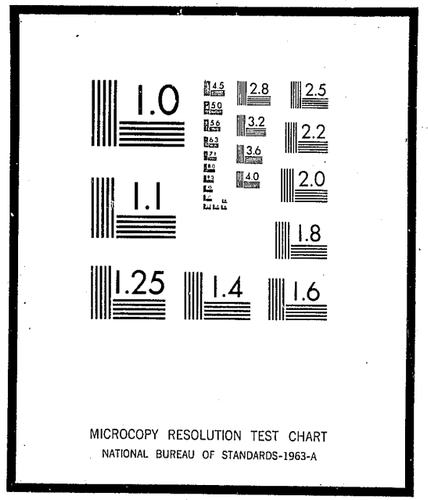

PROJECT SEQUIL

THE DEVELOPMENT OF A SEQUENTIAL I-LEVEL CLASSIFICATION SYSTEM

YEARLY REPORT - February 1971 - January 1972

by

Martin J. Molof

and

Carl F. Jesness

Sponsored by the California Council on Criminal Justice through a grant to the American Justice Institute with the cooperation of the California Youth Authority - Contract A 147-70.

The Authors
would like to thank

Mr. Robert F. Wedge

for his editorial assistance
in the preparation of this
report

TABLE OF CONTENTS

LIST OF TABLES

Preface

Project Sequil (Development of a Sequential I-Level Classification System) is a 29-month research-demonstration project funded by a grant from the California Council of Criminal Justice to the American Justice Institute. This report describes the progress of the Sequil Project for the period of February 1, 1971 to January 31, 1972, the first year of the project.

Because of the widespread interest in the project, a fairly extensive report has been prepared. This report describes experiences with a provisonal sequential classification system. However, the primary objectives of the project have not as yet been attained and the final classification procedures recommended for general use will not be available for several months.

In the meantime, the many persons who have inquired about the system are urged to use the I-Level probability statements provided by the Jesness Inventory as a provisional method for arriving at I-Level classification. In other words, Sequil staff are discouraging interested persons from obtaining training materials for using the sentences and interview at this time, for it may be demonstrated that these particular measures are not needed as a part of the procedure.

PROJECT SEQUIL - THE DEVELOPMENT OF A SEQUENTIAL I-LEVEL CLASSIFICATION SYSTEM

Sponsored by the California Council on Criminal Justice through a grant to the American Justice Institute

First Year Report - January 1972

I. Classification

Classification is the grouping of objects, people, and events in a manner which reflects similarities and differences among that which is being classified. Classification is a form of concept formation. It is necessary to the neural and psychosocial functioning of individuals and groups and has strong implications for action. Classification allows one to process information coming from the external world so as to maximize cognitive, affective, and behavioral economy and to make sense of the stimuli impinging upon the organism. Classification leads to differential action toward different classes.

Classification of people is as relevant to human functioning as classification of objects and events. It happens in everyday life, as we all classify others into manageable perceptual groups in order to facilitate our interactions, although sometimes classification (such as stereotyping) may cause interpersonal difficulties. Small groups, larger organizations, and total societies classify their members and those who are not members. The bases for classification vary widely with respect to content, complexity, and implications for action. Some people are classified according to specific roles they enact, others are classified on the basis of ability, experience, specific observable behavioral or physical characteristics, background, etc.

With regard to organizations dealing with those who exhibit serious problems or deviancy, classification represents an important function both for the efficient operation of the system as well as for the most efficient way to solve the problems represented by the clients. Some basic assumptions about classification need to be stated in order to justify the last statement. The first is that people can be systematically grouped in ways that reflect similarities and differences. That is, there is an underlying reality (if only social consensus) which the classification approximates (validity). The second assumption would be that the similarities and differences which are the bases for classification can be discerned and measured with some degree of objectivity to be useful over different classifiers and time (objectivity). A third assumption is that a large proportion of those to be classified can be classified using the procedures of a particular system (inclusiveness). A fourth assumption, and one which goes beyond the logical processes of classification, is that the resulting groupings will lead to increased understanding, action, or some other result consistent with goals of the organization or individual doing and using the classification.[1] In other words, we assume that classification has utility. In summary, a system of classification is assumed to have <u>validity</u> in terms of the similarities and differences of those classified, <u>objectivity</u>, <u>inclusiveness</u>, and <u>utility</u>.

Another dimension of a classification system is its extensiveness. This refers to the number of different aspects of an individual the system takes

[1] This general statement would include assumptions that there is the possibility for application of classification-based treatment.

into account in grouping people. The degree of extensiveness should allow the system to closely approximate reality, to be objective, to be inclusive and to have utility. Extensiveness is probably most relevant to the utility of a classification system.

The idea that people differ in measurable, systematic ways, and that these differences may lead to differential action which in turn may lead to a more successful achievement of goals, underlies the use of classification. The need for and the potential uses of a classification system in the field of juvenile corrections have been well stated (Warren 1966b). She briefly discusses several classification systems for juveniles and shows how they can or have been used for management and treatment purposes. Warren also mentions the utility of classification for developing differential treatment strategies and its aid toward systematic evaluative research. Classification can also aid in theory development and testing of hypotheses. Warren (1966b) states that a typology of offenders which is relevant to treatment leads to a correctional model in which, "The <u>goals</u> of correctional treatment with any offender should relate in some direct manner to the causes or meaