps are detailed in the following sections.

### Instrument Development

In accordance with the working definition (Chapter II), verbal descriptions of experiences were chosen as the area for analysis. Given that, we needed an appropriate instrument for collecting protocols of such verbal descriptions. Specifically, we wanted the instrument to yield three kinds of information relevant to the self-knowledge construct.

(1) We were interested in identifying characteristics of how people described their own experiences. What data about their experiences do individuals at each developmental stage have access to? The instrument needed to elicit a sample of the data base to which individuals have access.

(2) We were interested in how people explain their own experiences at each stage. That is, how do they construct hypotheses about and draw conclusions from their experiences? The instrument needed to

engage people in the process of arriving it these hypotheses and conclu-
sions, by having them conceive and describe the antecedents and consequ-
ences of their experiences. From the various ways in which these
antecedent and consequence explanations are made, we believed we
could identify a developmental sequence of how (i.e. the process of)
people explained their experiences.

(3) Finally, we were interested in the ways in which persons
assigned value, significance or importance to their experiences. The
instrument needed to elicit descriptions of what individuals themselves
saw as the valuable or significant aspects of their experiences.

In short, our aim was to collect people's (1) descriptions of their
own experiences, (2) explanations of their experiences, and (3) their
assignment of significance, value or importance to their experiences.
In order to provide us with these kinds of data, subjects needed to
engage in a task which allowed them to recall and report their
experiences, and also to construct hypotheses about those experiences.

Initially, we reviewed existing standardized personality tests to
determine whether any one of them would suffice for our purposes.
The typical multiple-choice objective measures were examined and rejected.
Self-concept tests can be used to illustrate our reasoning. The
usual approaches to self-concept depend only on degree of self-approval
or some other polar dimension or continuum. The fallacy of this approach
is that persons at different developmental stages use different
criteria and dimensions for self-approval and disapproval (Wylie, 1961;
Loevinger, et.al., 1970). For example, Loevinger et.al., found
"at low levels (I-2 and Delta) both a shallow self-approval and bitter

self-rejection, at middle levels (I-3 and I-3/4) predominantly self-
satisfied remarks, while high at levels there are characteristic tempered
self-criticisms (Loevinger, Wessler and Redmore, 1970, II,p. 275)."
Similarly other single dimension scales such as semantic differentials,
Likert-type scales (Likert, 1932) and checklists would not suffice,
because they all measure where people lie on individual dimensions,
rather than identifying a sequence of qualitative developmental changes.

Also it did not seem possible to elicit qualitative stage differences
by other existing non-projective techniques. The inherent difficulty
of multiple-choice and forced choice tasks used to measure multi-
dimensional constructs can be illustrated by Shostrom's Personal
Orientation Inventory (1968). The POI is a self-report instrument
that attempts to assess values, attitudes and behaviors relevant to
Maslow's concept of the self-actualizing person. Maslow's concept
and the self-knowledge construct are similar in that both view
development in a hierarchical stage sequence. But the qualitative
stage differences are lost when the test measures the degree or intensity
of attitudes on one dimension rather than eliciting the type of dimension
people choose to use to evaluate themselves.

> In each item, the subject is asked to choose between
> two opposing statements....This often provides the subject
> with a more clearly delineated choice then he would otherwise
> have....It is a bit more disturbing to find that so many
> statements are expressed in an absolute, categorical
> form. The testee is frequently confronted with a demand
> to choose between two extremes, neither of which comes close
> to describing his attitudes or life situation. (Caan, 1972, p. 293)

Finally, existing non-projective instruments do not elicit the
process of how persons arrive at explanations of their experiences.

These instruments yield data on the product, but not the process
of a person's thinking. Hence, we decided that non-projective techniques
were inappropriate for our aims, and that a projective format should
be used for the data-collecting instrument. In principle, the subjects'
responses in projective tests are manifestations of how they process
data. And since our aim was to identify characteristics of verbal
descriptions that reflect this processing the projective format seemed
more appropriate than non-projective techniques.

In reviewing existing projective techniques, it appeared that
none were constructed to elicit descriptions of personal experiences.
Visual projective techniques, such as the Rorschach Inkblot Test (Rorschach,
1942) and the Thematic Apperception Test (Atkinson, 1958; Henry, 1956),
depend on subjects' responses to a given visual stimulus. But,
describing a picture, cartoon, or inkblot seemed distinctly unlike
describing one's own experiences; i.e. one's emotions, thoughts and
behaviors. These visual projective techniques were considered
inappropriate, because they did not get at content relevant to this
study, namely descriptions of personal experiences and their implications.

The other common projective format, the verbal projective techniques,
was more sensitive to descriptions of experiences. However, they
provided incomplete and insufficient data for our purposes. Existing
verbal techniques rely on the person's mental association to a word,
an incomplete sentence or a story fragment. These mental associations
are usually tangential to what subjects consider as their own
experiences. Also, these techniques did not involve subjects in
constructing explanations or hypotheses of their experiences.

Consequently, we decided against using existing verbal projective techniques in their published form.

In essence, these decisions meant deriving a new projective instrument which would be more appropriate for our aims. To develop this new instrument, we first identified the desirable properties which would characterize this instrument. These properties included:

(1) The instrument should elicit data relevant to the working definition and the theoretical frame of stage characteristics. Specifically the test should allow subjects to provide detailed descriptions of their experiences. It should engage them in constructing hypotheses about their experiences by having them describe the antecedents and consequences of their experiences. The instrument should also reveal the subjects' assignment of significance or importance to the experiences.

(2) Since the instrument would eventually be used by educators at all levels, the test should be appropriate to a broad age range of subjects.

(3) The instrument and its administration should be as objective as possible, and the factors which bias subjects' responses should be minimized.

(4) The instrument should be feasible in terms of available skills, time and financial resources.

(5) The instrument and the testing procedure should meet ethical standards. The human rights and "personal integrity" of the subjects should be respected by the test and the testing process.

These properties were used as guidelines i. creating several prototype "self-knowledge" tests. Each of these prototypes were reviewed with practice subjects.[2] After numerous revisions and preliminary testing with practice subjects, the Experience Recall Test[3] (hereafter, ER) was the instrument that seemed to best match the above list of desirable characteristics.

The ER test involves subjects in recalling and describing an "unforgetable" experience. The instructions direct the respondents to close their eyes, relax, and scan their lifetime for memorable experiences. Subjects are then asked to select one of these experiences to think about or recount in detail. After they have "relived" the memorable event, they are asked to open their eyes and respond orally, or in writing, to the following questions:

(a) Describe as fully as you can, and in as much detail, the experience you remembered. (Please include what led up to this experience, what your thoughts and feelings were and what the results of this experience were.)

(b) How was the experience important or special to you _then_?

(c) How is the experience important or special to you _now_?

(d) From the experience you just remembered, please describe some things you know about yourself now.

---

2. A review of this search for an appropriate instrument appears in Self-Knowledge Project Working Paper #7, "Developing Self-Knowledge Elicitors," Unpublished paper, University of Massachusetts, 1974.

3. The current oral and written forms of the ER are found in Appendix A.

(e) How could knowing this about yourself be useful to you? Specifically, how can it help you get what you want or avoid what you don't want?

(f) Do you have any comments about what it was like answering these questions?

We evolved the ER by incorporating desirable characteristics from various existing instruments and invented prototypes. The format of directly asking subjects to describe an experience was borrowed from Flanagan's "critical incident" technique (1954) and other similar methods (e.g. Carlson, 1971). The idea of "scanning one's memories" can be traced to Jackins (1965), Scheff (1972), and common humanistic education methods involving "fantasy."

We screened through the criteria of desirable properties, and the ER seemed to satisfactorily meet the specifications. It appeared: (1) to elicit data relevant to the working definition and theoretical frame; (2) appropriate for subjects, ages six through late adulthood; (3) controllable for the major factors biasing subjects' responses; (4) feasible in terms of skills, time and financial resources; and (5) ethically sound.

How did the ER satisfy these criteria?

1. Relevance to working definition and theoretical frame. Following the working definition (see Chapter II), the focus of this study was individual's descriptions of their experiences. The ER directly asks subjects to report this in Question A. Most respondents gave detailed descriptions--the cues and suggestions in the instructions seemed to

help them recall and describe their selected experiences in detail.
It was by analyzing these experience descriptions that we eventually
arrived at characteristics differentiating the various stages.

The assignment of significance, value or importance to experience
was also part of the working definition. This is reflected in the ER
in several ways. First, in selecting an experience to remember in
detail, subjects are asked to choose "one that is somehow important
to you." As such, we may assume that there is some "value" or
significance inherent in the "important" experience they describe.
More directly, two questions in the ER ask subjects to state how
the experience was significant to them. Question B asks how the event
was important to them at the time they experienced it, and Question
C asks how the event is important now. By analyzing responses to questions
B and C, we hoped to begin defining the role of affect and the assignment
of value in development.

We were also interested in people's explanations of their experiences.
That is, how do they construct hypotheses and come to conclusions about
their experiences? Does the type of hypotheses (which a person can
make) change developmentally? The ER seemed to actively engage respondents
in constructing hypotheses about their experiences. The sequence of
questions inductively leads them to stating these hypotheses in
Question D and the application of these hypotheses in Question E.
By examining responses to Questions D and E, we can find the ways in
which experiences are explained; i.e. how the antecedents and consequences
of experiences are conceived. Responses to Question A in the ER also

contained clues to developmental stage differences in subjects'
descriptions of antecedent and consequent conditions of their experiences.

In summary, the ER seemed to elicit data that were relevant to
the working definition and the theoretical frame of stage character-
istics. It engaged subjects in describing the experience in detail,
constructing a hypothesis about that experience, and stating how the
experience was significant or important to them. Thus, the ER was an
instrument which seemed to adequately meet our content specifications.
We will now describe how the ER met the practical and ethical
specifications.

2. <u>Appropriateness to a broad age range</u>. The criterion of appro-
priateness is the extent to which the respondent group can meet the
demands imposed by the instrument. Persons age six through adult were
selected as the respondent group, because we intended the instrument
to eventually be used by educators at all these levels.

One demand imposed by any verbal instrument is that the subjects
have command of the vocabulary and grammar of the language. We
assumed that the subjects were capable of understanding instructions
given in standard American English. The instructions and questions
in the ER were carefully examined and revised from several perspectives
to minimize ambiguity in the language and to eliminate jargon that has
meaning limited to technical, culture-specific or regional contexts.
From numerous trials and revisions it appeared that anyone over age
six who understands standard English could follow the set of instructions
in the ER. But it was noted that some words used in the instructions for

children were inappropriate for adults, and conversely, some words
that had clear meaning for adults were distracting to children.
After many refinements to make the instructions uniform and equivalent
for adults and children, we decided on two separate, but equivalent forms
of the ER: one for subjects younger than 12 years old, and the other
for older subjects.[4]

Further reason for using two forms emerged when we considered the
demand upon subjects to read and write. Although there was no
method to control for verbal fluency, the possible discrepency between
speaking ability and writing ability was considered. Probably elementary
school children are less capable of expressing themselves in writing,
than they are in speaking. Thus, the children's form of the ER
involved subjects responding by speaking into a tape recorder, rather
than writing. Also, adult subjects not fluent in written expression
had the option of responding orally using a tape recorder. For all
other respondents the written form seemed manageable and acceptable.[5]
It was thus assumed that one of the response formats, either oral
or written, would be appropriate for all respondents.

Inasmuch as judging the appropriateness of the instrument is
subjective, it appeared to us that the verbal demands of the ER (including

---

4. Equivalence between the two forms was determined informally with
practice subjects. The practice subjects each responded to both forms
and their protocols were compared (between forms) and judged "essentially
equivalent." Formal reliability studies to establish equivalence between
the two forms have yet to be conducted.

5. The equivalence between the oral-response format and the written-
response format was established informally with practice subjects and
with repondent groups in early phases of data-collection.

ability to understand standard American English, and to respond orally or in writing) could be met by all respondents over six years old who know English.[6]

Turning to the content demands, it appeared that some subjects might not be able to respond to some of the suggestions in the instructions. For example, a person may not remember exactly "what the place looked like" or "what other people did and said" in their recalled experience. But it did not seem significant if these suggestions were not answered, because they were intended as cues to assist respondents in re-living their selected experience. The question demanding the subjects' actual response is open-ended; it asks that the subject describe the experience "as fully as you can, and in as much detail." If some suggestions in the instructions were not helpful, the respondents generally focused on and described other aspects of the recalled experience relevant to their own frame of reference. Thus, whether or not the respondent can answer the specific suggestions in the instructions, these cues seemed appropriate in that they stimulated subjects to think about their experiences, without binding or restricting them to answering these questions.

In general, it appeared that the ER, after many revisions, met the criterion of appropriateness, in that all respondents could meet the verbal and content demands of this instrument.

3. Response bias and objectivity. In any test situation there are

6. Note that subjects need the ability to understand the instructions in standard English, but they need not respond in standard English. They may respond in one or another dialect of English, or even in another language. If this occurs, this is a problem in analyzing the data, but it does not affect the subjects' ability to respond fully to the instrument.

factors that may impede subjects from giving unbiased responses.
The criterion of objectivity involves the extent to which these factors
have been minimized or controlled.

In the ER, two major sources of bias, the interviewer bias and the
bias involving the instructions, were considered. In the face-to-face
interviewing of the ER, the interviewer's behavior, appearance,
temperment, sex, age, race or other characteristic could affect the
interviewee's responses. The following steps were taken to minimize
these potential interviewer influences: (1) Training sessions for all
interviewers were conducted so that they could administer the ER's
in uniform manner. The interviewers were trained to monitor their
own behaviors (such as postures and voice inflections) that could affect
the subjects' emotional responses in the test experience. (2) An
important aspect of the ER instructions is that the subjects close
their eyes to scan their memories. This reduces distractions for the
subjects and thus enables them to more easily focus on their experiences.
With the subjects' eyes closed, there are no visual stimuli or cues
from the interviewer, hence the subjects' visual impressions of the
interviewer as a source of bias is probably reduced. (3) Finally,
interviewers were assigned to subjects randomly and the same team of
interviewers administered the ERs to virtually all respondent groups.
The effects of this procedure was that a random interviewer bias-effect
on respondents is distributed throughout the total sample, hence
partially controlled.

Another potential source of bias in the ER was the instructions.
Does the lengthy set of instructions affect objectivity? The following

measures were taken to maximize objectivity in the ER instructions:
(1) The statements, questions and suggestions in the instructions were
reviewed many times over for consistency with the specifications of the
working definition.  The current ER instructions appear to refer only to
the behaviors we want to observe (i.e. verbal descriptions of experiences,
the significance of these experiences and the construction of hypotheses
about these experiences).  (2) Suggestions that appeared to influence the
respondents' selection of an experience were deleted.[7]  No examples of
types of experiences to recall are given to the subjects.  (3) The
instructions were "standardized" to the extent that interviewers did not
deviate from the instructions while administering the ER.

In sum, we have traversed several impedements against objectivity
in the ER format.  The major biasing factors involving the interviewer
and the instructions, which affect subject responses, were minimized
or controlled where possible.  Other factors biasing subjects' responses
including history bias (external events beyond the control of the
researcher affecting  the performance of respondents), maturation bias
(irrelevant internal processes of the subjects affecting their responses),
and instrumentation bias (changes in the ER forms over test groups)
were left uncontrolled in this study.

4.  Feasibility.  The criterion of feasibility involved three aspects:
skills, time and money.  Skills refer to the abilities necessary to

---

7.  Currently, the only criteria for selecting an experience are: (1)
"that the experience is somehow important," or significant to the subject;
and (2) the experience is "one that you could think about now."

administer the instrument and analyze the collected data. The ER
involved some special interviewer skills that interviewers could be
(and were) trained for. These skills were learned by our interviewers
(graduate students) in two or three hours. Most classroom teachers should
be able to learn the procedure for administering the ER in the same amount
of time. Compared to months of training required to administer other
projective tests (e.g. TAT, Rorschach and WAI ; or to learn Piaget's
"method clinique" the ER is very practical and has potential for
widespread use in classrooms. The time required to administer the
ER appeared practical--approximately 45 minutes for either oral or
written form.

Learning how to score the ER protocols using the current manual
(Appendix B) takes considerably longer than learning to administer it.
Probably several months would be necessary to understand all the details
and nuances of the manual in its present form. The time involved
should decrease with future revisions and clarification of the manual.
A trained scorer can rate an average protocol within twenty minutes.

Finally, the financial outlay required in administering the ER
and preparing the protocols for analysis seemed reasonable. In short,
the ER was practical and feasible as a data-collecting instrument.

5. Ethical standards. This criterion involves the extent to which the
testing procedure and demands of the instrument respect the human rights
and "personal integrity" of the respondents. We did not want to
exploit respondents; put differently, we wanted the test experience to
be inherently valuable or meaningful to the respondents themselves.

The following procedures were followed to carry out these intentions: (1) All potential respondents were informed about the purpose of the study, the nature of their task, and how their responses would be used. They were given this information several days prior to the interview. Parents of children-respondents were also informed. All questions or concerns of respondents (or their parents) were addressed before the ER was administered. (2) The ER was completely voluntary for all subjects. Parental consent for minors was also obtained. (3) The names of subjects were kept in confidence within the project staff. Protocols were identified by assigned code numbers and not by names, and each respondent was assured this confidentiality. (4) Requests for feedback about results were honored.

A more complex ethical issue is whether it is justifiable to arouse deep emotions, stir memories and force perceptions in a psychological test. Are there any risks in surfacing unforgetable memories that could result in self-destructive or socially destructive consequences? Although there is no guarantee of eliminating these risks, there are some safeguards in the ER and its use to minimize them. These include the following: (1) The subjects were informed beforehand of possible distressful memories and given a method to cope with them.[8] (2) Many psychologists believe that repression operates to keep memories that are too stressful from being consciously recalled. This means that aspects of an experience one is not prepared to cope with probably

_____

8. For example the interviewer could say, "Some people remember very important and emotional events; and they might shake or feel like crying. This is perfectly normal. If this happens to you, it's o.k.; you need not worry about it. I encourage you to talk about your experiences with your friends afterwards."

will remain unconscious. This appears to be a built in safeguard within every person. (3) Persons recalling "painful" experiences are not left stranded with their distress. Questions B through E play a significant role for helping people deal with these types of memories. The questions enable subjects to assign a coherent meaning to the experience recalled. This coherence involves "making sense" (i.e. in Gestalt terminology, "completion") of the experience by crystallizing or clarifying the sources of the distress (this is done by answering questions B and C). The subject is encouraged to gain some understanding of the emotions and give present and future direction to them (by answering questions D and F) to the new coherence or meaning. Thus, there is a therapeutic and/or educational quality to the sequence of questions in the ER. This seems especially valuable to a person recalling a distressful experience. (4) Finally, after each interview there is a "de-briefing" period in which the interviewer addresses any remaining concerns or questions.

In general, the ER and the way it has been administered seemed non-explotative of subjects, in that it acknowledges their rights as human beings in the interview situation. Also, the procedures and questions of the ER minimized the dangers and maximized the educational value of the experience.[9]

---

9. These ethical and "humanitarian" considerations were major focal points in the development of the instrument. For more detailed descriptions of these issues, see Self-Knowledge Project Working Paper #7A "The Unforgetable Experience Recall Test," by Roy Tamashiro, unpublished paper, University of Massachusetts, 1974; and also, Working Paper #9, "The Development of Affective Dispositions in Loevinger's Theory: Challenge for S.K. Theory," by Roy Tamashiro, Unpublished paper, University of Massachusetts, 1974.

It seemed that the ER was inherently valuable or meaningful for many if not most of the respondents. Examples of comments about the ER interviews include: "It was fun," "enjoyable," "I learned a lot about myself by thinking back and reviewing my life," and "The question about the future made me realize that I could really improve myself."

## Data Collection Procedures and Sample Selection

After the ER was developed as the measuring instrument, the data collection procedures and sample selection strategy needed to be specified so that protocols from the target populations could be collected.

The general procedures for gathering data were determined in conjunction with the planned data-analysis. Also, the data-gathering procedures and the accompanying rationales of previous developmental theorists (namely, Kohlberg, Loevinger and Van den Deale) were reviewed and considered in making these decisions.[10]

The first procedural issue involved the use of an instrument (the ER, in this case) to measure developmental differences. The passage of time, or more specifically, the sequential order in which characteristics appear in a person's growth, is a critical variable in the study of development. Currently the method most suited for collecting data to assess the order and changes of these emerging characteristics is the longitudinal approach. With this method,

---

10. This review is documented in Self-Knowledge Project Working Paper #6, "Sampling and Data Analysis Methods," by Judith L. Evans, Unpublished paper, University of Massachusetts, 1974.

(which consists of measuring the same individuals at different intervals over a period of time) continuity can be plotted "without having to worry about differential sampling among age groups" (Buhler, et. al., 1973, p. 864). Also, "longitudinal investigations are mandatory if we are to ascertain the permanence--or lack of permanence--of various response tendencies" (Kagan, 1964, p.1). And, the patterns and increments of growth can be ascertained with more certainty than with other methods (e.g. the cross-sectional).

In spite of these valuable assets in the longitudinal approach, an alternative method--the cross-sectional approach--was employed in this study. In this approach, a composite picture of development is con- structed by simultaneously measuring groups of individuals from different age (stage) populations and comparing them on specific variables. The major advantage of this technique was the saving of time; by this approach we did not need to wait for a period of years for subjects to progress to the next stage and then retest them. Although the continuity of development as it occurs in an individual is lost by the cross-sectional method, this method seemed adequate as a first step in collecting the ER protocols for the purposes of identifying developmental stages. The method would be useful in locating the needs for future longitudinal research.

The second major decision concerning data-collection was to obtain a series of successive samplings from different populations, rather than to sample one target population. This decision was a function of the experimental status of the ER test. By the successive sampling technique the instructions, questions and format of the ER were reviewed and

improved after the test had been administered to each group. Simul-
taneously, each group provided data to be analyzed to derive the scoring
manual.

The invited samples were initially selected according to availa-
bility, and diversity on two demographic characteristics, age (or grade
in school) and occupation (or membership in selected specialty groups).
No other criterion for achieving representativeness was used in selecting
the invited sample.

Within the invited samples, specific samples needed to be selected
for administration of the ER. Except for students, the groups were
small enough such that a liaison could invite all members of a group
that the liaison knew. In schools, one or two classrooms at each grade
level were arbitrarily selected by principals, teachers and/or the
project staff. Parents of students in the selected classrooms were
sent letters requesting permission for students to participate in this
study. Ten to 15 students in each grade were randomly selected from
among those students with parental permission. Thus, a pool of subjects
selected for testing was composed of 10 to 15 students at each grade
level and all volunteering members in the other groups.

After the ER had been satisfactorily developed using practice
subjects, it was administered to the selected populations. The first
invited sample was a university women's gymnastics team. An oral form
(Form O/3-74) was administered to eight women on the team, ages 19 to 22.
They also completed the Washington University Sentence Completion Test
for ego development (Loevinger, et. al., 1970).

After testing the gymnasts, revisions were made in the ER instructions, and the first written form (Form W/4-74) was developed. This written form was administered to the second and third invited samples. In the second sample, 11 student drug counselors ages 15 to 27, were tested. The third sample included seven women ages 18 to 21, on a university softball team. Also, this revised form was used in testing five assorted adults (written form), ages 23 to 44, 11 welfare recipients (oral form) ages 18 to 76, and nine students ages 18 to 33, in an introductory humanistic education class ("Education of the Self") (written form).

The children's forms of the ER, one oral (Form 9/5-74) and one written (Form W/5-74),were created for testing in the school populations. The oral form was administered to 15 fourth graders in an elementary school in a university community, to 29 second graders in an urban (Springfield, Massachusetts) integrated public school, and 14 second graders in another public school in Springfield. The written form was used to test seven seventh graders and 25 tenth graders in Springfield, and 18 students, ages 16 to 19, in a high school in Easthampton, Massachusetts.

The questions in the ER were revised after protocols were collected from all of the above mentioned groups. The second and third questions on the early forms asked how the subjects saw themselves as "the same as" or "different from" the way they were when the recalled event occurred. The fourth and fifth questions asked how they thought they would "stay the same" and "change" in the future. These four questions (the second, third, fourth and fifth) on the early forms were changed to five new questions on the current forms (W/9-74 and O/9-74). The new questions

ask how the event was important or special to the subject when it (the event) was experienced and currently. They also ask subjects to make generalizations about what they know about themselves from the experience recalled, and how this knowledge could be useful to them. The first question in the current forms, asking subjects to describe in detail the experience they selected, remained basically the same as in the earlier forms.

With the revised questions, the new form of the ER (Form W/9-74) was administered to two additional groups. Both were graduate level seminars in psychological education. Twenty-two students, ages 23 to 52, in a course titled "Education as Feminist Consciousness Raising" comprised the first group; and 22 students, ages 23 to 47, in a seminar titled "Autology" comprised the other group.

Having 203 protocols available, the next step was to select a manageable number of protocols for analysis and construction of a scoring manual. For the purpose of this study, it seemed that the most important sampling variable was "range of developmental levels." That is, since the aim of this study was to identify the developmental differences in verbal descriptions of experiences, it was crucial that the collected protocols were representative of persons at all levels of development. But the developmental level of a person is usually unknown before testing. Chronological age is a crude measure, but it is highly unreliable especially beyond age 12 (Kessen, 1960; Loevinger, 1966). Thus, to determine the developmental levels of subjects, a test for ego development[11] (the Washington University Sentence Completion Test:

---

11. "Ego development" was a construct known to be related to the area of interest in this study, namely verbal descriptions of experiences.

Loevinger, et. al., 1970) was administered to the respondents. This meant that subjects took two tests: the ego development test and the ER (in either the oral or written form).

Some of the groups tested, however, were not administered the ego development test. These groups included the drug counselors, the softball team, and the students in the Springfield schools. Ego level scores were derived for subjects in these groups by reading their ER protocols and assigning an ego-level score using the same criteria for scoring the Sentence Completion test. These scores were "compromised" between two raters. However, the error introduced by using the Sentence Completion scoring method on the ER protocols (which the method was not intended for) was left uncontrolled.

Those subjects who did complete the ego development test were assigned an ego-level score according to their scores on the test.(the Sentence Completion). The manual for scoring the Sentence Completion test was followed closely: This involved at least two raters scoring each protocol independently and "compromising" differences in their ratings.

The actual data-producing sample was identified after the ego development tests were scored. A total of 72 ER protocols were selected for analysis from the several samples on the basis of their ego development scores (I-levels). Ten of these protocols were from subjects who scored "I-2" on the ego test. Ten were from subjects scoring "Delta;" ten from those scoring "Delta/3;" ten from those scoring "I-3" and so forth for each of the other levels of ego development (including,

"I-3/4," "I-4," "I-4/5," "I-5," and "I-6").[12] We deliberately included protocols representative of several test groups at any given I-level grouping. For example, the ER protocols in the I-3 group included subjects from the softball team(1), the Springfield public schools(4), the welfare group(4) and the Easthampton high school group(1). Table 3-2 lists the number of protocols selected from each sample group for construction of the Preliminary Scoring Manual. Table 3-3 lists the number of protocols selected from each sample group for each ego-level grouping.

Besides including protocols from several test groups in each level, there was no other attempt to achieve representativeness on other variables. The reason for this was that the critical variable was developmental range (achieved by selecting according to ego levels). Representativeness according to demographic or other characteristics was secondary and could be eventually achieved in subsequent studies.

Thus, this selection procedure yielded 72 protocols from the various sample groups. Using these protocols, we attempted several methods of content analysis to arrive at an initial method of scoring the ERs. The strategies used in analyzing the ER protocols and deriving a scoring method will now be discussed.

---

12. Although there are nine ego levels, there are only 72 (rather than 90) protocols in our sample. This is explained by the fact that very few persons in any population score at the highest levels (I-5 and I-6). Because of this paucity, we treated I-5 and I-6 as one level for our purposes. Other protocols were discarded because of incomplete responses.

TABLE 3-2: LIST OF SAMPLE GROUPS TESTED,
CHARACTERISTICS AND NUMBER
SELECTED FOR ANALYSIS

| Group | Number Tested | Age Range | Ego Level Range | Number in Data-Producing Sample |
|-------|--------|--------|--------|--------|
| Gymnastics Team | 8 | 19-22 | Delta/3-I-5 | 6 |
| Drug Counselors | 11 | 15-27 | Delta-I-5 | 5 |
| Softball Team | 7 | 18-21 | Delta-I-4 | 6 |
| Assorted Adults | 5 | 23-44 | I-4-I-6 | 2 |
| Welfare Recipients | 11 | 18-76 | I-2-I-4/5 | 11 |
| "Education of the Self" class | 9 | 18-33 | I-3-I-4/5 | 3 |
| Elementary School: University Community-Grade 4 | 15 | 8-9½ | I-2-Delta/3 | 6 |
| Springfield Public Schools:<br>(a) Second Graders (1)<br>(b) Second Graders (2)<br>(c) Seventh Graders<br>(d) Tenth Graders | 29<br>14<br>7<br>25 | 7-8<br>7-8<br>12-13<br>15-18 | I-2<br>I-2<br>Delta<br>I-2-I-4 | 1<br>1<br>1<br>15 |
| Easthampton High School | 18 | 16-19 | I-3-I-3/4 | 3 |
| "Education as Feminist Consciousness Raising Class | 22 | 23-52 | I-3/4-I-5 | 10 |
| "Autology" Seminar | 22 | 23-47 | I-3/4-I-6 | 2 |

TABLE 3-3: NUMBER OF PROTOCOLS SELECTED FROM EACH
SAMPLE GROUP ACCORDING TO EGO-LEVELS

| Group | I-2 | Delta | Delta/3 | I-3 | I-3/4 | I-4 | I-4/5 | I-5, I-6 |
|---|---|---|---|---|---|---|---|---|
| Gymnastics Team | – | – | 1 | – | – | 2 | 2 | 1 |
| Drug Counselors | – | 1 | – | – | 1 | 2 | – | 1 |
| Softball Team | – | 2 | ? | 1 | 1 | – | – | – |
| Assorted Adults | – | – | – | – | – | – | 1 | 1 |
| Welfare Recipients | 2 | – | 3 | 3 | 1 | 1 | 1 | – |
| Elementary School: University Community--Grade 4 | 4 | 1 | 1 | – | – | – | – | – |
| Springfield Public Schools | 4 | 4 | 2 | 4 | 2 | 2 | – | – |
| Easthampton High School | – | – | – | 1 | 2 | – | – | – |
| "Education as Feminist Consciousness Raising" Class | – | – | – | – | 1 | 2 | 4 | 3 |
| "Autology" Seminar | – | – | – | – | – | – | 1 | 1 |

## Data Analysis Strategy

Given the responses to the ER test, a procedure was needed to categorize the data, such that characteristic developmental differences in these data could be discerned. Several traditional approaches to analyzing data in open-ended tests did not seem appropriate. These approaches included the

tabulation method and the polar continuum method.[13] They were not designed to pick out <u>qualitatively</u> different characteristics that, in this study, would distinguish the several developmental stages. The polar continuum approach is sensitive only to differences that can be spread across a one-dimensional scale; i.e., it is sensitive to differences in quantity or degree, but not qualitative differences. The tabulation method also yields only quantitative sums, differences and ratios of particular characteristics, and not the qualitative differences between the characteristics.

Some developmental studies, notably Kohlberg's and Loevinger's, experimented with various approaches to analyze their data for qualitatively different characteristics. But lacking a previously developed model for "qualitative" content analysis, the direction and evolution of their scoring methods resulted largely from numerous trial-and-error attempts. In the present study, aspects of the methodology and/or the insights of these developmental studies shed some light on the problem of scoring the ER protocols. But trial-and-error dictated the direction of our efforts to a greater degree.

---

13. The tabulation approach involves counting instances of the relevant characteristics observed in the subjects' responses. For example, the Rorschach scoring consists of counting and summing the number of total responses ("R"), responses based on form ("F") and responses based on color ("C") (Rorschach, 1942).

The other approach is to postulate a polar continuum and estimate a position on that continuum for each response. For example, an attitudinal continuum may involve degrees of satisfaction from extremely positive (+5) to neutral (0) to extremely negative (−5). The score of a response is a judgment of whether the response falls on this +5 to −5 scale. The Miner Sentence Completion Test (Miner, 1964) and the Rotter Incomplete Sentence Blank (Rotter and Rafferty, 1950) use this second approach.

The earliest attempts to score the ER protocols clarified the level of analysis. Should we analyze strictly what the respondent said, counting specific words or phrases verbatim (with nothing inferred or assumed)? Or should we score responses at the latent level, in which the meaning of the responses or the underlying dynamics motivating the person is described? It was not feasible to categorize responses by counting words or phrases: Every protocol described a different experience, hence in principle, if in actuality, the content of every response is unique. When the content is treated as unique, it is not possible to scale protocols in a developmental sequence.

Latent approaches were unsatisfactory for two main reasons:[14] (1) Latent approaches relied too heavily on the subjective interpretation of the scorer (In other words, no clear objective criteria for scoring could be defined using these approaches); and (2) the unconscious material (drives, motives, needs, etc.) that is scored by latent level analysis was outside the focus of this study. (See Working Definition, Chapter II). It seemed that the scoring method should reflect the study's aim of identifying differences in descriptions of conscious experiences by also scoring on the conscious rather than unconscious level.

_____

14. On the latent level of analysis, three approaches were attempted. The first might be characterized as a "subjective literary" approach. In this approach, a judge would read through the protocols in each ego stage grouping and try to describe over-all distinguishing characteristics of the protocols in that group (much in the manner of an English composition teacher). For example, I-2 protocols appeared to describe experiences by "signing" or "naming" them; Delta/3 protocols described experiences as "traumatic" or "shocking;" I-3 experiences were "melodramatic" and "soap operatic;" and I-4 experiences were "kaleidoscopic." The second latent level approach was to abstract from the protocols what seemed to be the underlying (i.e. unconscious) orientation, goal or intention (i.e., "what the person was trying to get") of the person. A third approach was to interpret and classify the protocols according to the various "needs" as specified by Maslow's (1943) hierarchy.

Thus, it became apparent that the level of analysis we sought was neither the verbatim word or phrase count, nor the latent (unconscious) level. Rather, we sought analysis on the level of the subjects' conscious meanings. On this level, the aim was to analyze and group the responses into categories which the subjects themselves would recognize as their own meanings. Of course some inference would be involved. Short of re-interviewing the subject, we can only guess what a person meant by any given response. But the guideline was to infer on the level of common discourse, not on the level of unconscious or psychoanalytic meanings.

The trial attempts to score the ER protocols also raised the question, what is the unit of content that should be scored in the protocols?[15] Should the total response be scored as one unit, or should a response be broken down into the words, phrases, sentences, or paragraphs, that make it up? The usually lengthy responses especially to Question A were too cumbersome to score as a total unit; but breaking down the responses into smaller units resulted in losing some of the person's meanings. This issue was resolved by compromise, and we decided to score the responses basically in sentence units. Each sentence-unit was identified as in conventional English grammar, i.e., the unit of (written) thought included a complete subject and predicate, usually

---

15. The trial approaches include those described in Note 14 above. In addition, another trial approach was to classify responses according to the hypothesized stage characteristics of verbal descriptions (See Chapter IV ). Still another approach was to identify examples of verbatim responses from the protocols that could distinguish one developmental level from another; i.e., the "exemplar" manual approach. None of these approaches were fruitful.

visually distinguishable from each other by terminating punctuation
marks (period, question mark, or exclamation point). (See General Rules
for Scoring in Preliminary Symbol Scoring Manual; Appendix B.)

A more difficult problem in scoring the ER protocols was evolving
a method of categorizing a given response (i.e., classifying a sentence-
unit). We chose to develop a schematic symbol approach to scoring the
sentence-units.[16] This approach involved focusing on the organization
or structure of the sentence-unit, rather than the superficial content
of the statement. The specific content was represented by a symbol that
denoted a category; and each symbol (or category) represented similar
specific content. For example, references to "I" or "self" was denoted
by a circle ( $\bigcirc$, S.1 in the manual); references to overt actions by an
arrow ($\rightarrow$, S.5); and references to other persons, singular or plural,
by a square ( $\square$, S.2). The symbols which represented the various parts
of a sentence were diagrammed in a schematic configuration which
reflected the organization in the statement. One way that the above
three symbols could be diagrammed is: $\bigcirc\!\!\rightarrow\!\!\square$. This configuration denotes
any statement having the form, "I acted on another person." Hence all
of the following sentences were diagrammed by that configuration: (a) "I
kicked the nurse..." (b) "I had a baby." (c) "I saw a cute negro girl."
(d) I did visit them."

The assumption behind the schematic symbol approach was that each
symbol was a hypothesized developmental characteristic. Starting with

---

16. This schematic symbol approach is similar to that used by Kenneth
Isaacs in his study assessing developmental levels of interpersonal
relatability (1956).

about twenty symbols, each representing a hypothesized developmental characteristic, we attempted to diagram the sentence-units in the 72 ER protocols selected by ego-levels. We began with ER protocols of subjects with lower ego levels (which contained simpler statements), and moved to protocols of subjects with higher ego-levels (which contained more complex statements). A new symbol was created whenever a characteristic of a sentence-unit could not be represented by a previously-defined symbol. A team of four raters diagrammed the sentence-units in the protocols, discussed their choices of symbols and diagrams, and decided when new symbols were necessary.

The decision made for scoring each sentence-unit (in responses to Question A) in all 72 protocols were recorded on scoring worksheets (Fig.3-1). A scoring worksheet consists of a sentence-unit typed at the top of the sheet. Below it was space to record the diagram which the scorers decided on for that sentence-unit. Then all the individual symbols which were considered in diagramming the sentence-unit were listed. A "yes" was indicated for each of the symbols considered which were actually used in the diagram and "no" was recorded for those symbols considered but not used. Each of these "yes"-and-"no" decisions were then recorded separately on file cards. The card listed the symbol considered, the part of the sentence in question, and the scoring decision (yes or no). (See Fig. 3-2)

These symbol-decision cards were filed according to the symbol code numbers (S.1, S.2, S.3, etc.). In short, (1) all of the sentence-units were diagrammed by the scorers; (2) their decisions were recorded on scoring worksheets and (3) these decisions were transferred to cards

FIGURE 3-1:  SAMPLE SCORING WORKSHEETS

---

0411011 (4)

1.  Last June, right, me and my sister, we went to a concert.

   $\checkmark$, (○—□)—→△

   NO    S.4 <u>me</u> <u>and</u> <u>my</u> <u>sister</u>, <u>we</u>

   YES   S.4B <u>me</u> <u>and</u> <u>my</u> <u>sister</u>, <u>we</u>

   YES   S.3 concert

---

0210713 (6)

3.  In remembering back this seems to be the experience where
   I discovered my "self" for the first time ever.

   $\checkmark$, ☞ ※

   YES   G.2 <u>In</u> <u>remembering</u> <u>back</u>, <u>this</u> <u>seems</u> <u>to</u> <u>be</u> <u>the</u>
            <u>experience</u>.

   YES   S.6 <u>discovered</u>

   YES   S.1 <u>my</u> "<u>self</u>"

   NO    S.36 <u>for</u> <u>the</u> <u>first</u> <u>time</u> <u>ever</u>

   NO    S.12 <u>for</u> <u>the</u> <u>first</u> <u>time</u> <u>ever</u>

   YES   S.47 <u>for</u> <u>the</u> <u>first</u> <u>time</u> <u>ever</u>

---

and filed.  After we scored the 72 protocols and recorded the decisions
by this procedure, we defined each of the symbols.

There were several steps involved in defining a symbol.  First, the
scorers named the criteria they employed in deciding whether to use a
particular symbol in scoring a sentence-unit.  Then, each card filed
under the symbol (the Symbol-Decision Card) was examined against these
criteria.  There were numerous discrepancies between the scorers' criteria
and the examples on the cards.  (This was because the scorers' criteria

FIGURE 3-2:  EXAMPLES OF SYMBOL DECISION CARDS

S.42            (On white card, indicating "yes")   0210713 (6)
(Symbol                                             (protocol ID
code No.)                                           No. & I-level)

   Up to that time, I had had a poor concept of myself,
although it had been improving slightly through the
previous few years.

Explanation:  previous years is coded · 42

---

S.9C            (On green card, indicating "No")   0210401 (4/5)

   I felt as if we were the only poeple in the world.

Explanation:  felt as if is not coded S.9C

---

underwent many revisions or changes in the process of scoring the 72

protocols.)  These discrepancies were resolved either (1) by changing

the scoring of an example on the card to a different symbol, or (2) by

revising the scorers' criteria so that the discrepant example was

incorporated by the revision.  As these decisions were made to refine

the symbol-criteria or to change the scoring of particular responses

the definition of the symbols were gradually clarified.  Some existing

symbols needed to be sub-divided into separate symbols, while some

symbols were dropped because their criteria were duplicated by another

symbol.  The result of this definition procedure was the compilation of

the Preliminary Symbol Scoring Manual (Appendix B).

   The Preliminary Scoring Manual was used to re-score the 72 subjects'

responses to Question A of the ER.  The scorers closely followed the

criteria, definitions and examples in the manual to diagram the sentence-units. When the manual itself did not provide enough guidelines for scoring a particular sentence-unit, the scorers referred to the Symbol Decision Cards, which were now filed according to current symbol definitions.

After sentence-units in a protocol were diagrammed, another person verified the scoring. This verification was done by attempting to re-create the structure or organization of the original sentence by reading the scored diagrams alone. The extent to which the substance of the original sentence could be re-created indicated the appropriateness or correctness of the symbols selected to score the sentence-unit. When a diagram did not convey the organization of the original sentence, or if it did not conform to specifications in the Preliminary Scoring Manual, the diagram was revised.

When the re-scoring and verification steps were completed, the frequency of each symbol used in scoring a protocol was tabulated. This frequency count was taken individually for each of the 72 protocols scored. These tabulations were then translated into binary units of "presence" versus "absence" of each symbol. If a symbol was used at least once in the scoring of a protocol, this was counted as a "presence." And, if a symbol was not used in scoring a protocol, it was counted as "absence." These units of presence and absence for each symbol was then subjected to the Cornell Technique for Scaling (Guttman, 1944, 1947). This technique enabled us to ascertain whether the set of symbols formed a hierarchical sequence. Forty-one symbols from the manual did scale in this hierarchy and 12 did not (See Chapter VI).

From this hierarchical sequence of symbols, we postulated four stages of verbal descriptions of experience. These stages were: the Elemental stage, the Situational stage, the Patterned stage, and the Transformational stage. The descriptions of these stages are presented in Chapter V.

The organization and interpretation of the sequence of symbols into the four stages suggested further revisions of the scoring manual. For example, the pattern of occurrences of some symbols on the Guttman scale suggested that these symbols be combined into one symbol. Other patterns on the scale suggested that particular symbols should be re-defined and further re-worked so that it differentiated stages more clearly. These revisions are discussed in Chapter VI, but the scope of this study does not include the description of the actual revisions made on the Preliminary Symbol Scoring Manual.

The Preliminary Manual was evaluated in three other ways: the degree of agreement between raters using the Preliminary Manual was evaluated. And, the assigned stage scores on the ER protocols were compared with the individuals' ego level and with their chronological age. These evaluation procedures, their results and the implications of these results are discussed in Chapter VI.

Other desirable methods for evaluating the Preliminary Manual, such as cross-validation, tests of validity (e.g., predictive validity), and tests of internal consistency, were outside the scope of this study (See Chapter VII).

<p align="center">*　　*　　*</p>

In sum, the data analysis began with numerous trial-and-error attempts to identify qualitatively different characteristics that differentiated developmental stages among the ER protocols. Eventually we decided to score the responses in units of sentences, on the level of the respondents' conscious meanings. A system of schematic symbols was devised to do this, and the Preliminary Scoring Manual was constructed on the basis of these symbols. The Guttman scaling technique was applied to arrange the occurrences of these symbols in a hierarchical sequence. This hierarchical sequence was interpreted and organized into four stages. Finally the Preliminary Manual was evaluated by assessing the degree of agreement between raters using the manual, and by computing the correlation of respondent's ages and ego levels with the four self-knowledge stages.

After completing these empirical procedures, the resulting Preliminary Symbol Manual and the derived stages were compared to the initial hypothesized stage characteristics of verbal descriptions of experiences. This comparison clarified and corrected the hypothesized stage characteristics. This is reported in Chapter VII. At this point, we had come full-circle in the dialogue between theory and observation. The dialogue began with a theoretical frame in which stage characteristics of verbal descriptions of experiences were hypothesized from four selected developmental theories. Then the observation half of the dialogue involved developing an instrument (the Experience Recall Test), selecting and testing respondents using the ER, and devising a scoring method for the ER protocols. These empirical steps illuminated the theoretical frame from which we began and to which we now return. The next chapter describes the original theoretically derived stage characteristics of self-knowledge theories.

C H A P T E R   I V

THEORETICALLY-DERIVED STAGES OF
SELF-KNOWLEDGE THEORIES[1]

Before embarking on an empirical search for the stages of self-
knowledge theories, we attempted to derive a composite description of
these stages from existing structural-developmental theories. Four
theories were used. These theories included Piaget's theory of cognitive
development, Kohlberg's theory of moral reasoning development (1964;
Kohlberg and Turiel, 1971; 1973), Loevinger et. al.'s theory of ego
development (1970) and Van den Deale's theory of ego-ideal development
(1968).

The four theories were aligned with each other for their theoretical
equivalency (this procedure is described in Chapter III). Assuming this
general similarity among the theories (see Table 3-1), we deduced
characteristics that formed a stage sequence of self-knowledge theories.
This chapter outlines the theoretically-derived characteristics of these
stages.

In this preliminary composite description of the stages, character-
istics derived from three of the theories (namely, Kohlberg's; Loevinger,
et. al.'s; and Van den Deale's) were subsumed under the Piagetian cogni-
tive-developmental framework.[2] Characteristics from the various theories

_____

1. The material in this chapter is adopted from Self-Knowledge Education
Project Working Paper #3, "Toward a Theory of Self-Knowledge Development,"
unpublished paper, University of Massachusetts, 1973.

2. It is debatable whether Piaget's theory of cognitive development is
"more general" than the other three. For example, the concept of ego
development contains numerous dimensions other than cognitive ones. However,
the Piagetian stages seem to be prerequisites for the equivalent (parallel)
stages in the other theories (Kohlberg and Mayer, 1972; Loevinger, 1966)
and thus, we used the Piagetian stages as a general framework for deriving
characteristics of stages.

were identified whenever they were relevant to the question, "How do people differentiate and integrate antecedents, responses and consequences of their experiences at the pre-operational stage, early and late concrete operational stage and early and late formal operational stage?" The characteristics are outlined here according to each of these stages.

## Pre-Operational

Pre-operational thinking is limited to single, concrete, obvious immediate instances or aspects of reality. "The pre-operational child is confined to the surface of the phenomena. He (or she) tries to think about assimilating only those superficial features which clamor loudest for his (or her) attention. . . . One form which concreteness assumes is what Piaget calls _realism_. Things are what they appear to be in immediate, egocentric perception; and the insubstantial phenomena (dreams, names, thoughts, moral obligations, etc.) are substantiated as quasi-tangible entities (Flavell, 1963, p. 157, 159)." Similarly, "affects are seen primarily as felt bodily states or impulses rather than as differentiated inner feelings or as generalized psychological states (Loevinger, et. al., 1970, p. 58)."

For the pre-operational child good and bad are naive, global dichotomizations of the physical consequences on the child. "(He or she) tends to dichotomize the world into good or bad, mean or nice, and clean or dirty . . . . People are seen as sources of supply, she demands things from them, and good often, if not always, means good to me (Loevinger, et. al., 1970, pp. 56-57)." In responding to a Kohlberg-type moral dilemma story, the pre-concrete operational child defines

"good or bad according to reward or punishment rather than according to adult rules or commands." An act becomes good or bad only after it is rewarded or punished. Goodness or badness is not independent of the immediate, experienced consequences.

Because pre-operational children are bound to single, concrete, immediate experiences they are unable to hold original premises or situations in mind as the situation changes. Thus they do not appreciate lawful transformations nor are they able to reverse the sequence of events in their minds to get an internal image of the original state after that state has changed externally. Pre-operational thought only "can focus impressionistically and sporadically on this or that momentary static condition but cannot adequately link a whole set of successive conditions into an integrated totality by taking account of the transformations which unify them and render them logically coherent. . . . They are unable to keep their premises unaltered during a reasoning sequence. Their thought is irreversible in the sense that the permanent possibility of returning . . . to an unchanged initial premise . . . is denied them (Flavell, 1963, pp. 157, 159)."

What integration there is occurs as a juxtaposition of a specific instance. Although these three elements are differentiated, they are not causally related by the child. "And" and "because" are used to mean "and." There are no true (self-knowledge) hypotheses at this stage because: (a) there is no inference that the unique juxtaposition of events recurs beyond this instance; and (b) because antecedents, responses, and consequences are not causally related. There may be habitual patterns of antecedent, responses and consequences obvious to an adult

but the habit is not recognized by the pre-concrete operational child.

When describing their experiences (feelings, actions, sensations, thoughts), the situation in which these experiences occur and the consequences, the pre-operational characteristics should be evident in the following aspects of a child's report:

1. Descriptions of antecedents, responses and consequences are limited to a specific, singular instance. They are not described as in terms of more general sets--

   > "My brother hit me, and I cried, and my mother came" (versus)"When my brother hits me, I cry and my mother comes."

2. Descriptions of antecedents, responses and consequences are in terms of obvious, superficial aspects of reality. Even dreams, names, thoughts, and feelings are substantiated as quasi-tangible entities assumed to be visible to others.

   > "I am a girl. I have long hair."
   >
   > (question) "Can I always see it when your feelings are hurt?"
   >
   > (answer) "Yes."

3. Descriptions of antecedents, responses and consequences are global, simplistic or dichotomous (e.g., good--bad, happy-- sad, nice--mean, fun--hurts, clean--dirty).

4. Good and bad are determined by, and after the response of other people, usually adults, and the pleasure-pain effects on the person.

5. The child can link or juxtapose an antecedent, response and consequence. "And," "because" and "then" are used to mean "and." The child is unable to specify <u>causally</u> <u>related</u>

classes of antecedents, responses or consequences. For
instance, the child is unable to cite additional examples
if asked, "are there other things that make you mad?"
or "At other times are there things you do when you get
mad?" Answering these questions requires moving beyond
the immediate instance to a class or set of functionally
equivalent instances.

## Concrete Operations

If we take a group of objects, bunch them closer together and ask
a child if there now are more, less or the same amount, the pre-operational
child will say, "less." The concrete operational child will say, "the
same." If we ask for the concrete operational child's reasons, he or
she will say either that nothing has been added or that the group can
be spread out again. According to Piaget the difference lies in a
child's conceiving of a concretely experienced action now as one among
a number of systematically interrelated compensatory actions. A child
can see that:

1. Two successive actions can be combined into one:

2. The action-schema already at work in intuitive
   thought becomes reversible;

3. The same point can be reached by two different
   paths without being altered;

4. A return to the starting-point finds the starting-
   point unchanged;

5. When the same action is repeated, it either adds
   nothing to itself or else is a new action with a
   cumulative effect. In these we recognize transitive
   combinativity, reversibility, associativity and
   identity, with either logical tautology or
   numerical iteration. (Piaget, 1960, p. 141, 142)

Because the child now views an action such as bunching a group of objects,
as one action in an increasingly complex, tightly integrated system of
compensatory actions (1-5 above), the child is no longer fooled by
exclusive attention to the one action. The essence of concrete operations
is described by Lunzer (1965):

> . . . what develops at about the age of six or
> seven is the ability to examine two judgments
> simultaneously and arrive at an appropriate
> conclusion . . . . An invariant "operational"
> concept represents a synthesis of two compen-
> satory judgments . . . . The new (concrete
> operational) concepts do not entail loss of
> awareness of such prepotent features (an area
> covered by a group of objects). But they do
> imply that such awareness is balanced by a
> simultaneous awareness of other features and,
> above all, by an awareness of the lawful
> character of compensation (pp. 19, 20, 22).

Concrete operations, according to Piaget, presuppose structures or
total systems of operations of which they are a part.

> In order to pose a class and cognize it as
> a true logical class rather than as a momentary,
> perceptual configuration or collection of elements,
> one must have the generalized ability to pose
> other classes, to add various classes together
> to form supra-ordinate classes, to subtract one
> class from another, and soon. In short, the
> single at-the-moment _actualized_ operation of posing
> one class could not occur without a whole prior
> system of at-the-moment potential class operations
> (Flavell, 1963, pp. 166, 167).

Piaget describes nine such structures in logical-mathematical terms,
called "groupings." His empirical research shows that a child can
perform a variety of concrete operations that pre-suppose these
structures, e.g. adding, subtracting, multiplying, dividing. These
operations allow a child to conserve number, weight and volume in spite
of irrelevant perceptual changes. According to Piaget the essential

operations of concrete reasoning are those of classification and
seriation (Inhelder and Piaget, 1964) and their effect is to allow the
child to establish precise relations between directly experienced
objects.

Our research does not attempt to prove the existence of these
structures, or to identify new structures or to verify the existence of
new or previously identified operations. Instead, we are investigating
how these operations, with their implied structures, are manifested
when children attempt to make sense out of their experiences (feelings,
actions, thoughts, and sensations) in relation to the events that
occasion them.

To summarize, concrete operational reasoning involves the
awareness of the lawful character of compensation between two simultaneous
aspects of a directly experienced situation. These lawful compensations
are: (1) Transitive combinativity (two successive actions can be
combined into one); (2) associativity (the same point can be reached
through two routes );(3) tautological identity (when the same action is
repeated,it neither adds anything to itself nor takes anything away
from itself);(4) numerical iteration (when the same action is repeated
there is a cumulative effect); and (5) reversibility (a return to the
starting point finds nothing changed). These five lawful compensations
are characteristics of concrete operational structures which allow the
child to perform two essential concrete operations, logical classification
and seriation, as well as several other operations involving these
fundamental operations, e.g. adding, subtracting, multiplying and
dividing.

In all of these operations, it is important to remember that they occur in immediate, direct, concrete experience. The child at this stage does not apply these operations to unexperienced, possible events. Concrete operations are tied to and limited by what the child experiences or can manipulate in the here-and-now.

We hypothesize that concrete operational reasoning will be reflected in several ways when children describe stimuli, responses and consequences and their relationships.

1.  The child is able to classify (or cite) two or more concrete instances as members of the same set of antecedents, responses, or consequences. These two or more instances are seen as functionally equivalent in leading to the same response or consequence.

    > I feel hurt (response) when my brother told me I couldn't make a wooden airplane, and when kids on the playground wouldn't let me play baseball with them. . .

    Later in concrete operational reasoning two or more sets of experienced antecedents or responses are cited as functionally equivalent in leading to the same response or consequence.

    > I get high (response) when I exercise, smoke dope, go hiking or body surfing.

    Here, each of the antecedents refers implicitly to a number of specific instances.

2.  The child understands that internal states (sensations, feelings, thoughts) are not visible to others. Conversely

the child is aware that other people have non-visible feelings. However, these feelings still are described in rather global, simplistic terms: happy, sad, mad, glad.

> When my brother feels sad, I feel sad too
> and give him my bike to ride for a while.

> (Question) Do you ever say things to yourself
> in your head so that no one else can hear.

> (Answer) Yes. I say "I'm glad I did it."

In later concrete operational reasoning, internal states in oneself and others become more highly differentiated. "The I-3/4 subject (late concrete operational) has a stronger awareness of feelings (Loevinger, et. al., 1970, p.72)." "The I-3/4 (person) has a deepening interest in interpersonal relations. Moreover, inter-actions are described in terms of feelings or traits rather than in purely behavioral terms as is often the case with I-3 (Loevinger, et. al., 1970, p. 74)." Even later, the concrete operational person describes interpersonal interaction "in terms of differentiated feelings, motives or traits (Loevinger, et. al., 1970, p. 68)." One form taken by this more complex, dif-ferentiated awareness of internal states is a chain of responses.

> (Question) What happens when you get into a fight?

> (Answer) First I get mad, then I get excited, then
> I feel guilty.

> (Question) Can you tell me how that happens?
>
> (Answer) First I'm just mad. Then I get excited and fight back. Then I feel guilty about fighting.

Notice however that in this chain of reactions every other reaction is external. It is not yet a completely internal chain.

3. The concrete operational child is aware of the system of rules governing behavior and relationships.

(a) Early in concrete operations a child judges his or her behavior in terms of its conformity to the proper rule or role that is directly experienced, e.g. stated by an adult. Kohlberg calls this the "good boy--nice girl" orientation. Loevinger, et. al., state, "Formulas for what does happen or what ought to happen tend to be stated in absolute terms without contingencies or exceptions. Behavior is governed by rules and is often judged by absolute standards of right-wrong (1970, pp. 64, 65)."

> If my mother gives me advice, I take it because I know she is always right.
>
> Education is very important for everyone.

The motive for correct behavior is primarily the demonstrated approval of significant others.

(b) Later in the concrete operational period goodness-badness is less absolute, and more dependent on conditions, comparisons and concerns with "the system."

"In place of the I-3 tendency to classify actions in
mutually exclusive categories of right and wrong, the
I-3/4 subject tends to think about appropriateness,
what is right for the time and place and the situation.
There are contingencies, exceptions and comparisons,
though they are global and often banal. More complex
and differentiated contingencies and comparisons
appear at I-4 (Loevinger, et al., 1970, p. 71)."

> My mother and I share some unfortunate traits.
> (emphasis ours)

> When I am with a man I feel normal, according
> to who the man is and what he means to me.

Kohlberg describes this stage of moral reasoning as the
"authority and social order maintaining orientation."
Goodness-badness has an added contingency—approval not
just by others for conformity, but by legitimate sanctioned
authorities of the system.

(c) The concrete operational person is aware of
reciprocal or cooperative actions necessary and
appropriate to achieve a desired result or relationship.
The following statement illustrates awareness of
reciprocal sexist roles defined by a larger system:
"A man should always be a jock on the playing field and
a gentleman with the ladies." Kohlberg hints at this
awareness of reciprocity within a system when he
states "moral judgments at this level are based on
role taking, on taking the perspective on the other
person with legitimate expectations in the situation.

(Kohlberg, 1966, pp. 26-27)."

4. Experienced antecedents, responses and consequences are seen as component parts of a dynamically interrelated set of events. Self-knowledge hypotheses infer causality rather than mere juxtaposition of events. Evidence of these systematic relationships may be seen in:

    (a) Two or more stimuli or sets of antecedents can be stated as alternative causes of a response.

    (b) A set or sets of responses can be stated as caused by an antecedent or seen as potentially equivalent in terms of getting a desired outcome.

    (c) Responses may be contingent or qualified or expectations may be stated.

    (d) Chains of responses may be listed: A person's action may cause a response in others that is an antecedent to another response in the person.

While this complex self-knowledge hypothesis may include many alternatives, the person does not categorize the alternatives within a larger framework or state the general rules that describe all variations in the relationships between antecedents and responses or responses and consequences. This is a characteristic of formal operational structures.

## Formal Operations

In contrast with the concrete operational child's relative imprisonment in what is real, present and concrete, the formal operational adolescent is able to conceive of what is possible, unexperienced and in

the more distant future. With this capacity comes a deeper valuing
and interest in theoretical problems not related to everyday realities,
ideas about the future of society, the way it should be, how society can
and should be transformed, the adolescent's role in it, ideals about
the way he or she should be, life plans, career and marital choices,
and projects that implement those ideals. Adolescents' concerns focus
on what is remote in time and space and the social systems that incor-
porate the present as a point from which some desired future reality will
emerge (Piaget, 1967, pp. 60-70).

Implicit in these new concerns about "the possible" as opposed to
"the real" are three essential characteristics of formal operational
thought. First, it is hypothetico-deductive. An adolescent reasons,
for example, that "It may be necessary and sufficient to get high
grades to get into college, or to be an outstanding athlete, or both.
I have to find out which is really true." The adolescent can hypothesize
a variety of conditions that may have to occur in order to reach a desired
future goal, compare his or her alternative possible courses of action
in terms of the likelihood of leading to the goal and deductively choose
one course of action, all of this prior to action or experience in
achieving the goal. This hypothetico-deductive thought may take the form
of extensive rumination about how to become successful, popular, loved
or powerful (Flavell, 1963).

Second, formal operational thought is propositional, or propositions
about propositions. Imagine a debate in a group of adolescents over the
rules that will govern their group. As the adolescents identify the
possible consequences of alternative rules in their attempt to choose

which rules are most appropriate and adequate, they are not only engaged in hypothetico-deductive reasoning, they are classifying and evaluating the rules, establishing criteria or propositions about what kinds of rules are best. These are propositions about propositions.

Third, formal operational reasoning involves subjecting variables or rules to combinatorial analysis, the mental actions of considering all possible combinations of conditions. To continue with the example of the debate over the rules of some new group, suppose that the adolescents came down to two basic rules they were considering: (a) In order to be a member of the clique, members must always tell each other what they _really_ are thinking when asked; and (b) In order to be a member of the group, members must always help each other out when asked. Adolescents could, and perhaps would consider all possible combinations of these two rules in terms of whether they are necessary to achieve and maintain membership and a sense of belonging: (i) Perhaps neither "a" nor "b" are necessary; (ii) Perhaps "a" is necessary but "b" is not; (iii) Perhaps "b" is necessary but "a" is not; (iv) Perhaps both are necessary; and (v) Perhaps "a" is necessary only when "b" is absent or "b" is necessary when "a" is absent, etc. (Flavell, 1963). The essence of combinatorial analysis is to consider outcomes in terms of all possible combinations of two or more conditions.

Formal operational thinking may be characterized in terms of these three verbal descriptions, or more precisely and completely in terms of the logico-mathematical structures and operations implied by them. Recall that Piaget defined nine "grouping" structures that are implicit in such concrete operations as logical classification, seriation, adding,

substracting, multiplying and dividing. At formal operations, the underlying structures, according to Piaget approximate the mathematical models of a "group" and "lattice." These structures make it possible for adolescents to engage in reasoning which can be described as hypothetico-deductive, propositions about propositions and combinatorial analysis.[3] However, certain aspects of these structures must be noted to make clear the connection between them and our hypothesized coding categories for assessing the developmental level of self-knowledge.

The group consists of the complete and systematic relationships between four different types of transformations of propositions: <u>Identity</u> (I) nothing changes in the proposition on which this null transformation is performed, i.e. assertions; <u>Negation</u> (N) everything changes in the proposition on which this transformation is performed, e.g. all assertions become negations; <u>Reciprocal</u> (R) this transformation permutes assertions and negations but leaves conjunctions (i.e. both X and Y) and disjunctions (i.e. X but not Y) unchanged; <u>Correlative</u> (C) this transformation permutes conjunctions and disjunctions but leaves assertions and negations unchanged. (Flavell, 1963, p. 216) "The gist of Piaget's experimental findings is that older children, in contrast to younger ones, appear to be able to discriminate the various direct and opposing operations (i.e. transformations) and also to assess their effects vis-a-vis one another (Flavell, 1963,p.218)." I,N,R and C form a mathematical group in the sense that they can be multiplied or combined.

---

3. The mathematical notions of "groups" and "lattices" are explained in Flavell, 1963, pp. 212-222.

For example, the negation of a negation leaves the original proposition unchanged (NN=I), or the assertion of a reciprocal is equivalent to the reciprocal itself (IR=R).

This rather abstract and abreviated presentation can be summarized adequately for our purposes. This summary applies both to the group and the lattice structure. Lunzer (1965) in his logical and empirical analysis of the INRC group in relation to the capacities inherent in the groupings of concrete operations states that "the essential operations of concrete reasoning are those of classification and seriation and their effect is to establish precise relations between terms that are physical objects. . . The results of the present inquiry suggest. . . that the familiar verbal analogies (i.e., Lunzer's empirical test) require formal reasoning in the sense that their solution demands the apprehension of second order relations, or relations between relations, and not merely first order relations, which are relations between objects (Lunzer, 1965, p.41)."

Several examples of seeing relationships between relationships may help clarify this, and these examples have important manifestations in formal operational self-knowledge. The formal operational child (1) understands proportions, the relationships between ratios (e.g. X is to Y as A is to B); (2) can appreciate probability (X occurs a certain percentage of the time Y occurs); and (3) correlation (X varies as a certain function of Y). All three of these capacities entail relationships between relations and can be derived mathematically from lattices and group structures (Flavell, 1963, p. 222).

To summarize, the formal operational adolescent in contrast to the concrete operational child is oriented to the possible as opposed to the real, the future as opposed to what is immediately experienced. Adolescents' reasoning may be characterized as hypothetico-inductive, propositions about propositions, and combinatorial. Implicit in these capabilities are the mathematical structures of the group and the lattice which involve the capacity to perform several combinations of the I, N, R and C transformations on propositions. These combinations can be summarized as the capacity to appreciate the relations between relations. Three forms of this capacity are the understanding of proportions, probability and correlations.

To a large extent the characteristics of formal operational reasoning are overlapping and interdependent. They imply or lead to each other therefore it is difficult to define discrete mutually exclusive categories of self-knowledge statements to be coded. The following were first passes at defining relatively discrete categories.

1. Formal operational self-knowledge hypotheses will refer to possible (as opposed to actually experienced) antecedents, responses and consequences in relation to each other.

    (a) The formal operational adolescent can postulate potential antecedents, responses and consequences remote in time and space.

> When I drive my car I realize that I'm lessening
> my chances to cross country ski in North America
> ten years from now due to thermal pollution.

Here, the specific relationship is cast in terms of
eternity. It is seeing the relationship as an indication
of the distant future that gives the present its
particular emotional meaning.

(b) The adolescent can postulate a future in terms
of ideal, perhaps unattainable states, situations and
consequences. Conversely, the worst possible situation
can be envisioned as well. Both are invested with deep
feelings for the first time during adolescence.

> We are struck by the fact that feelings about
> ideals are practically non-existent in the child...
> There is no operation available at this level
> which would make it possible for the child to
> elaborate an ideal which goes beyond the empirically
> given. The notions of humanity, social justice,
> freedom of conscious, civic or intellectual courage
> and so forth... are ideals which profoundly influence
> the adolescents affective life. (Inhelder and Piaget,
> 1958, pp. 348-349)

(c) One key characteristic is hypothetico-deductive
(if-then) statements about future situations, states of
being, and results.

> Well, if I decide to go to college I might flunk
> out and that would disappoint my parents terribly.

> If I were elected president of the club, I guess
> I would really feel great. I'd probably have a lot
> more friends.

Often reflected in an adolescent's considerations are
two or more routes to achieve the desired end state, e.g.
considerations of a variety of strategies for being admitted
to the college in which he or she wants entrance. Also

there may be an attempt to make a logical choice about
which strategy is most likely to be successful, i.e.
a combinatorial analysis of the alternatives.

2. Formal operational self-knowledge hypotheses will
reflect combinatorial analysis, i.e. stating the
possibility of several outcomes (either responses in
relation to antecedents or consequences in relation to
responses) as a function of the presence or absence of
several conditions.

 (a) This may take the form of stating a set
within a set.

> When I do something that really pleases teachers
> (set), especially those I care about (set within
> a set) I feel so full and warm inside and the other
> person usually responds warmly to me by letting me
> know she appreciates me.

 (b) This also may take the form of two or more
conditions that must be present for the result to occur.

> When I'm feeling down on myself (condition 1)
> and other people criticize me (condition 2), I
> feel defensive and sorry for myself.

> When I'm in a situation with competent, agressive,
> good looking males (conditions 1, 2 and 3) I feel
> stupid and weak.

 (c) Descriptions may involve a variety of other
possible combinations of necessary conditions; e.g.,
two conditions must be absent; one condition must be present
and another must be absent, etc.

(d) When a person is trying to arrive at these types of conclusions (a, b, c above) there may be extensive rumination about which combination of conditions will lead to the outcome described.

3. Formal operational self-knowledge hypotheses will contain two or more alternative viewpoints about the same experienced or anticipated stimulus, response or consequence.

> I was frightened and really turned off, but somehow strongly attracted.

> When I'm in a group with authority figures (set within a set), I feel inattentive, confused and unfocused. I end up just being quiet and not contributing anything to the group, my ideas are lost--they could save the group a lot of mistakes, they could be instrumental in changing policy (viewpoint 1). Worst of all I lose my own sense of self worth and pride. I don't get practice feeling and being competent (viewpoint 2).

This may also take the form of a particular antecedent, response or consequence being seen as good from one perspective and bad from another.

4. The thoughts, sensations and feelings of formal operational adolescents is more highly differentiated, complex and rich. This experience of self has more of a life of its own.

(a) Thoughts, feelings and sensations become antecedents and responses to each other, leading to chains of internal reactions. During concrete operations, thoughts, feelings and sensations are stated as a group of responses to some external antecedent(s). At formal operations, these inner reactions can be stated as

antecedents and responses to each other.

> Sometimes I get angry with my girlfriend because
> she doesn't understand what I'm trying to say.
> Sometimes I make some nasty comments. Then I
> feel guilty and sorry and hope she won't get too
> mad. Then after its over I keep wondering why I
> do things like that.

Notice that this whole chain of his own responses is
described in response to his single, initial reaction
to his girlfriend. If the reactions were described
as a chain including intervening additional "antecedents"
from his girlfriend, it would be characteristic of late
concrete operational thinking.

(b) Sensations and feelings are described as
psychological states implying more general categories
and a positive or negative value. This is the essential
difference between reports of being "jittery, nervous,
tense" (descriptions of physical sensations) and reports
of being anxious, depressed or elated. Psychological
states are not as visible to others, except through the
manifestations of sensations.

> When I'm _feeling down_ on myself and other people
> criticize me. I feel _defensive and sorry_ for
> myself.

> When conflict arises I tend to avoid that person.
> I don't tell what's bothing me, and _I feel guilty_
> _for feeling annoyed in the first place_, like I
> have no right to have expectations.

The last example also contains illustration of a chain of
psychological feelings.

(c) There are reports of vicarious feelings from at least two types of stimuli.

(1) Individuals report internal responses to <u>anticipated</u> reactions of others. This is the meaning of the comment that adolescents are constantly reacting as if they were playing to an anticipated audience.

> I feel nervous whenever I have to present
> something to a group of people I don't know
> and to be evaluated by someone who represents
> an authority to me.

This is a report of a past pattern of reactions to an anticipated audience. In many people, there is stagefright, or in adolescents, extensive preening and concern about what others will think, feel or do in some anticipated situation.

(2) The experience of others becomes a more powerful antecedent to similar feelings in oneself. Sympathy, and empathy grow by quantum leaps in adolescents.

> I know that whenever I'm in a class or
> in a group situation and someone in the
> group obviously is being put down by
> another member of the group or group leader,
> I find myself internalizing that put down.

(d) Inner reactions to past and future situations have a more intense and larger holding power. They infuse or cloud one's reactions to an immediately experienced situation. While this may occur during concrete operations, the difference at formal operations is that individuals are aware

of the carryover. It involves the capacity to have reactions that are independent of immediately experienced concrete situations.

> After we broke up, it bothered me for months.

(e) The capacity to envision alternative competing future states and the capacity to view an event or relationship from several points of view leads to more intense internal psychological conflict. The formal operational person "feels the full force of inner conflict. (He or) She tries to cope with it or to find some means of transcending it or of reconciling herself to it (Loevinger, et. al., 1970, p. 99)"

> I want to get to know what different people are all about, but this is difficult to do because of the homogeneity of the university community that I live in and because I am shy and I don't have a degree.

5. Formal operational self-knowledge hypotheses contain quasi-mathematical statements about the relationships between antecedents and responses, between thoughts, feelings, sensations and actions and between responses and consequences.

(a) These statements may reflect awareness of correlations.

> The more I try, the harder it becomes.

> I've been trying to lose weight and after going through several so-called miracle diets I've discovered, to no one's surprise, that the less I eat, the more I lose and the better I feel.

(b) These statements may reflect awareness that relationships between antecedents, responses and consequences are probabilistic.

> In all probability, if I keep using my power this way people will get turned off and avoid me.

> Almost everyday I feel physically well. This especially happens when I jog, shower, meditate and eat a good breakfast at the beginning of the day. When I start my day off with healthy rituals I most often feel good physically and psychologically.

(c) These statements may reflect an awareness of proportional reasoning. Proportions (the equivalence of two ratios) has a linguistic analogue in verbal analogies, e.g. wool is to sheep as leather is to steers. Any use of analogies to describe the relationship between events, antecedents, responses and consequences is evidence of proportional reasoning.

> It's like taking on a sumo wrestler trying to master Piaget's theory.

> I keep changing my mind, like I had some kind of mental palsy.

With the advent of formal operational self-knowledge hypotheses, the adolescent conceives of more distant future states and goals, and sees actions now as well as potential activity in relation to those states. Antecedents, responses and consequences are more complexly conceived as sets within sets or some combination of two or more antecedents, responses and consequences. Feelings, sensations, thoughts and actions become antecedents and responses for each other as inner life seems to have a life of its own independent of whatever situation the

person may be experiencing here-and-now. Antecedents, responses, and consequences, are now more highly differentiated, complex and have quasi-mathematical relationships to each other (correlation, probability and proportionality).

Later in formal operations this rich inner life becomes the object of what the person construes. One can have hypotheses about the way one hypothesizes, propositions about one's propositions, and in general characterize one's experiences in terms of the characteristic procedures one uses to make sense of the world, one's relationship and place in it. Thus far we have seen relatively few spontaneously occurring examples of this stage. Here are two examples.

> I know that I try to synthesize the best parts of each experience, relationship or concept into subsequent experiences, relationships and concepts.

> I'm an analyzer. I kind of zero in on a problem, meditate on it, until the essential parts are so clear I can summarize it in a simple declarative sentence then amplify on that sentence by describing its component parts and their inter-connections.

In both of these examples the concern transcends the attempt to describe specific patterns and focuses on the general procedures used to arrive at hypotheses. Perhaps it is the equivalent of Kohlberg's last stage of moral reasoning when there is an "orientation not only to actually ordained social rules but to principles of choice involving appeal to logical universality and consistency (Kohlberg, 1966, p.7)," Transposing Kohlberg's statement results in the following paraphrase: "There is an orientation not only to specific hypotheses, but to principles of hypothesizing involving appeal to comprehensiveness and consistency."

* * *

The characteristics outlined here were hypothesized before we began the empirical search for the stage characteristics of self-knowledge theories. The hypothesized stage characteristics were considered tentative and preliminary. Their major purpose was to guide us in the analysis of the ER protocols. These hypothesized stage characteristics would be revised and corrected after comparing them to the stage characteristics derived empirically. This procedure is described in Chapter VII. The next chapter outlines the characteristics of the stages which were derived empirically by analyzing the ER protocols.

CHAPTER V

EMPIRICALLY-DERIVED STAGE CHARACTERISTICS
OF SELF-KNOWLEDGE THEORIES

Four stages of verbal descriptions of experiences were derived
by following the empirical procedures outlined in Chapter III.
In this chapter, the characteristics of these four stages are
presented.

Since these stages were derived in terms of the working definition
of self-knowledge (see Chapter II), the reader should keep this working
definition in mind when reading the stage characteristics presented
here. Before detailing the stage characteristics, we shall summarize
the features of the self-knowledge working definition which seem
especially salient in understanding the stage characteristics.

## Background

We have conceived the self-knowledge construct as having three
analytically distinct components as represented in Figure 4-1 (See
Chapter II for details).

FIGURE 4-1: SCHEMATIC MODEL OF THE
SELF-KNOWLEDGE WORKING DEFINITION

| EXPERIENCES | MENTAL OPERATIONS | THEORIES OR VERBALIZED CON-CEPTUALIZATIONS OF EXPERIENCE |
|---|---|---|
| One's conscious thoughts, sensations, feelings and actions. | Processes of the mind for transforming experiences into theories | Oral or written statements describing the experience, explaining the experience, or assigning value to the experience. |

Experiences of feelings, thoughts, actions and sensations are private, in the present time and unstable, in the sense that it is changing from moment to moment. Mental operations are the procedures or processes by which a person makes sense of that experience. We have assumed from the outset a structural-developmental point of view about these operations, namely that they are limited in number, develop in an invariant sequence, are hierarchical in nature, are relatively stable over time, and are to a large degree similar across cultures. At each stage of development the level of these processes available to a person determines the nature of the hypotheses and theories they can generate about their experiences. The focus of this study was to identify changes in people's descriptions of their own experiences which reflect the stage or level of a person's mental operations.

The adequacy of any theory depends, in large part, on the adequacy of the data available to be conceptualized. Thus, the first part of the Experience Recall test (Question A) asks individuals to describe fully a significant or unforgetable experience, i.e. to recall data. It appears that the data reported reflects developmental changes in the mental operations. Note that we are not saying a person's original experience changes over time, but only that there seems to be developmental changes in how much is recalled and the way it is reported. It is as if the mental operations were slowly changing filters through which, over long periods of time, more and more facets of the original experience are "seen," recalled and reported. How personal experience is described, is the first dimension of people's

theories about experiences. By analyzing responses to Question A
in the ER, we seem to have arrived at some clear ways to define and
characterize this dimension. To date, it is this developmental
dimension we have explored and defined most fully.

A second dimension of self-knowledge theories is the nature of the
value, meaning, or significance assigned to one's experiences. The
second part of the ER (Questions B and C) asks respondents to describe
how the experience was significant or important to them. Some subjects
also reported this value assignment in the first part of the ER (in Ques-
tion A). But, having focused only on Question A to date, this second
dimension, namely, how experience is valued, has not received as
complete analysis as the first dimension (how personal experiences are
described).

Just as the nature of available data and value assignments appear
to develop, so too does the nature of individuals' hypotheses about
their experiences seem to change. In the second part of the ER (in
Questions D and E), subjects are also asked to make sense of, or
hypothesize about the data they have recalled. We have not analyzed
responses to these questions, hence we are presently not able to fully
characterize this third dimension of self-knowledge theories, how
experience is explained.

In short, the current status of our research is that we have
analyzed responses to the first part of the ER, and this analysis has
yielded characterizations of the first dimension of self-knowledge
theories or verbalized conceptualizations of experiences, namely, how

experiences are described. The analysis has also given some clues to the other two dimensions, i.e. how experiences are valued, and how experiences are explained. However, these other two dimensions cannot be fully characterized until responses to the second part of the ER are analyzed. Given this current state, there appear to be four stages in the development of people's theories about their experiences: Elemental, Situational, Patterned and Transformational. In the following section, an overall synopsis of each stage is sketched. In this synopsis, the three dimensions of how experience is (1) described, (2) valued, and (3) explained are combined.

Of course, this synopsis of the stages will not be sufficient to enable one to score responses in the ER protocols, nor will it be adequate for assigning stages to individuals. The intension of this synopsis is to give one a general idea of the four stages. In addition to the general stage description, sample responses (to Question A) from two ER protocols in each stage are used for illustration.

## Synopsis Of The Stages

The earliest stage we have identified among the protocols we analyzed is named the Elemental stage. In this stage, only discrete, "visible," aspects of a single event (i.e. the elements) are described. These elements may be related to each other by serial ordering or by juxtaposing them, but no causal connections between the elements are stated. Hence no explanations or hypotheses about one's experiences are reported at this stage. The description of the elements seem to

suffice as an explanation for persons at this stage. The description of elements also function as the way of assigning value in this stage. That is, value or significance is attributed to one's experience by characterizing the elements, usually by adjective or adverb modifiers.

As the name "Elemental" suggests, one's experiences are described, explained and valued only in terms of the overt of observable <u>elements</u> of the experience. It is as if one's theory or verbalized conceptualizations of experiences at this stage consisted of an album of photographs, or a motion picture with little, if any, editorial comment.

<u>Responses to Question A Which Exemplify Elemental Stage</u>:

1. Protocol 0310207--Me and my brother were going to my friend's house. We were sliding on our sleds. His house was right in back of ours. We would cut through the bushes and turn.

2. Protocol 0220406--Well, when we go camping and we get up in the morning. My father went and told my grandmother. It was about 4 o'clock in the morning and we got ready to go camping. It was this beautiful campground. It took us a while to get there but we got this beautiful campground. It had a whole mess of sand all over. It was in Nova Scotia. It has a platform for the tent to go on. I was really young then, I slept on a cot. My mother yelled, "Do you want some lunch?" I said yes and she said what, I said Peanut butter sandwiches. She fixed it for me. We waited about 15 more minutes and then we go swimming.

The next stage is labelled Situational. Here, individuals appear to have a gestalt of a single situation composed of causally connected elements, including for the first time, non-visible, internal emotional states. The discrete elements, which were described separately in the Elemental stage, are now organized into one or more coherent units or situations. In this stage, explanations of one's experiences are made

by stating causal connections among elements, or by describing
the causal factors of the whole situation. Value is assigned to
one's feelings, to the whole event or situations, or by explicit
comparison of two specific situations. Situational theories or
verbalized conceptualizations of experiences are thus characterized
by descriptions, explanations and value statements, in which elements
are integrated into a single specific coherent whole.

Responses to Question A Which Exemplify Situational Stage:

> 1. Protocol 0341024--The experience I remembered happened
> about five years ago in the summer of 1969. I had been
> driving down a very busy highway with my father, my
> brother and two friends. My father who was
> driving had pointed out to us many car accidents that
> occurred on this highway. We were on vacation in
> Cape Cod. In the car ahead of us were my mother
> and the parents of my friends. We had to drive
> in two cars since there wasn't enough room in one.
> But all of a sudden I heard my father yelling
> something, and before I knew it we had been
> involved in an accident. I remember feeling very
> frightened although no one was hurt. It wasn't
> my father's fault, it was the other guy's fault who
> seemed in a hurry to get off of there. The people
> who were in the car in front of us stopped to help
> us and I can remember hardly being able to talk to
> my mother. I guess everyone was pretty shaken up
> especially my father who was responsible for all
> the kids in the car. For the rest of my vacation
> I had been upset.

> 2. Protocol 0411203--I was in the explosion in the
> village. I was blown out of a building. I
> haven't worked since then. Because of my back. I
> have real funny dreams, Sometimes I wake up in
> the middle of the night and I can't go back to
> sleep. No, it wasn't a pleasant experience.

At the next stage, the Patterned stage, individuals can describe
characteristics of their experiences which generalize across situations
over time. Where the Situational person only organized elements into

situations, persons at the Patterned stage can comment upon, refer back
to, and make generalizations from the situations they describe.
They name patterns in terms of roles, personality traits, obligations,
and on-going interpersonal relationship characteristics.  In explaining
their experience, persons in this stage demonstrate hypothetical thinking,
i.e. hypothetical explanations, or hypotheses in its true sense, are
possible for the first time.  At this stage, value or significance can
be assigned to any pattern described, as well as the elements or
specific situations that exemplify those patterns.  Theories about
experiences in the Patterned stage thus involve descriptions, explanations
and hypotheses about one's stable, lasting, and distinctive patterns.

Responses to Question A Which Exemplify Patterned Stage:

> 1.  Protocol 0210507--The experience I remembered
> was my leaving my house with the intention of getting
> a divorce.  After 27 years, eight children, many
> crises, months of counseling (for me, because
> "any problems were mine"), several years of trying
> to keep the marriage together for the children,
> several years of trying to separate for the
> sake of the children, and finally success when I
> realized that I had to separate for my sake.  I had
> been working toward a B.A. but took time out to
> work for a year to save enough money to make and
> move as I would have to be the one to leave with
> four children and, also, my father.  The day
> finally came, and all arrangements had been made with
> the lawyer, camp rented for a month (didn't know
> where we were going after that), father delivered to
> aunt's for short time in case any trouble.  Two
> women friends came and helped with the move and
> their support was wonderful.  When we reached the
> camp and had everything moved, I said, "I did it!"
> and we hugged one another.  It was a joyous  occasion!--
> freedom!--liberation!
>
> 2.  Protocol 0210211--I had a great deal of trouble
> focusing on one experience.  I remember some things
> that happened at eight years old and some at three
> or four.  The experience I spent the most time
> thinking about happened when I was five or six.

I don't exactly remember the cause, but I think
it was a spanking. I found myself in bed, fully
clothed, in my new bedroom that my father had just
added to the house, with my head buried under my
pillow and I was crying and screaming that nobody
loved me. Obviously, I was trying to get my mother
to come in and comfort me but nobody came, I think
I had done this once or twice before and it had
worked then. But this time, nobody came and that
made me scream louder and cry harder and get really
mad and feel alone. Finally one of my parents came
in and told me to stop it or I would get another
spanking. This made me feel totally helpless and
I soon stopped my tirade and left my bedroom and
felt a little ridiculous and thinking, that I
would get back at them if I got the chance, but also
knowing I wouldn't try this kind of thing again.

The final stage we identified among the analyzed protocols was

named Transformational. Whereas in the previous stage an event is

significant because it defines a stable pattern, at this stage the

experience of change is what is described as stable and continuous.

Specific traits, roles, obligations and relationships are in the

process of transformation and, therefore, are described in terms of

the more general, abstract and stable categories in which these

patterns fall: For example, words such as "abilities," "capacities,"

"personality," "interests," "minds," and "feelings" are often used.

The possibility of actualizing one's unexpressed feelings, undeveloped

capacities, interests, etc., is far more prominent and reflects the

explicit recognition of internal conflicts. In this context of

continuous development, experiences which stand out as unforgetable are

those which mark turning points having long-term, wide-spread, or

continuing impact on one's life subsequently. At this stage value

is assigned by attempting to explicitly state what is the "meaning,"

or "inner significance" of the process of change. Just as situations integrate elements, and patterns integrate situations, the focus on transformations enables one to integrate patterns—as points defining the beginning or end of a phase of change.

Responses to Question A Which Exemplify Transformational Stage:

     1. Protocol 0210713—The experience was during a Gestalt workshop given by a prof. at CSU., Chico, Calif., in 1971, for teachers, grad students and others. I was an undergrad at the time. In remembering back this seems to be the experience where I discovered my "self" for the first time ever. It was not only a discovering, because I had always had an inkling there was one really there, but it was an accepting process. As I went into the workshop—which was the first time I had ever experienced Gestalt, I sensed that it was not only permissible in this setting to be natural and to follow my own inner direction, but it was highly desirable if I were going to receive what the experience had to offer.

     Up to that time, I had had a poor concept of myself, although it had been improving slightly through the previous few years. But that weekend was vastly important to me. I was elated to discover that I could give myself permission to first: feel my own feelings, and secondly to act on them.

     This had had a tremendous impact on my life. That was the beginning of a new life for me—a life that I was now consciously controlling. It was a "high" experience that lasted for months and months, and which I still experience to a certain extent.

     2. Protocol 0210108—My grandmother's death....I was in the eighth grade and I had been invited to a party at a friend's house and the girls were invited to stay overnight and I wasn't allowed to stay overnight, I don't know why, I wasn't allowed to stay overnight. My grandmother had been very sick and I had talked about it with my mother and had not been familiar with death at all with anyone this close to me and we had talked about it a number of times and it was obvious she was going to die as she was very sick, but somehow I couldn't accept that, I just thought she wasn't going to die and we had gone to Connecticut a number of times to

see her and each time we would go she would be
very bad...the party was on a Friday night and
Saturday I went swimming at the pool and I came home
from the pool and I remember going into the house and
my mother saying--now I don't want any hesterics,
Mimi died today.  Then she immediately left the
room and I remembered that I hardly reacted but she
cried.  She left me by myself with my own thoughts
and I offered to help her and went downstairs and
hung out the wash.  I remember just feeling a
stunned thought, like it really wasn't true or that
it just hadn't happened.  I couldn't really realize
what it was.  She explained to me later that that's
why she didn't want me to stay at the party,
she was afraid something would happen and that's
why I came home...faith in God...had to be something
other than just here.  I remember praying for my
grandmother but there wasn't anything I could do.
When a person dies, life goes on, nothing changes.
I remember riding down the street in the funeral
procession and seeing a girl I had known.  She
lived near my other grandmother.  She didn't recog-
nize me and she looked at the funeral procession and
kept on playing.  Things go on and I had never
been in touch with it before.  I had just
never realized people die and people are born
every day and it just doesn't make any difference.
Everything goes on.

The four stages (Elemental, Situational, Patterned and

Transformational) are not numbered because we believe, and have speculated

about, the existence of prior and subsequent stages.  The four identified

stages are tentative--they are open to revisions after a method for

scoring the second part (Questions B,C,D and E) of the ER is developed

and after the stage descriptions are cross-validated on other protocols.

However, the current version of stages do provide a basis for extrapolating

possible characteristics of earlier and later stages, and then searching

for their existence.  For example, the idea of action differentiated

from the self occurred in all of our test responses.  From other

developmental theories, it seems that this differentiation occurs at a

developmental stage earlier than the youngest age (seven years old) represented in the analyzed protocols. Similarly, one or more stages beyond the Transformational stage could be extrapolated from other developmental theories. However we have not identified any characteristics of these earlier or later stages in the ER protocols we have analyzed.

The four stages and their characterizations above were based on the symbols in the Preliminary Scoring Manual (Appendix B). These symbols were defined for scoring the experience description part (Question A) of the ER, and thus primarily reflects developmental changes in the first dimension of self-knowledge theories, i.e. how experience is described.

Table 4-2 lists the symbols from the Preliminary Scoring Manual (denoted by their titles and code numbers) by the stages and the dimensions they seem to reflect. We determined which stage each symbol should be placed after interpreting the sequence of these symbols on the Guttman Scaling Technique (See Chapters III and VI for details). Symbols in the Preliminary Scoring Manual which did not scale are not included in Table 4-2.

There are noticeably fewer symbols in the dimensions "How Experience is Explained" and "How Experience is Valued," than in the dimension "How Experience is Described." This is because the responses analyzed in constructing the manual did not include responses to the questions on the ER which directly ask subjects to give explanations of their experiences and to assign significance or value to their experiences (Questions B, C, D, and E). More symbols representing the experience

TABLE 4-2: SYMBOLS FROM THE PRELIMINARY SCORING MANUAL REPRESENTING THE DIMENSIONS OF SELF-KNOWLEDGE THEORIES

| Stages \ Dimensions | How Experience Is Described | How Experience Is Explained | How Experience Is Valued |
|---|---|---|---|
| Elemental | Physical Self (S.1A)<br>Personal Possessive (S.43)<br>Others (S.2 & S.2A)<br>Concrete Objects (S.3 & S.3A)<br>Communications (S.13)<br>Thoughts (S.6B) | | |
| Situational | Core Event (S.18A & S.18B)<br>Unspecified Set of Things (S.20)<br>Unspecified External Force (S.7)<br>Mutual Action (S.22A)<br>Situational Specific Emotional State (S.9A)<br>Situational Specific Emotional Action/Reaction (S.9B) | Because (S.8)<br>Despite/Although (S.16B)<br>And So (S.16A)<br>Negation (S.23) | |
| Patterned | Personality Traits (S.39A)<br>Own & Others Roles (S.1B & S.2B)<br>Interpersonal Relationship Traits (S.22B & S. 22C)<br>Summary (S.35)<br>Reference Back (S.18C)<br>Continuation of Actions or Conditions (S.42A & S.42B)<br>Internal Shoulds (S.37) | Hypothetical If-Thens (S.25)<br>Possibilities (S.24A & S.24B)<br>Differences/Contrasts (S.40)<br>Internal Shoulds (S.37) | |
| Transformational | Personality Cluster (S.39B)<br>Thought Procedures (S.6C)<br>Expressable Emotions (S.9C)<br>Unspecified Multiple Feelings (S.9D)<br>Abstract Constructs (S.46)<br>Turning Point (S.36A) | Thought Procedures (S.6C)<br>Emotional Impact (S.5B) | Meaning/Inner Significance (S.44) |

explanation dimension and the value dimension will be defined when those questions are analyzed. Since symbols for these dimensions are incomplete at present, we shall only focus on the experience description dimension as we detail the stage descriptions further in the next section.[1]

### Symbols Illustrating Stages Of How Experience Is Described

By itself, the synopsis of stages in the previous section is not sufficient as an operational definition of each stage. Probably a complete operational definition can only be understood by learning all the details and nuances of the Preliminary Symbol Scoring Manual (Appendix B ). Short of that, we can give a flavor of the symbols which represent the observable manifestations of the four identified stages.

In this section, each symbol within the dimension, "How Experience is Described," is briefly summarized and illustrated with verbatim responses from subjects. It may be helpful to continue referring to Table 4-2 in reading this section.

It should be noted that a particular symbol designates only a part of a sentence. That is, just specific words or phrases within a sentence are scored by a given symbol. The remainder of the sentence is scored by other symbols. Thus in the examples that follow, one should focus primarily on the parts of the example sentences which are intended to illustrate the symbols. These parts are underlined for easy identification.

---

1. Readers wishing further elaboration on the symbols (as currently defined) in the experience explanation dimension and the value dimension may refer to the complete descriptions of these symbols in the Preliminary Symbol Scoring Manual (Appendix B).

1.    Elemental stage.  In the Elemental stage, individuals describe
themselves (i.e., "I") by referring to their own physical characteristics,
or vital statistics.  This PHYSICAL SELF (S.1A) description includes
mentioning of specific parts of one's own body, age, race, place of
residence, or states of being in terms of geographic location.  Emotional
states are not named as such, but feelings can be described in physio-
logical terms.

> "I did wear glasses and did not have dates."
>
> "I was on the baseball team."
>
> "I think I was eleven at the time."
>
> "I was hurt and sick that my friend couldn't
>     play with me."

Mention of other persons and descriptions of OTHERS (S.2 and S.2A)
in terms of their physical characteristics and vital statistics can be
expected at the elemental stage.  Note that the descriptions of others
are parallel to the description of oneself.

> "My opponent being white and me being black."
>
> "They gave me a surprize party."
>
> "My husband was sick for nine years."

Similarly, observable aspects of CONCRETE OBJECTS or activities
(S.3 and S.3A) are named and described in Elemental stage responses.

> "That was a lovely place."
>
> "He picked up a stone and threw it at me."
>
> "It was a cold winter afternoon."

Also in the Elemental stage, words such as "my," "our," "hers,"
"his," and "theirs" are used to designate PERSONAL  POSSESSIVES (S.43).

> "She took away my icepop and Johnny's mother
>     didn't take away his."

"We're not _his_ only kids."

"I went to live with _my_ cousins."

Elemental stage responses often contain descriptions of overt COMMUNICATIONS (S.13). References to persons "talking" or "speaking" are common. Also, the content of the communications (i.e. what was said) may be mentioned.

"My mother _yelled_, 'Do you want some lunch.'"

"...I was crying and _screaming_ that nobody loved me."

"...my mother came down to _tell_ me my best friend had died..."

Simple THOUGHTS (S.6B) are referred to in the Elemental stage. In this stage, the definition of thought includes the notion of bringing something to mind or having something in mind.

"I _thought_ this was impossible."

"I _remember_ one time when we were younger, he called up on the phone."

"The _next thing I knew_ was that I was in a car on the way to the hospital."

2. _Situational stage_. In the Situational stage, responses usually reflect many of the symbols in the Elemental stage. In addition, however, there are other characteristic ways of describing experiences which are not evident in Elemental stage responses. One of these is the organization of the experience recalled into a coherent unit or CORE EVENT (S.18A and S.18B). Besides describing the observable details of an event, individuals in the Situational stage comment upon or make several references to the entire event in their responses. Often these commentaries about the core event include one's reactions to or feelings about the event as a whole.

The core event is illustrated here with a complete response, rather than with individual sentences.

> (1) I was 11 when I was sitting in my cellar watching TV when my mother came down to tell me my best friend had died during the night. (2) I thought she was kidding until I saw the tears come down her face. (3) I was the last friend to see him before he died. (4) It was like being in a dream. (5) Just waiting to wake up and seeing him. (6) But it wasn't, it was reality. (7) The funny thing about it he had a brother who was 10. (8) I was walking down the street with him the same day his brother died. (9) He didn't think anything of it. (10) One of his brother's friends came up to him to ask where his brother was, and of course his brother had died, but he just said very calmly, 'He's dead.'

In this response, sentence 1 organized the experience into two core events, (a) "my best friend had died," and (b) "my mother came down to tell me" about it. Sentences 2 and 3 describe the details of the situation. Most of the remaining sentences involve commentaries of either event (a) or event (b), as noted by the underlined phrases.

Descriptions of experiences in this stage often include SITUATION SPECIFIC EMOTIONAL STATES (S.9A). Unlike the physical or physiological description of feelings in the Elemental stage, emotional states in the Situational stage are described as invisible and internal. The emotional states named may be of oneself or of others.

> "For the rest of my vacation, I had been upset."

> "I could sense the agony in him."

> "I think I was mad but I know I was frustrated."

Individuals at this stage can also refer to SITUATION SPECIFIC EMOTIONAL ACTIONS OR REACTIONS (S.9B). That is, they can name what

their emotions are directed toward, or what is the stimulus for an
emotional reaction.

> "I always resented him."

> "We were concerned about our uniforms for some reason."

> "I was in love with many of the people I worked with."

An UNSPECIFIED SET OF THINGS (S.20) can be referred to by persons
in the Situational stage. These "unspecifieds" are some experience or
events which are mentioned but left undefined or unelaborated in the
person's response.

> "We really got to know each other very good by just
> talking about anything and everything."

> "I remember some things that happened at eight years
> old and some at three or four."

> "I was...in far better circumstances than I am today."

Also in this stage, one can describe experiences involving an
UNSPECIFIED EXTERNAL FORCE (S.7). These external forces usually involve
permission from an authority, acts upon the person in the situation, or
available opportunities. The forces may also be the necessity of
getting some physiological need satisfied or physical injuries healed.
In any case, the source of the force is left unspecified.

> "I was blown out of a building."

> "The Dr. said it was physical and I must be hospitalized."

> "I had to move from one place to the other."

> "My friend couldn't play with me."  ("Couldn't"
> is interpreted as did not have permission in
> this example.)

MUTUAL ACTIONS (S.22A), or behaviors involving two persons acting upon
each other, may also be mentioned in Situational stage responses.

"We then started <u>to kiss</u>."

"...and we always <u>avoided</u> <u>each</u> <u>other</u>."

"We laid on the beach and tried <u>to keep warm in</u>
    <u>each other's arms</u>."

3. <u>Patterned stage</u>. Responses at the Patterned stage usually contain

the characteristics of the previous Elemental and Situational stages.

Several additional qualities however, seem to distinguish responses

in the Patterned stage from those in the prior stages. For example,

at the Patterned stage, one can describe PERSONALITY TRAITS (S.39A).

Personality traits are defined as an individual's distinguishing

characteristics (behavioral, emotional or mental), which describe

that person generally across many situations. Descriptions of oneself

in this stage are no longer situation-bound nor necessarily physically

based.

"Somehow I saved--because of a <u>basically</u> <u>optimistic</u>
    <u>nature</u>....a good dose of <u>self-respect</u>."

"I was losing <u>my</u> <u>ambition</u> and sleeping often."

"Like all through junior high school up to eleventh
    grade I had always been <u>real</u> <u>shy</u>, <u>quiet</u>...."

Similarly, INTERPERSONAL RELATIONSHIP TRAITS (S.22B and S.22C),

that pervade beyond an immediate situation can be named in this stage.

"We really <u>got</u> <u>to</u> <u>know</u> <u>each</u> <u>other</u> very good...."

"If it was with a man that I could have <u>the</u> <u>deepest</u>
    <u>and</u> <u>most</u> <u>total</u> <u>relationship</u>--there was no
    way around the preliminary bullshit."

"I was <u>not getting along with</u> myself though ."

Descriptions of one's OWN AND OTHERS' ROLES (S.1B and S.2B)

characterize many responses in the Patterned stage.

"We were both <u>art students</u>."

"...I had a <u>lousy teacher</u>."

"I was a <u>housemother in a halfway house for delinquent
teenagers</u>."

Also at this stage individuals can identify inner-directed

prescriptions or social imperatives; and often express these prescriptions

or imperatives as INTERNAL SHOULDS (S.37).

"I was a fool I <u>should have</u> said something but I didn't."

"...a desire not to negatively define my love for certain
women as <u>society would have me do</u>."

"My mother's way of looking at things suggested that if
I wanted a man... <u>I would have to</u> compete with other
women on the level of physical attractiveness."

"I <u>should have</u> mentioned that I was married at the time."

Often descriptions of an event at the Patterned stage include

departures from the time frame of the event itself. That is, there is

often mention of CONTINUATION OF ACTIONS OR CONDITIONS (S.42A and S.42B)

prior to or since the event being described.

"I think I had done this <u>once or twice before</u> and
it worked then."

"We went steady for awhile and <u>to this day</u> we are
still close friends"

"In addition it could be useful to say that the
person that I met at the fish store <u>is now</u>
my boss."

Another characteristic of responses at this stage, is that the

notion of "experiencing" seems to be understood in the phenomenological

sense of personally involving oneself in, or participating in an action,

event or on-going action or event. The CONTINUING INVOLVEMENT (S.5D)

is one in which the self is both acting in and affected by the situations

described.

"However, I know I could not <u>endure living</u> the life
of the past three weeks for a whole year."

"I <u>became very involved</u> in the research."

"It was a 'high' experience that lasted for months
and months, and which I <u>still experience</u> to
a certain extent."

Frequently in Patterned stage responses, individuals substitute
pronouns or key phrases in order to make REFERENCE BACK (S.18C) to
some previously mentioned part of their descriptions.

"...he got married to lots of other women after
that. I never knew this until that day that we
met him and he told us all about it." ("This" and
"it" refer to the prior sentence.)

"I guess I really felt close to the team, but
that's been there for a long time." ("that's
been there" refers to the prior clause.)

"Well, when the coach read the starting line-up
and I was part of it--it had to be one of the
happiest moments of my life." "It" refers to
"starting lineup" in the previous clause.)

SUMMARY (S.35) statements are often included in responses at the
Patterned stage. These are somewhat general statements whose function
is to conclude, summarize or otherwise bring closure to one's report
of the experience.

"I was ready to start anew knowing that if you
wanted and worked hard enough, nothing is
unattainable."

"It was a happy life; course you worry, do you
have enough to live on or not."

"I always wanted to meet my father and then he
was really nothing."

4. <u>Transformational stage</u>. In the Transformational stage, persons can

describe themselves (i.e. "I") and others in terms of generalized

PERSONALITY CLUSTERS (S.39B). Instead of listing several personality characteristics or patterns separately, one word such as "traits," "capacities," or "interests" can be used to refer to the patterns collectively.

> "I can now see my faults and learn to accept others."

> "I hoped and planned to do much work and self-realization of my capabilities."

> "I was very curious about her ideas, habits, expectations and goals."

Also at this stage, one is aware of THOUGHT PROCEDURES (S.6C). One's own thinking is often described as involving interrelated conscious mental acts. Responses usually imply that there are steps or procedures in one's thinking, or that there is an inter-relationship among the ideas or thoughts.

> "I had planned to go to mental health after diagnosing myself with hysteric conversion resulting in paralysis."

> "I was elated to discover that I could give myself permission to first: feel my own feelings, and secondly to act on them."

Emotions or feelings are described as something to be expressed or used for communication. These EXPRESSABLE EMOTIONS (S.9C) are depicted as though they can be "let out," acted on, or acted out.

> "I was feeling like I had terribly deep feelings and emotions and had not been able to express them-- let myself out of myself."

> "A burst of anger or fear, I don't know which bust out of me."

> "I am lying on the floor of a dormitory room--alone-- crying with a feeling of hysteria and despair that want to cry out for help, understanding--"

At the Transformational stage, individuals seem to experience several emotions simultaneously. Often, the actual, specific feelings are not named; and instead, one word or phrase is used to denote these MULTIPLE UNSPECIFIED FEELINGS (S.9D).

> "Why did it take me as long to admit my feelings to myself and not try and run away from them?"

> "I asked in terror as I tried to hold my inner feelings just to bust out and scream and cry..."

> "On one hand I can hardly write at all about these feelings--even now--almost 7 years later, I am still trembling inside at the thought of her and my feelings towards her."

Actions are often characterized in this stage as having an EMOTIONAL IMPACT (S.5B) on oneself or others. This emotional impact can result from actions upon oneself or from actions of other persons.

> "Obviously, I was trying to get my mother to come in and comfort me..."

> "More a desire not to run from what I really felt."

> "I was losing my ambition and sleeping often."

ABSTRACT CONSTRUCTS (S.46) or intellectual ideas are often incorporated in descriptions of experiences at the Transformational stage.

> "In the process, I learned a great deal about the rights (and lack of rights) of women."

> "I can't recall how I developed the ideas."

Responses at this stage may also depict an experience as a TURNING POINT (S.36A) in one's lifetime. This turning point is described as a change in one's personal condition or characterization which begins or terminates (ends) with the experience described.

> "That was the beginning of a lonely and bitter childhood for me."

"That mark will always be with me until the day I die."

"It was a 'high' experience that lasted for months and months, and which I still experience to a certain extent."

Theoretically, there are an unknown and indefinite number of symbols that could represent each of the stages. By analyzing protocols, we have identified and defined a sample of these symbols. There are probably other symbols (representing each stage) that we have missed, overlooked or otherwise not identified. Also, the symbols that we have identified may not be directly representative of the stage in which they are placed--these symbols may be merely statistical correlates of other, presently unknown symbols which actually represent the various stages.

Therefore, the symbols or characteristics that we have identified should be treated as pieces, samples or hints of a greater, unified whole that characterizes stages. Extensive evaluation is necessary to ascertain to what extent these symbols actually represent developmental stages of self-knowledge theories. Our preliminary evaluation of these empirically-derived stage characteristics are reported in the next chapter.

C H A P T E R   V I

PRELIMINARY EVALUATION OF THE STAGES
OF SELF-KNOWLEDGE THEORIES

The four stages described in the previous chapter were derived from
analyzing 72 responses to the first question (A) on the ER test using the
Preliminary Symbol Scoring Manual (Appendix B).  These stages are incom-
plete:  Additional stages and two additional dimensions (i.e. how
experience is explained, and how experience is valued) of the present
stages need to be clarified by analyzing the responses to the rest of
the ER test questions.  However, it is important to obtain an interim
assessment of the degree to which the scoring system and the existing
stage characteristics are reliable and valid.  More specifically, (1) How
reliable is the scoring methodology?  (2) Do the stages form a hierarchial
sequence?  and (3) To what extent do the stages correlate with ego
development and with chronological age.  These data will help inform
subsequent efforts to complete the scoring system and stage descriptions.

## Coder Reliability Studies

Three assessments of coder reliability were made:  (1) the degree
to which two coders agreed on their decisions to use particular symbols
in scoring each sentence in ten selected protocols; (2) the degree of
coder agreement about the presence or absence of the symbols in the
total response to the first ER question; and (3) the degree of agreement
in assigning stages.

Two coders, Maxine Markson and Roy Tamashiro, were involved in
the evaluation of coder reliability.  Both coders contributed substantially

to the construction of the Preliminary Scoring Manual, hence were
familiar with the manual at all points in its evolution. Ten ER
protocols which had not been used previously in the construction of the
Manual were selected. The corresponding ego levels for these
individuals ranged from I-2 to I-5, but these ego levels were not known
to either coder prior to the coding. The two raters independently
scored the selected protocols according to the Preliminary Scoring
Manual (Appendix B).

In the sentence-by-sentence assessment, particular symbol decisions
made by each coder in each sentence were tabulated. The total number
of symbol decisions that the coders agreed on (i.e. were identical between
coders) in each sentence also was counted. Table 6-1 presents the
number of decisions made by each coder and the number of agreements
between them.

TABLE 6-1:   TOTALS OF SENTENCE-BY-SENTENCE SYMBOL DECISIONS AND
NUMBER OF AGREEMENTS BETWEEN CODER A AND CODER B

| Protocol ID No. | Number of Sentences | Total Symbol Decisions By Coder A | Total Symbol Decisions By Coder B | Number of Symbol Agreements Between Coder A & Coder B |
|---|---|---|---|---|
| 0210606 | 23 | 142 | 143 | 103 |
| 0210509 | 11 | 141 | 158 | 102 |
| 0520104 | 5 | 12 | 16 | 11 |
| 0210613 | 15 | 144 | 148 | 107 |
| 0210618 | 12 | 53 | 59 | 44 |
| 0210518 | 49 | 274 | 284 | 187 |
| 0613105 | 29 | 185 | 192 | 141 |
| 0540119 | 11 | 172 | 151 | 119 |
| 0540105 | 3 | 27 | 29 | 21 |
| 0540104 | 9 | 74 | 72 | 59 |
| Totals | 167 | 1224 | 1252 | 894 |

Percent agreement between coders was calculated using the formula,

$$\text{Percent agreement} = \frac{2(\text{total number of symbol agreements between coders})}{\left(\begin{array}{c}\text{total symbol decisions}\\ \text{by coder A}\end{array}\right) + \left(\begin{array}{c}\text{total symbol decisions}\\ \text{by coder B}\end{array}\right)}$$

By this formula, the degree of agreement between coders was 72 percent. A figure of 72 percent agreement between raters is not sufficiently high to claim that the scoring method is highly objective. It does suggest, however, that the coders tend to agree more often than chance on their sentence-by-sentence symbol decisions. Given the present status of the manual, the complexity of the scoring system, and the number of symbols to choose from, the figure of 72 percent is sufficient to indicate that the definitions and criteria in the Preliminary Scoring Manual are evolving toward objectivity. However, further effort to improve the objectivity of scoring is necessary.

Another sentence-by-sentence assessment of symbol decisions and coder agreements was conducted. In this evaluation, only the symbols that had scaled by the Guttman technique (described in a following section of this Chapter) were counted. The rationale for assessing coder agreement among only the scalable symbols was that only these symbols were used in identifying stage characteristics--the non-scaling symbols were discarded. Table 6-2 presents the total decisions involving the scalable symbols made by each coder and the number of agreements between them.

The degree of agreement between Coder A and Coder B on their decisions involving scalable symbols was 69 percent. Although there is a three percentage point discrepancy between this figure and percent

TABLE 6-2:  TOTALS OF SENTENCE-BY-SENTENCE SYMBOL DECISIONS OF SCALABLE
SYMBOLS AND NUMBER OF AGREEMENTS BETWEEN CODER A AND CODER B.

| Protocol ID No. | Number of Sentences | Total Decisions Involving Scalable Symbols by Coder A | Total Decisions Involving Scalable Symbols by Coder B | Number of Symbol Agreements Between Coder A & Coder B |
|---|---|---|---|---|
| 0210606 | 23 | 58 | 72 | 46 |
| 0210509 | 11 | 80 | 85 | 53 |
| 0520104 | 5 | 5 | 4 | 3 |
| 0210613 | 15 | 58 | 60 | 42 |
| 0210618 | 12 | 20 | 24 | 17 |
| 0210518 | 49 | 136 | 134 | 90 |
| 0613105 | 29 | 87 | 93 | 59 |
| 0540105 | 3 | 13 | 14 | 8 |
| 0540119 | 11 | 76 | 63 | 56 |
| 0540104 | 9 | 25 | 24 | 16 |
| Totals | 167 | 558 | 573 | 390 |

agreement between the coders when all symbols were considered, the difference is trivial. Thus, we can make the same interpretation about scorer reliability for scoring with the scalable symbols as we made about scorer reliability for scoring with all the symbols in the manual.

*   *   *

Another method for assessing coder reliability involved determining the degree of coder agreement about the presence or absence of the symbols in the total responses to Question A on each of the selected protocols. In this approach, the number of different symbols present anywhere in the total response to Question A was summed for Coder A's scoring and for Coder B's scoring of each protocol. "Agreements" between coders were counted whenever a symbol was used by both scorers to score any part of a given protocol. This meant that scorers could disagree about the use of a particular symbol in scoring a given sentence, but if both scorers did use that symbol in any sentence in the protocol, then this would be tabulated as an "agreement" for that symbol.

The rationale for assessing coder reliability with this approach is based on the method of assigning stages to protocols, described in a following section in this chapter. The presence or absence of symbols in the total protocol determines the stage assignment. It is not necessary to know the frequency of symbols in the protocol, nor is it necessary to know in which sentence in the protocol a symbol was used.

Table 6-3 summarizes the totals of different symbols used by each coder for each protocol and the total agreements between the coders.

Using the same formula for computing percent agreement, the overall percent agreement between coders on the presence or absence of symbols

TABLE 6-3: TOTAL NUMBER OF DIFFERENT SYMBOLS USED IN EACH PROTOCOL BY
CODER A AND CODER B AND NUMBER OF AGREEMENTS BETWEEN CODERS
(INCLUDES ONLY THOSE SYMBOLS WHICH SCALED BY THE GUTTMAN ANALYSIS)

| Protocol ID No. | Number of Different Symbols Used by Coder A | Number of Different Symbols Used by Coder B | Number of Agreements Between Coder A & Coder B |
|---|---|---|---|
| 0210606 | 15 | 16 | 12 |
| 0210509 | 21 | 26 | 21 |
| 0520104 | 3 | 3 | 2 |
| 0210613 | 18 | 17 | 15 |
| 0210618 | 5 | 6 | 5 |
| 0210518 | 21 | 23 | 18 |
| 0613105 | 26 | 23 | 22 |
| 0540119 | 15 | 13 | 12 |
| 0540105 | 7 | 7 | 5 |
| 0540104 | 10 | 12 | 8 |
| Totals | 141 | 146 | 120 |

was 84 percent. This figure is acceptably high to suggest that the presence or absence of symbols in a total protocol can be reliably coded. However, this reliability figure may be misleading. Suppose, for example there are 100 possible symbols. In a long protocol, coder A finds all 100 symbols as does coder B. But it is possible that in any specific sentence, coder A and coder B might disagree 100 percent. Still their percent agreement for the presence of symbols in the total protocol would be 100 percent. Given this logical possibility, greater weight must be given to the first, more precise method of assessing reliability.

Coder agreement of presence or absence of symbols was also assessed by stages. That is, we computed the degree of agreement between coders about the presence or absence of symbols in the Elemental stage.[1] Similarly, coder agreement was computed for symbols in the Situational, the Patterened and the Transformational stages. Table 6-4 summarizes the total different symbols present in the coders' scoring of the selected protocols and the number of agreements between them.

The percent agreement between coders for symbols in the Elemental Stage was 95 percent. For symbols in the Situational Stage, there was also 95 percent agreement. There was 67 percent agreement for symbols in the Patterened Stage and 73 percent agreement for symbols in the Transformational Stage. The degree of agreement between coders for

---

1. Symbols in each stage were determined by the Guttman Scaling Technique. See following section in the Chapter.

TABLE 6-4:  TOTALS OF DIFFERENT SYMBOLS IN EACH STAGE USED BY EACH CODER AND NUMBER OF AGREEMENTS BETWEEN CODERS (INCLUDES ONLY THOSE SYMBOLS WHICH SCALED ON THE GUTTMAN ANALYSIS)

| Protocol ID No. | Number of Symbols In Elemental Stage | | | Number of Symbols In Situational Stage | | | Number of Symbols In Patterned Stage | | | Number of Symbols In Transformational Stage | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Coder A | Coder B | Agreements | Coder A | Coder B | Agreements | Coder A | Coder B | Agreements | Coder A | Coder B | Agreements |
| 0210606 | 6 | 6 | 6 | 7 | 7 | 5 | 2 | 3 | 1 | 0 | 0 | 0 |
| 0210509 | 6 | 6 | 6 | 6 | 8 | 5 | 6 | 8 | 6 | 3 | 4 | 3 |
| 0521004 | 2 | 3 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0210613 | 6 | 6 | 6 | 7 | 6 | 6 | 5 | 3 | 3 | 0 | 2 | 0 |
| 0210618 | 3 | 4 | 3 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0210518 | 7 | 7 | 7 | 5 | 8 | 5 | 6 | 6 | 5 | 3 | 2 | 1 |
| 0613105 | 7 | 7 | 7 | 7 | 7 | 6 | 8 | 5 | 4 | 4 | 4 | 4 |
| 0540119 | 7 | 7 | 7 | 5 | 5 | 4 | 3 | 1 | 1 | 0 | 0 | 0 |
| 0540105 | 3 | 4 | 3 | 2 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| 0540104 | 5 | 7 | 5 | 2 | 4 | 2 | 3 | 1 | 1 | 0 | 0 | 0 |
| Totals | 52 | 57 | 52 | 43 | 50 | 37 | 36 | 27 | 21 | 10 | 12 | 8 |

symbols in the Elemental and Situational Stages are extremely high, while the degree of their agreement for symbols in the Patterned and Transformational Stages is below acceptability standards of 80 percent. Given the low percent agreement figure in the previous sentence-by-sentence assessment, the 95 percent figure in the Elemental and Situational Stages is probably deceptively high. Although the coders may both use a given symbol somewhere in the total response, they may not agree that the symbol is used in a particular sentence. The chances of this occurring is higher among symbols in lower stages (Elemental and Situational) because coders use more lower stage symbols than higher stage symbols throughout any protocol. Therefore, the actual percent agreement figure for symbols in the Elemental and Situational Stages is probably lower than 95 percent. In addition, two plausible explanations can account for the differences in coder agreement between lower stages and higher stages: (1) The symbols in lower stages denote characteristics that are relatively simple to recognize (compared to characteristics of higher stages): hence they are more sharply defined in the manual conversely, symbols in the higher stages involve more complex characteristics and currently this complexity is not fully defined and clarified in the manual. (2) Another reason involves the coders' individual abilities to remember all the details, nuances and other complexities of the manual. The coders are more likely to misunderstand or confuse the often complicated criteria or complex definitions of the symbols in the higher stages than they would for symbols in the lower stages. Thus, even if the manual defined the symbols perfectly,

either coder's confusion, misunderstanding, or errors on some details
of the manual (which are more likely on the more complex symbols of
the higher stages) can account for the reduced reliability for symbols
in the higher stages. The implications of these explanations are (1) to
clarify the criteria and definitions of symbols that the coders disagree
on most frequently; and (2) to find ways to simplify the scoring procedure
to minimize the human errors of coders (including misunderstanding complex
definitions, forgetting details, etc.) without decreasing sensitivity to
identifying the stage characteristics. These implications suggest some
of the next steps in the development of the scoring system.

\* \* \*

One further test of coder reliability was conducted. This involved
the degree of agreement between coders on the stage assigned to their
scored protocols. Each protocol was assigned the highest stage in
which three or more different symbols were present in the protocol. This
rule for assigning stages was derived inductively from the Guttman
scaling analysis (explained in the following section in this chapter).
For each protocol, Coder A's stage assignment was compared to Coder B's
stage assignment. It should be noted that the assignment of stages involves
counting symbols. Any disagreements in stage assignment result from the
individual coders using symbols from different stages in their original
scoring of the responses.

Table 6-5 lists each coder's stage assignments on the protocols,
and the agreements and disagreements between coders. Figure 6-1
illustrates the coders' stage assignments in a scattergram.

TABLE 6-5:  STAGE ASSIGNMENTS FOR TEN PROTOCOLS

| PROTOCOL ID NO. | STAGE ASSIGNED BY RATER A's SCORING | STAGE ASSIGNED BY RATER B's SCORING | AGREEMENT OR DISAGREEMENT |
|---|---|---|---|
| 0210606 | Situational | Patterned | Disagreement |
| 0210509 | Transformational | Transformational | Agreement |
| 0520104 | Elemental | Elemental | Agreement |
| 0210613 | Patterned | Patterned | Agreement |
| 0210618 | Elemental | Elemental | Agreement |
| 0210518 | Transformational | Transformational | Disagreement |
| 0613105 | Transformational | Transformational | Agreement |
| 0540119 | Patterned | Situational | Disagreement |
| 0540105 | Elemental | Situational | Disagreement |
| 0540104 | Patterned | Situational | Disagreement |

Coder A and Coder B's scoring yield identical stage assignments on five protocols and disagreement on five.  In the protocols where the stage assignment differed between the coders, the deviation was never more than one stage (see Figure 6-1).  Yet the discrepancy of stage assignment on 50 percent of the protocols, especially when there are only four possible stages to assign, seems very unsatisfactory.

FIGURE 6-1:  SCATTERGRAM SHOWING RELATIONSHIP BETWEEN
STAGE ASSIGNMENTS FOR RATER A AND RATER B

| STAGE ASSIGNMENTS FOR RATER B'S SCORING | Elemental | Situational | Patterned | Transformational |
|---|---|---|---|---|
| Transformational | | | | ‖ |
| Patterned | | ｜ | ｜ | ｜ |
| Situational | ｜ | | ‖ | |
| Elemental | ‖ | | | |

STAGE ASSIGNMENTS FOR RATER A'S SCORING

This low degree of agreement between coders on stage assignments is somewhat paradoxical, considering the satisfactory reliability on the presence or absence of symbols used in the total protocol (84 percent). Given this satisfactory reliability figure on the presence/absence of symbols, and given the fact that stage assignments between raters never varied beyond one stage, it may be that the source of the error is in the stage assignment rule. For example, a protocol with only two symbols in the Patterned Stage present would not be scored at the Patterned Stage, but a protocol with three different Patterned Stage symbols would be assigned to the Patterned Stage. A symbol only has to be used once in an entire protocol to be counted as present. Given the unreliability of scoring, it is possible for one coder to include an extra symbol, resulting in a different stage assignment. In other words, the stage assignment rule is extremely sensitive to the presence of symbols that are relatively unreliably coded. Conversely, the degree of agreement on stage assignments should increase when the symbols are more reliably codeable.

In general, the evaluations of coder agreement suggest that the current scoring methodology--including the Preliminary Symbol Scoring Manual and the stage assignment rule--is not sufficiently reliable. Thus, the next steps in developing the scoring methodology are to identify the sources that decrease agreement between coders and to make corrections in these areas.

One obvious solution is to refine and clarify the definitions and criteria of symbols in the Preliminary Scoring Manual, especially those symbols on which coders most often disagree. But given the complexity

of the manual thus far, further specification of the symbol definitions may only increase the complexity of the manual for its users, hence potentially decrease coder reliability even further.

A second possible solution is to modify the quantitative aspects of the scoring methodology. For example, the "presence" of a symbol in a protocol could be redefined as two, three, four or any number of occurrences of the symbol in the protocol, instead of just one occurrence. Also, the stage assignment rule could be changed by altering the number of symbols necessary to assign a protocol to a stage, or by using a "profile" system (Kohlberg, 1970) or "ogive" system (Loevinger, 1970) to assign stages. But these quantitative manipulations will not in themselves increase coder reliability. The coding process relies primarily on the coders' judgments on the <u>qualitative</u> characteristics of the protocols. This will not be changed by merely manipulating the sums, differences and ratios or these characteristics. Also, increasing the number of symbols required to constitute "presence" will confound stage scoring with verbosity or length of response, because the length of one's response correlates with the tendency to use a symbol more frequently. Quantitative manipulations may also be theoretically inconsistent. For example, the existence of mental operations (comparable to the characteristics denoted by the symbols) is determined by the fact that one is <u>able</u> to perform those operations, not by how <u>frequently</u> one actually performs them. These reasons make this solution somewhat unacceptable.

Still another solution is to revise the format or procedure for coding. For example, instead of scoring for the characteristics

(symbols) first, then assigning stages on the basis of these characteristics; this procedure can be reversed, i.e. first identify the stage, then justify the assignment by finding a number of appropriate stage characteristics. The symbols are indicators of the stages that are broader than the sum of the individual symbols. In contrast to the "molecular" symbols, the stages are "molar" descriptions. It may be possible and more reliable for coders to search for these molar characteristics in protocols, e.g. does the individual generalize experience across two or more situations (Patterned)? Or, is only this one event discussed (Situational)? Once a tentative stage assignment has been made, the coder could justify it by finding several stage related symbols. Molar coding would have the advantage of simplicity and speed, making it more accessible for teachers. At present, the best way to increase the objectivity of the molecular (symbol) scoring (a necessary prerequisite for molar coding) seems to be to have two or more people score every protocol, then resolve differences in their coding through careful discussion. This is what was done in determining the symbol and stage scoring among the 72 protocols analyzed in this study.

### Validity Studies

We conducted a preliminary assessment of construct validity by applying the Guttman Scaling Technique (1950) to the symbols in the Preliminary Scoring Manual. Also, we compared the assigned stage scores on the ER protocols to individuals' ego level and chronological age. These evaluations are reported in this section.

1.  <u>The Guttman Scaling Technique</u>.  In the Preliminary Scoring Manual,
each symbol represented a hypothesized developmental characteristic.
Having defined the symbols, we needed to ascertain whether or not the
symbols actually formed a developmental sequence.  The Guttman
Scaling Technique appeared to be an appropriate method for this purpose:

> ...the basic notion of the Guttman or cumulative
> scale is that an internal relationship exists
> among the items forming the scale such that a person
> who endorses or agrees with an item of a given
> scale position will endorse all items below it
> on the scale.  If it is known that a person
> endorsed three items of a four-item scale, it is
> also known which three items he endorsed.  Likewise,
> all individuals endorsing only three items will
> endorse the same three.  Thus it is possible to
> order individuals into relative categories or
> positions defined by the position of the items
> endorsed.  (Dotson & Summers, 1970)

We anticipated that this technique would yield (1) a hierarchical
ordering of the symbols used in scoring the protocols; and (2) a
hierarchical ordering of the protocols according to which symbols
occurred in scoring them.  If the symbols and protocols scaled in a
hierarchical order, this would be an indication that the symbols
in the Preliminary Scoring Manual were developmental in nature, i.e.,
consistent with the assumption in structural-developmental theory
that stages are hierarchical and integrate acquisitions of the
previous stage.  Of course, other criteria would also need to be met
before the symbols can be judged as signs of structural development.[2]

---

2.  These criteria include:  (a) the symbols form a culturally-invariant
sequence; (b) that they are relatively stable over time; (c) that
they represent operations which can be organized into structural wholes.

TABLE 6-2: ORDERS OF SYMBOLS AND PROTOCOLS ON
THE GUTTMAN SCALING TECHNIQUE



Row labels (top to bottom): 43, 3+3A, 1A, 13, 6B, 2A, 7, 23, 18 A+B, 8, 9A, 16B, 20, 22A, 9B, 16A, 18C, 40, 35, 42A+B, 22B+C, 39A, 1B+2B, 24A+B, 25, 37, 5D, 39B, 6C, 5B, 36A, 44, 46, 9D, 9C

Row group labels (right side): ELEMENTAL, SITUATIONAL, PATTERNED, TRANSFORMATIONAL

Column group labels (bottom): ELEMENTAL, SITUATIONAL, PATTERNED, TRANSFORMATIONAL

But the hierarchical sequencing of symbols resulting from a technique such as the Guttman scale is a preliminary indicator of structural development.

The first step in scaling the symbols was to chart the presence or absence of each symbol for each protocol. The presence of a symbol for a protocol was equated to "endorsement of an item" and absence of a symbol was equated to "non-endorsement of an item" on the Guttman technique. Then the rank orders of the symbols and the protocols were both manipulated with the aim of achieving an order such that protocols endorsing the progressively more difficult items (i.e. symbols ordered higher on the scale) also endorsed all previous items (i.e. symbols ordered lower on the scale). Figure 6-2 summarizes the results of the Guttman scaling procedure.

Twelve symbols in the Preliminary Scoring Manual did not scale in hierarchical order among all other symbols. We interpreted these 12 non-scaling symbols to be not developmentally relevant, and did not consider them further in this phase of analysis. The remaining symbols that did scale were further examined. Some separate symbols which scaled very closely and which were conceptually similar were combined into one symbol (e.g. S.24 A-One possibility and S.24 B-Many possibilities were combined into "Possibilities"). Also the symbols were analyzed in their rank order for similarities and internal relationships to each other. From this scrutiny, we derived the current four stage description outlined in the previous chapter.

From observing the sequence of symbols, we arrived inductively

**FIGURE 6-3: ORDER OF PROTOCOLS ACCORDING TO STAGE ASSIGNMENT RULE**



Table — At least 3 different symbols in: Elemental / Situational / Patterned / Transformational

**ELEMENTAL / SITUATIONAL panel**

| Protocol ID No. | Elemental | Situational | Patterned | Transformational |
|---|---|---|---|---|
| 0220405 (2) | − | | | |
| 0330703 (A) | − | | | |
| 0220408 (2) | − | | | |
| 0310207 (2) | − | | | |
| 0330703 (A) | + | | | |
| 0320214 (2) | + | | | |
| 0220409 (2) | + | | | |
| 0341021 (A) | + | | | |
| 0341016 (2) | + | | | |
| 0341018 (A) | + | | | |
| 0220406 (2) | + | | | |
| 0410804 (2) | + | | | |
| 0411205 (4½) | + | | | |
| 0411110 (2) | + | | | |
| 0411203 (4½) | + | + | | |
| 0410906 (4½) | + | + | | |
| 0341012 (3) | + | + | | |
| 0411308 (4½) | + | + | | |
| 0220401 (4½) | + | + | | |
| 0341004 (4) | + | + | | |
| 0210305 (A) | + | + | | |
| 0341024 (4½) | + | + | | |
| 0210101 (4½) | + | + | | |
| 0410001 (4½) | + | + | | |
| 0210208 (4) | + | + | | |
| 0231106 (4½) | + | + | | |
| 0231110 (4½) | + | + | | |
| 0210201 (3) | + | + | | |
| 0210201 (4½) | + | + | | |
| 0231101 (3) | + | + | | |
| 0341019 (4½) | + | + | | |
| 0341010 (4½) | + | + | | |
| 0341005 (4½) | + | + | | |
| 0220407 (2) | − | + | + | |
| 0341015 (4) | + | + | + | |
| 0210106 (4) | + | + | + | |

**PATTERNED / TRANSFORMATIONAL panel**

| Protocol ID No. | Elemental | Situational | Patterned | Transformational |
|---|---|---|---|---|
| 0210401 (4½) | + | + | + | |
| 0210512 (4½) | + | + | + | |
| 0341017 (3) | + | + | + | |
| 0210107 (4½) | + | + | + | |
| 0410809 (3) | + | + | + | |
| 0411202 (3) | + | + | + | |
| 0210102 (4½) | + | + | + | |
| 0210301 (4) | + | + | + | |
| 0210304 (4½) | + | + | + | |
| 0210505 (5) | + | + | + | |
| 0210506 (5) | + | + | + | |
| 0210302 (4½) | + | + | + | |
| 0210520 (4½) | + | + | + | |
| 0411011 (4) | + | + | + | |
| 0210211 (4) | + | + | + | |
| 0341006 (3) | + | + | + | |
| 0210303 (3) | + | + | + | |
| 0210507 (4) | + | + | + | |
| 0210402 (4) | + | + | + | |
| 0210206 (5) | + | + | + | |
| 0210513 (4½) | + | + | − | + |
| 0210306 (4½) | + | + | + | + |
| 0211703 (4½) | + | + | + | + |
| 0210105 (4) | + | + | − | + |
| 0211705 (5) | + | + | + | + |
| 0210502 (4) | + | + | + | + |
| 0210713 (5) | + | + | + | + |
| 0210404 (4½) | + | + | + | + |
| 0341001 (3) | + | + | + | + |
| 0411207 (3) | + | + | − | + |
| 0210108 (5) | + | + | − | + |
| 0210202 (4) | + | + | + | + |
| 0210504 (4½) | + | + | + | + |
| 0210707 (4½) | + | + | + | + |
| 0210515 (4½) | + | + | + | + |
| 0210508 (5) | + | + | + | + |

at a rule for assigning an overall stage score to protocols: Assign

a protocol to the highest stage in which at least three symbols occur.

For example, to apply this rule, if a protocol contains five symbols

in the Elemental Stage, six symbols in Situational, four in Patterned

and one in Transformational, this protocol would be assigned to the

Patterned Stage, because the Patterned Stage is the highest stage in

which this protocol has at least three symbols.[3]   This rule was

adopted for the purpose of analyzing the sequence of the four stages.

It does not represent our final stage assignment rule.

In essence, the stage assignment rule reduces the number of items

on the scale to four, i.e. three symbols defining the endorsement

(or presence) of each stage. Figure 6-3 shows the protocols rank-

ordered into four stages by the stage assignment rule. It is possible

to compute the errors on the scale by counting the number of non-endorsed

stage positions below the assigned stage on each of the protocols.

By identifying and tabulating these scaling errors, the degree of

scalability of the stages can be computed. The "degree of scalability"

is one way of estimating the internal consistency among the items on

the scale. Guttman (1950) has proposed the coefficient of reproducibility,

$(1 - \frac{\text{total placement of error}}{\text{respondents x items}})$, as a method of estimating degree of

internal consistency or scalability. He somewhat arbitrarily set a

---

3. According to this rule, a protocol need not contain three symbols
in lower stages to be assigned a higher stage, although this is rare.
For example, if a protocol had only two symbols at the Elemental Stage,
but five at Situational and three at Patterned, it would be assigned
to the Patterned Stage. But protocols like this are discrepancies,
in the sence that the hierarchical order of the symbols is violated.

minimum of .90 as necessary for assuming scalability. According to this standard, the amount of error tolerated is not to exceed 10 percent. Applying this formula yields a coefficient of reproducibility of .97 for the sequence of stages. Thus, the error factor in the scale ordered by the stage-assignment rule is within the 10 percent range tolerable. Menzel (1953) has proposed another method for estimating the degree of scalability, which he calls "coefficient of scalability," $(1 - \frac{Errors}{Maximum\ Errors})$. By this formula, the coefficient of scalability for the sequence of stages is .84. This figure is above the level of acceptability (.60) suggested by Menzel.

Both the coefficient of scalability and the coefficient of reproducibility imply that given only the stage assignment of a protocol, one can predict that three or more symbols were present in the assigned stage and in all previous stages. In general, this suggests that the symbols in the Preliminary Scoring Manual, rank-ordered into the four stages, represent a hierarchical sequence. This heirarchical sequence is one indicator that the symbols in the manual are developmental in nature.

2. Ego Level. Since the concept of ego development is closely related to the self-knowledge construct (See Chapter II), we expected ego level would be moderately highly correlated with stage assignment on the ER. A high positive correlation is almost guaranteed when using these 72 protocols because the symbols in these protocols were developed in part to reflect the developmental changes in ego level (See Chapter III).

Therefore, the present comparison of stage scores and ego levels,
whatever the results, must be cross-validated.

To test the hypothesis of positive correlation, the stage scores
were plotted against ego levels. The scattergram (Figure 6-4) suggests
a generally positive relationship between the two vaiables. The
degree of relationship between ego levels and stages assigned can
be determined by computing Pearson's coefficient of correlation.

FIGURE 6-4:  SCATTERGRAM SHOWING RELATIONSHIP BETWEEN
ASSIGNED STAGE SCORES ON EXPERIENCE
RECALL TEST AND EGO LEVELS

ASSIGNED STAGES FOR EXPERIENCE RECALL TEST

| | I-2 | Δ | Δ/3 | I-3 | I3/4 | I4 | I4/5 | I5–I-6 |
|---|---|---|---|---|---|---|---|---|
| Transformational | | | | ‖ ② | ⦀ ③ | ⦀ ③ | ⃒⃒⃒⃒ ④ | ⃒⃒⃒⃒ ④ |
| Patterned | | ‖ ② | ‖ ② | 卅 ⑤ | | 卅 ⦀ ⑥ | 卅 ⑤ | ⦀ ③ |
| Situational | | ‖ ② | 卅 ⦀ ⑧ | ‖ ② | 卅 ⑤ | ⃒ ① | ⃒ ① | |
| Elemental | 卅 卅 ⑩ | ⦀ ③ | | | | ⃒ ① | | |

EGO LEVELS SCORES

By this computation, the correlation is +.73. This figure indicates
that the present scoring methodology is yielding stage scores for the
ER which are developmental in ways parallel to the sentence completion
test for ego levels. However, one's confidence in this "high"
correlation should be tempered by the fact that the ego level scores
of protocols used in constructing the manual were always known
and often considered in deciding on manual rules and symbol definitions.

In the other direction, the correlation is not high enough to suggest that one's ego level and stage assignment on the ER measure precisely the same concept, i.e. there appears to be about 50 percent common variance.

3. <u>Age.</u> How is chronological age related to assigned stages on the ER protocols? Compared to ego level, we believed that age would be a less reliable indicator of stage assignment on the ER test. Theoretically, one cannot achieve a higher developmental stage without having achieved all previous stages. Thus, younger subjects are more likely to be at lower stages, and one would expect few, if any, children at the higher stages. However, advancement in chronological age does not automatically mean advancement in developmental stage. Probably, stage advancement can be retarded or stopped at any age. Hence, one would expect that an adult may be assigned to any of the four stages. To evaluate these speculations, we computed the degree of relationship between assigned stage scores and age on the analyzed protocols. Using Pearson's coefficient of correlation, a value of +.47 is derived. This figure denotes a moderate positive correlation between age and stage assignment on the ER protocols. It is consistent with the theoretical relationship between developmental stages and chronological age, namely that younger subjects tend to be at lower stages and older subjects at higher stages. Hence, this relationship between age and assigned stages is another partial indicator that the current scoring methodology is yielding stage assignments that reflect development. In contrast with ego level, age was not considered in the creation of symbols or stages. Thus this correlation was not "built into" the derivation of the stages and symbols.

In general, the three evaluations of the validity suggest that the sequence of stage characteristics (the symbols) and the sequence of stages are consistent with the theoretical definition of structural development. The Guttman Analysis indicates that the sequence of symbols and stages are hierarchical in nature, and the relationship of assigned stages to age and to ego level suggest consistency with these two concurrent indicators of development. But further expansion, revision and evaluation of the scoring methodology is required, and additional construct validity tests must be done before we can determine more definitively whether the identified characteristics of people's self-knowledge theories reflect structural-development.

C H A P T E R   V I I

REVIEW, RECOMMENDATIONS AND CONCLUSION

The six previous chapters have described an attempt to identify
characteristics of developmental stages in people's theories about
themselves. To what extent have these stage characteristics been
adequately and accurately defined? What value is there is this work?
And, what next steps should be taken? This chapter addresses these
questions by critically reviewing the present study, drawing some
general conclusions and making recommendations for continued efforts.

In the first section, the derivation of the current version of
self-knowledge stage characteristics is summarized. In the next
section the research to date is evaluated against technical standards
for educational and psychological tests and specific recommendations
emerge. And, in the final section, this study is viewed from a broad
perspective that asks, "Does this work contribute to solving the
original generic problems in psychological education?"

## Derivation of the Stages of Self-Knowledge Theories

The assumptions of the structural-developmental perspective
provided the basis for the search for stages of self-knowledge theories
(or verbalized conceptualizations of experience). For the
structural-developmentalists, notably Piaget, Kohlberg, and Loevinger,
development consists of an invariant sequence of reorganizations of mental
life. These re-organizations or stages are hierarchical integrations
(i.e. are more complex, yet more integrated than the previous stages);
they involve distinct, qualitative changes; they are relatively stable

over time and they form a sequence that is, in principle, culturally universal.

Initially, stage characteristics of self-knowledge theories were deduced from Piaget's theory of cognitive development, Kohlberg's theory of moral reasoning development, Loevinger et.al.'s theory of ego development and Van den Deale's theory of ego-ideal development. From these four theories, we hypothesized the characteristics of three broad stages of self-knowledge theories, (1) Pre-operational, (2) Concrete Operational, and (3) Formal Operational. From the outset, there was a dialogue between theory and empirical data. To test and correct the theoretically-defined stages, we created an instrument that elicited samples of individuals' self-knowledge theories (the Experience Recall Test). We ordered the responses to this test according to the ego level (measured by Loevinger, et.al.'s Sentence Completion Test (1970) for ego development) of the person who produced the response, and searched for a progression of charac- teristics in these responses to the ER that might reflect structural- developmental changes. The Preliminary Scoring Manual (Appendix B) contains the definitions of these characteristics. Using the Guttman Scaling Technique, we found that 41 of these characteristics appeared to be hierarchical in nature. After examining this sequence of characteristics, we inductively arrived at four clusters or stages of self-knowledge theories. Statistical examination of these stages revealed that (1) the reliability of scoring protocols for these stages and their characteristics is only moderately high; (2) the four stages form a developmental sequence as judged by the statistical

measures of scalability and reproducibility on the Guttman Scale; (3) the stage scores correlate highly with ego level, as they would, given the derivation method; and (4) the stage scores correlate moderately highly with age, as was predicted.

Two obvious next steps are called for. These steps include: (1) cross-validation of these findings using a second matched sample of 80 protocols, and (2) an integration or mutual re-interpretation of the theoretically-derived stages and the empirically-derived stages. The first step is underway at the time of this writing, but is beyond the limits of this report. The comparison of the theoretically-derived and empirically-derived stages is discussed here. The following questions guided this step of the inquiry: First, to what extent do the theoretical and empirical stage characteristics agree with each other? Second, to what extent do they contradict each other? And third, in what ways do the theoretically-derived version of the stages and the empirically-derived version of the stages illuminate gaps in the other?

1. <u>Correspondence between the empirical and theoretical versions</u>. In general, there is a one-to-one correspondence in the early stages between both versions of the stages. For the later stages, the stage named "formal operational" in the theoretical version seemed to encompass part of the Patterned Stage and all of the Transformational Stage in the empirical version. Table 7-1 shows this overlapping relationship between the two versions.

Examples of correspnding characteristics between the Pre-operational and the Elemental Stages and between the Concrete Operational and the

TABLE 7-1:   COMPARISON OF THEORETICALLY DERIVED STAGES
TO EMPIRICALLY DERIVED STAGES

| Theoretically-derived Stages | Empirically-derived Stages |
|---|---|
| Preoperational | Elemental |
| Concrete Operational | Situational |
| Formal Operational | Patterned |
| | Transformational |

Situational are placed adjacent to one another in the following outline:

| These Pre-Operational Stage Characteristics | ...Correspond to... | These Elemental Stage Characteristics |
|---|---|---|

Pre-operational thinking is limited to single, concrete, obvious, immediate instances or aspects of reality. (p. 84)

Only discrete, "visible" aspects of a single event (i.e. the elements) are described. (p. 112)

What integration there is occurs as the juxtaposition of a specific antecedent, response and consequence in a specific instance. Although these three elements are differentiated, they are not causally related by the child. "And" and "because" are used to mean "and." There are no true (self-knowledge) hypotheses at this stage. (p. 85)

These elements may be related to each other by serial ordering or by juxtaposing them, but no causal connections between them are stated. Hence no explanations or hypotheses about one's experiences are reported at this stage. (p. 112)

...dreams, names thoughts and feelings are substantiated as quasi-tangible entities assumed to be visible to others. (p. 86)

Emotional states are not named as such, but feelings can be described in psychological terms. (p. 122)

| These Concrete Operational Stage Characteristics | ...Correspond to... | These Situational Stage Characteristics |
|---|---|---|

The child is able to classify (or cite) two or more concrete instances as members of the same set of antecedents, responses or consequences. (p. 90)

Individuals appear to have a gestalt of a single situation composed of causally connected elements... The discrete elements, which were described separately in the Elemental stage, are now organized into one or more coherent units or situations. (p. 113)

The child understands that internal states (sensations, feelings, thoughts) are not visible to others. Conversely the child is aware that other people have non-visible feelings. (p. 90)

Unlike the physical or physiological description of feelings in the Elemental stage, emotional states in the Situational stage are described as invisible and internal. The emotional states named may be of oneself or of others. (p. 124)

The concrete operational person is aware of reciprocal or cooperative actions necessary and appropriate to achieve a desired result or relationship. (p. 93)

MUTUAL ACTIONS (S.22A), or behaviors involving two persons acting upon each other, may also be mentioned in Situational stage responses. (p. 125)

Besides echoing Situational stage characteristics, the Concrete Operational stage also seemed to parallel several characteristics in the Patterned stage. For example,

> ...in later concrete operational reasoning, internal
> states in oneself and others become more highly
> differentiated...e.g., a deepening interest in
> interpersonal relations. Moreover, interactions
> are described in terms of feelings or traits rather
> than in purely behavioral terms...the concrete oper-
> ational person describes interpersonal interaction
> in terms of differentiated feelings, motives or
> traits (Loevinger, et. al., 1970, p. 68) (p. 91)

These same characteristics (namely, personality traits (S.39A); interpersonal relationship traits (S.22B and S.22C); etc), though using slightly different terminology, fell into the Patterned stage in the empirically-derived version of the stages.

Other characteristics in the Patterned stage match directly with characteristics that describe Formal Operational thinking. For example, propositional thinking, i.e. the ability to reason about the "possible" or "hypothetical" as opposed to the "real" or "actual" is a central feature of the Formal Operational stage. This is mirrored in the Patterned stage by characteristics such as "hypothetical if-then state-ments" (S.25) and descriptions of possibilities (S.24A and S.24B). Similarly, most characteristics in the theoretically-derived Formal Operational stage are consistent with characteristics in the empirically-derived Patterned stage. Another example of this match is that in the Formal Operational stage,

> Inner reactions to past and future situations have a
> more intense and larger holding power. They infuse
> or cloud one's reactions to an immediately experienced
> situation...It involves the capacity to have reactions
> independent of immediately experienced concrete situations.
> (pp. 104-105)

This corresponds to "descriptions of an event at the Patterned stage that include departures from the time frame of the event itself. That is, there is often mention of continuation of actions or conditions (S.42A and S.42B) prior to or since the event being described." (p. 127)

In short, some characteristics in the Patterned stage match characteristics in the Concrete Operational stage, while other characteristics in that stage (Patterned) match characteristics of the Formal Operational stage.

The characteristics of the final empirically-derived stage, Transformational, are consistent with characteristics of the Formal Operational stage. For example, in the formal operational stage, "one can have hypotheses about the way one hypothesizes, propositions about one's propositions, and in general characterize one's experiences in terms of the characteristic procedures one uses to make sense of the world, one's relationships and place in it." (p. 107) This description mirrors descriptions of the Transformational stage such as the following:

> At this stage, one is aware of THOUGHT PROCEDURES (S.6C).
> One's own thinking is often described as involving
> interrelated conscious mental acts. Responses usually
> imply that there are steps or procedures in one's
> thinking, or that there is an inter-relationship
> among the ideas or thoughts. (p. 129)

In summary, the empirically-derived stage characteristics closely paralleled the theoretically-derived stages. This overall consistency between the two versions of the stages seems to suggest that the empirically-derived stages (Elemental, Situational, Patterned and Transformational), some of whose characteristics were conceived intuitively, are generally theoretically supportable. Conversely, the theoretical version of the stages, which was deduced from previous

investigations, tends to be further confirmed by the set of character-
istics derived inductively by analyzing the ER protocols.

In the parts where the two versions of the stages do not correspond
directly to each other, each version seems to complement each other.
For example, let us consider the Patterned stage, which straddles two
of the theoretically derived stages, i.e. it is partially parallel to
concrete operations and partially parallel to formal operations (See
Figure 7-1). This may be interpreted as a mismatch. But examining
this further, the distinction in the theoretical version of the stages
between concrete operational and formal operational informs us of
possible differentiations within the Patterned stage. That is, there
may be at least two sub-stages of the Patterned stage, or there may be
two separate stages within what is now defined as the Patterned stage.
Using the concrete-formal distinction to illuminate the definition of
the Patterned stage, one may arrive at the following hypothetical
reformulation:

> The next stage beyond Situational becomes
> evident when the individual can describe or generalize
> from experiences involving several different situations.
> Patterns in one's actual or past experiences are named
> and described. These patterns include roles, personality
> traits (including behavioral, emotional or thought
> patterns), and interpersonal relationship characteristics.
> In this stage (or sub-stage), the patterns described are
> those actually experienced in the past or present, i.e.
> "real." Patterns in the future are usually described
> as linear extensions of these actual patterns.

> In the next stage (or substage), the advent of
> formal thought enables the individual to consider
> patterns which are "possible," unexperienced or in
> the more distant future. Individuals in this stage
> (or sub-stage) are no longer bound to consider only
> the patterns that were "real," or experienced in the
> past or present. Hypothetico-deductive reasoning;
> propositional thinking and combinatorial analysis can now
> be observed in individuals' descriptions and explanations
> of possible variations in their patterns.

Of course, further analysis and clarification is necessary to complete and verify this potential redefinition of the Patterned stage. This does, however, illustrate how the misalignment of stages in the theoretical version and the empirical version could be used to clarify and differentiate stages. In the other direction, differentiating the Patterned stage into two separate stages (or sub-stages) may be a false or unsupportable distinction. This, however, is an empirical question that can be clarified given more data.

In a similar manner, the distinction between the Patterned and the Transformational stages suggests a differentiation within the theoretically-derived Formal Operational stage. It is possible that the recognition of the dynamics of changing patterns (of thought, emotions and behaviors) are signs of another stage (or sub-stage) beyond (or within) the Formal Operational stage. But again, further data is required to demonstrate the validity of this distinction.

Thus, given the overall consistency and potential areas of distinction resulting from the comparison of the two versions of the stages, the following next steps are recommended for research:

1. The characteristics that differentiate Concrete Operational and Formal Operational self-knowledge should be identified more specifically, and hypothesized as characteristics differentiating two stages or sub-stages within the Patterned stage. New data should be obtained for these characteristics; and these characteristics should be evaluated to determine whether the differentiation into two stages or sub-stages should be made.

2.  The distinction between the Patterned and the Transformational stages should be closely monitered with additional data that may support the potential distinction of the Formal Operational stage into two stages or sub-stages.

3.  Similarly, the distinction between the Situational and the Patterned (first phase) stages, which suggests a differentiation of the Concrete Operational stage into two sub-stages (see Table 7-1), should be further validated with new data.

2.  Contradictions between the theoretical and empirical stage descriptions. Another aspect of comparing the theoretically-derived stages and the empirically-derived stages was to ascertain to what extent the two versions of the stage characterizations contradict each other.

The stage characteristics of the two versions, as described above, seem to parallel each other, and in a general sense, are not contradictory. However, the examples given to illustrate the parallel characteristics are often non-parallel and seem contradictory.

For example, in the theoretically-derived stage description of Formal Operations, the following example is used to show descriptions containing several alternative viewpoints about the same experience. "I was frightened and really turned off, but somehow strongly attracted (p. 102)." The characteristic (alternative viewpoints about the same experience) is consistent with the ability to the Transformational stage to describe one's own thought procedures (S.6C). However, using the Preliminary Symbol Scoring Manual to score the above example, no characteristics (symbols) in the Transformational stage are evident. There are three situation-specific emotional stages ((1) "frightened,"

(2) "really turned off," and (3) "somehow strongly attracted") scored
S.9A and a logical connection, "but," scored S.16B (Despite/Although).
These characteristics fall within the Situational stage and not the
Transformational stage.

Another illustration: In the Concrete Operational stage the
following two examples are given to show the judgment of oneself in
terms of one's conformity to an authority figure or proper rule:

> "If my mother gives me advice, I take it because
> she is always right."

> "Education is very important for everyone." (p. 92)

When scored by the Manual, characteristics beyond the Concrete
Operational stage (or the parallel Situational stage) are evident in
these examples. Specifically, the first statement contains a hypo-
thetical if-then proposition (S.25), a characteristic of the Patterned
stage. The second statement contains an abstract construct ("Education")
scored S.46 and possibly an indication of its meaning or inner
significance ("is very important for everyone") scored S.44. Both
characteristics (S.44 and S.46) empirically occurred only in the
Transformational stage.

Despite the fact that characteristics between the theoretical
and the empirical version of the stages are parallel, some examples
that illustrate the theoretical version of the stages seem to be
misplaced when the empirically-derived definitions and criteria are
applied to these examples. Thus, these examples are classified in
one stage in the theoretical version and in a different, non-parallel
stage in the empirical version. The misclassification of examples
between the two versions of the stages requires further examination

and analysis, specifically:

1. Search for and identify the sources or causes of the discrepancies in the example. For instance, it may be that the descriptions of the stage characteristics (in either version) are too broad, such that examples can be interpreted to exemplify the characteristics of several stages.

2. Revisions or refinements should be made for the examples placed in non-parallel stages. These revisions involve one or both of the following types of changes:

> (a) Replacing or deleting the problematic examples.
>
> (b) Redefining or refining the descriptions and definitions of the stage characteristics that involve the problematic examples.

3. <u>Gaps in the theoretical and empirical stage descriptions</u>. The misplacement of some examples illustrating stage characteristics seems to be the only inconsistency between the theoretical and empirical versions of the stages. There are, however, some gaps in the empirical version of the stage characteristics suggested by the theoretical version. And, reciprocally, there are some reinterpretations of the theoretical version suggested by the empirically-derived stage characteristics.

One of the areas characterized in the theoretically-derived version, but absent in the empirically derived version is how "good and bad" are described. For example, in the Pre-operational stage, "good and bad are determined by, and after the response of other people, usually adults; and the pleasure-pain effects on the person." (p. 86) In the Concrete Operational stage, conformity to a system of rules governs the

determination of good and bad. In the Formal Operational stage, good and bad are not absolute, but often dependent on the perspective or viewpoint taken in making the judgment. However, this dimension of how people judge good and bad is not present anywhere in the empirically-derived stage characteristics, and is relevant to the dimension of how value is assigned to one's experiences.

The theoretically-derived version also includes another type of characterization, which is absent in the empirically-derived version. These are the characterizations described in logico-mathematical terms. For example, in the Concrete Operational stage, two simultaneous aspects of a directly experienced situation can be related by logical compensations including: (1) transitive combinativity; (2) associativity; (3) tautological identity; (4) numerical iteration; and (5) reversibility (p. 89). In the Formal Operational stage, hypothetical and propositional thinking enables individuals to describe experiences in terms of (1) correlational relationships; (2) notions of probability; and (3) proportional reasoning (pp. 105-106). These logico-mathematical characterizations do not appear in the empirical version of the stages. This mathematical way of characterizing the stages seems relevant to how people explain their experiences.

In short, the theoretical version of the stages contains two kinds of characterizations which are relevant to two major dimensions of self-knowledge theories, but which are absent in the current empirically-derived version of the stages: (1) descriptions of how people judge good and bad, relevant to the value assignment dimension of self-knowledge theories; and (2) descriptions in logico-mathematical terms, relevant to the explanation

of experience dimension. The absence of these relevant types of characterization suggests that the next steps in research should be to search the ER protocols for each of these dimensions, then evaluate, whether these characteristics fall into a developmental order. Fortunately, the last half of the ER protocols, which have not been analyzed to date, contain responses to questions particularly relevant to these two dimensions.

In the other direction, what gaps in the theoretical version of the stages are suggested by the empirically-derived stage characteristics? In general, the empricially-derived version identifies characteristics of people's statements in terms of precise definitions and criteria (in the Scoring Manual, Appendix B). The aim in developing these descriptions was to leave as little as possible to inference or varying interpretations. In contrast, many of the characteristics in the theoretically-derived version are stated broadly, hence allowing varying and conflicting interpretations. For example, let us consider the statement, "I am sad." Given the theoretical version of the stages, this statement may be classified in the Pre-operational stage, as an example of a global, simplistic or dichotimous description of oneself (p. 86). But, it may also be placed in the Concrete Operational stage, because it is a description of an internal state (i.e. a feeling or emotion) that is non-visible to others (p. 90). On the other hand, in terms of the definitions of characteristics in the empirical version of the stages, the above statement would definitely be scored as a situation-specific emotional state (S.9A), a characteristic in the Situational stage. Thus, compared to the theoretical version, the empirically-derived stage

characteristics are clearer and less ambiguous in their descriptions
and definitions. This format of deriving stage characteristics using
precise definitions and criteria is instructive in fleshing out and
amplifying the theoretically-derived stage characteristics.

There is another area in which the empirical version of the stages
illuminates the theoretical version. This involves the distinction in
the theoretical version between antecedents, responses, and consequences.
This distinction is not in the empirically-derived stage descriptions.
When this distinction is made, it appears to be irrelevant and confusing
in terms of people's actual experience descriptions. Many people, for
example, do not conceive of their experiences in terms of antecedents,
responses and consequences. For other individuals, antecedents, responses
and consequences are inter-related or interchangeable: one aspect of an
experience is simultaneously a response to something, an antecedent
to something else, and a consequence of still another aspect of the
experience. Given these examples, defining what are the antecedents,
responses and consequences of individuals' experience can easily distort
the meaning of their descriptions. The empirical version of the stages
seems to have sufficiently characterized responses without using the
antecedent-response-consequence distinction. This suggests that such
a distinction may not be necessary, and that these seemingly inappropriate
categories of antecedents, responses and consequences should be deleted
from the theoretical version of the stage characteristics.

In summary, there are two areas in which the empirical version
of the stages suggest revisions in the theoretical version. These
revisions involve: (1) increasing the degree of specificity in defining

the stage characteristics and (2) deleting the distinction between antecedents, responses and consequences in the stage descriptions.

* * *

In this review, we have summarized the derivation of the theoretically-derived version and the emprically derived version of the stage characteristics of self-knowledge theories. The two versions of the stages were compared to each other for similarities, contradictions and gaps or revisions that one version suggests for the other. These revisions and specific recommendations for next steps were also outlined. Eventually, these revisions and reformulations will lead to a consolidation and synthesis between the two versions of the stages. This synthesized version of the stages will involve new or revised characteristics and definitions, and possibly a revived or alternative method of scoring ER protocols. Of course, new data will be required to demonstrate the validity of this synthesized version of the stages. In the next section, the current status of this research is evaluated against technical standards for educational and psychological tests. Even though the ER test is not complete and final, it will be helpful to know how adequate our work is to date and what further needs to be done.

### Review Of The Study Using Technical Criteria For Tests

Since this study involves the construction of a psychological test, it is possible to assess its administration, scoring, interpretation, reliability and validity, using the American Psychological Association's Standards for Educational and Psychological Tests and Manuals (1966).

The Experience Recall test was designed to assess the stages of one's self-knowledge theories (or one's verbalized conceptualizations of experience). The rationale, characteristics and limitations of the ER are detailed earlier in this report (Chapter III). Thus far, the ER is the only measuring device available for determining an individual's stage of self-knowledge theories, and the ER was the measuring device used for collecting data to derive the empirical version of the stages (Chapter V).

Currently, the ER is primarily for research use, however the aim is to make it eventually practical for educational diagnosis and evaluation. Given these intentions, we can judge to what degree we have sufficiently standardized and validated the ER test and the stages derived from it. To do this, we examine the administration and scoring of the test and review the various aspects of its reliability and validity.

1. Administration of the Experience Recall Test. There are two formats for administering the ER: one involves written responses and the other involves oral responses. The instructions on both forms are almost exactly the same (see Appendix B). But there are slight variations between forms in the instructions and questions to adjust for age differences in the subjects tested. Also, the oral form can only be administered in an individual interview (one-to-one) format, whereas the written form may be administered to groups or individually. The administration of either form of the ER is not time-consuming—it can be completed within one hour. Very little training is required to learn to administer the ER. These factors make the ER quite practical for classroom use and for research purposes.

Each form of the ER seems sufficiently standardized separately. But, there has been no formal evaluation of the equivalency between the oral form and the written form. A future study should be conducted to evaluate and establish this "equivalent form reliability."

2. <u>Scoring of the ER test</u>. Thus far, there is only one method for scoring the ER test; this method is described in previous chapters and in the Preliminary Symbol Scoring Manual (Appendix B). The scoring involves a sentence-by-sentence analysis of the responses, a procedure which is currently complex and elaborate. The same format for scoring is used for both written and oral response forms of the ER. At the present time, the scoring procedure probably is too complex and intricate to be useable on a widespread basis, and especially impractical for use by classroom teachers. The scoring method is incomplete until responses to the other questions can be scored.

This suggests that future steps need to be taken in developing a scoring procedure for other questions on the ER test and in simplifying the scoring procedure without sacrificing objectivity.

3. <u>Reliability</u>. Reliability refers to the accuracy (consistency and stability) of measurement by a test. There are five major types of reliability estimates that are relevant to this study. These include estimates of (a) temporal stability, (b) internal consistency, (c) intra-individual accuracy, (d) interrater agreement and (e) comparability between forms.

(a) <u>Temporal Stability</u>. Temporal stability estimates refer to how nearly constant the test scores are likely to be if the test is repeated after time has lapsed. Such an estimate would indicate the

degree to which test scores reflect actual characteristics of the individual rather than random fluctuations resulting from the testing session. For any test of normal developmental changes, an increase in scores is expected over time. Thus, "stability" is relative. We would expect stability of scores over periods of weeks or months, but probably not years. However, to date, no formal study has been conducted to estimate the temporal stability of the ER test. Measuring the stability of scores across time on the ER test is an essential next step in research, after the scoring system is complete and final.

(b) Internal Consistency. The estimate of internal consistency deals with the homogeneity of test items. Applied to the ER test, the internal consistency measure would estimate the degree to which each question assesses a single trait, namely the stage of one's self-knowledge theories.

At present, it is not possible to compute an estimate of internal consistency because a scoring procedure is available for only one of the items (i.e. Question A) on the ER test. This form of reliability will be relevant when the scoring methodology is complete for all of the questions (and dimensions).

(c) Intraindividual accuracy. The accuracy of an individual's score refers to the degree to which an individual's test score reflects that individual's true score. This is usually assessed using the standard error of measurement, that is, the standard deviation of an individual's score. For example, in terms of the ER test, suppose an individual scored at the Patterned atage. Without an estimate of the standard error of measurement, one does not know whether this is Patterned $\pm$

one stage, Patterned $\pm$ two stages, or Patterned $\pm$ one-half stage. This estimate would be attained by administering the ER test many times (parallel forms may be used) to an individual, and then computing the standard error of the individual's scores on these administrations.

Thus far, estimates of this form of reliability on the ER test scores have not been assessed. Given the tentative and preliminary status of the scoring methodology and the fact that there are only four possible stage scores, an estimate of standard error of measurement may not be meaningful at this time. However, as the stage characteristics and the scoring approach are developed and become more well-defined, an assessment of this form of reliability will become necessary.

(d) _Interrater Reliability_. Interrater reliability indicates the degree of agreement between independent scorers of the test responses. Several assessments of rater or coder reliability were conducted and are reported in Chapter VI. There was 72 percent agreement between two coders on sentence-by-sentence use of symbols in the manual, and 69 percent agreement when only scalable symbols are considered. There was 84 percent agreement on presence or absence of particular symbols over the entire response to Question A, but only 50 percent agreement on stage assignments.

Most of the percent agreement figures were below conventional standards of acceptability (80 percent). Also, these coder reliability estimates involved only two coders, and both coders had contributed substantially to the construction of the Preliminary Scoring Manual. It is thus not known to what degree other coders, less involved in the

Manual construction process, would be able to achieve agreement on their scoring.

Further work is thus required in obtaining more rater reliability estimates, especially with newly-trained raters. Also, the reliability scores themselves need to be considerably increased. This can be done (1) by revising and clarifying the definitions and criteria in the present scoring approach, (2) by creating a standardized, reliable training program for coders, or (3) developing an alternative approach to scoring.

(e) <u>Comparability of forms</u>. This type of reliability is concerned with the degree to which the scores on two forms of the same test are consistent. It is applicable to the ER test in two ways. First, there are two forms of the test, oral and written. The similarities and differences in the characteristics of the two forms are described in Chpater III, but no comparisons of test scores between forms has been conducted. Second, the current version allows individuals to choose their unforgetable experience. We do not know yet whether current recollections of a distant and near past experience yield the same stage scores, or whether stage scores for an individual would remain the same across several content areas. Thus, future studies that ascertain the means and variances between forms, and between types of experiences recalled are desirable.

4. <u>Validity</u>. Two types of validity information are pertinent in assessing the value of the ER test and the concept of measures: criterion-related validity and construct validity.

(a) <u>Criterion-related validity</u>. This form of validity is demonstrated by comparing test scores with one or more external variables

considered to provide a direct measure of the characteristic in question. We have argued that mental processes or operations cannot be measured directly. Verbal behaviors are the only known external variable or "output" that is related to these mental structural-developmental processes. We can thus correlate these verbal "outputs" (i.e. scores) on the ER test with other types of structural-developmental "outputs," e.g. scores on the ego development test (Loevinger, et. al., 1970), on the moral development test (Kohlberg, 1958) and on the ego-ideal development test (Van den Deale, 1968). There should be positive, moderately high correlations between the ER test scores and the other developmental test scores; positive because all of these tests are measures of structural development, but only moderately high because each test measures a somewhat different aspect of structural development.

Of these "concurrent validity" tests, we have correlated 72 ER test scores with ego development test scores. The Pearson coefficient of correlation was +.72. This unusually high correlation was due in part to the method of deriving the ER scoring manual, i.e. the ER tests were ordered on the basis of their ego development score. Cross-validation of these results on a matched sample of 80 subjects is a necessary next step (and is underway at the time of this writing). In addition, data from several populations that includes scores on other developmental tests need to be analyzed. In sum, at present we have completed the analysis of only minimal criterion-related validity data.

(b) <u>Construct validity</u>. This type of validity assesses the correspondence between theoretically hypothesized relationships and empirically measured manifestations of those relationships. For instance,

in this research, we assumed (or hypothesized) that the stages would be (1) hierarchical integrations, (2) invariant in sequence, (3) stable over relatively long periods of time, and (4) relatively culturally universal. The stages must have these characteristics if we are to believe they are indices or reflections of structural development. In addition, we speculated that at higher levels of self-knowledge development, the theories people construct about their experiences should be progressively more adequate, accurate, useful and economical. These hypotheses need to be assessed empirically.

Most fundamentally, the developmental stages of self-knowledge theories should be positively correlated with age. A 0-order correlation would contradict the notion that these stages are related to the natural development of human beings over time. In fact, in the analyzed sample of 72, the correlation with age was +.47.

There are several statistical procedures for determining whether the stages identified by the ER test are hierarchical. The Guttman Scaling Technique was used in this study. The figures for the coefficient of reproducibility (.97) and the coefficient of scalability (.84) indicate that the four stages identifiable by the ER test are hierarchical for the protocols analyzed. But the stage characteristics were derived from these protocols themselves, thus maximizing these coefficients. We are now cross-validating these results on a second sample of 80 protocols.

A strategy for assessing the cultural invariance of the stage sequence is to examine age trends in the stage scores among subjects in various cultures. Cross-cultural sequentiality would be indicated if there was a positive correlation between stage and age across the cultural groups

tested. Thus far, there have been no studies using the ER comparing various groups within or across cultures. Such studies comparing age trends across cultures are desirable as another construct validation approach in future research.

Data from longitudinal studies provide probably the "truest" indication of construct validity for the invariant sequence of stages and their relative stability. This approach consists of measuring the same individuals at different points over a period of time, e.g. over a 20 year period. Several critical aspects of development can be tested since emerging characteristics and changes can be assessed. The degree of stability of permanence of the stage characteristics can be ascertained. The invariance as well as the irreversibility of stages can be evaluated. Also, individual growth increments and patterns can be seen using longitudinal studies. Longitudinal studies using the ER have not been conducted thus far.

There are quicker less costly, but less definitive ways to assess invariant sequentiality. Specifically, experimental studies can be used. These studies may be done in several ways including, (1) experimentally inducing changes individuals' stage scores (cf. Turiel, 1966), and (2) assessing preference and comprehension for the type of thinking that characterizes each stage (cf. Rest, 1973; Rest, et. al.,1969). Both methods presume the following: If the stages form a fixed and invariant sequence, then subjects will be influenced more by reasoning (i.e. stage characteristics) one stage above their own dominant stage than by reasoning (i.e. stage characteristics) further above. And furthermore, they will tend to view reasoning at lower stages as incomplete or

inadequate. Such experimental studies need to be carefully designed
because of numerous potential competing variables and rival hypotheses.
(Cf. Campbell and Stanley, 1966). Nevertheless, these experimental
approaches can provide relevant data on construct validity. In
addition, experiments on inducing stage change have direct relevance
for the educational applicability of the self-knowledge stage
sequence. Thus, future studies involving this experimental approach
to contruct validity are recommended.

Determining construct validity for some aspects of the developmental
nature of the self-knowledge stages require logical and theoretical
analysis. Specifically, structural development involves qualitative
changes from one stage to the next. To determine whether stage changes
identified by the ER are qualitative, we could analyze the internal
logic and mode of thought characterizing each stage against criteria
such as consistency, logical validity and coherence; and then compare
each stage with the others for their relative adequacy, comprehensiveness,
range of convenience, differentiation and integration of prior stages.
In actuality, the four stages identifiable by the ER test intuitively
meet these qualitative criteria, but thus far a thorough and explicit
analysis has not been conducted. This must wait until the additional
stage dimensions are defined.

In brief, we have reviewed the ER test and the evaluations of it
in terms of their technical specifications. Table 7-2 summarizes the
status of our work in terms of these technical specifications, alongside
two other developmental theories. In general, the table indicates that

| CHARACTERISTIC | SELF-KNOWLEDGE | MORAL REASONING | EGO |
|---|---|---|---|
| Theoretical Derivation | Four structural developmental theories(Chapters I-IV) Historical Philosophical Review (Hopkins, 1974) | Western Philosophies (Kohlberg, 1958) Piagetian Theory (Piaget, 1932) | Psychological Theories (Loevinger 1966; 1969; Loevinger, et.al. 1970) |
| Method of Assessment | Experience Recall Test 2 forms (oral,written) (Appendix A) | The Moral Judgment Scale 9 Dilemmas;varied formats for administration | Sentence Completion Test Standard Forms for Men, Women, Girls & Boys. |
| Availability of Scoring | Preliminary Symbol Scoring Manual (Appendix B) | Standard Scoring Manual (Kohlberg, et.al.1973) | Scoring Manual for Women and Girls (Loevinger,et.al.,1970) Scoring Manual for Men and Boys:Pre-publication version (Redmore, et.al., 1974) |
| Workshop/ Course for Scoring Available | No | Yes | Yes |
| RELIABILITY STUDIES (1)Temporal stability | None | None | Test-retest correlations (Redmore and Waldman, 1974) |
| (2)Internal Consistency | None | None | Split-half correlations;Alpha coefficients(Redmore and Waldman, 1974). Eigan values and coeff-icient Alpha for principal component analysis(Loevinger, et.al.,1970) |
| (3)Intra-individual accur-acy(Standard error of measurement) | None | None | None |
| (4) Interrater Reliability | Sentence-by-Sentence Presence-Absence,& Stage assignment percent agreement(Chapter VI) | Product-movement correlations (Kohlberg,1958; Fodor, 1969; Fodor,1972;Haan, et.al., 1968 Keasey, 1971; Ruma and Mosher, 1967; Turiel, 1966) Interscorer percent agreement (Haan, et.al.,1968; Rest, Turiel and Kohlberg,1969; Saltzstein, et.al, 1972) | Percent agreement by items, Interrater correlation coefficient, Item inter-correlations, Percent agree-ment and correlations for total protocol ratings (Loevinger, et.al.,1970; Hoppe, 1972; Cox, 1973) |
| (5)Comparability of forms | None | None | None |
| VALIDITY STUDIES (a)Criterion-related validity | Correlations with ego levels(Chapter VI) | Political & Social activism compared with stages(Haan, et.al. 1968) Cheating behavior and helpfulness compared with stages (Schwartz,et.al.,1969) Guilt compared with stages (Ruma and Mosher, 1967) Delinquency compared with stages (Fodor,1969) Conformance compared with stages (Salzstein, 1972) | Helping behavior compared to ego levels(Cox,1973) Conformity behavior compared to ego levels(Hoppe, 1972) Role-taking compared with ego levels(Lamb, 1971) |
| (b)Construct Validity | Correlations with age (Chapter VI) Guttman Scaling Technique (Chapter VI) | Age trends in U.S. and Taiwan (Kohlberg, 1967) Age trends among children in U.S.,Mexico, Taiwan, Turkey and Yucatan(Kohlberg,1968) Quasi-simplex correlation (Kohlberg, 1958) Longitudinal(Kohlberg&Kramer,1969) Experimental attempt to induce stage change(Turiel,1966) Assessment of Preference and comprehension of stages(Rest, et.al., 1969; Rest, 1973) | Correlations with interview ratings(Loevinger, et.al.1970) Age Distributions on Total Protocol Ratings(Loevinger,et.al., 1970) Word count correlations with item ratings and total protocol ratings(Loevinger, et.al. 1970) Correlations with IQ (Loevinger, et.al.,1970) Effects of motivation training on ego levels(Coor,1970; Hidi, 1971) Fakability of sentence comple-tion test(Tate, 1970) |

the work on self-knowledge stages is sparse compared to research on moral resoning development and ego development. However, considering the relative infancy of our work (two years compared to 15 years of moral development research and nine years of ego development research), we seem to be progressing satisfactorily along this checklist of technical criteria.[1] Several characteristics of the ER test and the self-knowledge stages are already adequate for their eventual intended uses in research and education. These characteristics include the following:

1. There is a consistent theoretical foundation for the stages and their characteristics (i.e. the structural-developmental theories).

2. Instructions for each form of the test, oral and written, are explicit such that the administration of the test is sufficiently standardized.

3. The administration of the test is not time-consuming, requires little training, is economical and is relevant to a wide age range; hence practical.

4. Although the scoring of the test is currently not sufficiently reliable (between coders), the stage characteristics have been defined

---

1. In a recent critique of the research on moral reasoning (Kurtines and Greif, 1974), several problems and omissions in Kohlberg's approach have been pointed out. These problems include: (1) inconsistencies in the derivation, administration and scoring of the Moral Judgment Scale; (2) lack of evidence for the reliability and validity of the test; and (3) absence of direct evidence for the basic assumptions of the theory. The work on the ER test seems to have avoided these errors and inconsistencies thus far.

clearly enough to serve as a general guide for identifying the stages.

5. There are preliminary indications of the construct validity of the stage sequence. Specifically these include correlations with chronological age and ego level; hierarchical ordering on the Guttman Scaling Technique; and overall consistency with the theoretically-derived version of the stages, hypothesized from other developmental theories.

Further work is recommended in the following areas to increase our confidence in the viability, validity and value of the ER test and the associated theory of self-knowledge in education.

1. Develop a scoring procedure for Questions B through E on the ER test.

2. Revise the scoring procedure to increase interrater reliability. The scoring procedure should also be simplified without sacrificing objectivity.

3. Conduct reliability estimates for temporal stability of the instrument, internal consistency, and standard error of measurement.

4. Assess the comparability between the oral form and the written form of the ER, and between content-specified and open-ended versions of the ER test.

5. Cross-validate the stage sequence and stage characteristics using another sample population. Correlations of ER stage scores with ego level and with age; and satisfactory scaling on the Guttman tests are necessary for this cross-validation study.

6. Compare age-stage trends among individuals in various populations and across different cultures using the ER test.

7. Conduct longitudinal studies using the ER test.

8. Use the ER in experimental studies, such as those that involve inducing changes in an individual's stage scores or assessing comprehension and preference for thinking that characterizes each stage.

9. Conduct further logical and theoretical analysis for qualitative differences among stages.

10. Identify other external variables (behaviors) that seem to provide a direct measure of self-knowledge stages, and conduct further criterion-related validity studies using the ER test.

## Concluding Discussion

The growing field of psychological education has important implications for the deliberate development of human beings. Since most of the present goals of psychological education are not based on a systematic theoretical and empirical foundation, they are operationally confusing, difficult to evaluate and questionable in their educational and ethical value. To solve these problems, we sought, in this study, to lay theoretical and empirical cornerstones for psychological education goals. The structural-developmental perspective offers an appropriate theoretical frame for that grounding. With our confidence staked in this prospect, we suggested that "self-knowledge" was the common unifying concern among the courses and goals in psychological education. Then we created a working definition for the construct, "self-knowledge". Using this working definition as a guideline, we constructed both the Experience Recall test and the preliminary scoring methodology. With the ER test, one can elicit individuals' descriptions of their

experiences, their value assignments to those experiences and their explanations of the experiences, i.e. a sample of the theories they hold about their experiences. The Preliminary Scoring Manual allows one to identify characteristics of developmental stages in people's responses on that test in a specific, empirically verifiable and fairly reliable manner.

Having completed these steps, we may ask, "Are we now any closer to solving the generic problems of psychological education?" That is, to what extent does this investigation enable us now to define psychological education goals that are: (1) operationally clear, (2) more open to evaluation and assessment, (3) educationally valuable, and (4) ethically justifiable?

To address these questions, we need to imagine that the self-knowledge stage characteristics identified in this study were translated into psychological education goals.

Would the goals be operationally clear? Probably so. The stage characteristics defined by the Preliminary Scoring Manual have very specific definitions. These characteristics are observable: Given virtually any verbal (i.e. oral or written) statement, a person familiar with the manual can determine whether or not a particular characteristic described in the scoring manual is evident in that statement. If the specificity and clarity of these stage characteristics were preserved in translating them into psychological education goals, then one would expect the goals to also reflect that specificity and clarity. Compared to present psychological education goals, the goals derived from our stage characteristics would be less misleading, because there

would be less confusion about their operational meanings. As a result, educators would probably be able to derive consistent curriculum objectives and lesson plans from these operationally clear goals. Also, assuming that the developmental order of the identified stage characteristics is valid, curricular sequencing of psychological education goals becomes possible for the first time. The sequence of stages could be used for deciding which goals should precede or follow which other goals; teachers would have a systematic way to decide whether a lesson is appropriate for the seven-year old or for the seventeen-year old.[2]

Can goals derived from self-knowledge stage characteristics be assessed? If psychological education goals are derived directly from the stage characteristics identified in this study, the problem of assessment or evaluation of the goals would be minimal, because the Experience Recall test measures the presence of these characteristics. The administration of the ER is feasible for most classroom purposes and it is adequately standardized. There is preliminary indication that the scores on the test are relatively reliable and valid, although more work is required to increase its reliability and validity. It appears that the ER test will eventually enable educators to evaluate their programs systematically; hence providing them with useful feedback to improve their effectiveness.

---

2. An initial attempt to translate the stage characteristics into curriculum objectives has occurred and is encouraging. The summary report of this effort is presented in Appendix C.

Would the goals derived from the stage characteristics be less questionable than present goals in terms of their educational value? One way that the educational value of goals can be judged is to ascertain whether the achievement of the goals is relatively permanent; i.e. Are the abilities or characteristics retained once they are learned? By definition, developmental stages and their characteristics are cumulative and irreversible. Theoretically, once they are acquired, it is difficult to lose or "forget" these stage-related characteristics or abilities. Thus, characteristics or abilities that are developmental in nature would constitute worthy educational goals. In this study, we have identified several stages and their characteristics, which appear to be developmental according to preliminary validity indicators. If psychological education goals were derived from these developmental characteristics, then it is likely that the goals themselves would be developmental in nature. And therefore, aiming for these goals would probably be educationally valuable: Achieving them would probably consistute relatively permanent and stable learnings. This would be a major improvement over present psychological education goals which largely involve characteristics that are transient and not retainable (See Chapter I).

Another way to judge the educational value of goals is to examine what actual behavioral difference the achievement of the goals make. Do certain stage characteristics of self-knowledge enable individuals to engage in more self-enhancing rather than self-destructive behaviors, to cope with stress situations more adequately or to solve problems more effectively? If so, these desirable behavioral by-products may

substantiate the educational value of goals that were derived from self-knowledge stage characteristics. At present however, this criterion-related validity research has not been completed. Thus, it is not known what actual behaviors people with particular self-knowledge characteristics would be able to perform.

Would the goals be ethically justifiable? In this study, we have avoided judgments about the relative worth of the self-knowledge stage characteristics. There is a tendency to see the higher stages as "better" than the earlier stages. This is a distortion. Although the stage sequence was assumed to be an order of increasing complexity, comprehensiveness and adequacy, this does not imply that it is an order of increasing worthiness or value. At this point the stage characteristics and their order are intended to be descriptive only, and are not meant to contain other prescriptive values. The function of education in expanding a given stage or fostering stage advancement must be determined by democratic debate based on more empirical evidence.

Let us return to the general question, "Are we any closer to solving the generic problems of psychological education?" From our present perspective, the answer seems to be yes. Thus far, the structural-developmental perspective has been fruitful in providing a theoretical and empirical base for psychological education. With further work on this base, the goals derived from the self-knowledge stages promise to be operationally clear, assessible, educationally worthy and ethically viable. In time, these goals may transform psychological education into a prime catalyst for developing and nurturing human beings toward

clarified ideals that we now describe vaguely as "fully integrated, supremely healthy, ultimately capable persons."

B I B L I O G R A P H Y

BIBLIOGRAPHY

Alschuler, A.S., Developing Achievement Motivation in Adolescents: Education for Human Growth. Englewood Cliffs,N.J.: Education Technology, 1973.

Alschuler, A.S. Psychological education. Journal of Humanistic Psychology, 1969 (Spring), 1-9.

Alschuler, A.S. Tabor, D., and McIntyre, J. Teaching achievement motivation: theory and practice in psychological education. Middletown, Conn.: Education Ventures, 1970.

Alschuler, A. and Weinstein, G., Self-Knowledge Project Working Paper#1: Developmental Self-Knowledge--A Humanistic Education Goal. Unpublished paper, University of Massachusetts, 1973.

Alschuler,A., Weinstein, G., and Evans, J., Self-Knowledge Project Working Paper #3: Toward a theory of self-knowledge. Unpublished paper, University of Massachusetts, 1974.

American Psychological Association, Standards for Educational and Psychological Tests and Manuals, Washington, D.C.: American Psychological Association, Inc., 1966.

Assagioli, R. Psychosynthesis. New York: Hobbs, Dorman, 1965.

Atkinson, J.W., Ed., Motives in Fantasy, Action and Society Princeton, N.J.: Van Nostrand, 1958.

Ausubel, D., and Sullivan, E. Theory and Problems of Child Development. New York: Grune and Stratton, 1970.

Bach, G.R. and Wyden, P. The Intimate Enemy: How to Fight Fair in Love and Marriage. New York: Avon Books, 1970.

Back, K.W. Beyond Words: The Story of Sensitivity Training and the Encounter Movement, Baltimore, Md: Penguin, 1972.

Baldwin, J.M. Fundamental Logic: Vol.I Thought and Things. New York: Macmillan, 1906.

Baldwin, J.M. Experimental Logic: Vol.II Thought and Things. New York: Macmillan, 1908.

Baldwin, J.M. Genetic Epistemology: Vol. III Thought and Things. New York: Macmillan, 1911.

Beilen, H., Kagan, J. and Rabinowitz, R. Effects of verbal and perceptual training on water level representation. Child Development, 1966, 37(2), 317-328.

Bindrim, P. Facilitating peak experiences. In H. Otto and J. Mann (Ed.)., Ways of Growth, New York: Grossman Publishers, 1968.

Brown, G. Human teaching for human learning. New York: Viking Press, 1971

Buhler, C., Keith-Spiegel, P., and Thomas, K., Developmental Psychology, In B. Wolman (Ed.) Handbook of General Psychology, Englewood Cliffs, N.J.: Prentice-Hall, 1973, pp. 861-917.

Butler, J.M., and Haigh, G.V. Changes in the relation between self-concept and ideal concepts subsequent upon client-centered counseling. In Rogers, C. and Dymond, R. (Ed.), Psychotherapy and personality change. Chicago: University of Chicago Press, 1954, pp. 55-75.

Cann, Richard W. Critique of the Personal Orientation Inventory. In O.K. Buros (Ed.), The Seventh Mental Measurements Yearbook, Highland Park, N.J.: Gryphon Press, 1972, Vol.I.

Campbell, J. and Dunnette, M. Effectiveness of t-group experience in managerial training and development. Psychological Bulletin, 1968, (August), 73-104.

Campbell, D.T. and Stanley, J.C. Experimental and quasi-experimental designs for research. Chicago: Rand McNally, 1966.

Carlson, R. Sex differences in ego functioning: Exploratory studies of agency and communion. Journal of Consulting Clinical Psychology, 1971, 37, (2), 267-277.

Coleman, J.S. Equality of educational opportunity. Washington, D.C. United States Office of Education, OE 38001, 1966.

Coopersmith, S. The antecedents of self-esteem, San Francisco: W.H. Freeman, 1967.

Coor, I.F. The effects of grade level and motivation training on ego development. Unpublished doctoral dissertation, Washington University, 1970.

Cox, L.N. Ego development and helping behavior. Unpublished doctoral dissertation, Washington University, 1973.

deCharms, R. Personal causation. New York: Academic Press, 1968

deCharms, R. "Origins, pawns and educational practice." In Lesser, G. (Ed.), Psychology and the educational process. Evanston, Ill.: Scott Foresman, 1969.

deMille, R. Put your mother on the ceiling. New York: Walker, 1967.

Dewey, J. Experience and education. New York: Collier, 1963 (originally written in 1938).

Dewey, J., and Tufts, J.H. Ethics, New York: Holt, 1908.

Dotson, L.E. and Summers, G.F. Elaboration of the Guttman scaling technique., In G.E. Summers (Ed.), Attitude Measurement, Chicago: Rand McNally, 1970. pp. 203-213.

Enelow, G. Inner beauty, outer youth. New York: Information, 1969.

Evans, J.L. Self-Knowledge Project Working Paper #6: Sampling and Data Analysis Methods, Unpublished Paper, University of Massachusetts, 1974.

Fantini, M. and Weinstein, G. Toward humanistic education New York: Praeger, 1970.

Flanagan, J.C. The critical incident technique. Psychological Bulletin, 1954, 131, 4(July), 327-347.

Flavell, J.H. The developmental psychology of Jean Piaget. New York: Van Nostrand, 1963.

Fodor, E.M. Moral judgment in Negro and White adolescents. Journal of Social Psychology. 1969, 79, 289-295.

Fodor, E.M. Delinquency and susceptibility to social influence among adolescence as a function of moral development. Journal of Social Psychology. 1972, 86, 257-260.

Furst, B. The practical way to a better memory. Greenwich, Conn.: Fawcett Publishers, 1960.

Gordon, T. Parent effectiveness training. New York: Peter H. Wyden, Inc., 1970.

Gordon, W.J. Synectics: the development of creative capacity. New York: Harper and Row, 1961.

Gough, H.C. and Heilbrun, A.B. The adjective check list manual.
    Palo Alto, Calif.: Consulting Psychologists Press, 1965.

Gruen, G.E. Experiences affecting the development of number conservation
    in children. Child Development, 1965, 36, (4) 963-979.

Gunther, B. Sense relaxation: below your mind. New York: Collier Books,
    1968.

Gunther, B. What to do until the Messiah comes. New York: Collier
    Books, 1970.

Guttman, L. The Cornell Technique for Scale and intensity analysis.
    Educational and Psychological Measurement, 1947, 7, 247-280.

Guttman, L. A basis for scaling qualitative data. American Socio-
    logical Review, 1944, 9, 139-150.

Guttman, L. The basis for scalogram analysis, In S.A. Stouffer, et.al.,
    Measurement and Prediction. Princeton, N.J.: Princeton University
    Press, 1950, pp. 60-90.

Haan, N., Smith, M.B., & Block, J. Moral reasoning of young
    adults: Political-social behavior, family background, and
    personality correlates. Journal of Personality and Social
    Psychology. 1968, 10, 183-201.

Henry, W.E. The Analysis of Fantasy: The Thematic Apperception
    Technique in the Study of Personality, New York: John Wiley and
    Sons Inc., 1956.

Harvey, O.J., Hunt, D.E. and Schroder, H.M. Conceptual Systems and
    Personality Organization. New York: Wiley, 1961.

Hidi, S.E. Ego development and motivation, Unpublished masters'
    thesis, University of Toronto, 1971.

Hopkins, G. From Descartes to Developmental theory: A consideration
    of the definitional evolution of "self-knowledge." Self-
    Knowledge Education Project Working Paper #5, University of
    Massachusetts, 1974.

Hoppe, C.F. Ego development and conformity behaviors. Unpublished
    doctoral dissertation, Washington University, 1972.

Inhelder, B. & Piaget, J. The early growth of logic in the child.
    Rantledge & Kegan Paul: London, 1964.

Inhelder, B. & Piaget, J. The growth of logical thinking from childhood to adolescence. Basic Books: New York, 1958.

Isaacs, K.S. Relatability, a proposed construct and an approach to its validation. Unpublished doctoral dissertation, University of Chicago, 1956.

Ivey, A. The intentional individual: A process outcome of behavioral psychology. Counseling Psychologist, 1969, 1, 59-60.

Ivey, A. Microcounseling: innovations in interviewing training. Springfield, Ill.: Charles C. Thomas, 1971.

Ivey, A. and Rollen, S. A behavioral objectives curriculum in human relations: A commitment to intentionality. Journal of Teacher Education, 1972, 23, 161-165.

Jackins, H. The human side of human beings. Seattle: Rational Island Publishers, 1965.

Jacobson, E. You must relax. New York: McGraw-Hill 1962.

James, W. Principles of psychology. New York: Holt, 1890.

Jaspers, K. Philosophy and the world; selected essays and lectures. Translated by E.B. Ashton, Chicago: Renery, 1963.

Jung, C.G. A study in the process of individuation. In The archtypes and the collective unconscious. Princeton, N.J.: Princeton University Press, 1959

Kagan, J. American longitudinal research on psychological development. Child Development, 1964, 35, 1-32.

Katz, R. and Kolb, D. Outward Bound and education for personal growth. Mimeo. Sloan School of Management, M.I.T., Cambridge, Mass., 1968.

Keasey, C.B. Social participation as a factor in the moral development of preadolescents. Developmental Psychology, 1971, 5, 216-220

Kessen, W. Research designs in the study of developmental problems. In P.H. Mussen (Ed.), Handbook of research method in child development, New York: John Wiley, 1960.

Kohlberg, L. The development of modes of moral thinking and choice in the years ten to sixteen. Unpublished doctoral dissertation, University of Chicago, 1958.

Kohlberg, L. The development of children's orientation towards a
    moral order: I: sequence in the development of moral thought.
    Vita Humana, 1963, 6, 11-33.

Kohlberg, L. Development of moral character and ideology. In M.L.
    Hoffman (Ed.). Review of Child Development Research, Vol I
    New York: Russell Sage Foundation, 1964., pp. 383-431

Kohlberg, L. "Moral education in the schools: a developmental view."
    The School Review, 1964, 74, (1) pp. 1-30

Kohlberg, L. Moral and religious education and the public schools:
    A developmental view. In T.R. Sizer (Ed.), The role of religion
    in public education. Boston: Houghton Mifflin, 1967.

Kohlberg, L. The child as a moral philosopher. Psychology Today,
    1968, 7, 25-30

Kohlberg, L. Stage and sequence: The cognitive-developmental approach
    to socialization. In D. Goslin (Ed.), Handbook of Socialization
    Theory and Research. New York: Rand McNally, 1969.

Kohlberg, L. and DeVries, R. Relations between Piaget and psychometric
    assessments of intelligence. In C. Lavatelli (Ed.) The natural
    curriculum. Urbana, Ill.: E.R.I.C., 1971.

Kohlberg, L. and Kramer, R. Continuities and discontinuities in
    childhood and adult moral development. Human Development,
    1969, 12, 93-120.

Kohlberg, L. LaCrosse, R., and Ricks, D. The predicatability of adult
    mental health from childhood behavior. In B. Wolman (Ed.),
    Handbook of child psychopathology. New York: McGraw-Hill, 1971.

Kohlberg, L. and Mayer, R., "Development as the aim of education."
    Harvard Educational Review, November 1972, 42 (4), 449-496.

Kohlberg, L. and Staff. Standard Scoring Manual. Cambridge, Mass.:
    Laboratory of Human Development, Harvard University, 1973.

Kohlberg, L. and Turiel, E. Moral development and moral education.
    In G. Lesser (Ed.), Psychology and Educational Practice.
    Chicago: Scott Foresman, 1971.

Kohlberg, L. and Turiel E. (Eds.) Recent research in moral development.
    New York: Holt, Rinehart and Winston, 1973

Kurtines, W. and Grief, E.B., The Development of Moral Thought:
    Review and evaluation of Kohlberg's approach. Psychological
    Bulletin, 1974, 81, (8), 453-470.

Lamb, N.J. The relation of role-taking to ego development. Unpublished doctoral dissertation, Washington University, 1971.

Langer, J. Theories of development. New York: Holt, Rinehart and Winston, 1969.

Lieberman, M.A., Yalom, I.D., and Miles, M.B. Encounter groups: first facts. New York: Basic Books, 1973.

Likert, R. A technique for the measurement of attitudes. Archives of Psychology, 1932, 22, 1-55.

Loevinger, J. Objective tests as measurements of psychological theories. Psychological Reports (Monograph Supplement 9) 1957, 3, 634-694.

Loevinger, J. The meaning and measurement of ego development. American Psychologist, 1966, 21, 195-206.

Loevinger, J. Theories of ego development. In L. Breger (Ed.) Clinical-Cognitive Psychology: Models and Integrations. Englewood Cliffs, N.J.: Prentice-Hall, 1969. pp. 83-135.

Loevinger, J., Wessler, R., and Redmore, C. Measuring ego development. San Francisco: Jossey-Bass, 1970., Vol I-II.

Lowen, A. Love and orgasm. New York: MacMillan, 1965.

Lowen, A. The betrayal of the body. New York: Macmillan, 1967.

Lunzer, E.S. "Problems of formal reasoning in test situations." Memographs of the society for teacher in child development. Vol. 30 (series #100) 1965. pp. 19-46.

Maslow, A.H. A theory of human motivation. Psychological Review, 1943, 50, 370-396.

Maslow, A. Toward a psychology of being. Princeton, N.J.: D. Van Nostrand, 1968.

Massialas, B. and Zevin, J. Creative encounters in the classroom: teaching and learning through discovery. New York: John Wiley and Sons, 1967.

McClellan, D.C. (Ed.), Studies in motivation. New York: Appleton-Century-Crofts, 1955.

McClelland, D.C. Achievement motivation can be developed. Harvard Business Review, 1965, 43, (July-August) 6-8.

Menzel, H. A new coefficient for scalogram analysis. Public Opinion Quarterly, 1953, (Summer) 268-280.

Miner, J.B. Miner Sentence Completion Scale, New York: Springer Publishing, 1964.

Parsons, T. The school class as a social system: some of its functions in American society. Harvard Education Review, 1959 29, (4), 297-318.

Pervin, L.A. and Lilly, R.S. Social desirability and self ratings on the semantic differential. Educational and Psychological Measurement, 1967, 27, 845-853.

Piaget, J. The moral judgment of the child. London: Routledge & Kegan Paul, 1932.

Piaget J. The psychology of intelligence. Littlefield & Adams: Peterson, N.J., 1960.

Piaget, J. Six psychological studies. New York: Random House, 1967.

Piaget, J. Structuralism. New York: Harper and Row, 1970.

Pinard and Laurendeau, M. A scale of mental development based on the theory of Piaget: Description of a project. Journal of Research in Science Teaching, 1964, 2, 253-260.

Proskauer, M. Breathing therapy. In H. Otto and J. Mann (Eds.), Ways of Growth, New York: Grossman Publishers, 1968.

Raths, L. Harmin, M. and Simon, S. Values and teaching. Columbus, Ohio: Charles E. Merrill, 1966.

Redmore, C. and Waldman, K., Reliability of a sentence completion measure of ego development. Unpublished paper, St. Louis, Mo.: Washington University, 1974.

Reich, W. The discovery of the orgone. Vol 1, the function of the orgasm. New York: Orgone Institute Press, 1942.

Rest, J. Comprehension preference and spontaneous usage in moral judgment. In L. Kohlberg and E. Turiel (Eds). Recent research in moral development. New York: Holt, Rinehart and Winston, 1973.

Rest, J.R. The hierarchical nature of moral judgment: A study of patterns of comprehension and preference of moral stages. _Journal of Personality_, 1973, _41_, 86–109.

Rest, J., Turiel, E., & Kohlberg, L., Level of moral development as a determinant of preference and comprehension of moral judgments made by others. _Journal of Personality_, 1969, _41_, 86–109.

Rorschach, H. (trans. P. Lemkau and B. Kronenburg) _Psychodiagnosis: A diagnostic test based on Perception_, Berne: Huber, 1942.

Rosenberg, M. _Society and the adolescent self-image_. Princeton, N.J.: Princeton University Press, 1965.

Roth, D.M. _The famous Roth memory course_. Cleveland: Ralston Publishing, 1952.

Rotter, J.B. and Rafferty, J.E., _Manual for the Rotter Incomplete Sentences Blank, College Form_, New York: Psychological Corporation, 1950.

Ruma, E.H. & Mosher, D.L. Relationship between moral judgment and guilt in delinquent boys. _Journal of Abnormal Psychology_, 1967, _72_, 122–127.

Saltzstein, H.D., Diamond, R.M., & Belenky, M. Moral judgement level and conformity behavior. _Developmental Psychology_, 1972, _7_, 327–336.

Satir, V. _Conjoint family therapy_. Palo Alto, Calif.: Science and Behavior Books, 1967.

Scheff, T. Reevaluation counseling: social implications. _Journal of Humanistic Psychology_, _12_ (Spring 1972) p. 1–13.

Schwartz, M. and Tangri, S.S. A note on self-concept as insulator against delinquency, _American Sociological Review_, 1965, _30_, 922–926.

Schwartz, S.H., Feldman, K.A., Brown, M.E., & Heingartner, A. Some personality correlates of conduct in two situations of moral conflict. _Journal of Personality_, 1969, _37_, 41–57.

Secord, P.F. and Jourard, S.M. The appraisal of body-cathexis: Body cathexis and the self, _Journal of Consulting Psychology_, 1953, _17_, 343–347.

Shea, D. and Jackson, K. "Motivation training for teachers," Unpublished paper, Department of Sociology, Washington University, 1970.

Shostrom, E.L. _Personal Orientation Inventory_, San Diego, Calif.: Educational and Industrial Testing Service, 1968.

Sigel, I.E., Roeper, A. and Hooper, F.H. A training procedure for acquisition of Piaget's conservation of quantity: a pilot study and its replication. British Journal of Educational Psychology, 1966, 36, 301-311.

Simon, S.B., Howe, L.W. and Kirschenbaum, H., Values Clarification: A handbook of practical strategies for students and teachers, New York, Hart, 1972.

Smeldslund, J. The acquisition of conservation of substance and weight in children. Scandanavian Journal of Psychology, 1961, 2, 71-87.

Sprinthall, N.A. Learning psychology by doing psychology: A high school curriculum in the psychology of counseling. Report #1, Minneapolis, Minn.: Minneapolis Public Schools, 1973.

Sprinthall, N.A. and Mosher, R.L. Psychological education in secondary schools: A program to promote individual and human development. American Psychologist, 25 (October, 1970), 9-1-924.

Stewart, J.S. Values development education. East Lansing, Mich.: Michigan State University, 1973.

Sullivan, H.S. The Interpersonal Theory of Psychiatry. New York: Norton, 1953.

Tamashiro, R. Self-Knowledge Project Working Paper #7: Developing Self-Knowledge Elicitors, Unpublished paper, University of Massachusetts, 1974.

Tamashiro, R. Self-Knowledge Project Working Paper #7A: The Unforgetable Experience Recall Test, Unpublished paper, University of Massachusetts, 1974.

Tamashiro, R. Self-Knowledge Project Working Paper #9: The Development of Affective Dispositions in Loevinger's Theory: Challenge for S.K. Theory, Unpublished paper, University of Massachusetts, 1974.

Tart, C. (Ed.), Altered states of consciousness. New York: John Wiley and Sons, 1969.

Tate, R.L. Fakability of the Washington University Sentence Completion Test for measuring ego development. Unpublished master's thesis, Washington University, 1970.

Turiel, E. An experimental test of the sequentiality of developmental stages in the child's moral judgements. Journal of Personality and Social Psychology, 1966, 3, 611-618.

Van den Deale, L. A developmental study of the ego-ideal, <u>Genetic Psychology Monographs</u>, 1968, <u>78</u>, 191-256.

Van den Deale, L. Preschool intervention with social learning. <u>Journal of Negro Education</u>, <u>39</u>, (Fall 1970), 296-304.

Weinstein, G. The trumpet: A guide to humanistic psychological curriculum, <u>Theory Into Practice</u>, 1971, <u>10</u>(3), 196-203.

Weinstein, G., Hardin, J. and Tamashiro, R. Education of the Self: An approach to self-science education at the college level. Unpublished paper, University of Massachusetts, 1973.

Wolman, B.B. (Ed.) <u>Handbook of General Psychology</u>, Englewood Cliffs, N.J.: Prentice Hall, 1973.

Wylie, R. <u>The self-concept: A critical survey of pertinent research literature</u>. Lincoln, Neb.: University of Nebraska, 1961.

A P P E N D I X   A :

INSTRUCTIONS AND FORMS FOR ADMINISTERING

THE EXPERIENCE RECALL TEST

## UNFORGETABLE EXPERIENCE RECALL (ORAL FORM)

### (For 3rd, 4th & 5th graders in school settings)

Go to the classroom personally and pick up the child. Talk with the child while walking to test site. Talk about self or child; establish common connection or base: e.g. "I used to be a teacher of 3rd graders." or "I am a student also." "Nice day for playing outside..." Interviewer should have an attitude of AUTHENTIC CURIOSITY about the child. Ask and talk about favorite after-school activities, favorite school subjects, sports, etc.)

## INSTRUCTIONS

(SEAT CHILD)

We're working on a project trying to find out how different people think about themselves. And so we're asking different age people to help us out—like we're talking with some kids and some grown-ups. We picked you because we're really curious to know how kids like you, think about yourself. I'd like you to help me by answering some questions I have about some things you remember. (PAUSE FOR THE CHILD'S ACKNOWLEDGEMENT) Just to make it fair, you can ask me anything you want to after I'm finished. (PAUSE FOR THE CHILD'S ACKNOWLEDGEMENT)

First, I'll ask you to close your eyes and I'll talk to you to help you remember. Then I'll ask you to open your eyes to answer some questions. I'm gonna use a tape recorder, so I can listen to you and not have to write everything down. Are there any questions before we begin?

For the first part of this interview, it's best if you get in a comfortable and relaxed position in your seat. You might want to sit or lie on the floor. Go ahead and get as comfortable and relaxed as you can. Okay? Close your eyes. Let your whole body relax, from your head to your toes (5). Take a couple of deep breaths, breathing out any tightness (8). Now breathe normally (5). Notice your thoughts for a minute (6). And now let them go (2).

Now I want you to follow my voice and begin to picture yourself and the things that happened in your life. I'm going to ask you to think back and remember your life and your experiences. I'll ask you to remember what you

did and remember the things that happened to you....We'll start with yesterday and we'll go back as far as you can recall (2). First, picture yourself yesterday (1 (ALLOW FOR CHILD'S ACKNOWLEDGEMENT DURING EACH TEN SECOND PAUSE) Last Saturday (10). Last summer (OR NAME A SEASON) (10) When you were in the second grade (10). When you were in kindergarten (10). And when you were a little boy/girl (10).

I want you to find one thing that happened in your life, something you won't every forget; some experience that is somehow important to you (10). There might be several of these times that you can think of, but pick one that you could think about now (20).

Now, I want you to remember that experience as much as you can. First picture the place where you were. What did it look like, and who was there? (8) (ALLOW FOR CHILD'S ACKNOWLEDGEMENT DURING EACH PAUSE) Can you picture what you looked like, like how big you were, and what you were wearing? (8) Now, see if you can remember exactly what happened. What did you do and say? What did other people do and say? (10) Can you remember any of your thoughts, or what you were saying to yourself? (8) What were you feeling then? (8) What do you imagine the other people were feeling and thinking (8). Can you remember what led up to this experience? (8) And what happened because of all that? (8)

Go ahead and finish the scene/event in your mind. Take your time (3) and when you are ready, at your own pace, you may come back to this room and open your eyes.

- - - - - - - - - - - -

Now, I'll ask you some questions and I'd like you to answer them as fully as you can. Take as much time as you need to, and I will not ask another question until you tell me that you are finished. This is the part I'll tape. (TURN ON THE TAPE RECORDER)

1. First, could you tell me as much as you can about what you just remembered?

    PROBE: IS THERE ANYTHING ELSE YOU WANT TO SAY ABOUT WHAT YOU REMEMBERED?

2. When this happened, was it special or important to you, then? Could you

    tell me how?

3. Now that you're thinking about it, how is it special to you now?

4. Now that you've thought about it, does this remind you of some things

    you know about yourself? Could you tell me?

    PROBE: ARE THERE SOME THINGS YOU KNOW ABOUT YOURSELF THAT YOU COULD TELL ME?

5. Does knowing this help you out in anyway?

    PROBE: DOES IT HELP YOU GET ANYTHING YOU WANT? OR ANYTHING YOU DON'T WANT?

ALTERNATE QUESTION TO #5

    Did that time you remembered help you out in anyway?

    PROBE: DID IT HELP YOU GET ANYTHING YOU WANT? OR ANYTHING YOU DIDN'T WANT?

## UNFORGETABLE EXPERIENCE RECALL

The following instructions are to be read aloud to an individual or in a group setting. The numbers in brackets following some of the sentences and phrases indicate the number of seconds the reader should wait before reading the next sentence. The written answer sheets should be handed out before the instructions are given.

### INSTRUCTIONS

We are involved in a project which is trying to find out how different people know about themselves. There are two parts to this exercise. First, I will have you close your eyes and help you remember an important experience in your life. Then, I'll ask you to open your eyes and answer some questions. The questions you have in front of you are the only ones we want you to answer. Read it over, so you'll know what they are, and so you understand them. Your answers will be kept in strict confidence and no one except the project staff will see your responses with your name on it. Are there any questions before we begin?

For the first part of this exercise it is best if you get in a comfortable and relaxed position in your seat. You might want to sit or lie on the floor. Go ahead and get as comfortable and relaxed as you can. Okay? Close your eyes and let your whole body relax, from your head to your toes (5). Take a couple of deep breaths, breathing out any tension (8). Now breathe normally (5). Notice your thoughts for a minute (6). And now let them go (2).

Now, I want you to follow my voice and begin to picture yourself and the things that happened in your life. I am going to ask you to think back and remember your life and your experiences. I'll ask you to remember what you did and remember the things that happened to you. We'll start with yesterday and we'll go back as far as you can recall (2). First, can you remember anything important about yourself yesterday (12), last week (10), last month (10), last year (10), three years ago (10), when you were in high school (10), when you were in junior high school (10), when you were in elementary school, when you were a young child (10).

I want you to find an experience or an event in your life that stands out in your mind, an experience that is somehow important to you. It might be something you will always remember, something you won't ever forget (10). There might be several of these experiences that you can think of, but pick one that you could think about now (20).

Now, I want you to remember that experience as much as you can. First, picture the place where you were. What did it look like, and who was there (10). Can you picture what _you_ looked like (5). Now, see if you can remember exactly what happened. What did _you_ do and say. What did other people do and say? (10) See if you can remember any of your thoughts, or what you were saying to yourself (10). What were _you_ feeling then (10). What do you imagine _other_ people were feeling and thinking (10). Can you remember what led up to this experience? (10) And what happened as a result of this experience (10).

Go ahead and finish the scene /event in your mind. Take your time (3) and when you are ready, at your own pace, come back to this room and open your eyes.

The next part is the written section. Take as much time as you need to answer all of the questions. If you need more space you may write on the backs of the pages.

Included here is the current written form of the Experience Recall test (9/74). It is printed on three pages with a space for the subject's name at the top of the second and third pages. Question A is printed on the first page, Questions B, C, and D are printed on the second page and Question E and F are printed on the third page.

* * *

Name: _____
                (please print)
                         Sex: _____
                         Age: _____

## Unforgetable Experience Recall

A. Describe as fully as you can, and in as much detail, the experience you remembered. (Please include what led up to this experience, what your thoughts and feelings were and what the results of this experience were.)

B. How was the experience important or special to you then?

C. How is the experience important or special to you now?

D. From the experience you just remembered, please describe some things you know about yourself now?

E. How could knowing this about yourself be useful to you? Specifically, how can it help you get what you want or avoid what you don't want?

F. Do you have any comments about what it was like answering these questions?

APPENDIX B :

THE PRELIMINARY SYMBOL SCORING MANUAL FOR

QUESTION "A" ON THE EXPERIENCE RECALL TEST

THE PRELIMINARY SYMBOL SCORING MANUAL

FOR QUESTION "A" ON

THE EXPERIENCE RECALL TEST

Self-Knowledge Education Project
School of Education
University of Massachusetts
Amherst, Massachusetts

August 1975

THE PRELIMINARY SYMBOL SCORING MANUAL
FOR QUESTION "A" ON
THE EXPERIENCE RECALL TEST

<u>CONTENTS</u>                                                              <u>Page</u>

(N) Indicates symbols that did not scale on the Guttman analysis.

THE PRELIMINARY SYMBOL SCORING MANUAL
FOR QUESTION "A" ON
THE EXPERIENCE RECALL TEST

## A.  INTRODUCTION

This is a manual for scoring responses to Question A (Form 9-74)

on the Experience Recall Test:

> Describe as fully as you can, and in as
> much detail, the experience you remembered.
> (Please indicate what led up to this experience,
> what your thoughts and feelings were and what the
> results of this experience were.)

The manual was constructed using the responses to this question

by 72 respondents on both the oral and the written forms of the

Experience Recall Test.  Although there are slight variations among

the questions on the various forms, the essential similarity among

them is our case for treating them as the same question.  This

preliminary manual has not been cross-validated.

Section A of this manual describes in general how the manual

should be used and Section B outlines the format for diagramming the

responses onto scoring sheets; Section C details the symbols which

are the categories for scoring the responses.  In Section C,

definitions and examples are given for each symbol.  "Coded" examples

are sentences which exemplify the use of the particular symbol being

discussed.  "Not Coded" examples are sentences that show when the

symbol should not be used.  Examples which minimally meet the definition

for using the discussed symbol are indicated as "Borderline."

The examples are verbatim excerpts from actual protocols.  Mis-

spellings and incorrect grammar are faithfully preserved.  Since

these examples are quoted out of context of the total responses, their interpreted meanings may not be obvious to the reader who is not familiar with the protocols from which these examples are taken. Nevertheless, the examples do illustrate the criteria for scoring responses with the symbols.

B. GENERAL RULES FOR SCORING AND USE OF THE SYMBOL MANUAL

1. The sentence is the unit of scoring

Analyze and score a protocol by examining each sentence individually. Although an individual word or phrase may give a strong indication that a certain symbol should be used, the usage of that word or phrase in the context of the whole sentence is the criterion for deciding how to score the word or phrase. When the meaning of a word or phrase is ambiguous within a sentence, it may be necessary to examine other sentences in the protocol to arrive at a clearer definition of what the person means. In most situations, however, the sentence-unit offers enough information to score according to the manual.

The sentence-unit is defined as in conventional English grammar; the unit of (written) thought including a complete subject and predicate, usually visually distinguishable from each other by terminating punctuation marks (period, question mark, or exclamation point). There are, of course, some subjects who respond in non-standard English or in stream-of-consciousness formats in which sentences are not distinguishable in the conventional manner. In these cases the scorers should use their own judgments in identifying the sentence-units.

A few symbols (See S.18A, 18B, 18C, S.35) are exceptions to Rule 1. In these cases several sentence-units are considered in relationship to each other. See descriptions of these symbols for details.

## 2. Score every sentence

Even though some sentences may appear irrelevant to the questions asked, these sentences should be scored. Some sentences are very cryptic--in these cases, scorers should use their judgment in interpreting the sentence to the degree the statement makes enough sense to score according to symbols in the manual. The interpretation of one scorer should be verified by an independent interpretation by another scorer. Disagreement between scorers can be resolved by discussion, or by appeal to a third scorer's interpretation.

Only after all conceivable attempts to make meaning out of cryptic statements have failed (there were no examples of this among protocols used in constructing this manual) is the sentence not scored.

## 3. Stick to the level of the subject's conscious meanings

This means that raters should deal with exactly what the subject says, or appears to mean to say, in a sentence. Do not postulate unconscious motivations, drives, needs, etc., in scoring a sentence; rather interpret statements only to the degree that the subjects would (probably) still recognize the interpretations as what they meant. Score for the relationships between and among self, others, and environment, which appear to be what the subjects are conscious of.

There is a tendency to identify certain words with certain symbols. But this can be misleading. The symbols are intended to represent what the subject consciously meant, which may not be a one-to-one association with particular words. For example, in the statement, "I felt like fully things were happening inside my

stomach," _felt_ _like_ appears to be a phrase describing emotions, denoted by symbol S.9B. However, in this statement _felt_ _like_ means "perceived," or "was aware of," and this is denoted by symbol S.6B.

Intellectual or technical jargon, and dialect differences in the language make tasks involved in this rule difficult, since jargon and special dialect uses tend to veil meanings even for experienced and perceptive coders. Hence, this rule tends to be more a guideline than an inviolable law.

C.  RULES FOR DIAGRAMMING SENTENCES AND RECORDING RATINGS

D.1 Diagram each sentence on a separate line

Following our ground rule that the sentence is the unit of
scoring, distinguish and numerate each separate sentence in the
protocol response.  That is, the first sentence in the response is
#1, the second #2, the third #3, the fourth #4 and so forth.  On
the scoring sheet, line #1 should represent the diagram of sentence
#1, line #2 should represent sentence #2, and so forth.

The symbols and configurations representing the various parts
of a given sentence should all be diagrammed on one line.  In other
words, the diagram on one line should be complete enough such that
the elements and relationships involved in the (original) sentence
can be re-created or re-stated (by reading the definitions of the
symbols in that line).  Several symbols, specifically S.18A, B, C
and S.35 are exceptions to this guideline, in that they involve
references to sentences other than just the one in question.  See
the descriptions of these symbols for further clarification.  Another
exception is when explicit contrasting, causal, contingent or other
relationship is made from one sentence to the next.  In these cases,
the diagrams in the two lines (representing the two sentences) are
linked by the symbol showing the relationship described (by the
subject) between the two sentences.

S.2 Diagram symbols in a left-to-right order

For a given sentence, place symbols on the scoring sheet (line)
in a left-to-right order in a sequence corresponding to the order

in which the parts of the sentence are stated. That is, the first thing mentioned in the sentence should be the first symbol on the line (at the left), the second thing mentioned should be the next symbol to the right, and so forth. In general, do not change the sequence of the sentence parts into another order in the diagram. For example, note the following sentence: "Before I went out to play, I had to do the dishes." In this sentence the temporal (time) order of events is reversed; i.e. in actuality "I had to do the dishes" occured first, and "I went out to play" occurred later in time. In diagramming this sentence, however, the symbols should reflect the order of the person's expression, not the order of events. Thus, "before I went out to play" is diagrammed first, and "I had to do the dishes" is diagrammed to the right of the first diagram.

The exception to this rule is when a sentence needs to be interpreted or restated by the scorer to diagram an otherwise cryptic or fragmentary sentence. Another exception is when the actual sentence sequence, syntax or grammar obscures the meanings (of relationships and connections) which the subject seems to be making. (of course, in both cases, the diagram would reflect the order of the sentence in its interpreted form rather than its original form. This suggests that scorers should be conscientious about making interpretations which remain as faithful as possible to what the subject seems to mean. (Often individual scorers interpret a given sentence in different ways, and these differences can only be settled by compromise, by discussion, or by an arbitrary decision.) The necessity of making

interpretations in order to diagram a sentence occurs to some degree in practically every sentence, some minimally, others to a greater degree. Thus, there tends to be less correspondence between the order of expression (in the original sentence) and the left-to-right interpretation is involved.

D.3 Elemental symbols and relational symbols

Some symbols in the manual are defined in a manner such that they carry meaning when they are diagrammed alone (e.g. S.1, S.2, S.3, S.4, etc.). We shall call these elemental symbols. Other symbols carry meaning only when they are diagrammed in conjunction with other symbols; they cannot be diagrammed alone, because they denote relationships (the connnections) between one or more descriptions. These symbols (e.g. S.7, S.5, S.16, S.25, etc.) are called relational symbols. (In one sense, every symbol denotes a relationship described by the subject. The distinction is made here only to clarify the format for diagramming a statement.)

D.3a: When more than one relational symbol is required to represent the description of one elemental referent, and the elemental referent is not repeated in the sentence, all of the relational symbols are diagrammed from the same elemental symbol. For example, note the following example:

"We sat down at the bar and had a beer."

In this case "we" is the elemental referent and scored S.4. Two relational descriptions ([1] "sat down at the bar," and [2] "had a beer.") describe the elemental referent we, by S.5. Hence

the diagram of this sentence is: ⬡⟶ △ .

The elemental symbol S.4 is not repeated, i.e. the statement

should not be diagrammed: ⬡⟶ , ⬡⟶△ .

D. 3b: When elemental symbols are used to denote more than a simple

reference to the subject, e.g. in denoting physical condition,

vital statistics, etc.), the elemental symbol should be

diagrammed as many times as there are discrete descriptions

in the statement. For example, "I was eight and living in New

York." is scored by two separate elemental symbols S.1

denoting vital statistics as follows: ◯ , ◯ . Also when

both an elemental symbol denoting physical condition, vital

statistic or other definition, and a relational symbol are

required to represent a statement, the elemental symbol should

be diagrammed a second time, third time, etc. For example:

"I was sick and knew I probably wouldn't be able to go."

The symbol S.1 represents "I was sick," S.6B represents

"knew" and S.7 and S.5 represent "I probably wouldn't be able

to go." The elemental symbol S.1 referring to "I" must be

diagrammed three times to accurately represent the statement

as follows: ◯ , ◯⟶ (↛◯⟶) . The statement should not

be diagrammed in the following ways ◯⟶(↛◯⟶) or

↛◯⟶ .

D. 3c: Often, following rule D.3a may result in confusing or otherwise

ambiguous diagram. In these cases, the scorer may choose to

repeat a diagram of an elemental symbol, even though the

elemental referent is not repeated in the statement. This may be
done for the sake of visual clarity; i.e. so that a diagram can be
read to accurately represent meaning of the statement.

D.4 Parenthesis

The parenthesis is used to group symbols together. Its function is
to set off symbols which are related to each other in one part of the
sentence from symbols in other parts of the sentence. Parenthesis are
always used in the following instances:

1. When S.8 is used, they set off the results described.

2. When S.13 is used, they set off the content of the
   communication.

3. When S.25 is used, they set off both parts of the relationship.

4. When S.6A, B or C are used, they set off S.1, 2 or 4 from the
   content of thought.

The parenthesis create visual clarity and thus resolve ambiguity in
diagramming. For example, if parenthesis are not used the sentence, "I
was in kindergarten at the time, but was not going because I was sick,"
the diagram would appear as: $\bigcirc, \bigcirc \overset{?}{\rightarrow} \leftarrow\!\!\!\cdots\!\!\!-\bigcirc$. In this diagram, one cannot
be sure if the causality arrow is related only to the symbol immediately
preceding it, or if it refers to both sumbols preceding it. When am-
biguity can be clarified by use of the parenthesis, they should be used.

Coded:

0210305 (Δ) "But I got better earlier than expected and my mother
             told the teacher to come by anyway, the day of the picnic
             to see if I felt alright to go, providing the doctor
             said it was o.k."
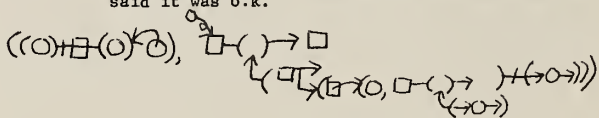
0341021 (Λ)   "The next thing I knew was that I was in a car on the way to the hospital."

$$\bigcirc\!\!\!\!\!\rightarrow (\bigcirc, \bigcirc\!\!\rightarrow)$$
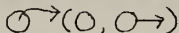
0341016 (2)   "I went across the street to my neighbors house because their daughter had just graduated from college."

$$(\bigcirc\!\!\!\!\!\rightarrow \triangle)\!\!\leftarrow\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\! (\square)$$
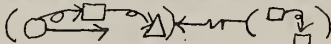
0210305 (Λ)   "We had a picnic planned for about this time of year and I had known about it for a long while."

$$\boxminus\!\!\rightarrow (\triangle\nexists, \bigcirc$$
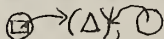
0411110 (2)   "Both times I had my baby I had some nice people in with me."

$$\bigcirc\!\!\!\!\!\!\!\rightarrow\!\square, (\bigcirc, \square)$$
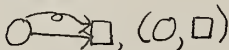
D. DEFINITIONS OF SYMBOLS AND CRITERIA FOR SCORING

S.1  The Self   $O\rightarrow$   $O\!\!-\!\!(\ )\!\rightarrow$   $O\sigma\rightarrow$

This symbol, a circle, is used in conjunction with other relational symbols to denote any reference to the self. For example, any mention of "I," "me," "my" or "mine" is scored using S.1.

S.1A  The Physical Self  $(O)$

This symbol is used when self (the "I") is described in terms of a state of being usually physical or physiological. This can be in terms of:

1. Vital statistics (age, geographical location, race, sex, grade); except vital statistics describing one's role (see S.1-B and S.22B, S.22C).

2. Specific parts of the body (my arm, leg); when S.1 is used in these cases, it denotes the personal possessive "my" as well, as thus, S.43 is not used in conjunction with S.1.

3. Descriptions of states of being in terms of location, i.e., environment (laying across the bed, I was on vacation, I stayed there, I got there).

4. Simple physiological conditions; or conditions of health such as "I was sick," "I was okay." When description of physiological conditions are more differentiated than these general terms, see S.9 and S.39.

Coded:

0210515 (4/5)  "I did wear glasses and I did not have "dates."

$$(\,O\,)\!\!-\!\!(O\!\!\leftarrow\!\!\rightarrow\!\Box\,)$$

0341012 (3)  "I was on a baseball team"

$$O$$

0410001 (4/3)  "I have one child every year and I lived here and there..."

$$O\longrightarrow\Box\,,\,O$$

0210210 (3/4)  "My opponent being <u>white</u> and me being <u>black</u>."

0210305 (△)  "I got better..."

0210303 (3)  "I ruined <u>my arm</u>."

0341024 (4)  "We were on vacation in Cape Cod.

0210404 (3/4)  "...he meant I was <u>having a nervous breakdown</u>."

0410011 (4)  "I talked to him one time like when <u>I was pregnant</u>
you know any my mother knew it."

0210404 (3/4)  "I was <u>beginning to feel numbness in my hands and
feet</u>."

0210404 (3/4)  "I thought <u>it was genetic</u> and couldn't be helped."

0210404 (3/4)  "I was <u>paralyzed from the waist down</u> and couldn't
believe it."
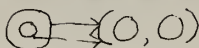
Borderline:

0210513 (3/4)  "I had no idea what a "negra" was but I was <u>very
hurt</u> and <u>sick</u> that my friend couldn't play with me.
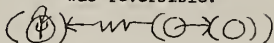
0210404 (3/4) "I had always been pleased and worked at <u>being</u>
<u>limber and graceful</u>..."



Not Coded:

0210404 (3/4) "What saved me emotionally was the fact that it
was reversible."



0341019 (Δ/3) "because I was homesick and frightened."

Expla: <u>homesick</u> is scored S.9.
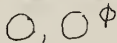


S.1B  <u>Own Role</u> ○ φ
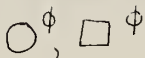
This symbol is used when the subject defines self using a con-
ventional naming of his/her role where the implications of that role
are not explixit such as; mother, student, child, sophomore, housemother,
had a teaching job (When the individual describes the role use S.22B
or S.22C).

Coded:

0210301 (Δ) "When I was in high school -- a sophmore."

○, ○ φ

0210404 (3/4) "<u>We were both art students</u>."

○ φ, □ φ

Not Coded :

0410011  (4)  "...but that was important to him "cause I was his
              daughter."

    Expla:  I was his daughter is coded S.43.

$$( \boxed{\square} ) \longleftarrow \wedge \wedge \longrightarrow ( \bigcirc \leftarrow_o \square )$$
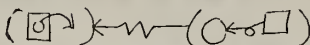
0210504  (4/5)  "I became very involved in the research."

              See S.5 E

$$\bigcirc \angle \rightarrow \triangle$$
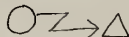
0341014  (3/4)  "He took me, got the other kid and we went to the
                office."
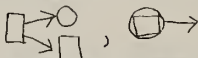
$$\square \overset{\nearrow \bigcirc}{\underset{\searrow \square}{\longrightarrow}} \quad , \quad \boxed{\bigcirc} \longrightarrow$$

0410011  (4)  "I guess they'd never believe that we were his
              daughters, they thought we were his girlfriends."

$$\bigcirc \gamma ( ( \square \overset{\text{2}}{\rightarrow} ( \overset{\text{+}}{\ominus} ), \square \times ( \overset{\text{+}}{\ominus} ) )$$
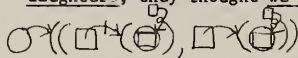
0210504  (4/5)  "I was married at the time."

$$( \bigcirc )$$


S.2  Others  □

    This symbol is used whenever reference is made to other people
(both in the singular and the plural).  If the other person is men-
tioned implicitly in a "we," see S.4.  When S.22 is used S.2 is always
used as well.

    This symbol is used for persons, other than the subject who are
mentioned with proper nouns, third person pronouns, as roles, or as
generalized "everyone."

Coded:

0210303 (3) "I had been telling everyone all year."
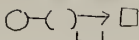
0210515 (4/5) "...somehow the depth of friendship I needed was
not to be found."
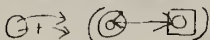
0210208 (Δ) "We met each other on the sidewalk."

    Expla: each other is interpreted as "he and I".
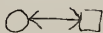
0210201 (4) "I stood up in back and can see the show from start
to finish, Cilla's dancing, June Chris, Joe all those
slowly falling at the end."
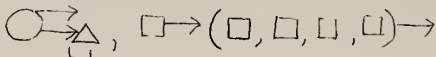
Not Coded:

0210504 4/5 "I quoted Eriksons golden rule in the light of new
insight, Mcluhan (Global Village), Mead and others.
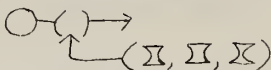
S.2A **Physical Description of Others** $(\Box)$

S.2B **Others' Role** $(\Box \, \phi)$

The definition of S.2A is identical to that of S.1A, except that

S.2A denotes references to others' physical state, whereas S.1A refers

to one's own physical state.

Similarly, S.2B is defined like S.1B, except that S.2B refers to

others' roles and S.1B refers to one's own role.

S.3  <u>Concrete Objects</u>  △

This symbol represents a concrete object (or set of objects) or activities that is <u>acted upon</u> by a person (the respondent or other persons).  Objects or activities ("party," "table," "cars," etc.) are frequently named in the responses but only those which are explicitly <u>acted upon</u> (thought about; or felt about) are scored in conjunction with S.5; S.6 and S.9.  They are not scored when they are parts of prepositional phrases such as "to practice" or "at the bar."  Nor are they scored when the action is directed <u>toward</u> or <u>to</u> the object, but not upon the object (e.g., "to the beach," "come home" are not scored with S.3).  Objects which are named as possessions (See S.43) are also scored using S.3.

<u>Coded</u>:

0410804 (2)  "They gave me a <u>surprize party</u>."
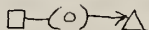


0341016 (2)  "We sat down at the bar and had <u>another beer</u>."



0341024 (4)  "My father who was driving had pointed out to us many <u>car accidents</u>  that had occured on this highway."
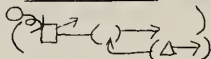


0410001 (△/3)  "I buy my <u>own</u>...and have a happy life."

Not Coded:

0241110 (3/4)   "I always resented him for this because I never
                could understand why people made such a big thing
                over skin color."

$$(\oslash \rightarrow \square) \leftarrow w (\oslash \times \!\!-\!\! w \rightarrow (\square \rightarrow (\square)))$$

0341010 (3/4)   "I knew there was something wrong."

   Expla:   there was something is scored S.20.

$$\oslash \rightarrow (\cancel{\triangledown})$$

0210211 (4)   "I don't exactly remember the cause, but I think it
              was a spanking."

   Expla:   the cause is coded S.8.

$$\oslash + \times (\!-\! w \rightarrow \cancel{\star}), \ \oslash \rightarrow ((\!-\!\rightarrow O) \!-\! w \rightarrow (\cancel{\star}))$$

0210502 (4)   "I began to defend my position with argument going on
              and on."

   Expla:   my position is coded S.39B.

$$\oslash \{ \} \rightarrow , \ \oslash \leftarrow \rightarrow \square$$
$$\phantom{\oslash \{ }} \llcorner (\mathbb{D})$$

0411205 (3/4)   "Then in '69 I got pregnant and I came back home..."

$$\rightarrow O, \ O \rightarrow$$

0210301 (Δ)   "I recall the confusion in going to practice."

   Expla:   practice is not scored S.3.

$$\oslash \rightarrow (\oslash \rightarrow \rightarrow)$$


## S.3A   Object Description (Δ)

The definition for S.1A also applies to the definition for S.3A,
except that the physical characteristics of an object or activity (rather
than oneself) is being described.

Coded :

0411202 (3)   "That was a lovely place."

$(\triangle)$


S.4   <u>We/Us</u>   ⬭

This symbol denotes references where self is included with others
(i.e., "we" or "us") in common or parallel action (or thought).  The
symbol also refers to people mentioned "together," or "we both".  When
self in included among others but named separately (e.g., "my brother
and I"), S.4 is not used (See S.10), unless the action (or thought) are
done jointly or commonly,  (e.g., "my brother and I thought").  Also,
when the actions involving "we" or "us" involve interactions, i.e.,
actions done upon each other, S.4 is not used, (See S.22A).

Coded :

0410011 (4)   "I remember one time when <u>we were younger</u>, he called
up on the phone."

ⵔ⤬(⬭, ⬭⵨ ⟩⟶)

0210208 (Δ)   "...and when she saw our heads..."

Expla:   <u>our heads</u> is interpreted as <u>us</u>.

⟼⬭

0410011 (4)   "Last June, right, me and my sister we went to a
concert.

Expla:   <u>me and my sister</u> is coded S.4.

⬭⟶

0341006 (3) "my twin brother and I than thought why not, let's enter.

    Expla: <u>my twin brother and I</u> are coded S.4B.
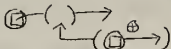


0341001 (3) "We managed to have a great time, just because we <u>were together</u>."
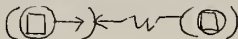


<u>Not Coded:</u>

0411110 (2) "...I had some nice people in with me."
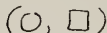
$(\bigcirc, \square)$

0210404 (3/4) "<u>We each</u> had our own rooms for privacy, personal tastes and entertainment of friends."
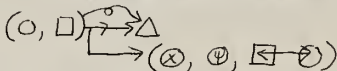


0210208 (△) "We both happened to have 15 cents with us..."

    Expla: interpreted we each

$(\bigcirc, \square) \longrightarrow \longrightarrow \triangle$
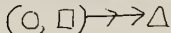
0341016 (2) "So two carloads <u>of</u> people were in front of us."

$\square$

0411207 (3) "He brought her home and there I was with the two of them him with..."

    Expla: <u>I with two of them</u> is scored S.10.

$\square \longrightarrow \bigcirc, (\bigcirc, \square)$
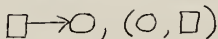
S.4A  <u>Physical Description of "We"</u>  $(\text{\textcircled{D}})$

S.4B  "Our" role  ⓓ �ⁱ

The definition of S.4A is identical to that of S.1A, except that
S.4A denotes reference to "our" physical state, whereas S.1A refers to
one's own physical state.

Similarly, S.4B is defined like S.1B, except that S.4B refers to
the role of the first person plural ("our"), and S.1B refers to one's
own role.

S.5A  Action  ○——→▢   ◁⧨⟩

This symbol (the arrow) denotes a description of an action, deed
or behavior.  It represents the predicate phrase or verb phrase in
conventional English grammar.  This symbol denotes those verbs which
imply overt, observable behaviors on the part of the subject.  Descrip-
tions of acting, doing or behaving are scored S.5-A, some intransitive
verbs are scored S.5-A, when these verbs do not imply physical or
emotional states of being (see S.1 A,B,C).

This symbol is superceded by several other symbols which denote
specific types of actions.  These symbols are S.6 A,B,C for some mental
actions, S.9A,B,C,D,E for emotional actions, S.13 for communicated
action S.22 A,B,C for mutual action.  See definitions for these symbols.
The symbol S.5A should not be used unless these other symbols do not
apply, and the statement fits the description above.  Note that
specific other types of actions, deeds or behaviors are scored by
S.5B,C,D and S.5E.

The symbol, S.5A denotes the entire verb phrase, including all of
its prepositional phrases (with exceptions noted below).  This means

that prepositional phrases such as "toward..." "upon..." "to the..."
are scored as part of S.5A. Contents of these prepositional phrases
are not diagrammed separately. They are considered as descriptors
of the action described. The exception to this rule is when the
prepositional phrase describes a relationship which can be diagrammed
by any of the other symbols in this manual. Note especially preposi-
tional phrases involving references to "I"/"me" or other personal
(self or others) as indirect objects (see S.5E).

Coded:

0210404 (3/4)  "I had always been pleased and <u>worked at</u> being
limber and graceful..."

$$\bigcirc\!\!\!\!\!\longrightarrow\!\!? (\bigcirc,\bigcirc)$$
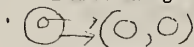
0410809 (3)  "I <u>avoid</u> them."

$$\bigcirc\longrightarrow\square$$
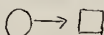
0210502 (4)  "I could not keep my mind on my duties, studies, or
work--I began making errors in judgement and
<u>treatments</u>."

$$\bigcirc\!\!+\!\!\nwarrow(\triangle,\ \triangle,\ \triangle),\ \bigcirc\!\!\!\!\nwarrow\!\!\rightarrow$$
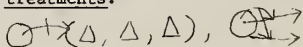
0210305 ( )  "We used to get picked up for school by the head
person (man) in his Volkswagen bus."

Expla:  This statement is interpreted as if it were stated in
the active voice and hence diagrammed as follows:

$$\square\longmapsto\!\!\rightarrow\oplus$$
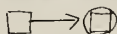
0210404 (3/4)  "I <u>started falling down</u>, experiencing cramping of
whole body, <u>could not run</u>, got panicy at the sight
of staircases, cried alot, felt sorry for myself and
tried to snap myself out of it by <u>babying myself</u>,
<u>playing games</u>."
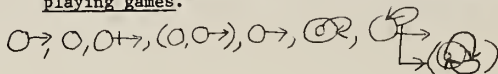
$$\bigcirc\!\!\!\nwarrow\!\!\rightarrow \bigcirc, \bigcirc\!\!+\!\!\rightarrow, (\bigcirc,\bigcirc\!\!\rightarrow), \bigcirc\!\!\rightarrow, \bigcirc\!\!R, \bigcirc\!\!\!\nwarrow\!\!\!\rightarrow_{\longrightarrow(\bigcirc\!\!R)}$$

0210211 (4)  "I think I <u>had done this</u> once or twice before and it
had worked then."

$$\bigcirc \rightarrow (\bigcirc \rightarrow \not\!\!\!\triangle)_{\pi_V \pi} , \not\!\!\!\triangle$$
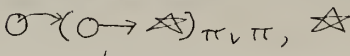
Not Coded:

0411207 (3)  "I just try and go back and put the pieces together.."

Expla:  To go back, put the pieces together are coded S.6B,C.
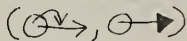
$$(\not\!\!\!\bigcirc^V \rightarrow , \bigcirc \rightarrow \blacktriangleright )$$

0210515 (4/5)  "I resolved that this was not necessarily true and
<u>saved</u> a little corner of myself."

$$\bigcirc \rightarrow (\not\!\!\!\triangle ), \not\!\!\!\bigcirc$$
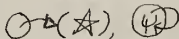
0410906 (△/3)  "I <u>kept waiting</u> all day long for someone to come and
noone came."

$$\bigcirc \rightarrow (\square \rightarrow , \not\!\!\!\square \rightarrow )$$
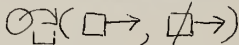
S.5B  <u>Emotional Impact</u>  $\bigcirc \rightarrow \boxminus$ . $\bigcirc$

S.5B differs from S.5A in that the arrow goes from the external
to the internal of the elemental symbol rather than from the external
to the external.

S.5B denotes action upon one person (usually the subject) done by
some other explicitly named person, thing, or event which has an in-
ternal or emotional impact on that person.

Coded:

0210505 (5)  "More a desire not to <u>run</u> from what I really felt."

$$\not\!\!\!\bigcirc$$

0210404 (3/4) "I was <u>losing</u> my ambition and sleeping often."



0210404 (3/4) "What <u>saved</u> me emotionally was the fact that it was reversible."
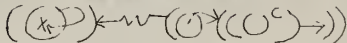


0210211 (4) "Obviously, I was trying to get my mother to come in and <u>comfort</u> me but nobody came."
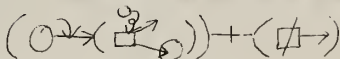


Not Coded:

0341006 (3) "This to my brother and I <u>was</u> great!"



S.5C  <u>Possession</u>  

This symbol denotes material ownership or availability. "Have" and other words implying ownership are scored S.5C. For example "I had another beer" would be considered as "I drank another beer " (See S.5).

Also other meanings of "had" are scored with their respective symbols (e.g., "I had an idea" = S.6; "I had a toothache" = S.1; "I had a funny feeling" = S.9, etc.). Use of personal possessive pronouns are not scored S.5C (see S.43).

Coded:

0411202 (3)  "I <u>had</u> six rooms."
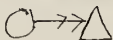
0210101 (Δ/3)  "And <u>I didn't have any tissues</u> and I was nervous about getting the jacket all dirty."
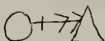


0411202 (3)  "I <u>had</u> a young son."
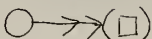


<u>Not Coded</u>:

0341016 (2)  "I <u>had</u> another beer."

Expla:  <u>had</u> is interpreted to mean <u>drank</u>.



0210504 (4/5)  "I was married at the time, <u>had a teaching job in a small junior college,</u> and in far better circumstances than I am today."

Expla:  <u>had a teaching job</u> is coded S.1B.
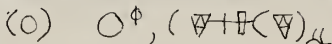


S.5D  <u>Continuing Involvement</u>  

This symbol denotes the notion of "experiencing," in the sense of personally involving oneself in or participating in an action, event or an on-going (continued) action or event. The <u>personal</u> involvement suggests that one is both acting in and acted upon (or affected by) in the situation described. That is, it is indefinite whether one is subject (active) or object (passive) in the situation described—often both are implied. A word or phrase is scored S.5D, when it refers to this kind of personal involvement. For example, "I experienced Gestalt...," "I <u>became involved</u> in the research." "I <u>endured living</u>." are scored S.5D.

If there is not implication or direct personal involvement in the situation, or the involvement is described in a manner suggesting the person is the actor (agent or subject) or an action, or condition, S.5D is not used (see S.7; S.5A,B).

Coded :

0210505 (5)  "A desire to commit myself positively to those I can understand and love and yet, still at certain moments, that quaking fear of losing it all again--I can't go through that pain a second time and I am so afraid.

0210502 (4)  "However, I knew I could not endure living the life of the past three weeks for a whole year.

0210504 (4/5)  "I became very involved in the research."

0210303 (3)  "Well, I had a bit, of emotional trauma to go through."

0210502 (4)  "When I talked to my husband on the phone he claimed to be experiencing the same kinds of discomfort and non-interest."

0210713 (6)  "It was a "high" experience that lasted for months and months, and which I still experience to a certain extent."

Not Coded :

0210713 (6)  "Up to that time, I had had a poor concept of myself,
             although it had been <u>improving slightly through the
             previous few years</u>.
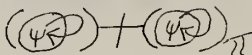


## S.5E  <u>Indirect Action</u>  

This symbol denotes that a verb phrase includes an indirect object
(as defined in conventional English grammar).  The "indirect object" is
the grammatical object (in a statement) indirectly affected by the
action (S.5A) of a verb, for example <u>me</u> in "he gave me some roses."
and <u>us</u> in "friends gave us a drink."  A statement must qualify to be
scored with S.5A and a direct object (usually S.3, S.2, S.1 or S.4)
before S.5E is considered.  The indirect object of the statement is
diagrammed within the parentheses of this symbol.  Note that this
diagramming can be distinguished from S.13, in which content of a
communication is diagrammed in parentheses outside the symbol itself.

This symbol should not be used in most cases when prepositional
phrases describe, qualify, modify or clarify the action denoted by the
verb, see S.5A.  A guideline is that indirect objects are usually a
reference to a person (self or others) and not an object or place (i.e.,
location or setting).

Coded :

0341017 (3)  "He gave me some red roses."
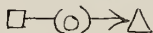
0341002 (3) "...he didn't give me a straw."

$$\square + (\circ) \rightarrow \triangle$$
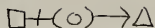
0341014 (3/4) "He picked up a stone and threw it at me."

$$\square - (\circ) \not\rightarrow \triangle$$
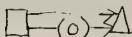
0341106 (3/4) "Friends came in and gave me a drink or a coke and rapped for a while then left again."

$$\square \rightarrow (\circ) \rightarrow \triangle, \triangle, \quad \square \langle \rangle \rightarrow$$
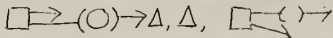
0210515 (4/5) "I remember my mother saying (by way of comfort) was that in a year or so they would buy me contact lens."

$$\oslash \times ( \circ \rightarrow \boxdot - ( ) \rightarrow \atop \searrow (\ominus - (\circ) \rightarrow \triangle) )$$
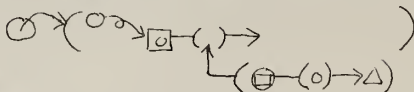
Not Coded:

0341024 (4) "My father who was driving had pointed out to us many car accidents that had occurred on this highway."

$$\circ \rightarrow \square \rightarrow ( ) \rightarrow \boxdot \atop (\triangle \rightarrow )$$
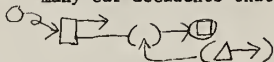
0341014 (3/4) "After awhile my father came and took me home."

$$\circ \rightarrow \square \rightarrow \circ$$

0410809 (3) "I took him to court."

$$\circ \rightarrow \square$$
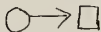
0341017 (3) "Finally he brought me home and came in."

$$\square \rightarrow \circ \atop \rightarrow$$

0210404 (3/4) "I was extremely upset and expected to be taken to mental health."

$$\oslash \times ( \rightarrow \circ )$$
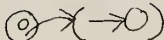
S.6B  <u>Thoughts</u>   ⟋⟶ ⌐⟍

This symbol denotes "thinking" in the sense of bringing something
to mind or having something in mind. "Thinking" or thought defined in
the following ways are all scored S.6B:

  1. to intend, plan (including to decide, to refuse)

  2. to believe (e.g., "it seemed to me, I guess...") or to regard
     as (e.g., "I thought it unfair.")

  3. to remember or call to mind; ro recall

  4. to expect, look forward to, or anticipate

When the word "think" (or thought) or other words (or phrases) are
used to mean any of the above meanings, score it S.6B. Other concepts
scored S.6B include the following:

  1. know, in the sense of apprehending with certainty

  2. want or need when it is neither a physiological need (see S.7)
     nor a social or personal imperative ("should's", see. S.37)

  3. find out; or "learn," when it means gaining mastery of a skill
     or gaining knowledge (apprehension) especially through books
     or facts, (see S.6C for other definitions of "learn.")

  4. to wonder, ponder, reflect, meditate or dream

  5. to try, or put an effort into

  6. to perceive, or sense (e.g., "I had an inkling."...."I could
     sense the agony in him)

  7. to think, in the sense of, "to say to oneself"

Symbol S.6B should not be used for emotions, feelings or sensations
(e.g., "my mother has never forgiven me.") See S.9 and S.1A.

Coded:

0210305 (Δ) "I _fully_ _expected_ the doctor to say I could go."
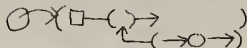
0210305 (Δ) "We had a picnic planned for about this time of year
and I _had_ _known_ about it for a while."
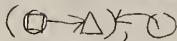
0210301 (Δ) "I _remember_ _wishing_ I had never _known_ her."

    Expla: _remember, wishing and known_ are coded S.6B
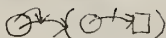
0341002 (3) "I _learned_ _a_ _lot_ about him and he _learned_ _a_ _lot_
about me."

0210211 (4) "Obviously, I was _trying_ to get my mother to come in
and comfort me but nobody came."
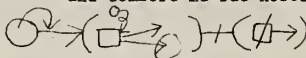
0210515 (4/5) "Whatever happens I still like myself," was another
_thought_ later in that tearful night."
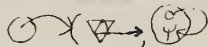
0210301 (Δ) "I _thought_ how phoney that was a coach has to be
_interested_ and ..."
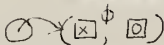
0341006 (3) "My twin brother and I then _thought_ why not, let's
enter."

0411110 (2) "I _thought_ this was impossible."

Borderline:

0210306 (3/4) "I remembered dreaming that day of how I hoped it
would answer all my <u>dreams</u>."
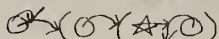


0341017 (3) "I was <u>beginning to wonder</u> if we were ever going to
leave."
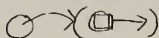


Not Coded:

0210502 (4) "About two weeks after our separation <u>I came to the
conclusion</u> that I was into a situation I hated and
resented."

    Expla: <u>I came to the conclusion</u> is coded S.6C.
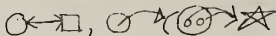


0210505 (5) "A desire to commit myself positively"

    Expla: <u>commit</u> is coded S.6C.



0210502 (4) "We had <u>promised</u> our parents that we would <u>wait</u> until
I was through my nursing program."
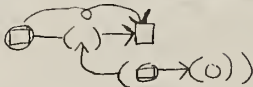


S.6C  <u>Thought Procedures</u>   

This symbol denotes thinking seen as inter-related conscious mental
activities. It denotes awareness of: (1) the steps or procedures of
thinking or (2) the inter-relationship among ideas or thoughts. The
word "think," when it has the following definitions are scored S.6C:

1. to devise or create by thinking (e.g., "I developed the ideas")

2. to center one's thoughts on (e.g., "focus on"); to consciously
   form a mental picture of

3. to subject to power of logical (or procedural) thought (e.g., "think things out", "I concluded:"); to reason.

Words or phrases (other than "think") having these definitions should be scored S.6C. In addition, the concept of "learn" when it means to acquire by experience (especially when that experience involves suffering or mental agony) is scored S.6C, (e.g., "I learned what it meant to be for a person to make a commitment and then break it."). Note that other types of learning are scored S.6B.

It may be difficult to distinguish words or phrases scored S.6C from those scored S.6B. One way to decide this is to examine other parts of the protocol for explicit description of the steps or procedures of thinking which were involved in the thinking described by the word or phrase in question. Lacking this, scores should judge whether the definition of the word or phrase in question is close to one of those listed above; or closer to those listed in S.6B.

Coded:

0210713 (6)   "That was the beginning of a new life for me—a life that I was now consciously controlling."

0210713 (6)   "I was elated to discover that I could give myself permission to first: feel my own feelings, and secondly to act on them.
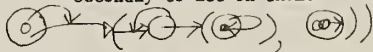
0210502 (4)   "I learned what it meant to be for a person to make a commitment and then break it."
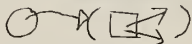
0210404 (3/4)   "I had planned to go to mental health after
          <u>diagnosing</u> myself with hysteric conversion re-
          sulting in paralysis.



0210713 (6)   "It was not only a discovering, because I had always
          had an incling there was one really there, but it was
          <u>an accepting process</u>.



<u>Borderline:</u>

0410011 (4)   "I can't <u>understand</u> him at all."



0411207 (3)   "I just try and go back and <u>put the pieces together</u>...
          (not clear)....



<u>Not Coded:</u>

0210202 (4)   "and quickly passing save tumble weed for my mother,
          thoughts of people and things, good feelings, good
          sleep then complete off to Yale.

    Expla:   <u>thoughts of</u> are coded S.6-B.



0210301 (Δ)   "I found out my best friend (name deleted) was on
          drugs."

    Expla:  <u>found out</u> in this instance is scored S.6B.



0210208 (Δ)   "She was pretty freaked out figuring how our heads
          could be cut off...

    Expla:  <u>figuring</u> is scored S.6B and interpreted as knowing.

0210306 (3/4) "I sat <u>trying</u> to be calm but inside I was a bundle of nerves."

Expla: <u>trying</u> is coded S.6B.

$( \; \overline{G5} \; ), \; \ominus H(\triangle)$
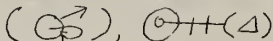
0210404 (3/4) "I looked forward to therapy 2 times weekly."

Expla: <u>looked forward</u> is coded S.6B.

$\ominus \dashrightarrow (\triangle)$

0210515 (4/5) "...saved a little corner of myself that <u>refused</u> to jump headlong into the competition"

$\textcircled{Y\!P} \dashv (\propto \!\!\leftarrow\!\! \dashv\Box)$

S.7 <u>Unspecified External Force</u> $\longrightarrow\!\bigcirc$

This symbol denotes a description (implicit or explicit) of

an external force acting on the subject, in which the source (origin)

of the action is unclear or unspecified. There are several forms

in which this may be expressed:

1. When the external force involves permission. This is usually stated as "I was/wasn't allowed to go;" "I couldn't play," or "I wasn't permitted to..." The permission usually is implied to be parental, teacher's or other authority figures; it is not societal permission.

2. When the external force involves action upon the subject from the situation described, such as "blown out of a building," "getting involved in an accident..."

3. When the force is a need to get physical injuries (parts of the body, usually) or ailments healed ("had to get stiches").

4. When there is an opportunity available ("we got to go swimming").

5. When the source of the action is another person, but the person is not named, or described in the statement, such as "I get spanked." (See S.5).

Note that S.7 is not used when the force is an internal prescription
or social imperative ("should's"). For these see S.37. Also, S.7
is not used when the expression "I had to..." is interpreted as "in
order to," i.e., a means to an end that is specified. See S.34.

Coded:

0210404 (3/4) "The Dr. said it was physical & I <u>must be</u>
<u>hospitalized</u>."
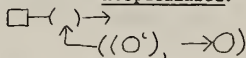


0411202 (3)   "I <u>had to</u> move from one place to the other.



0210211 (4)   "thinking that I would get back at them if I
<u>got</u> the <u>chance</u>, but also knowing I wouldn't try
this kind of thing again."
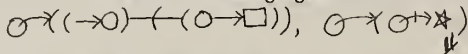


0210513 (3/4) "my friend couldn't play with me.

Expla: <u>couldn't</u> is interpreted as wasn't allowed.
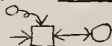


0411203 (3)   "I <u>was blown</u> out of a building."



Not Coded:

0410906 (△/3) "I got kind of nervous.

Expla: <u>got nervous</u> is coded S.1.



0210305 (△)   "But then I <u>got sick</u>..."

0341017 (3) "I was a fool I should have said something but I didn't."

Expla: should have is coded S.37.

$$(O), (O\overset{\oplus}{\longrightarrow}(\hspace{0.3cm})\longrightarrow)\nrightarrow(O\nrightarrow(\hspace{0.3cm})\longrightarrow)$$

0341024 (4) "We had to drive in 2 cars since there wasn't enough room in one."

Expla: had to is coded S.8.

$$(\square\longrightarrow)\leftarrow\!\!m\!\!\sim(\triangle)$$

S.8 Because $\sim\!\!\!\!\wedge\!\!\!\longrightarrow$

This symbol denotes an explanatory relationship between two parts of a sentence in which one part of a direct result or causal consequence of the other part. Also when one part of the sentence is the rationale for or reason for the other part of the sentence, S.8 is used to link the two parts. The causality must be explicitly stated in order for S.8 to be used, e.g., with words such as "because," "why," "reason for," "result."

The causes are described as if they were the necessary and sifficient conditions for the described results to occur. No distinction is made between the necessary versus sufficient reason. It is as if the causes named invariably determined the results described.

This symbol is not used when necessary but not sufficient conditions are described (see S.16B), nor is it used when sufficient, but not necessary conditions are described (See S.16A). Also causal statements expressed in hypothetical form is not scored S.8 (See S.25).

Coded:

0210504 (4/5) "As a result, I prepared a speech."

⟶∿⟶⟩( ⊙↙ ( )⟶⟩)
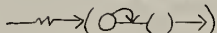
0411202 (3)   "That's why I tried to do the same thing that
              she did."

(⍓)⊢∿⟶✗ ⊙↙⟶⟩( (▢⟶⟩)⊣╫( ⊙⟶⟩))

0341024 (4)  "We had to drive in 2 cars since there wasn't
             enough room in one."

⟨ ⊙⟶△⟩⟵∿⟶(△)
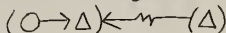
0341017 (3)  "I thought I might be kind of wierd for not
             enjoying kissing."

( ⍟)⟵∿⟶( ⊘↙⟶▢ )
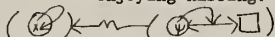
0341019 (△/3) "When they left I started to cry because I
              was homesick and frightened."

(▢⟶, ⊛)⊢∿⟶⟩(⊙⟶)
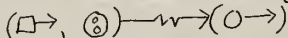
Not Coded:

0341012 (3)  "everytime I got up to bat I would strike out
             so one day my coach said to me he said I am
             going to teach you how to bat."

     Expla:  so is coded S-16.
     (⊙⟶, ⊙⟶)⟶( ▢⟶( )⟶⟩⊙)
                    ⟶(▢⟶↗⊙⟶(⊙⟶) )
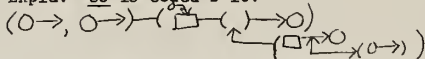
0210513 (3/4) "She told him loud enough for me to hear:  They're
     ·        negras--you can't play with her anymore."

     Expla:  you can't play and they're Negras--is joined by
             implied so, scored S.16.
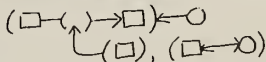
     (▢⟶( )⟶⟩▢)⟵⊙
            ⟶(▢), (▢⟵⟶⊙)

0210404 (3/4) "We each had our own rooms <u>for</u> privacy, personal
tastes and entertainment of friends."

Expla: <u>for</u> is coded S.34.
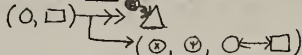


0210201 (4) "Our singer had lost his voice, so we ran it
without words."

Expla: <u>so</u> is coded S.16.
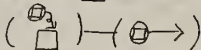


S.9A <u>Situation Specific Emotional State</u>  ⊙ ☐

This symbol denotes reference to any general or specific emotional

state or feeling condition.  The description of this emotional state

of being may be overall, i.e. a general feeling condition such as

"I was happy," "I had been upset," "I felt alright."  Or the emotional

state of being may be more specific, such as "a feeling of inadequacy,"

"I was scared," "I was lonely."  Also, the use of "emotional" words

(i.e. words descriptive of emotional conditions) that describe a

<u>time period</u> are scored S.9A, such as "happy moment."

States of being which are not emotional in character are not

scored S.9A.  These include physical states of being (e.g. "I was in

pain."), or states of being described in physiological or physical

terms (e.g. "I was nervous."  "I feel numb in my hands.") (See S.1 A).

Physical descriptions (e.g. "He wasn't very cute at all.") are not

scored S.9A (see S.1A ).

Emotional conditions or states of feelings which are not situation

specific are not scored S.9A.  That is, if the description of an

emotional condition suggests that this condition is a distinguishing characteristic of the person, such as a personality tendency or trait, this is not scored S.9A (See S.39A, B).

Emotional descriptions in which the object of the emotions are described; or descriptions of emotional reactions to a particular stimulus (or stimuli) are not scored S.9A (See S.9B). Also, emotions described as something to be expressed or used for communication (See S.9C); emotions described in a manner that implies understanding of multiple emotions described (see S.9D); and emotions "likened" to other descriptions (See S.9E) are not scored S.9A.

Coded:

0210306 (3/4) "I grew a little suspicious and wondered why he was asking me questions."
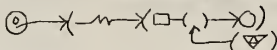


0341010 (3/4) "I could sense the agony in him."



0210210 (3/4) "I saw myself as confident, happy and proud."



0210305 (Δ) "I think I was mad but I know I was frustrated."



0341024 (4) "For the rest of my vacation I had been upset."

Not Coded:

0411202 (3)  "It was a happy life, course you worry,.... (Happy
life is interpreted to mean "I was a happy person.)

(x)

0210305 (Δ)  "I got better earlier than expected."

(O)—⧻—(O)⤺O

0210306 (3/4) "I was so eager to get started but yet was hoping
the day wouldn't end."

(O⤓→)⧻—( O→(✲⁄→))

0210202 (4)  "Sensing freedom we returned travel south tearing
more...."

(O→Ⅱ), ◻⇒

0210303 (3)  "I was so cocky."

(x)

0210404  "I felt clumsy and awkward."

O, O


S.9B Situation Specific Emotional Action or Reaction  ⟨O⟩→ ⟨O⟩→
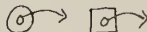
This symbol denotes that emotions are directed toward a
specified object(s), person(s), or thought(s), action(s), etc.  It
may also denote a description of an emotional reaction (responses)
to a stimulus (stimuli); i.e., a description of a state of
feeling or emotion resulting from an action, person, thought, etc.
No diagrammatic distinction is made between feelings directed toward
its object, and emotional responses to stimuli.

This symbol is distinguished from S.9A only in that the stimuli
or the direction of the emotion or feelings is specified in S.9B;

and unspecified in S.9A. The other guidelines for scoring S.9A are
also applicable in scoring S.9B (specifically as distinguished from
S.1; S.6; S.9C, D, E; S.39).

Coded:

0210505 (5)   "Thoughts like this--fill my insides with unending
              guilt."

$$((\mathcal{O}\rightarrow)\!\!-\!\!/\!\!/\!\!-\!(\cancel{\forall})\!\!\curlyvee\mathcal{O}$$

0210101 (△/3) "We were concerned about our uniforms for some reason."

$$(\;\textcircled{\textit{o}}\rightarrow\triangle\!\!\leftarrow\!\!w\!\!-\!(\cancel{\forall}))$$

0210515 (4/5) "Whatever happens I still like myself," was
              another thought later in that tearful night."

$$(\cancel{\forall},\;\cancel{\mathcal{O}}\curlyvee\bigcirc)$$

0231110 (3/4) "I always resented him."

$$\mathcal{O}\!\!\rightarrow\!\!\square$$

0210305 (△)   "...and (I) was mad I couldn't go."

$$+\!\!\curvearrowright\!\!\mathcal{O}\!\!-\!\!\rightarrow$$

0210301 (△)   "I...went home feeling I was a failure as a friend..."

$$\overset{\triangle}{\mathcal{O}}\!\!\leftarrow\!\!\lambda\!\!\rightarrow\!\!\square$$

Not Coded:

0210208 (△)   "...because I knew she was pissed."

$$\leftarrow\!\!w\!\!-(\mathcal{O}\!\!\rightarrow\!\!\boxed{o})$$

0410906 ( /3) "I got kind of mad."

$$\textcircled{\bullet}$$

0210502 (4)   "I <u>honestly feel</u> there would have been nothing left
              of me leave alone..."

0341024 (4)   "I remember <u>feeling very frightened</u> although no
              one was hurt."
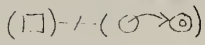
S.9C <u>Expressable Emotions</u>

This symbol denotes an emotion or feeling described as something
to be expressed or to be used for communication. The emotions are
described as expressible; i.e. the emotions can be acted out (or acted
on) or "let out."

This symbol is different from S.9B in that S.9B indicates a
description of feelings about or reactions to something and S.9C
involves the actual expression of the feelings or emotions. While
S.9C can be used alone, it can also be used in conjunction with S.5A
or S.13 when the emotions described are <u>actually</u> (or in fact) expressed
in some way as in "A burst of anger or fear, I don't know which burst
out of me."

   <u>Coded</u>:

0210413 (6)   "I was elated to discover that I could give
              myself permission to first feel my own feelings,
              and second <u>to act on them</u>."
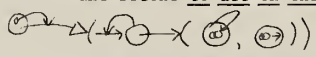
0210505 (5)   "I am lying on the floor of a dormitory room--alone--
              crying with a feeling of hysteria and despair <u>that
              want to cry out for help, understanding</u>--"
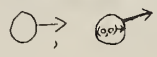
0210515 (4/5) "I was feeling like I had terribly deep feelings
and emotions and had not been able <u>to express them</u>..."

0210515 (4/5) "I was feeling like I had terribly deep feelings
and emotions and <u>had not been able to express</u>
<u>them</u>--let myself out of myself."
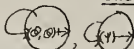
0341010 (3/4) "A <u>burst of anger or fear</u> I don't know which
bust out of me."

## S.9D <u>Unspecified Multiple Feelings</u>

This symbol denotes that "feelings" or "emotions" are described
in a manner suggesting several feelings experienced. Often the
actual, specific emotions are not named (or specified) in descriptions
scored S.9D. If the emotions are specified, or the reference to
"feeling" is singular rather than plural, the description should
not be scored S.9D (See S.9A, B, C).

<u>Coded</u>:

0210505 (5) "Why did it take me as long to admit my <u>feelings</u>
to myself and not to try and run away from them?

0210505 .(5) "What <u>feelings</u> did i have?"

0341010 (3/4) "I asked in terror as tried to hold my <u>inner</u>
<u>feelings</u> just to bust out and scream and cry
if he had broken it the answer was yes."
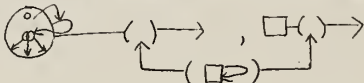
0210504 (4/5) "My <u>feelings</u> were heightened."

⊚

0210202 (4) "...and quickly passing save tumble weed for
my mother, thoughts of people and things, <u>good</u>
<u>feelings</u>, good sleep then complete off to Yale."

◯—(☉)—→△, ◌—◷(□,△) ⊚, ◯, ◯—→
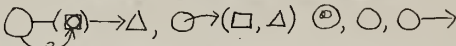
0210505 (5) "On one hand I can hardly write at all <u>about these</u>
<u>feelings</u>—even now--almost 7 years later, I am
still trembling inside at the thought of her
and <u>my feelings</u> towards her."

◯—(⤳)→
   ⤳(⊚)ᵩ , ◷⤝→☐☞, ⊚
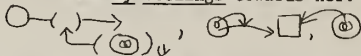
0210713 (6) "I was elated to discover that I could give myself
permission to first: feel <u>my own feelings</u>, and
secondly to act on them."

◷⤝—▷(↝◯—✗ ⊚, ⊝))
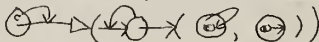
Not Coded:

0210505 (5) "My first thought (feeling) is that all the
white space in the world."

  Expla: <u>feeling</u> is not coded since it is not an emotion.

◯✗ )
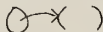
0341004 (4) "I filled my day with <u>whatever I felt</u>."

◷⤴⤳△

0210306 (3/4) "I remember answering questions concerning <u>what</u>
<u>it felt like</u>."

◯→✗(□—(⤳)—→)
       ⤳—(⊚—‖—◁)
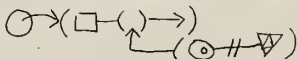
S.9E  <u>Likened Emotions</u>  ⊚—‖—( )

This symbol denotes that an emotion is described, not by naming
it, but by "likening" the emotion to something else. The description

(or descriptor) of the emotion is seen as similar to, but not exactly representative of the emotion experienced. Typical phrases scored S.9E include "felt as if;" "felt like." Metaphors used to describe a feeling or emotion are often scored S.9E.

Words or phrases which denote the intensity of the feeling, but not a likening to another description, such as "I was sort of angry." "I got kinda upset" should not be scored S.9E.

Coded:

0410011 (4)  "For me I just <u>felt</u> <u>like</u> I didn't even know him."

0210401 (4/5) "I felt as if we were the only people in the world."

   Expla: <u>felt</u> <u>as</u> <u>if</u> is coded S.9E.

0210306 (3/4) "I sat trying to be calm but inside I <u>was a</u> <u>bundle</u> <u>of nerves.</u>"

0210306 (3/4) "As far as I am concerned I was <u>on</u> <u>cloud</u> <u>nine</u>, not really believing it was happening to me."

Borderline:

0341005 (Δ/3) "It was like being in a <u>dream</u> just waiting to wake up and seeing him."

0210201 (4)   "We had a real family sort of feeling in the cast
              and crew."

   Expla:   family sort of feeling is coded S.9E.
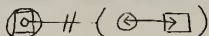



Not Coded:

0210515 (4/5) "I was feeling like 1 had terrible deep feelings
              and emotions..."

   Expla:   feeling like in this case means perceived.



0210401 (4/5) "I felt warm and beautiful, the two of us."

   Expla:   warm, beautiful (asthetic) are coded S.9A.



0210520 (4/5) "I felt like funny things were happening inside
              my stomach."

   Expla:   felt like is interpreted as "thought" and scored
            S.6B.




S.10 Listings    )

   This symbol denotes a relationship(s) between one or more parts of
a sentence in which the parts are LISTINGS, i.e., they are related
serially, or conjunctionally (by and's), listings in time (such as
temporal sequences and simultaneous listings in time). For example,
"and then," "after," "when," "and" are usually scored S.10.

   Rule D.3 precludes the use of S.10 in some cases. Whenever a
sentence requires more than one relational symbol from the same

elemental symbol, the elemental referent is not repeated; the relational
symbols are diagrammed from the same elemental symbol, without using
S.10. See D.3 for further explanation.

Coded:

0341019 (4/3) "The day I went to the hospital I was very frightened."
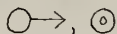
0341021 (△)  "We were just fooling around when I decided to ride
his bicycle around the street."
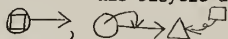
0341016 (2)  "...we sat down by the windows and had another beer
and then another."
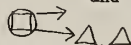
0210305 (△)  "I was in kindergarten at the time, but was not
going because I was sick."
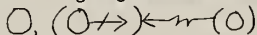
0210210 (3/4) "I remember seeing my opponent making his speak
just before I did."
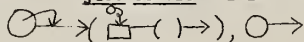
0310207 (2)  "Me and my brother were going to my friend's house."
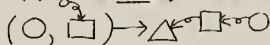

Not Coded:

0210305 (△)  "I had the measles or was just getting over them."

   Expla:  or is scored S.45.
   $(\bigcirc)_V (\bigcirc)$
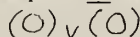
0231101 (3)  "My dad liked her so we decided, that's the horse
we'll buy."

   Expla:  so is coded S.16A.
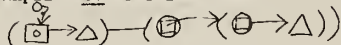
0341024 (4)   "I remember feeling very frightened <u>although</u>
              no one was hurt."

   Expla:   <u>although</u> is coded S.16B.

$$(\boxed{/})\!\!\!-\!\!/\!\!-\!(\,\bigcirc\!\!\!\rightarrow\!(\odot)\,)$$
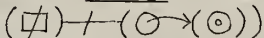
0341002 (3)   "I was really nervous <u>and so</u> wasn't he."

   Expla:   <u>and so</u> is scored S.41.

$$(\,\bigcirc\,)\!-\!\!/\!\!/\!\!-\!(\,\Box\,)$$
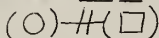
0310204 (2)   "We would cut through the bushes <u>and</u> turn."

   Expla:   The subject of the sentence, <u>We</u>, is not repeated
            before <u>turn</u>, and thus is scored according to
            diagramming rule D.2.

$$\boxed{\phantom{o}}\!\!\overset{\longrightarrow}{\underset{\longrightarrow}{}}$$

S.13 <u>Communication</u>   $\bigcirc\!\!-\!\!\langle\;\rangle\!\!\rightarrow$    $\bigcirc\!\!-\!\!\langle\!\!\langle\;\rangle\!\!\rangle\!\!\overset{\longrightarrow}{\langle\;\rangle}$

   This symbol is used to indicate an overt communication, whether
or not the content of the communication is specified. Besides the
obvious words (said, talked, tell, asked, called, etc.) these are
many other words which imply communication (confronted, promised,
defend my position, argue, consent, gave a sermon, hint, "put it,"
meaning said, rapped, explained, inquired, quoted, claimed). Other
words could be indicative of communication but the context is important
(e.g. answer is coded S.13 when it means "I answered the questions" but
it is not coded S.13 when it means "the result," "it would answer
all my dreams"; scream when used in "screaming that nobody loved me"
is coded S.13. "I was crying and screaming" is not coded S.13 but S.5).
Note: when the person says "my question" the possessive symbol (S.43) is

not used; possession is indicated by the person the communication comes
from.

<u>Coded:</u>

0410011 (4)   "I tried to <u>hint</u> <u>around</u>."
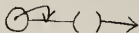
0210404        "I was very hostile to nurses on my entrance and
               in fact would not <u>answer</u> <u>their</u> <u>questions</u>."
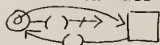
0210211 (4)    "...with my head buried under my pillow and I was
               <u>crying</u> and <u>screaming</u> that nobody loved me."
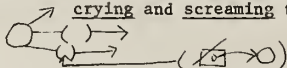
0210502 (4)    "We <u>had</u> <u>promised</u> our parents that we would wait
               until I was through my nursing program to marry but
               when we <u>confronted</u> my parents with the need reason
               they <u>consented</u>."
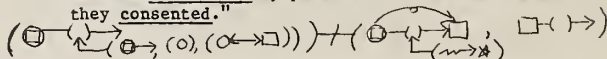
0210502 (4)    "I began to <u>defend</u> my position with the argument
               going on and on.
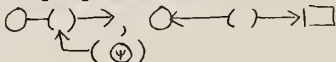
<u>Not Coded:</u>

0210306 (3/4) "I hoped it would <u>answer</u> all my dreams."
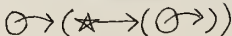
0411202 (3)   "I <u>call</u> it heaven."

       Expla: <u>call</u> is scored S.6B
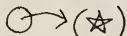
S.16A <u>And So's</u>    ( )⊢——( )

This symbol denotes an explanatory relationship between two
parts of a sentence in which the first part is a variable or condition
that accounts for the second part. It is stated as if the first part
were <u>sufficient</u> reason for the second part, but that the first part does
<u>not necessarily</u> (always) result in the second part.

The description in the second part may be the result of having
considered the "condition" or "fact" described by the first part. That
is the second part may be some decision or action taken on the basis
of knowing the facts or conditions described in the first part. There
seems to be an awareness that the second part may not necessarily
result from the fact or condition in the first part.

In cases where the distinction between necessary and sufficient
conditions is not made, S.16A is not used (See S.8 ). Also in
cases where the causes are described as necessary, but not sufficient,
S.16A is not used (see S.16B).

<u>Coded:</u>

0210303 (3)    "I was positive that I wouldn't be starting <u>so</u>
                I had to accept the fact that maybe I wasn't as
                good as I thought."
( ○→(○↦) )——( ○→(○⁺)╫╫(○)○

0210306 (3/4) "I was ready to start anew (knowing that if you
                wanted and worked hard enough, nothing is
                unattainable."

    Expla:  <u>starting</u> <u>anew</u> linked to <u>knowing</u> by S.16.
    ( ○→("(□↦)┤┤(□→∀)")) ——( ○↧→)

0210202 (4)   "1969 I had been accepted to Yale painting fellow-
ship <u>so</u> decided to go across country for first time
with boyfriend--David before."
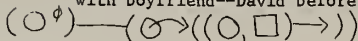
$$( \bigcirc^{\phi}) \!\!-\!\!\!( \sigma \!\rightarrow\!(( \bigcirc, \square) \!\longrightarrow\! ))$$

0341012 (3)   "Everytime I got up to bat I would strike out <u>so</u>
one day my coach said to me he said I am going to
teach you how to bat."

$$( \bigcirc \!\rightarrow\!, \bigcirc \!\rightarrow\!) \!\!-\!\!\!( \Box_{(\cdot)} \!\rightarrow\!\bigcirc ) \; ( \Box \!\xrightarrow{\prime}_{(\circ \rightarrow)} )$$
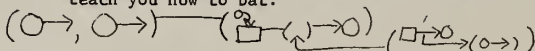
0231101 (3)   "My dad liked her <u>so</u> we decided, that's the horse
we'll buy.

$$( \Box \!\rightarrow\!\triangle ) \!\!-\!\!\!( \sigma \!\rightarrow\!\!\times\! (\bigcirc \!\rightarrow\!\triangle ))$$
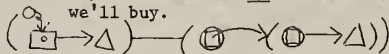
0341014 (3/4)  "I wanted to tease him <u>so</u> I said something like
I hope you lose, Glen."

$$( \sigma \!\downarrow\!( ) \!\longrightarrow\!\square ) \!\!-\!\!\!( \bigcirc \!\!-\!( )\!\!\rightarrow\!\!\! ) \; ( \sigma \!\rightarrow\!(\square ))$$
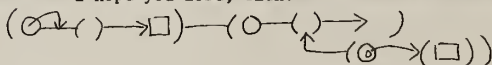
Not Coded:

0210306 (3/4) "I was so eager to get started, <u>but yet</u> was hoping
the day wouldn't end because...."

Expla: <u>but yet</u> is scored S.40.

$$( \sigma \!\downarrow\! ) \!\!\#\!\!-\!\!( \sigma \!\rightarrow\!(\star \!\!\rightarrow\!) \!\leftarrow\!\! m )$$
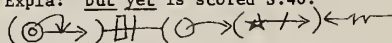
0210303 (3)   "So I had to accept the fact that maybe I wasn't
<u>as</u> good as I thought."

Expla: <u>as</u> is coded S.40.

$$\bigcirc \!\rightarrow\!(\sigma)\!\#\!\!-\!\!(\bigcirc)\!\!\diagdown\!\bigcirc$$
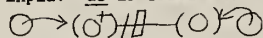
0231110 (3/4) "<u>So</u> I looked down on her and the steps she was
sitting on and said he...."

$$\bigcirc \!\!\rightleftarrows\!\!\square \!\rightarrow\!\triangle$$

0341002 (3)   "I was really nervous <u>and so</u> wasn't he."

$$( \bigcirc ) \!\!-\!\!\#\!\!-\!\!( \bigcirc )$$
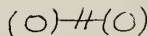
0210303 (3)    "I threw so hard during tryouts that I ruined my
               arm."

    Expla:  so, that are coded S.8.

    $(\bigcirc\rightarrow)\!\!-\!\!\sim\!\!\rightarrow\!\!(\bigcirc\!\!\cong)$
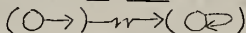
02204-- (Δ)   "I wanted to learn so I could be a champion and
              things like that."

    $\bigcirc\overset{\curvearrowright}{\underset{\rule{1.2em}{0pt}}{\longrightarrow}}\!\!\longrightarrow(\bigcirc, \forall\!\!\!/\,)$
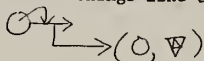
## S.16B  Despite/Although  $(\ )\!\!-\!\!/\!\!-\!\!(\ )$

This symbol denotes an explanatory relationship between two
parts of a sentence, in which one part (a description of thought,
feeling, action, condition, etc.) occurs in spite of the fact of
another thought, feeling, action, condition or other description. This
relationship takes the form: "Although "x" is the case, "y" occurred;"
"Despite condition "x", "y" occurred;" "Even though "x" occurred, "y"
followed." The symbol S.16B denotes the relationship between "x"
and "y" in these models.

There seems to be an awareness that in an event there were
necessary conditions present for something to occur, but that these
conditions were insufficient, and therefore the thing expected did not
occur. In other words, S.16B denotes the description of necessary
but not sufficient condition or reason.

In diagramming S.16B, record the qualifying part of the sentence
(i.e. the "x" part; the despite or although clause) first (i.e., to
the left). Note that this diagramming rule implies that the order of
the symbols in scoring will be the reverse order of its original

expression in the statement, when the "despite/although clause"
(x part) is expressed in the second part of the sentence (i.e. after
the y part).

This symbol should not be used when the relationship between the
two parts of the sentence is an explicit contrasting relationship; i.e.
when the description specifies contrasting <u>differences</u> between two
parts of the sentence (See S.40).

A serial or sequential listing which does not imply the "despite/
although-type" relationship should not be scored S.16B (See S.10).
Words like "although," "but," and "even if," are clues that the
sentence may involve S.16B.

<u>Coded</u>:

0341014 (3/4) "He was the one who threw the rock <u>but</u> I still
felt bad."
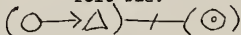


0341024 (4) "I remember feeling very frightened <u>although</u> no
one was hurt."
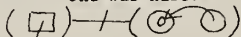


0210502 (4) "We had promised our parents that we would wait
until I was through my nursing program to marry
<u>but</u> when we confronted my parents with the
<u>need</u> reason they consented."
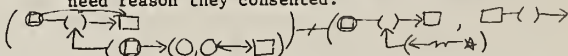


0341001 (3) "There was <u>never</u> a dull moment and <u>even if</u> there
was nothing to do or nowhere to go."
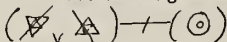
0210404 (3/4) "I told many people about my new feelings <u>but</u> got much mock advice."
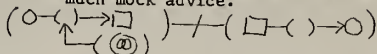
0210211 (4) "Obviously, I was trying to get my mother to come in and comfort me <u>but</u> nobody came."
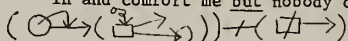
0210404 "I looked forward to therapy 2x weekly, <u>although</u> it was difficult & I needed someone to help me dress, get in & out of pool, etc."
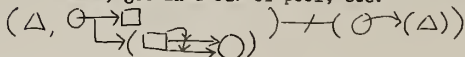
<u>Not Coded</u>:

0341005 (D/3) "I thought she was kidding <u>until</u> I say the tears come down from her face."
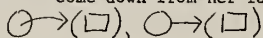
S.18A & S.18B <u>Core Event</u>

   S.18A <u>Brackets</u>  [  ]

      Brackets are used to distinguish the core event of the protocol. A core event is a sentence or part of a sentence that represents the essence of the protocol and must be referred to more than once to be bracketed. (For non-core event sentences referred to only once see S.18C.) Further S.18A is always used in conjunction with S.18B.

      Brackets are also used when a number of consecutive sentences from a cohesive unit to which reference is made in a preceeding or subsequent sentence (See example Δ/3--0341005, sentence #7-10).

      Indications that S.18A is to be used include "that," "it," "things," "these experiences," "what happened," or any other words

that clearly refer to the event.  (See S.35 for instances that do not
require brackets.

### S.18B Star

S.18B is introduced when an S.18A bracket is used.  From that
point on in the protocol, everytime that particular bracketed event is
referred to, the star is used to represent it.  If a second bracket is
used in the protocol, it gets two stars and then two stars are used to
represent this event in the rest of the protocol.  S.18B is treated as
an elemental symbol; when the star stands alone, this implies a description
or characterization of the referred to event (See sentence #6 protocol
#0341005 for example).

Coded:

0341005 (☆/3)

1."I was 11 when I was sitting in my cellar watching TV when my mother came down to tell me my best friend had died during the night."

$$O, O \overset{\nearrow}{\to} \triangle, O \overset{\nearrow}{\to} \urcorner |_{\gamma} (\Box \langle \to \rangle O)$$
$$\llcorner ([\overset{\circlearrowright}{\Box}, \Box])_{\star}$$

2."I thought she was kidding until I saw the tears come down her face."

$$(O \overset{\nearrow}{\to} (\Box \to \langle \to \rangle)), (O \to \Box)$$

3."I was the last friend to see him before he died."

$$\overset{\Box}{\to} \overset{\Box}{\to} \Box, \star$$

4."It was like being in a dream."

$$(\star\star) \dashv\vdash O$$

5."Just waiting to wake up and seeing him."

$$O \overset{\star}{\to} \Box$$

6."But it wasn't, it was reality."

$$(\star\star \dashv\vdash O) \dashv\vdash (\star\star)$$
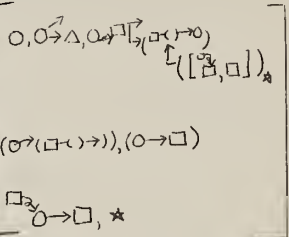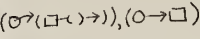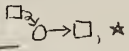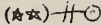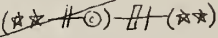
7."The funny thing about it he had a little brother who was 10."
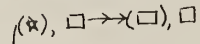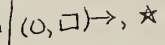
$$(\star), \Box \to \to (\Box), \Box$$

8."I was walking down the street with him the same day his brother died."

$$(O, \Box) \to \to, \star$$

9."He didn't think anything of it."

$$\setminus (\Box \overset{\to}{\to} (\star))$$
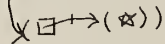
10 "One of his brother's friends came up
to him to ask where his brother was,
and of course his brother was dead, but
he just said very calmly, "He's dead."

## S.18C Reference Back

This symbol denotes a reference to a specific description in a previous or subsequent sentence (or part of a sentence). Generally a pronoun, such as "it," "that" or "this" is used to express this reference back. In using this symbol, the arrow is diagrammed to point to the referent in the previous or subsequent sentence diagram.

This symbol should not be used when the referent is a core event as defined by S.18A & B.

An example of the use of S.18C is illustrated by sentences #7 and #9 in protocol 0341105 in the coded example under S.18A & B.

## S.20 Unspecified Set of Things

This symbol refers to an unspecified set of events or experiences, which are not elaborated (i.e., described) anywhere else in the protocol. In other words, this symbol is used for a word (or phrase) whose referent is an unspecified (unnamed) set of actions, events or experiences. The word(s) denoted by S.20 are usually indefinite pronouns such as "some things," "anything," or "everything."

If the referent of a pronoun can be found elsewhere in the sentence or protocol the word (or phrase) in question should not be scored S.20. It should be scored using the most appropriate symbol that denotes the referent; e.g., "it" referring to a concrete object is scored S.3; "this" referring to an action is scored S.5. The symbol, S.18C should

be used when the referent of a word is located elsewhere in the
sentence or in another sentence (See S.18C).

If the referent of a particular word (or phrase) is a set of
events described by other sentences elsewhere in the protocol, S.20
is not used to denote that word (or phrase) (See S.18B). Also if the
referent is the totality of the event recalled (and described) by the
subject, S.20 is not used. For example, "the day," "that summer,"
"that weekend," "this experience" are not scored S.20 (See S.18B).

<u>Coded:</u>

0341002 (3)   "We really got to know each other very good by
              just talking about <u>anything</u> and <u>everything</u>."
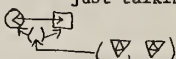


0210211 (4)   "I remember <u>some things</u> that happened at eight
              years old and <u>some</u> at three or four."
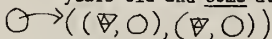


0210306 (3/4) "I was so eager to get started but yet was hoping
              the day wouldn't end because <u>so many things</u> would
              change."
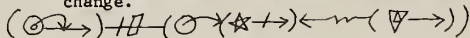


0411207 (3)   "I don't think I have had many happy <u>ones</u>."
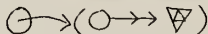


0231106 (3/4) "We stayed there and talked about <u>everything</u>, the world,
              people, parents, animals and us."
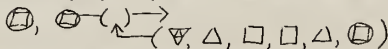


0210504 (4/5) "I should have mentioned that I was married at the
              time, had a teaching job in a small junior college,
              and in far better <u>circumstances</u> than I am today."
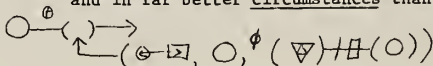
<u>Borderline</u>:

0341010 (3/4) "I asked my grandfather <u>what</u> happened."
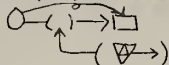


<u>Not Coded</u>:

0210505 (5)   "With a great feeling of inadequacy I will try to
              explain on paper <u>this experience</u>."

   Expla:   <u>this experience</u> is coded S.18B.
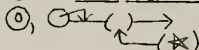


0341001 (3)   "I learned different things about different types
              of people."
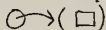


0411202 (3)   "They were happy days...was 27 when she died...
              is 29."

   Expla:   <u>days</u> is not coded S.20.  <u>They</u> refers to
            previously described series of events and
            happy days is a descriptor of those events.
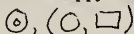


0210301 (∆)   "<u>It</u> was one of the hardest days of my life...."



S.22A <u>Inter-acting</u>  

   This symbol denotes mutual and reciprocal actions between two

persons.  Descriptions of actions scored S.22A involve descriptions

that imply or connote observable behaviors involving both parties

acting upon each other.  Descriptions of actions involving both parties

acting together, but not upon each other are not scored S.22A.  Actions

which cannot be done without the other party reciprocating (e.g.,
"met him/her," "kissing each other") are scored S.22A.

Coded:

0341006 (3)    "From this first <u>meeting</u> we hit it off great."

      Expla:  <u>hit it off</u> great is coded S.22B,
             but <u>meeting</u> is coded S.22A.
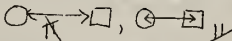


0210201 (4)    "I was in love with many of the people I <u>worked with</u>."
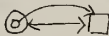


0341017 (3)    "We then <u>started to kiss</u>."



0341014 (3/4)  "...and we always <u>avoided each other</u>."



0210401 (4/5)  "we laid on the beach and <u>tried to keep warm in</u>
                <u>each other's arms</u>."
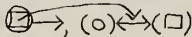


Not Coded:

0341021 (Δ)    "we <u>were fooling around</u>."

      Expla:  <u>fooling around</u> does not connote interaction,
             hence not scored S.22A.



0210208 (Δ)    "The boy across the street...who I wasn't especially
                good friends with walked out of his driveway the
                same time I walked out of my house."

      Expla:  (<u>walked out</u>)...<u>at the same time</u> is scored S.10.
             It is interpreted as simultaneous but not
             mutual action.
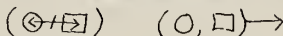
S.22B & C <u>Interpersonal Relationship Traits</u>

This symbol incorporates the former definitions of two separate symbols S.22B reciprocal roles , and S.22C reciprocal relationships .

This symbol denotes the characterization of an interpersonal relationship. It is used when a relationship (usually with another person) is described, evaluated or qualified. The response must indicate explicitly or implicitly that the relationship being described is not particular to just one situation, but rather indicative of a pattern of interaction.

<u>Coded</u>:

0341001 (3)  "I've also learned that there aren't really as many <u>true</u> <u>friends</u> as people think."

0341002 (3)  "We really <u>got to know each other</u> very good..."

0210505 (5)  "And why was it too late now to help make her life meaningful <u>together</u> with mine?

0231106 (3/4) "I was in ecstacy with the great <u>understanding</u> <u>we</u> <u>had</u>."

0210505 (4/5) "If it was with a <u>man</u> that I could have the <u>deepest</u> <u>and</u> <u>most</u> <u>total</u> <u>relationship</u>--there was no way around the preliminary bullshit.

0231106 (3/4) "The closeness we both felt mentally and physically was beautiful, in every sense of the word."

0341006 (3) "Our family are good friends with his and he is a great boss to us and really helps and understands."
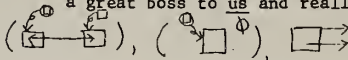
Borderline:

0210404 (3/4) "I was not getting along with myself though."

Not Coded:

0210201 (4) "I was in love with many of the people I worked with."

Expla: I was in love with is coded S.9B.

0210505 (5) "Moments ago I made a phone call abroad to find out that the woman (who I had finally admitted to myself without shame--that I was very much in love with).."

Expla: in love with is coded S.9B.
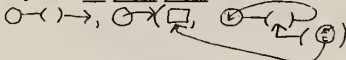
0210513 (3/4) "my friend couldn't play with me."
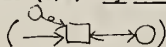
S.23 Negation $\emptyset \longrightarrow$

This symbol denotes that a specific thought, action, feeling or other description is negated, rejected, retracted or otherwise noted

<u>absent</u> by a word(s) (such as "not," "none," "don't," "couldn't,"
etc.) that refers to such a negation. Discontinuity of action (e.g.
"no longer") and absolute negations (e.g., "never") are scored S.23
also.

However, <u>actions</u> which connote negation, retraction or rejection
are not scored S.23 (e.g. "breaking a promise," "refused to jump,"
"stop crying." Also partial, tentative or incomplete negations are
not scored S.23 (e.g. "we're not his only kids") ("it was not
only a discovering."). Double negations also are not scored S.23
(e.g. "Nothing was unattainable"). Finally the symbol does not denote
negated value statements that function to express "intensity," or to
qualify an action, thought, feeling, etc.

<u>Coded</u>:

0210404 (3/4) "I <u>didn't</u> feel energetic or excited.

0210305 (Δ)   "...knew that I probably <u>wouldn't</u> be able to go."
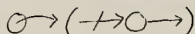
0210502 (4)   "I honestly feel there would have been <u>nothing</u>
              left of me leave alone the chance I could have
              made some grave mistakes."
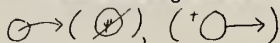
0411207 (3)   "Then because we <u>couldn't</u> speak to my son again,
              we just took the <u>plane</u> and flew out there."
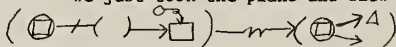
0410906 (Δ/3) "I kept waiting all day long for someone to come
              and <u>no ene</u> came."
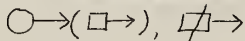
Not Coded:

0210208 (4)   "The boy across the street who I wasn't
              expecially good friends with...."

   Expla:  wasn't is not scored S.23 because it is a
           partial negation.

   $(\square), ( \square\!\!-\!\!\ominus)$
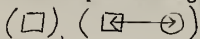
0210301 (4)   "Searching for (name deleted) was no easy
              task and...."

   $\bigcirc\!\longrightarrow\!\square$

0341001 (3)   "I made so many friends (and kept them) it was
              unbelievable."

   $( \square\!\Longleftarrow\!\ominus )\!\!\curvearrowleft\!\!\curvearrowright$
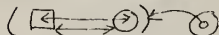
0411110 (2)   "When they brought him into the room, and he
              was so tiny, and I thought this was impossible."

   $\square\!-\!(\square)\!\longrightarrow\!\triangle, (\square) \quad \bigcirc\!-\!( \ )\!\longrightarrow$
   $\phantom{xxxxxxxxxxxxxxxxxxxxxxxxx}\llcorner( \bigstar )$
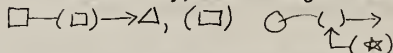
0341002 (3)   "I was really nervous and so wasn't he."

   Expla:  wasn't is not scored S.23 because this is a
           colloquial phrase meaning "he was nervous,
           too."

   $(\bigcirc)\!-\!/\!\!/\!-\!( \square )$
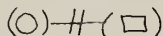

S.24A & S.24 B Possibilities   $+$   $\#$

   S.24A One Possibility $+$

        This symbol denotes an explicit reference to one possible

   contingency. It refers to a description of the potential rather than

   actual (i.e. it is hypothetical, rather than real). Often the words

   (or phrases) "might," "could," "it was possible that," are scored S.24A.

        There is an implicit comparison to another possibility or alter-

   native event, condition, action or other description. If no such

implicit comparison is suggested, S.24 is not used.

"Thoughts" are often hypothetical in themselves, because they are not descriptive of activity; they describe "possibilities" which one considers. However, thoughts are not scored S.24, unless they explicitly state an awareness of the potential, or hypothetical (rather than real) quality of the thought itself (e.g. "I thought of the possibility of his coming" is scored S.24A, "wishing I could help," is not scored S.24).

Also "could" when it means "ability" (or capacity to) is not scored S.24A (See S.5); also when "could" means "permission to" or possession of a power, right or means (e.g. President can veto the bill) it is not scored S.24A (See S.37, S.7).

The symbol is not used when the possibilities are indefinite in number. (See S.24B)  Also, it should be noted that S.25 supercedes this symbol.  If a diagram involves a contingency relationship scored S.25, the parts (or elements) of that relationship should not be scored S.24A.

Coded:

0210502 (4) "I honestly feel there would have been nothing left of me leave alone the chance I could have made some grave mistakes dealing with the health care of others."

$$\bigcirc\!\!-\!\!\!\times\!(\ \cancel{\bigcirc}\ ),\ (+\bigcirc\!\!\longrightarrow))$$
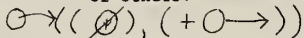
0410011 (4)  "I could have been really happy."

$$(+\ \textcircled{\circ}\ )$$

Not Coded:

0210301 (Δ) "...wishing I <u>could</u> help and yet knowing I never <u>could</u>."

$$\bigcirc \rightarrow (\bigcirc \rightarrow) , \bigcirc \rightarrow (\bigcirc \leftrightarrow)$$
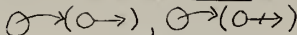
0210301 (Δ) "...feeling I was a failure as a friend--<u>I'd</u> never cut it."
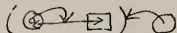
$$(\circledast \rightarrow \boxminus) \vdash \bigcirc$$

0210515 (4/5) "Whatever happens I still like myself,  was another thought later in that tearful night."

$$(\forall, \circledast) \vdash \bigcirc$$
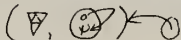
0210505 (5) "And why was it too late now to help make her life meaningful together with mine?"

$$-\!\!\!\leadsto (\bigcirc \!\!-\!\!\!\rightarrow (\circledast \!-\!\!-\!\circledast)))$$
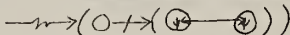
S.24B <u>Many Possibilities</u>  ⧣

This symbol denotes the description of an indefinite number of possibilities. It denotes multiples of that represented in S.24A, i.e. when numerous alternatives or possibilities are suggested by the statement. However, the unspecified descriptions (such as "something," "everything") are not scored S.24B (See S.20). The other criteria applicable to S.24A, involving thoughts, the use of "could" and use of symbol S.25 apply for the scoring of S.24B also.

Not Coded:

0210306 (3/4) "I was ready to start anew (knowing that if you wanted and worked hard enough, nothing is unattainable."

$$\bigcirc \rightarrow ((\bigcirc \rightarrow) \vdash (\bigcirc \rightarrow \mathcal{A})) \!-\!\!-\!( \bigcirc \!\!\rightarrow)$$
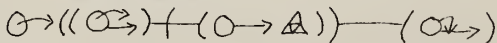
0210101 (Δ/3) "...<u>all</u> I <u>could</u> tell her was..."

$O\!\!-\!\!\langle\ \rangle\!\longrightarrow$
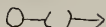
0341001 (3)  "This summer had to be the <u>greatest summer</u> <u>I</u>
         <u>have ever had</u>."
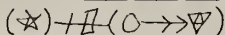
$(\maltese)\!\!-\!\!\!|\!\!\!+\!\!\!-\!(O\!\longrightarrow\!\!\!\!\gg\!\!\cancel{V})$

0341001 (3)  "There was <u>never</u> a dull moment and even if there was
         nothing to do or no where to go."

    Expla:  <u>there was nothing</u>, <u>there was nowhere</u>, are coded S.20.

$(O\!\longrightarrow\!\cancel{V},\ O\!\longrightarrow\!\cancel{V})\!\!-\!\!\!+\!\!\!-\!(\cancel{\Delta})$
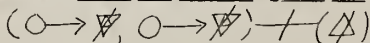

S.25 <u>Hypothetical If-Thens</u>    $\!-\!\!\!|\!\!\!-$

   This symbol denotes an explanatory relationship (between two
parts of a sentence) expressed in the form of a proposition or prediction.
It is a proposition or prediction in the sense that the content of the
statement has yet to occur--it is hypothetical, rather than actual.
It is a statement of potentiality (or possibility), rather than a
statement describing what has already happened (reality or actuality).
The statement takes the form, "if x, then y."

   The symbol is diagrammed to distinguish the <u>if</u> clause of the
sentence (on the left in the diagram), from the <u>then</u> clause of the
sentence (on the right in the diagram).

   S.25 should not be used if the explanatory relationship is
not hypothetical in nature (See S.8, S.16A, S.16B).

   <u>Coded</u>:

0410906 (3)   "The doctor told me <u>if</u> I wanted help for my ear, I
         had to go into the hospital and have my ear taken
         care of."

$\Box\!\!-\!\!\langle\wedge\rangle\!\!\longrightarrow\!\!O$
$\phantom{xxxx}\sqsupset\!\!\langle(\ O\!\!\cancel{\curvearrowright}\!-\!)\!\!-\!\!\!|\!\!\!-\!\langle\!\longrightarrow\!O\!\!\longrightarrow,\ \!-\!\!\longrightarrow\!O\rangle\rangle$
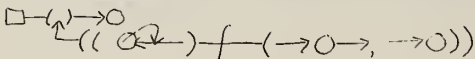
0210505 (5)   "**If** only I could have been braver sooner--would she have still been alive?"

$(\otimes^{+})-\!\!\!+\!\!\!-(\square)$
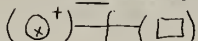
0410809 (3)   "I think I'd die **if** I did."

$(O\rightarrow)-\!\!\!+\!\!\!-(\sigma\rightarrow(O))$
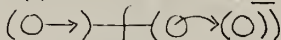
0410809 (3)   "He said, '**if** I ever get a hold of you, I'll kill you.'"

$\square-(\;)\!\!\rightarrow$
$\curvearrowleft((\square\rightarrow O)-\!\!\!+\!\!\!-(\square\rightarrow O))$
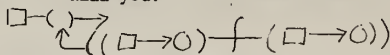
0410011 (4)   "**If** he was **then** I really could have told him."
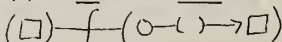
$(\square)-\!\!\!+\!\!\!-(O-(\;)\rightarrow\square)$

0210305 (△)   "My mother told the teacher to come by anyway the day of the picnic to see if I felt alright to go, providing the doctor said it was o.k."

$\sigma\!\!\searrow\square-(\;)\rightarrow\square$
$\curvearrowleft(\square\rightarrow,(\square\rightarrow((\odot,\square-(\;)\rightarrow\rightarrow O\rightarrow)-\!\!\!+\!\!\!-(\rightarrow O\rightarrow))$

0210306 (3/4)  "I was ready to start anew (knowing that **if** you wanted and worked hard enough, nothing is unattainable."

$\sigma\rightarrow((\sigma\!\!\nearrow)-\!\!\!+\!\!\!-(O\rightarrow\triangle))-\!\!\!-(O\!\!\nearrow)$
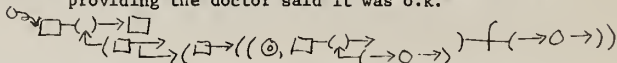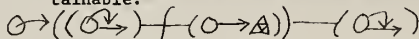
0210515 (4/5)  "**If** it was with a man that I could have the deepest and most total relationship--there was no way around the preliminary bullshit."

$((\boxed{\triangleleft\!\!\!-\!\!\!-\otimes})-\!\!\!+\!\!\!-(O\!\!\nearrow(O\!\!\leftarrow\square)))$
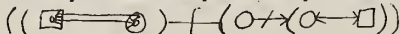
Not Coded:

0341024 (4)   "We had to drive in 2 cars **since** there wasn't enough room in one."
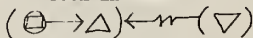
$(\ominus\rightarrow\triangle)\leftarrow\!\!m\!\!-(\triangledown)$

0210303 (3)   "I was positive that I wouldn't be starting **so** I had to accept the fact that maybe I wasn't as good as I thought."

$(\sigma\rightarrow(O\!\!\rightarrow\!\!))-\!\!\!-(\sigma\rightarrow(O_{+})-\!\!H\!\!-(O)\!\!\circlearrowright$

0341019 (△/3) "When they left I started to cry <u>because</u> I was homesick and frightened."

$$( \square \rightarrow, \; \textcircled{\small ○} ) \!\!-\!\! \sim \!\!\rightarrow\!\! ( \text{O} \rightarrow )$$

0231101 (3)  "My dad liked her so we decided, that's the horse we'll buy."

$$( \overset{\text{O}}{\underset{\text{o}}{\boxed{}}} \!\!\rightarrow\!\! \triangle ) \!\!-\!\! ( \text{Ø} \rightarrow ( \text{Ø} \!\!\rightarrow\!\! \triangle ))$$
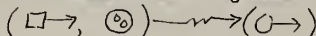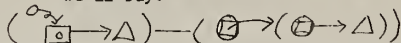
0210303 (3)  "I threw so hard during tryouts that I ruined my arm."

Expla:  <u>that</u> is coded S.8.
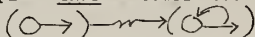
$$( \text{O} \!\!\rightarrow\! ) \!\!-\!\! \sim \!\!\rightarrow\!\! ( \overset{\frown}{\text{O}} \!\!\sim\!\! )$$

0341001 (3)  "There was never a dull moment and <u>even if</u> there was nothing to do or no where to go."

$$( \text{O} \!\!\rightarrow\!\! \cancel{\text{Ø}}, \; \text{O} \!\!\rightarrow\!\! \cancel{\text{Ø}} ) \!\!-\!\!/\!\!-\!\! ( \cancel{\text{Ø}} )$$
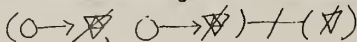
S.34 <u>In Order To</u>   $\text{O} \underset{\longrightarrow}{\overset{\longrightarrow}{\rule{0pt}{0pt}}}$

This symbol denotes a relationship in which one part of a sentence is a <u>means to an end</u> described by another part of the sentence. This relationship can      be expressed by the phrase "in order to." Although the phrase "in order to" is not usually stated by the subject in the protocol, the relationship can generally be identified by the use of a verb-infinitive (e.g., "to help," "to find out," etc.), in which the word "to" carries the meaning "in order to."   The symbol denotes only the relationship "in order to", and the verb following (the action or thought) is diagrammed also.

In the English language, the subject of the sentence is usually not repeated when a verb-infinitive is used; but in diagrams involving S.34, the subject of the sentence should be re-diagrammed in the

parentheses following the S.34 arrowhead. For example, the sentence, "I lined up to go out to the stadium," is diagrammed as follows: $\overset{\curvearrowright}{\text{O}}\!\!\overset{?}{\sqsubset}\!\!\rightarrow (\text{O}\!\!\rightarrow)$ It should not be diagrammed in either of the following ways: $\overset{\curvearrowright}{\text{O}}\!\!\overset{?}{\sqsubset}\!\!\rightarrow(\rightarrow)$ , $\overset{\curvearrowright}{\text{O}}\!\!\overset{?}{\sqsubset}\!\!\rightarrow(\triangle)$ .

Symbol S.34 only denotes means-ends relationships which are explicitly expressed by the phrase "in order to," by the verb-infinitive form, or in some cases of the word "for" (e.g., "We each had our own rooms _for_ privacy, personal tastes and entertainment of friends.").

The symbol is not used when the means-ends relationship is stated less definitely or less explicitly, as in the expression "so that" (See S.16). Also, S.34 is not used on some colloquial expressions involving the words "came" and "went." (e.g., "went to get", "came to see"). These are scored S.5, as a single action, i.e., S.34 is not used when the words "come" and "go" (and its tenses) are directly followed by an infinite (e.g., "came to pick me up").

Coded:

0210306 (3/4) "By then the time grew near and I lined up _to go out_ to the stadium."

$\triangle, \ \overset{\curvearrowright}{\text{O}}\!\!\overset{?}{\sqsubset}\!\!\rightarrow (\text{O}\!\!\rightarrow)$
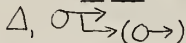
0210303 (3) "I even dragged my roommate to the game with me _to have a shoulder_ to cry on.

$\text{O}\!\!\overset{\curvearrowright}{\sqsubset}\!\!\rightarrow (\text{O}\!\!\overset{\rightarrow}{\rightarrow}\square)$
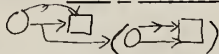
0210502 (4) "During the third week I called him again _to state_ that I had resigned."

$\text{O}\!\!\sqsubset (\ )\!\!\longrightarrow\square$
$\sqsubset\!\!\rightarrow (\text{O}\!\!\langle\ \rangle\!\!\rightarrow)$
$\sqsubset\!\!\!-(\text{O}\!\!\rightarrow)$
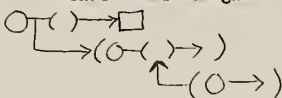
0341010 (3/4) "I then called some neighbors whom I could
rely on to help me get in touch with my parents."
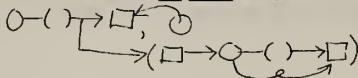
Borderline:

0341005 (Δ/3) "My mother came down to tell me my best friend died.
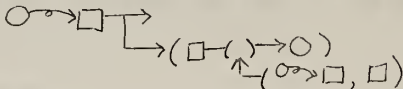
Not Coded:

0210505 (5) "Moments ago I made a phone call abroad to find
out that the woman (who I had finally admitted
to myself without shame..."
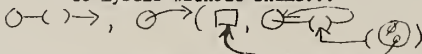
0341017 (3) "When he came to pick me up my mother asked him
what time he would bring me home."
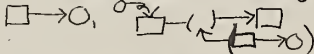
0341002 (3) "After the movie we went to get a milkshake and
he didn't get...."

Expla: went to get is scored S.5.
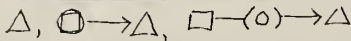
0210502 (4) "I returned to nursing to be sent several hundred
miles away on an affiliation."
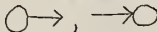
0210101 (Δ/3) "We were concerned about our uniforms for some
reason."

Expla: for some reason is scored S.8.
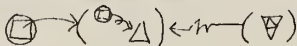
S.35 <u>Summary</u>

This symbol denotes that a particular sentence summarizes or
concludes the descriptions prior to that sentence. The summary statement
is (1) one entire sentence, and (2) refers to an aspect of the experience
described in general terms. The summary statement usually occurs near
the end of a paragraph and is often the last sentence in the response.

The summary may be about (1) the specific experience described (see
example #0410011 below) or (2) the implications drawn from the
experience for future action (See example #0210306).

This symbol should not be used if the statement meets criteria
for S.18A, B or C.

<u>Coded</u>:

0411202 (3) "It was a happy life, course you worry, do you
have enough to live on or not."



0210306 (3/4) "I was ready to start anew knowing that if you wanted
and worked hard enough, nothing is unattainable."



0410011 (4) "I always wanted to meet my father and then he
was really nothing." (Summary of particular
experience: This is the last sentence of the
protocol. The core event was a description of
meeting father and her responses.)



<u>Not Coded</u>:

0411207 (3) "So these were all tragic experiences."

0410809 (3)    "Boy that's really an experience for an eleven year old."

☆—(>)

0210504 (4/5)  "At the end--my husband asked me, 'liberation from what?'"

(diagram)
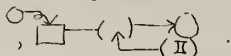
0341014 (3/4)  "Afterwards, and even now I felt really guilty about it."

(diagram)

0210401 (4/5)  "It was the most beautiful scene I had ever seen."

(☆—‖—(O—→ ∀))
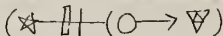
0411207 (3)    "I haven't got over it yet...."

(diagram)

S.36A <u>Turning Point</u>    ●——→

This symbol is used when the totality of the (described) experience is described as a turning point in the subject's lifetime. The turning point is described as a <u>change</u> in one's personal condition or characterization which begins or terminates (ends) with the experience described. The change must refer to the impact or result of the <u>total</u> event recalled, not just one element or part of the experience described (for these changes see S.42A and S.42B).

<u>Coded</u>:

0210713 (6)    "It was a 'high' experience that lasted for months and months, and which <u>I still experience</u> to a certain extent."

(diagram)
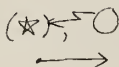
0210513 (3/4) "That was <u>the beginning</u> of a lonely and bitter childhood for me."

0410809 (3) "That mark will always be with me <u>until the day</u> I <u>die</u>."

## Not Coded:

0210502 (4) "It was the hardest thing I've ever done."

Expla: <u>I've ever done</u> is scored S.40.
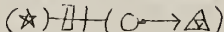
0341014 (3/4) "After awhile my father came and took me home."

Expla: <u>after awhile</u> is not coded S.36.
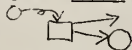
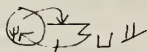0210401 (4/5) "<u>to this day</u> I never think I've seen the stars shile so bright as they did that night."
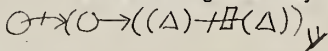
0341014 (3/4) "I <u>never</u> spoke to Glen again."
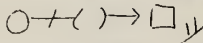
0210502 (4) "However, I knew I could not endure living the life of the past three weeks for a whole year."

Expla: <u>for a whole year</u> is coded S.42B.

0341001 (3) "In a way I have learned so much by every small experience that happened <u>that summer</u>."
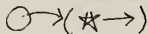
0341001 (3) "I also met a guy <u>that summer</u> that really meant alot to me."
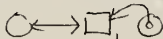
S.36B <u>Duration</u> ⌞⌟

This symbol denotes a specified passage or duration of time within the experience described. The length of time or duration must be specified according to clock time (number of minutes or hours), calendar time (days, weeks, months) or specific references to events marking the passage of time (e.g., "from the beginning to end of the program").

This symbol does not denote time used as a benchmark (e.g., "that day," "that summer," "the second year") in the experience described, nor does it denote references to time in describing a seuqence of events (e.g. "afterwards," "and then," "a few days later," "before," and "finally" are not scored S136B, see S.10).

<u>Coded</u>:

0210201 (4)    "I stood up in back and can see the show <u>from start to finish</u>, Cilla's dancing, June, Chris, Joe all those on stage slowly falling at the end."
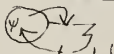
$$\bigcirc \overset{\rightarrow}{\underset{\sqcup}{}} \triangle \; , \;\; \square \rightarrow (\square, \square, \square, \square) \rightarrow$$
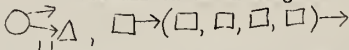
0210404 (3/4)  "The first <u>length of time</u> date I was told was 2 wks, next 2 mo., 3 mo., 7 mo., 2 years before it would be over.

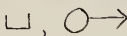$$-\langle \wedge \rangle \overset{\rightarrow}{\longrightarrow} \underset{}{\square} \\ \phantom{-}\langle \sqcup, \sqcup\sqcup, \sqcup\sqcup, \sqcup \rangle$$
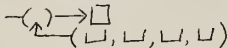
0210404 (3/4)  "I met an old friend, <u>after a week</u> of these feelings...."
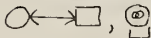
$$\bigcirc\!\!\leftarrow\!\!\rightarrow\!\!\square \; , \; \overset{\oslash}{\sqcup}$$

0210502 (4)    "However I knew I could not endure living the life <u>of the past three weeks</u> for a whole year."

$$\overset{\psi}{\underset{\displaystyle \diagup\;\;\sqcup}{\bigcirc}}$$

0210306 (3/4)  "The <u>next 20 or 30 minutes</u> went by and at the end I had heard my name."

$$\sqcup \; , \; \bigcirc\!\!\rightarrow$$
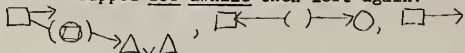
Not Coded:
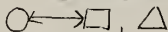
0210502 (4)   "I was <u>two</u> <u>years</u> <u>through</u> a 3 yr. nursing program."

(O)

0231106 (3/4) "Friends came in and gave us a drink or a coke and
              rapped <u>for awhile</u> then left again."
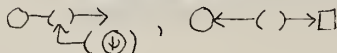
0341017 (3)   "We then started to kiss and <u>before</u> <u>long</u> it was
              getting late."

0210505 (5)   "Why did it take me as long to admit my feelings
              to myself and not to try and run away from them?

0210502 (4)   "I began to defend my position with the <u>argument</u>
              <u>going</u> <u>on</u> <u>and</u> <u>on</u>.
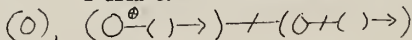
## S.37 <u>Internal Shoulds</u>   ⊕

This symbol denotes inner-directed prescriptions or social
imperatives, most of which are expressed as "shoulds". "Shoulds"
which originate from specific authority figures (such as one's parents,
the doctor or teacher) are not scored S.37. See S.7 for distinguishing
criteria.
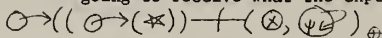
Coded:

0341017 (3)   "I was a fool I <u>should</u> <u>have</u> said something but
              I didn't."

0210713 (6)   "I sensed that it was not only <u>permissible</u> in this
              setting to be natural and to follow my own inner
              direction, but it was highly desirable if I were
              going to receive what the experience had to offer.

$$\bigcirc\!\rightarrow\!((\ \bigcirc\!\rightarrow\!(\maltese))-\!\!+\!\!-(\ \otimes,\ \widehat{\psi\mathcal{D}})\ )_{\oplus}$$
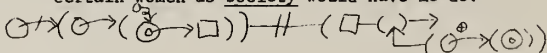
0210515 (4/5) "My mother's way of looking at things suggested
              that if I wanted a man--she assumed that--I don't think
              I was assuming that at the time--I would <u>have to</u>
              compete with other women on the level of physical
              attractiveness."

$$\bigcirc\!\supset\!\boxed{\mathcal{I}}\!\times\!(\bigcirc\!\rightarrow\!\square)-\!\!+\!\!-(\ \bigcirc\!\!\times^{\oplus}\!\!\rightarrow\!\square))$$
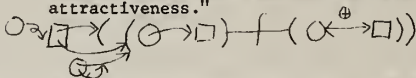
0210504 (4/5) "I <u>should</u> <u>have</u> mentioned that I was married at the
              time."

$$\bigcirc\!\!-^{\oplus}\!(\curvearrowright\!\!\!\longrightarrow\!\!(\ominus\!\!-\!\boxed{?}))$$
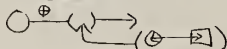
0210505 (5)   "A desire not to negatively define my love for
              certain women as <u>society</u> would have me do."

$$\bigcirc\!\rightarrow\!\!\times\!(\bigcirc\!\rightarrow\!(\overset{\mathcal{X}}{\ominus}\!\rightarrow\!\square))-\!\!+\!\!+\!\!-\!\!-(\ \square\!-\!(\curvearrowright\!\!\!\rightarrow\!\!\overset{\oplus}{\ominus}\!\!\rightarrow\!\!\times(\odot)))$$

Not Coded:

0210404 (3/4) "The Dr. said it was physical and I must be
              hospitalized."

   Expla: <u>must be</u> is scored S.7.
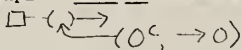
$$\square\!-\!(\curvearrowright\!\!\!\longrightarrow\!\!(O^{c},\ \rightarrow\!O)$$
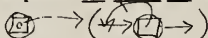
0210513 (3/4) "She told him loud enough for me to hear:  They're
              negras--you <u>can't</u> play with her anymore.

   Expla: <u>can't</u> is coded S.7.

$$(\square\!-\!(\curvearrowright\!\!)\!\rightarrow\!\square)\overset{\curvearrowleft\!\bigcirc}{\underset{\curvearrowleft\!((\bigcirc),\ (\rightarrow\!\square\!\leftarrow\!\rightarrow\!\square))}{}}$$
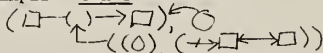
0231106 (3/4) "We were happy we didn't ever want <u>to</u> <u>have</u> <u>to</u> leave."

   Expla: <u>to have to</u> is coded S.7.

$$\widehat{\boxed{\odot\mathcal{I}}}\!-\!\!-\!\rightarrow\!(\overset{\frown}{\not\!\!4}\!\rightarrow\!\boxed{\mathcal{I}}\!\rightarrow\!)$$

0210513 (3/4) "...my friend couldn't play with me."

Expla:  <u>couldn't</u> is coded S.7.



## S.39A <u>Personality Traits</u>  Ⓧ

This symbol denotes reference to a distinguishing character,
behavioral, tempermental, emotional or mental traits of an individual,
generally referred to collectively as personality traits. When one of
these traits are named individually, (not collectively), S.39A is used.
For example, traits scored S.39A include ambitious, confident, proud,
serious, honest, optimistic, curious.

S.39A is not used when several of these traits are referred to
collectively, for example, by such words as "my personality," "my ego,"
my capabilities (See S.39B).

S.39A is not used when the traits are descriptive primarily of
one's role, vital statistics or physical condition (See S-1A), e.g.,
"so I could be a champion," "I was a fool," and "she was more
experienced than I" are scored S.1A—not S.39.

Emotional responses and situation-specific emotions are not
scored S.39A (See S.9); but emotional tendencies or patterns describing
oneself or other persons are scored S.39A. That is, if a description of
an emotion implies that that emotion is a characteristic tendency of
that person, then it is scored S.39A. If not, it is scored S.9.

Note that when the word "my" is used in conjunction with a trait
scored S.39A the symbol S.43 is not used to denote the "my." Similarly,

S.43 is not used with S.39A when other possessive pronouns, "his,"
"her," "our," "their," are used.

Coded:

0210404 (3/4) "I was losing my ambition and sleeping often."

0210210 (3/4) "It was clear to me that he didn't have the
confidence that I was feeling."

0210210 (3/4) "I saw myself as confident, happy and proud."

0210505 (5) "If only I could have been braver sooner—would
she have still been alive?

0210515 (4/5) "Somehow I saved—because of a basicly
optimistic nature I think—a good dose of
self-respect."

Borderline:

0210713 (6) "I sensed that it was not only permissible in this
setting to be natural and to follow my own inner
direction but it was highly desirable if I were
going to receive what the experience had to
offer."

0341017 (3) "I thought I might be kind of wierd for not
enjoying kissing."

Not Coded:

0210404 (3/4) "I was curious about her ideas, habits, expectations and goals."

   Expla: <u>curious</u> is coded S.6B.



0210404 (3/4) "We were both art students, she more experienced than I."

   Expla: <u>experienced</u> is coded S.1A and S.2A.



0341017 (3)  "<u>I</u> was <u>a</u> <u>fool</u> I should have said something but I didn't."



02204-- ( )  "...so I could be a champion and things like that."




S.39B <u>Personality Cluster</u>   $(\varphi)$   $\boxed{\psi}$

   This symbol denotes references to generalized personality characteristics, i.e., when several personality characteristics or traits (individually scored S.39A) are implicitly generalized into one word or concept, such as "my habits," "my ego," etc. In other words, the concept named implies that the subject is aware of several personality traits or characteristics. Typical examples of words scored S.39B are "personality," "my capacities," "soul," "mind," "spirits," "personal tastes," "my 'self'," "interests." References to "my life" when the contextual interrelationships S.32 are not specified are scored S.39B also. (When the word "my" is used in conjunction with the concept scored S.39B, S.43 is not used.)

Coded:

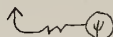0210502 (4)   "I began to defend <u>my position</u> with the argument going on and on."
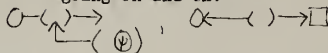
0210404 (3/4) "I was very curious about <u>her ideas</u>, <u>habits</u>, <u>expectations</u> and <u>goals</u>.
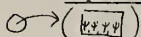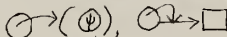
0210515 (4/5) "I resolved that this was not necessarily true and saved a little <u>corner of myself</u>.
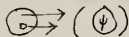
0411207 (3)   "All that happened to them because that was <u>my life</u>."

0341001 (3)   "I can now see <u>my faults</u> and learn to accept others.

0210404       "I hoped and planned to do much work and self-realization of <u>my capabilities</u>."
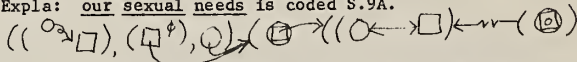
Not Coded:

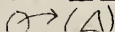0210404 (3/4) "...and <u>my whole pace</u> slowed down."

0210502 (4)   "My husband to be (he was a college student) and I decided that we needed to get married from a result of our sexual needs."

   Expla: <u>our sexual needs</u> is coded S.9A.

0210210 (3/4) "Most of my fantasy took place in the junior high school auditorium."

   Expla: <u>my fantasy</u> is coded S.6B.

S.40 **Differences/Contrasts** - ⫽

This symbol represents statements describing contrasts or differences between any of the following:

1.  Between different, but simultaneous, actions, thoughts, feelings, or states of being reported by the subject.

2.  Between actions, thoughts, feelings or states held by the subject and those of another person(s).

3.  Contrasts over time, between a subject's former and present thoughts, feelings, actions (see S.36 to differentiate time references).

Contrasts or differences which are not made explicit by words such as "than," "as opposed to," "versus" or "but" should not be scored S.40. Negations are not scored S.40. Also, "but" or "despite" in the sense of although (i.e. the statement of insufficient reason) is not scored S.40 (see S.16B).

Coded:

0210504 (4/5) "I was married at the time, had a teaching job in a small junior college, and in far better circumstances <u>than I am</u> today."

$$(\oplus \text{-} \boxed{?}], \bigcirc^{\phi}), (\forall) \text{-}\cancel{\#}(\bigcirc))$$
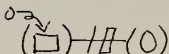
Borderline:

0210401 (4/5) "In the sky, the stars never seemed so bright and to this day I never think I've seen the stars shine so bright as they did that night."

$$\triangle, \bigcirc\text{+}\rightarrow\!(\triangle), \bigcirc\text{+}\rightarrow(\circ\rightarrow(\triangle)\text{-}\cancel{\#}\text{-}(\triangle))$$

0210202 (4) "To a snowy continental divide, dinnered on a grave site of flood victims, no fear but solidarity."

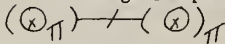$$\bigcirc\rightarrow\triangle, \bigcirc\rightarrow, (\overset{\phi}{\oslash})$$

0210210 (3/4) "My opponent being white and me being black."

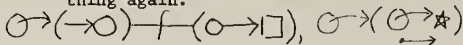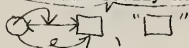$$(\square) \dashv\!\!\!/\!\!\!\vdash (O)$$

Not Coded:

0210713 (6) "Up to that time, I had had a poor concept of
myself, <u>although</u> it had been improving slightly
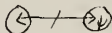through the previous few years."

$$(\textcircled{x}_{\pi}) \!\!-\!\!/\!\!-\!\!( \textcircled{x} )_{\pi}$$

0210211 (4) "thinking that I would get back at them if I got the
chance, <u>but</u> also knowing I wouldn't try this kind of
thing again."

$$O\!\!\rightarrow\!(\!\!\rightarrow\!\!O)\!\!-\!\!/\!\!-\!\!(O\!\!\rightarrow\!\square), \; O\!\!\rightarrow\!(O\!\!\rightarrow\!\maltese)$$

0410011 (4) "I always wanted to meet my father and then he
was <u>really</u> nothing."

$$\textcircled{x}\!\!\downarrow\!\!\square \; , \; "\square"$$

0210404 (3/4) "I was not getting along with myself <u>though</u>."

$$(\textcircled{} \!\!-\!\!/\!\!-\!\!\textcircled{})$$

0210404 (3/4) "<u>and now</u> I felt clumsy and awkward."

$$, \; (\textcircled{oo})$$

0210513 (3/4) "I had no idea what a "negra" was <u>but</u> I was
very hurt and sick that my friend couldn't play with
me."

$$( O\!\!\rightarrow\!\amalg )\!\!-\!\!/\!\!-\!\!( (O,O)\!\!\rightarrow\!(\maltese\!\!\leftarrow\!\!O) )$$
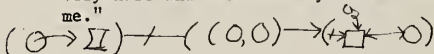
## S.41 <u>Recognition of Similarities</u> $\;(\;)\!\!-\!\!/\!\!-\!\!(\;)$

This symbol denotes an explicit statement describing the
similarities between two other descriptions. The dimilarities described
are often between the internal, emotional states of oneself and that of
other persons; and between the actions or conditions of oneself and

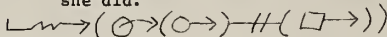another (other) person(s).  If the similarities are not explicitly

named by a word or phrase, S.41 should not be used (see S.10).

Coded:

0210502 (4)    "I know my parents were disappointed, extremely
               so, and I was probably also."
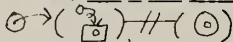
0411202 (3)    "That's why I tried to do the same thing that
               she did."

0210502 (4)    "When I talked to my husband on the phone he claimed
               to be experiencing the same kinds of discomfort
               and noninterest."
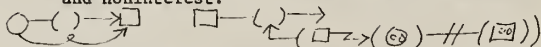
0210505 (5)    "Thoughts like this--fill my insides with unending
               guilt."

     Expla:  like this is not coded at all.
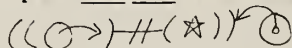

Not Coded:

0210713 (6)    "I sensed that it was not only permissible in
               this setting to be natural and to follow my own
               inner direction, but it was highly desirable if
               I were going to receive what the experience had to
               offer."
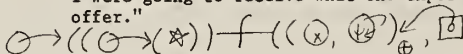
0341001 (3)    "There was never a dull moment and even if there was
               nothing to do or no where to go."

     Expla:  even if is scored S.16B.
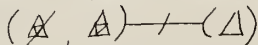
0341001 (3)  "I've also learned that there aren't really as many
             true friends as people think."

Expla:  as many as is coded S.40.
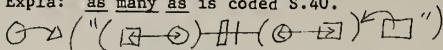


0410011 (4)  "Like when we called up the taxi place."
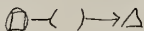



S.42A & B Continuation of Actions or Conditions $\pi$

This symbol incorporates previous definitions of two symbols,
S.42A condition prior to the event $\pi$, and S.42B condition since the
event $\psi$. This symbol denotes any reference to conditions prior
to or since the recalled event. This includes mentioning of data or
experiences prior but relevant to the situation or event described.
It also includes conditions or actions occurring during the event -
recalled (i.e. the situation described) and which continues after
the recalled event. The symbol denotes the continuation of a con-
dition or action that is part of (not the totality of) the recalled
event, or a condition (or action) not related at all to the recalled
event.

Continuations of actions or conditions attributed to the totality
of the recalled event or situation are not scored S.42A & B (See S.36A).
Also, simple descriptions of physical or emotional conditions are not
scored S.42A & B (See S.1A; 9A).

Coded:

0210306 (3/4) "I sat tracing back the long hours that I
              spent applying for scholarships."
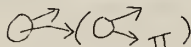
0231106 (3/4) "I slept in a waterbed with my boyfriend, <u>after</u>
<u>not being together for two months</u>."
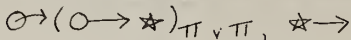
$$\text{⊘}\text{↷}\text{ㄱ} \, , \, ( \, \text{⊕} \, )_{\pi}$$

0210211 (4) "I think I had done this <u>once or twice before</u> and
it worked then."

$$\text{⊙→} ( \text{O→☆} )_{\pi \, v \, \pi} \, , \, \text{☆→}$$

0341012 (3) "<u>every time</u> I got up to bat I would strike out."

$$( \, \text{O→} \, , \, \text{O→} \, )_{\pi}$$
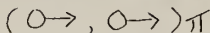
0210713 (6) "<u>Up to that time</u>, I had had a poor concept of
myself, although it had been improving slightly
<u>through the previous few years</u>."

$$( \, \text{⊘} \, )_{\pi} \text{↗} ( \text{⊘} )_{\pi}$$

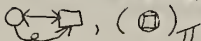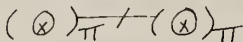0341001 (3) "We went steady for awhile and to this day we
are still close friends."

Expla:  <u>to this day</u> is scored S.42B.

$$\text{O←⊐} \, , \, ( \text{⊖——⊠} )_{⊥\!\!\!\perp}$$
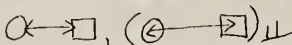
0341006 (3) "In addition it could be useful to say that the
person that I met at the fish store <u>is now</u> my boss."

$$\text{⊘↷}( \text{⊱}^{\text{→}}_{\text{→}} ( \text{⊏←O} \, , \, \text{⊐}^{\text{⊅}}_{⊥\!\!\!\perp} )$$
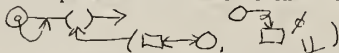
0210502 (4) "However I knew I could not endure living the life
of the past three weeks <u>for a whole year</u>."

$$\text{⊛⊃}_{⊔ \, ⊥\!\!\!\perp}$$

0341006 (3) "<u>From this first meeting</u> we hit it off great."

$$( \, \text{⊘←⊡}_{\text{Ħ}} ) \, , \, \text{⊖—⊠}_{\,⊥\!\!\!\perp}$$
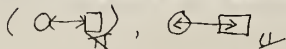
0341006 (3) "Also we have entered many other shows, won
better prizes but <u>to this day</u> these are the
one's I remember most."

$$\text{⊘}^{\text{→△}}_{\text{→△}} \, , \, ) \quad \text{O→}( \, \text{☆} \, )_{⊥\!\!\!\perp}$$
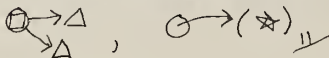
S.42C <u>The First Time</u>  ⪫⃗

This symbol denotes that the condition, action, thought,
feeling or other description is described as the <u>first</u> time this
has occurred or was experienced.  This definition is the logical
negation of the S.42A definition:  something never occurring
prior to the experience/event being described.

Coded:

0210713 (6)   "...which was the first time I had ever experienced
              Gestalt."

$(\bigcirc \leftrightsquigarrow \triangle) \; ⪫⃗$
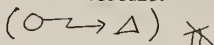
0341006 (3)   "From this first meeting we hit it off great."

$(\bigcirc\!\!\!\!\times\!\!-\!\!\boxminus)_{⪫⃗} \; (\ominus\!\!-\!\!\boxminus)_{⫫}$
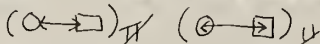
0210713 (6)   "...where I discovered my "self" for the first
              time ever."

$\widehat{\psi\!\diamond}\, ⪫⃗$

0210303       "Then the big day--our first game."

$⨳\,⪫⃗$

Not Coded:

0341005 ($\triangle$/3) "I was the <u>last</u> friend to see him before he died."

$\ominus\!\!\Rightarrow\!\!\boxminus, \; \square$
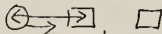
S.43 <u>Personal Possessives</u>  $\bigcirc_{\Rightarrow}$  $\square_{\Rightarrow}$
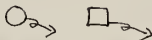
This symbol denotes the use of a personal possessive.  It is used
with S.1 when the pronoun is "my" or "mine," other appropriate elemental

symbols are used with the other possessive pronouns (e.g., "her dress,
S.2), "our car" (S.4). etc. Diagram the arrowhead of S.43 to the
symbol representing the object, feeling, thought, etc. which
the "my" describes.

S.43 is not used to denote possessions described in a sentence;
such as "I had 5 rooms." See S.5C. Also S.43 is not used when "my"
is mentioned in regard to personality traits (S.39A) or clusters of
traits (See S.39). It is not used when "my" refers to parts of the
body ("my arm," See S.1, S.1A).

Coded:

0210208 (△)    "She took away my ice pop and Johnny's mother
               didn't take his."
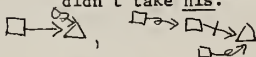


0410011 (4)    "We're not his only kids."

    Expla:  his only kids is coded S.43.



0210210 (3/4) "My closing sentence showed me standing up at the
              pottium as the crowd applauded my speech."
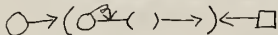


0410001 (△/3) "...I went to live with my cousins."



0410011 (4)    "I guess they'd never believe that we were his
               daughters, they thought we were his girlfriends."
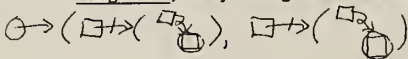
Not Coded:

0210210 (3/4) "It was clear to me that he didn't have the confidence
that I was feeling."

Expla: <u>have</u> <u>the</u> <u>confidence</u> is coded S.39.

$\bigcirc \rightarrow (\boxed{\underline{x}}) - /\!/ - (\bigcirc)$
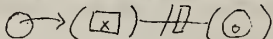
0210515 (4/5) "If it was a man that I could have the deepest and
most total relationship--there was no way around the
preliminary bullshit."

Expla: <u>could</u> <u>have</u> <u>the</u> <u>deepest</u> <u>and</u> <u>most</u> <u>total</u> <u>relationship</u>
is coded S.22C.

$(\bigotimes\!\!-\!\!\boxed{\underline{?}}) - / - (\bigcirc \rightarrow (\alpha \rightarrow \square))$
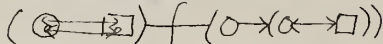
0210504 (4/5) "In the process I learned a great deal about the
rights (and lack of rights) of women."

Expla: <u>rights</u> <u>of</u> <u>women</u> is coded S.46.

$\bigcirc \multimap (\amalg , \amalg)$
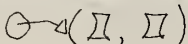
S.44 <u>Meanings/Inner Significance</u>  ``  ''

This symbol denotes that the description which it encloses is
a statement expressing the meaning, in the sense of the "inner
significance" of the experience (or part of the expereince) described.
This "meaning" is usually about "life," about the universe or about the
nature of people.

When the "meaning" is alluded to but not explicitly stated (e.g.
"I learned the meaning of the word 'friend'."), S.44 is not used. See
S.6C. A helpful criterion question to ask when scoring is "what <u>is</u>
the actual meaning or "inner significance"? If this question can be
answered, then S.44 is probably appropriate.

The word "you" included in a statement is often a clue to scoring the statement using S.44. A judgment is made by the scorer whether the "you" denotes the general philosophical sense of people in general; or whether "you" denotes a reference to oneself (i.e. "I"). If it refers to the former, the statement is more likely to be scored using S.44.

Coded:

0411207 (3)   "You have to bear it."

$$" \longrightarrow \Box \longrightarrow "$$

0210108 (5)   "Life goes on, nothing changes."

$$" \overrightarrow{\triangledown} \rightarrow, \ \overrightarrow{\triangledown} \rightarrow "$$

0411207 (3)   "You go along with your children and they get to be 45 or 50 and you expect they are all set for life and you can go on living peacefully and you can't."

$$" \overrightarrow{\Box \rightarrow \Box}, (\Box_{\vee} \Box) \ \Box \rightarrow (\boxdot, \Box z \rightarrow), \Box \not\rightarrow "$$

0210502 (4)   "It meant breaking a promise."

$$( " \bigcirc \!\!\!\!\! \searrow ( \ ) \longrightarrow " )$$

0341001 (3)   "I've also learned that there aren't as many true friends as people think."

$$\bigcirc \!\!-\!\! \triangleleft ( \ " ( \boxtimes \!-\! \oslash) \!\!\not{\!\!\!/\!\!/} \!\!-\! (\boxtimes \!-\! \oslash) \overset{\leftarrow}{\Box} " )$$

Not Coded:

0210502 (4)   "I learned <u>what</u> <u>it</u> <u>meant</u> <u>to</u> <u>be</u> for a person to make a commitment and then break it."

$$\bigcirc \!\!-\!\! \triangleleft ( \ \Box \!\! \overrightarrow{\rightrightarrows} \ )$$

0341001 (3)   "I learned the meaning of the word 'friend.'"

$$\bigcirc \!\!-\!\! \triangleleft ( \Box )$$

0210303 (3)    "You can be sure there was competition."
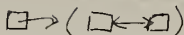


0341001 (3)    "I learned different things about different
               types of people and I can now see my faults
               and learn to accept others."
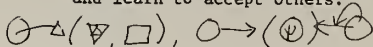


S.45 <u>Or's</u>  ∨

This symbol denotes a disjunctional (i.e. either-or) relationship
between two (or more) parts of a sentence, in which one part(s) is(are)
an alternative description to the other part(s). This either-or
relationship is usually expressed by the word "or," between the
alternative descriptions. The alternatives may be simple such as
"I was five or six," or more elaborate, such as "she had had a fatal
accident...or, in more direct words—had committed suicide."

The following uses of the word "or" are all scored S.45:
(1) alternative thoughts, perceptions, behaviors or other
characterizations; (2) uncertainty or indefiniteness between (or among)
descriptions; (3) synonymous or equivalent descriptions, such as, "I
had acrophophobia or fear of heights."

This symbol denotes only the relationships described above, and not
other related logical relationships such as conjunction ("and," see
S.10) contingencies ("if-then," see S.25) etc.

<u>Coded</u>:

0210301 (△)    "I was at softball practice—<u>rather</u> just going to it."
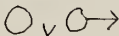
0210303 (3)  "that I was going to be the starting <u>or</u> short stop."
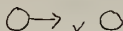


0210505 (5)  "had had a 'fatal accident' as the hesitant operator
             had put it--<u>or</u>, in more direct words--had committed
             suicide."
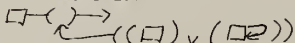


0210305 (A)  "I had the measles <u>or</u> was just getting over them."



0210311 (4)  "Finally one of my parents came in and told me to
             stop it <u>or</u> I would get another spanking."
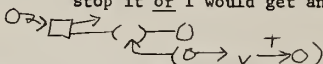


0341012 (3)  "It all started when I was about 12 <u>or</u> 11 years
             old."
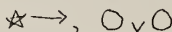


0341010 (3/4) "A burst of anger <u>or</u> fear I don't know which bust
             out of me as I took off with great speed for the
             house by the time I returned they ahd contacted
             my parents."
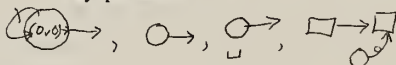


S.46  <u>Abstract Constructs</u>  ⟩⟨

    This symbol is utilized when an individual refers to an abstract

construct which is not part of the self description; the individual

does not indicate ownership of the construct (for example, <u>the ideas</u>

in the statement, "I developed the ideas" is scored S.46 while "my

ideas" is scored S.39B).

    Other examples of abstract constructs are rights, golden rule,

liberation, freedom, justice, issues, questions.

Coded:

0210504 (4/5) "In the process I learned a great deal about the
rights (and lack of rights) of women."

$$\ominus \!\!-\!\! \triangle (\ \amalg, \ \amalg \ )$$
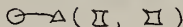

0210504 (4/5) "I can't recall how I developed the ideas."
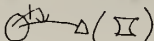
$$\oslash^{\!\!\!\!\!\nearrow}\!\!-\!\!\triangle(\ \amalg\ )$$

0210504 (4/5) "I quoted Erikson's golden rule in the light of
new insight, McLuhan (Global Village), Mead
and others.

$$\ominus\!\!-\!\!(\overset{\longrightarrow}{\underset{\longleftarrow}{\phantom{x}}}\!\!-\!\!(\ \amalg, \ \amalg, \ \varphi\ )$$

0210504 (4/5) "At the end--my husband asked me, "Liberation
from what?"

$$\ominus\!\!\Rightarrow\!\!\square\!\!-\!\!(\overset{\longrightarrow}{\underset{\phantom{x}}{\phantom{x}}}\!\!\circ\ (\ \amalg\ )$$
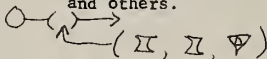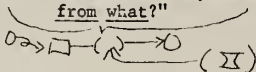
0210504 (4/5) "I can't recall how I developed the ideas--but
I dealt with many issues and questions re
masculinity and feminity, legal rights,
relationships.

Expla: abstract thoughts are coded S.46.

$$(\oslash^{\!\!\!\!\nearrow}\!\!\triangle(\ \amalg\ ))\!\!-\!\!\!-\!\!(\ominus\!\!-\!\!\triangle(\ \amalg\ \amalg, \ \amalg, \ \amalg, \ \amalg\ )$$
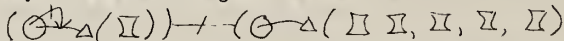
0210504 (4/5) "I tied the movement into a student movement."

$$\ominus\!\!\longrightarrow(\ \amalg\ )$$


Not Coded:

0210713 (6) "I sensed that it was not only permissible in this
setting to be natural and to follow my own inner
direction, but it was highly desirable if I were
going to receive what the experience had to offer."

Expla: what the experience had to offer is coded S.18B.

$$\ominus\!\!\longrightarrow(\ \ominus\!\!\longrightarrow(\ \bowtie)\!\!-\!\!-\!\!((\ \oslash, \ \varphi)^{\!\!\!\nwarrow}_{\oplus}\ ,\ \boxed{\square}$$
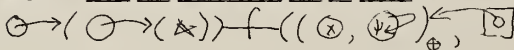
0210713 (6)  "It was not only discovering, because I had always
            had an inkling there was one really there, but
            <u>it was an accepting process</u>."
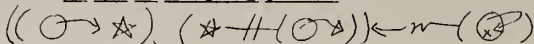


0210502 (4)  "I began to defend <u>my position</u> with the argument
            going on and on."

    Expla:  <u>my position</u> is coded S.39B.
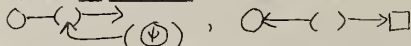


0210404 (3/4) "I was very curious about her <u>ideas</u>, <u>habits</u>,
            expectations and goals."

    Expla:  <u>ideas</u>, <u>habits</u>, <u>expectations</u>, <u>goals</u>, are scored S.39B.
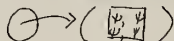
A P P E N D I X   C :

SELF-KNOWLEDGE EDUCATION WORKSHOP REPORT

SELF-KNOWLEDGE EDUCATION WORKSHOP REPORT

For the past two years the Self-knowledge Project has been funded through the Office of Drug Education in the Office of Education to develop an understanding of the stages of development of self-knowledge. The results of these efforts were the focus of a workshop held during the month of July 1975. The staff of the Self-knowledge Project presented a seven-day workshop for administrators and teachers within the State of Massachusetts who have been involved in Humanistic Education programs within their own school systems. The three main goals of the workshop were:

1. To present the stages of self-knowledge development as currently defined.

2. To begin to assess the extent to which teachers can translate the stages into curricula.

3. To lay the groundwork for a collaborative effort between UMASS and the school systems in Massachusetts (specifically Foxboro, Fall River, and Montague, with possibilities in Somerville).

In order to more fully understand these objectives, it is important to get an understanding of the total effort and the focus of the S-K Project at this point in time. The following diagram is presented to help put the S-K Project in perspective. In essence, parts A, B, and C in Diagram I represent the focus of the Self-knowledge Education Project for the last two years. More recently we have focused on part D and the work resulting from that effort was presented to the workshop participants during the first two days of the workshop. During the second week of the workshop there was an effort to translate D into F and G. Due to the fact that part D needs to be more completely defined and validated, the work on parts F and G were tentative and

DIAGRAM I

308

```
┌─────────────────────────────────┐
│ A.  A theory of self.knowledge  │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│ B.  The specific definition of  │
│ self-knowledge utilized in the  │
│ project.                        │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│ C.  The development of an instru-│
│ ment to assess self-knowledge   │
│ development.                    │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐        ┌──────────────────────────────┐
│ D.  Development of a coding     │ ◄────► │ E.  Validation of the instrument │
│ system for the purposes of      │        └──────────────────────────────┘
│ defining levels of development. │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│ F.  The development of cur-     │
│ riculum objectives which are    │
│ stage specific.                 │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐        ┌──────────────────────────────┐
│ G.  The development of lesson   │ ────►  │ H.  Evaluation               │
│ plans, activities, curriculum   │        └──────────────────────────────┘
│ packages, etc.                  │
└─────────────────────────────────┘
```

partial at the end of the workshop. However, connections were made with
school systems where a collaborative effort will be maintained throughout
the coming year. Concomitantly the coming year will also be a time for
further validation studies. But before discussing the work ahead, it
is necessary to describe in more detail the content and process of the
workshop.

The first two days:

As noted earlier the workshop was focused on presenting our stages
of self-knowledge development in as clear a way as possible so that
the teachers and administrators from school systems within Massachusetts
could begin to use the stages of development in their own curriculum work.
Thus in the first two days of the workshop we attempted to present the par-
ticipants with some understanding of the process we utilized in deriving
the stages. We tried to provide them with a cognitive and experiencial
understanding of the stages so that they might better assess the extent
to which they would be willing to work with us for the following week. At
that time the task would envolve a translation of those stages into
curriculum objectives and lesson plans. In essence, after the first two
days participants were asked to make a choice as to whether or not to
continue working with us during the following week. It should be noted that
while the workshop was specifically designed for individuals currently
working in school systems in Massachusetts there were many people from outside
the State of Massachusetts who were invited explicitly for the first two
days in order to become more acquainted with the current status of our work.
While most of these individuals were not concerned with the immediate

implications of our work for curriculum development, some of them continued through the second week of the workshop.

The workshop began by having people meet other people who are attending the workshop and getting an idea of what others were doing in the field of humanistic education. During one small group activity the participants were asked to discuss the changes they had seen in the field of Humanistic Education during the last few years. The essence of each group's discussion was shared publicly and then our perspective was presented in which we described how we arrived at the need for a developmental understanding of the growth of self-knowledge. This was followed by a brief statement by Ruth Levinson of how interests and concerns from some key people in Washington were very close to our concerns and how the project was funded to explore the ideas further.

A major portion of the afternoon session was devoted to having the participants take the Experience Recall Test and then talking about their reactions to the instrument. It became clear from the responses that the participants appreciated the chance to focus on an experience in the depth. Many of them reported having learned something about themselves as a result of completing the instrument. During the latter part of the afternoon we presented some protocols which were illustrative of responses from the lower stages of self-knowledge and had the participants brainstorm about the ways in which their responses differed from those of the sample protocols. This differentiation seemed obvious to them and gave them a better sense of some of the characteristics of stage differences. The last item on the schedule for the first day was a brief presentation of the symbol coding system which had been used to derive the stages. The

demonstration illustrated the extent to which the _structure_ or _process_ of a person's thinking could be differentiated from the content of their experience.

On the morning of the second day we presented the participants with a description of the stages of self-knowledge (see Chapter V). This was presented in terms of a verbal description of the characteristics of the stages. Following this presentation the participants, in small groups, discussed what they understood about the theory and the characteristics of the stages. To give the participants an experiential feel for the stages they were asked to imagine a building and they had to describe themselves as that building would at each of the four stages. A sample description generated is as follows:

I.  Elemental

I'm stone and have lots of candles and painted windows. Usually I am dark and no one is there. Sometimes music plays and people sing.

II.  Situational

We had a wedding today and lots of people came. Some cried, some seemed happy, lots of cars were on the road outside and the horns were noisey. I like weddings because I enjoy smelling the flowers and looking at the people.

III.  Patterned

I have lots of different moods, weddings are o.k. but funerals seem to make people so sad. The music is different and this often makes me look and feel differently. I wonder about the people and what they are like when they leave or if they act differently when they are some place else.

IV. Transformational

Sometimes I hear remarks about what people think of me. To some I am almost an enemy, a destructive force to society, to others I seem important and a very real part of their lives. What seems most important to my being is not my physical appearance or even the rituals that are performed within me but the purpose I serve to some people.

To further clarify the stages we asked the participants to think of a typical humanistic education exercise in which individuals are asked "Are you more like a hammer or a nail." Then participants were asked the reasons people would give for their choices at the different stages. Participants also generated a list of process questions that could be used to elicit responses at each of the four stages.

These two experiencial tasks helped people understand more clearly the nature of the stages and the types of thinking processes which are characteristics of a given stage. Thus, during the two days participanta had been exposed to some of our thinking in terms of how the problem was defined, how the instrument was developed, how we were currently going about the process of coding the protocola and had both a theoretical and experiential understanding of the stages as they had been defined. The final task of the second day was to discuss what the participants wanted to happen during the following week. It was clear from the responses from the group that most of the participants would return and that they were excited about the prospect of generating curriculum. We asked them to tell us what kind of a focus they wanted for the second week. On the basis of this data the second week was designed.

The Second Week:

On Monday we presented an agenda for the week to the group and asked for their response. In essence we suggested that the common goal for the

group was to write a developmental curriculum for self-knowledge within
their area of interest. From the data collected the previous week the
following interest groups were defined.

> Human development curriculum for high school
> Teacher training curriculum
> Confluent applications of humanistic education
>   (math, social studies, etc.)
> A revision of the Montague curriculum
> One-to-one counseling
> Stage related issues (Erikson, Maslow, Loevinger)
> Alternative methods of diagnosis

The essential task for Monday was to create a set of curriculum objectives
for the stages—regardless of special interest area—and these could
be used for the remainder of the week by the interest groups. By the
end of the day curriculum objectives for the general stage and for
each of the symbols in each stage had been defined. These were
duplicated Monday night and ready for the interest groups to work with on
Tuesday.                        To help people with their work on Monday an
expanded version of Working Paper #8 was created with a more detailed
description of the symbols utilized to illustrate each stage.


On Tuesday morning people began work on their groups and continued
to work throughout most of Tuesday, Wednesday and Thursday. In working
within the interest groups, participants were asked to create a minimum
of six lesson plans.

> Three lesson plans which represented alternative ways of
> trying to meet one objective; and
>
> Three lesson plans which would illustrate an attempt
> to meet an objective at an adjacent level of development.

In order to do this they had to:

1. Choose an objective to work with at a given stage.

2. Design a lesson plan which included the following

considerations:

    a. A description of who the exercise is for.
    b. A description of the materials necessary to implement
       the lesson.
    c. A description of the activity and how it would be
       conducted.
    d. A list of the processing questions that would be
       utilized.
    e. A consideration of the possible follow-up that could
       be used and cautions to be considered when using
       the exercise.

3. Consider how you would change the lesson plans if the group

the exercise was used with was mixed in terms of self-knowledge

stages represented.

With this framework participants could choose:

1. The stage they wanted to work within.

2. The specific objective which would be the focus within

the stage.

3. The content of the exercise.

4. The actual activity which would be employed.

5. The total number of exercises they would produce by the

end of the week.

On Wednesday afternoon we presented an exercise
to illustrate some of the processing questions which could be asked at
a given stage. In actual fact, the exercise turned out to be a task which
could be worked on through an entire semester's course. By Thursday
afternoon most of the groups felt that they had done as much as they
could on the task and so we spent part of the day discussing how a

collaborative relationship could be established between the University
and the various school systems represented.

The groups requested that some of the following things could happen
during the coming year:

> That a directory of the participants be created so that
> people from the workshop could write directly to one
> another.

> That the staff produce a processing guide which would
> consist of a listing of possible processing questions
> that could be used at each stage.

> That the curriculum materials which had been completed
> be edited and duplicated for all personnel who attended
> the workshop (see Attachment )

> That we sent new curriculum ideas to people in the field
> as it was generated and that they would respond to how
> it worked, making suggestions for revision.

> That there be a specific person to whom correspondence,
> etc., could be addressed who would be responsible for
> coordinating the efforts between the various systems.

> That the participants meet once or twice during the
> year to share their experiences in trying to use the
> material, generating additional material, etc.

In general, people were excited about the things they learned during
the workshop. They seemed to have a good understanding of our definition
of the stages, but it was clear that we had to better define the stages
before further work could be done. Thus our staff met on Friday to
consider our next steps and to discuss the work for the coming year.
Referring back to Diagram I it is possible to get a sense of the next
steps. Essentially we will be working on Parts E, F, and G at the same
time that we are continuing to do work on validating the instrument.

STAGE I: Elemental Self-Knowledge

Main Goal: The person will be able to, spontaneously or when asked, describe separate distinct independent "useable" parts of a personal experience (occurring at a single point in time and space).

Enabling Objectives:

1) The person will be able to describe others vital statistics, locations and physical condition in regard to the personal experience. A person will be able to use third person pronouns and proper nouns relating to other people.

Example

Who else was there?

2) The person will be able to describe concrete objects -- vital statistics (color, shape, etc. location).

Example

How big was the ball?

What did it look like?

3) The person will be able to indicate a communication which occurred in regard to the personal experience. The person will be able to repeat or report what they or someone else said.

Example

Who said that?

What did he/she say?

4) The person will be able to report at least one thought in his/her personal experience.

Example

What did you say to yourself when that happened?

Physical Self

(a) When asked, or spontaneously, a person will be able to describe
tal statistics such as age, physical characteristics, geographical
, race, sex and grade.

(b) When asked, or spontaneously, a person will be able to describe
parts of his/her body as required.

(c) When asked, or spontaneously, a person will be able to describe
f being in terms of location, i.e., environment and time --present,
e, past, removed past.

(d) When asked, or spontaneously, a person will be able to describe
r general physiological conditions or conditions of health.

mples

re were you when it happened?

old were you?

Personal Possessions: A person will be able to use appropriate
ve pronouns (This objective is not significant).

mple

se was it?

: Situational Self

: A person will a) be able to recognize a number of internal and
elements of a situation, b) be able to organize these elements into
nt unit and c) be able to make elementary evaluations of the event.

Objectives for Goal One:

Mutual Actions (This objective is not significant)

erson can describe an action involving him/herself and another person(s)
pon each other...

by experiencing working with others
                    playing with others
                    learning vocabulary which expresses mutuality of action
                    listening to others feelings of same experience

2) Situation specific emotional state

A person will be able to express emotions/feelings about a specific situation in emotional rather than physiological states by increasing feeling vocabulary.

3) Emotions as causes or caused: A person will be able to describe his/her own feelings about something such as an action, a thought, a person or object and also name the object of his/her feelings.

4) Core Event: A person will be able to describe a situation by specifying the details (who, what, etc.) of the situation, and then comment about the situation by describing (a) what led up to it, (b) what its consequences were, or (c) what his/her feelings about it were.

STAGE III: Patterned Stage

Goal One: The person can name patterns of his/her and others' personalities and generalize across situations over time and assign values to these patterns.

Enabling Objectives for Goal One:

1) In the description the person will name personality traits, identify his/her own and others' roles and recognize reciprocol role.

2) There will also be an expression of awareness of continuity of actions or conditions and of continuing involvement. S/he will describe internal "shoulds" (This objective is low priority for this stage).

Goal Two: A person will be able to describe personality traits in terms of the characteristics of an experience in a specific situation and will be able to recognize their own role and the interplay with others' roles and assign value to some of these patterns.

Enabling Objectives for Goal Two:

1) A person will be able to describe a number of personality traits in self or others.

2) A person will be able to show awareness of his/her own role and the roles of others, and to be aware of how these relationships interact.

3) A person will be able to describe personal involvement in an experience and to recognize its effect.

4) A person will be able to demonstrate his/her ability to explore alternative actions.

STAGE IV: Transformational Self

1) The student will be able to describe and categorize one's own:

(1) processes of transformation
(2) continuous development
(3) assignment of value in terms of meanings and inner significances of these processes

2) The student will describe an awareness of:

(1) the steps or procedures of thinking, namely understanding, impact application, analysis, synthesis and evaluation
(2) the interrelationships among ideas or thoughts

3) The student will refer to an abstract idea such as truth, justice, without claiming ownership of the idea.

4) The student will describe the impact or result of one's experience in its totality, the student will refer to this total experience as the point of change in one's life condition.

5) The student will be able to indicate that several (multiple) feelings were experienced simultaneously, by using one word or phrase to denote those feelings or emotions.

6) Expressable Emotions: One will be able to describe the conflict of expressing or not expressing a single emotion or feeling.

7) Personality Cluster

(a) The person will be able to express one word or concept to denote a generalization of several of his/her personality traits or characteristics.

(b) Given several words that denote several personality traits, the person will be able to use one word that categorizes all of them (in personal terms).

(c) Given a word that denotes a "generalized personality cluster," (such as "my interest," "my capacities," "my personal tastes"), the person can name several examples of that cluster. (For example, "personal tastes include: my preference for browns and violets in clothing, an inclination for Greek and Mexican foods, preference for discussion in social sciences rather than biological sciences.)

8) The person will be able to describe "learning" in terms of personal, emotional or experiential impact on oneself.

9) The student will be able to describe through the use of a single word multiple simultaneous feelings stimulated by a particular experience.

10) The person will be able to describe the total experience -- as turning point or time of change in his/her personal existence. The total experience described will begin or end this change.

SAMPLE LESSON PLANS

Teacher-Training -- Stage III   (Patterned)

Topic -- Awareness of one's sex-role and the sex-roles of others

Objective: -- A person will be able to show awareness of their own roles and the roles of others, and to be aware of how these relationships interact.

I.  Teachers are given the following sentence stubs to answer individually.

1.  When I see two males fighting I usually experience

    Feelings of ___
    I tell myself ___
    What I do is ___

2.  When I see two females fighting I usually experience

    Feelings of ___
    I tell myself ___
    What I do is ___

3.  When I see a male crying I experience

    Feelings of ___
    I tell myself ___
    What I do is ___

4.  When I see a female crying I usually experience

    Feelings of ___
    I tell myself ___
    What I do is ___

5.  When I am sworn at by a male I usually experience

    Feelings of ___
    I tell myself ___
    What I do is ___

6.  When I am sworn at by a female I usually experience

    Feelings of ___
    I tell myself ___
    What I do is ___

7.  When I am praised by a male I usually experience

    Feelings of ___
    I tell myself ___
    What I do is ___

8. When I am praised by a female I usually experience

       Feelings of ___
       I tell myself ___
       What I do is ___

9. When I am the only male/female in a group I usually experience :

       Feelings of ___
       I tell myself ___
       What I do is ___

10. When I am working for a male I usually experience

       Feelings of ___
       I tell myself ___
       What I do is ___

11. When I am working for a female I usually experience

       Feelings of ___
       I tell myself ___
       What I do is ___

12. When I have dinner with a male I usually experience

       Feelings of ___
       I tell myself ___
       What I do is ___

13. When I have dinner with a female I usually experience

       Feelings of ___
       I tell myself ___
       What I do is ___

14. When a male opens a door for me I usually experience

       Feelings of ___
       I tell myself ___
       What I do is ___

15. When a female opens a door for me I usually experience

       Feelings of ___
       I tell myself ___
       What I do is ___

1) Of the fifteen choose as many _pairs_ as time permits.

2) Share responses to the questions in triads.

3) Answer the following process questions individually

       a. Did you notice any similarities across these patterns to your responses?

b. Under what circumstances do you notice this pattern?

c. How does this pattern affect your relationships with your peers, students, parents, administrators?

Follow-Up -- Continue the original exercise by following the steps of the Trumpet.

My pattern helps me ...

Some of the prices of my pattern are ...

Alternatives to my pattern are ...

Cautions -- Use with volunteer group

Use with group who have prior knowledge of content of the workshop

Teacher-Training --- Stage IV (Transformational)

Objective A. · The person is able to describe one's level of thinking, namely understanding impact, application, analysis, syntheses and evaluation.

Objective B. The person is able to describe "learning" in terms of personal, emotional and experiential impact on oneself.

At the last session, the teachers looked at their patterns in terms of function and consequence and chose an alternative to "try-on" a new behavior in the intervening time between metings.

At the beginning of this session teachers share in their small support groups the experience of try-on new behavior, and accepting that behavior as different from a previous pattern or patterns of behavior.

Did you make any decisions after the "try-on" to accept or reject the new behavior?

Check those patterns (from the questionnaire) that are relatively recent for you. For each one checked, see if you can recall a turning point experience. What were the similar characteristics of these turning points? Do the characteristics of the turning points extend to other patterns you have changed?

STAGE TWO

Mutual Actions: (this objective has relatively low priority) A person can describe an action involving himself and another person acting upon each other. ...learning vocabulary which expresses mutuality of action.

Cautions: These exercises are based on the assumption that the children have already been exposed to the affective techniques and activities that would enable them to have a high trust level and an adequate feelings vocabulary.

DAY I

## A. Activity – Forced Choice

Teacher explains to children four choices:

1) likes monster movies
2) likes dogs
3) is afraid of dark
4) likes to collect things as a hobby

B. Give children time to make their decisions

C. Designate four corners of the room to represent your four topics. Ask children to meet in the group (corner) of their choice.

D. Materials -- give each group a crayon and a large sheet of newsprint

E. Instruct children to draw something pertaining to their choice

F. Encourage conversation while drawing

## Process Questions

Think of as many things as you can that you shared in your group.

1. What kinds of things did you do to one another, (we talked to each other, we laughed at each other, we disagreed with each other, etc.)

2. When you laughed at each other how did you each feel? Did you have the same feelings for each other?

3. There are many questions that would naturally follow the answers to the previous questions.

This is an excellent activity for stage III but inappropriate for stage II.

1. <u>Activity</u> - "The Howdy Game"

2. <u>Materials</u> - mimeographed sheet that looks like a Bingo Game - pencil, square markers for game.

3. <u>Instructions</u> - on top of work sheet (Bingo)

4. Instruct children to walk around (mice) the classroom and talk about shared feelings. Fill-in blanks (with name of other child) who shares the same feeling about each block.

5. Play the Bingo Game

6. Ask process questions.

Sample of Game Sheet

---

Name _____

Everyone walk around the room. Talk to each other about each block. When you find someone who has the same feeling as you do about a certain block go on, but with that persons name in that block. Try to fill as many blocks as you can. Don't be concerned if all blocks are not filled in.

| favorite ice cream Susan | favorite pet | favorite dogs | hates dogs | likes school |
|---|---|---|---|---|
| hates school | favorite t.v. show | likes music | likes dentist | hates dentist |
| likes drawing | hates drawing | is afraid of dark | is not afraid of dark | same hobby |
| a shared friend | favorite drink | favorite game | likes hot dogs better than hamburgs | likes to write stories |
| likes to help Mom | likes to help Dad | likes to cook | likes to be alone | likes to be with people |

## Process Questions

a.  How did you feel when you found someone who shared your feelings?

b.  How did you feel about encountering feelings different from yours?

c.  Who surprised you?

d.  Did you find someone you'd like to know better?

e.  What did you do together while doing this activity?

STAGE III

Name Tag Exercise -- (other options -- Bumpety Bump Bump, Elephant and Giraffe, Sign Game)

Objective: After this exercise the person hopefully will be able to name one personality trait as process questions in their personal journals.

Materials: large cards, blackboard, pens and magic markers, tape

| | |
|---|---|
| 2) "ing" words | 3) A place where you've been |
| 1) NAME (What you would like to be known by) | |
| 4) Name three things you do | 5) Name one thing you would like help to improve |

1) Name
2) List three words that describe you and end in ING.
3) A place where you've been that you enjoyed and would like to return to again
4) Name three things you do well
5) Name one thing you would like help to improve.

Is there anything else about this exercise that you would like to write in your journals? *(Open up the group for public sharing of processing questions)

During the milling:

How did you feel about this exercise? Is this a feeling you often feel when you meet new people? Try to remember where you stood in the middle, on the side, did you move around--is this typical of you? Were you a picker, a pickee? Did you meet many or few people? Is this a pattern of yours? Did you follow the rules? Did you want to follow them? Was this a concious decision? Is this typical of you?

*Open up processing here

Following Exercises: A coffee break, an energy exercise

Cautions!

Sharing to be voluntary/high structured exercise

Milling--Non-Verbal---observing other people's name tags and making mental notes about individuals you would like to meet with later (two minutes).

Now find one or two people who you would like to share your name tags with.

as you review your name tag patterns take out your personal journals: (assure them that content of answers do not have to be shared). Considering patterns you noted within yourself during the milling exercise were there any of these you are willing to or wish to alter. What do these patterns get you or do you loose through them? What will you gain through them? What will you gain or loose by changing them?

Name one behavior you would like to try on during this workshop in order to change your perception of yourself.

Process Questions

1. Do you do these things often? (In reference to your "ing" words. How often are these words used to describe you? Are these positive or negative describing words?

2. Which of the three words do you do most often and under what situations?

3. What about the place that makes you comfortable has made you comfortable in the past. Are there other places with these characteristics?

4. Are there certain times or needs that bring this place to mind and want to go back?

5. How did you feel about answering this question? Do you often feel this way when you have to name something "good" about yourself?

6. How did you feel about answering question five. Was it easy for you to admit to yourself that you need help? When asked where and how you need help, is your response to question five a pattern?

## WRITING LESSONS

Lesson I                Stage II    (Situational)

A writing class

Objective: Mutual Actions (this objective has low priority for this stage)

A person will recognize and express actions involving himself and another person.

A person will write a recalled experience involving another person

Materials:  paper, pencils and pens

Procedure:

     1.  The teacher begins by relating an experience demonstrating the Stage II objective--the teacher would start with a sentence such as :"I am going to tell you about something that my friend and I did to each other."

Conclusion:  "You must all have had experiences with other people where you did the same thing to each other.

     2.  Assignment--write about an experience you had during the past week with a sister, brother or friend.

     3.  Processing--What did you feel?  What did the other person feel?  Were your feelings the same or different?

### Stage III -- the same writing class

Objective:  The person can name patterns of his/her and others' personality and generalize across situations over time and assign values to these patterns.

Materials.

Procedure   ------->  Same as for stage II

Assignment

Processing for Stage III   (Patterned)

     Use questions for Stage II plus the following:

     Tell about another situation where you felt the same way.

Do you usually react this way?

Name the similarities and differences between the two situations.

Did you do something then that you might have done differently?

Fill in the blank

I am usually the kind of person who _____.

Lesson II      Stage III --. Same writing class

Objective: A person will describe an action involving him/herself and another person acting upon each other. (This objective has a very low priority for this stage).

Writing Objective: A person will write a recalled experience involving another person.

Materials needed:   corrected papers (corrected for writing skill content)

                    display board

Procedure:

1. The teacher will hand back papers and instruct the students to make a final copy for the bulletin board. There will be no names on work. Teacher will assign numbers to work.

2. When finished the teacher will collect and post on the board

3. Teacher will ask students to read several papers to themselves and indicate what experience they most relate to by listing on a piece of paper the numbers of the stories they chose.

4. Students will hand in lists

* Teacher will indicate to students they will be doing something the next day related to the list they made.

Lesson III          Stage II -- writing class

Enabling Objectives: a person can describe an action involving him/herself and another person's action upon each other.

<u>Writing Objective</u>: A person will participate in an experience with another person by illustrating a story they both relate to.

<u>Materials</u>: drawing paper, crayons or other drawing materials

<u>Procedure</u>:

    1. Teacher will pair off students based on number selection.

    2. Teacher tells students they will be working in pairs to illustrate stories they picked the day before.

    3. Students are given time to work.

    4. After most have completed work, students will be given paper to answer process questions.

<u>Process Questions</u>:

    1. What story did you illustrate?

    2. How did you help each other to decide what parts each would draw?

    3. What problems did you cause each other while working together.

    4. How did you feel as you were working with someone else?

    5. How do you think your partner felt?

When finished have volunteers share responses with class. Teacher might informally inventory the rest of the class to find similarities.

Lesson III         Stage II  Science Education

<u>Assumed pre-requisite</u>: Student should be able to observe and record data.

<u>Objective</u>: Two students will perform a forced choice experiment. The remaining students will observe the demonstration and record data and express their feelings of how it would feel to be the can or the egg and who had the same feelings or reaction.

<u>Materials</u>: Lab equipment for experiment--can, bunsen burner, hard boiled egg, glass milk bottle, paper.

Process questions:

1. Can you ever recall a time when you felt like the can or the egg?

2. Did anyone ever have the same feelings that you had?

3. What did it feel like to be the egg/or can?

4. When did you discover that someone else had shared the same feelings that you had.

Caution: (1) Exercise should be a voluntary response.

(2) Possibly by grouping students who shared same experience.

Revision for Stage I     Process Questions

1. How old were you when you had the experience?

2. Who if anyone was with you?

3. Where in your body did you feel the same as the egg or can.

Stage III Process Questions:

±. How many times did you feel that same way?

2. Did you ever feel that other people had the same feelings as you?

3. How has having the feelings or experience changed you (If you feel it has changed you?)

Evaluation by students: Students and teacher gather together in a circle and discuss their reactions to the lesson. Sort of a feedback situation.

Lesson II     Stage III (Patterned)

Objective: After observing a demonstration involving clear liquids in containers the students will be able to name patterns of their personality and of others; and generalize across situations over time and assign values to their patterns.

Demonstration: Three identical clear containers each containing a different solution. Container marked #1 will contain mineral oil; container marked #2 will contain alcohol, container marked #3 will contain water. (Fill containers with solutions before students enter room)

1. Place a plastic cube in container #1 (this cube will float).

2. Place an ice cube in container marked #2 (cube will sink to bottom).

3. Place ice cube in container marked #3 (cube will float).

Student may try to draw conclusions from data received. Student should only be reporting observation.

Materials: Three clear containers; alcohol, mineral oil, water, plastic cube, ice cubes, container for ice cubes, coke-pepsi, plain cups containing the soft drink. Mimeograph continuum.

Process questions:

1. Have you ever come to a conclusion prior to this demonstration without gathering enough information about the topic or subject?

2. On the mimeograph continuum place a check mark to show where you are on coming to a conclusion withoug enough information.

3. What were the results of or consequences of your reaction?

Process Questions:

Stage I

1. How old were you when you first felt the same ways as the other person?

2. What do you usually do when you experience this?

3. What do you tell yourself?

Lesson III    Stage IV (Transformational)

Objectives: After the student has completed the continuum; identifying patterns of behavior; the student will be able to describe and categorize one's own process of transformation.

Materials: mimeograph sheet

Process questions:

1. If you could describe your behavior in terms of an animal what would that animal be?

2. How do you feel about the value of your behavior?

3. If you're not comfortable with that behavior what could you do about it?

4. What kind s of changes (alternative) could you try?

a. What happened when you tried the alternative?

b. What were your feelings while you were changing?

c. Would you continue with that alternative change?

5. Can you think of a time when your reaction to the same situation changed your behavior?

a. How did it change it?

b. What was your reaction?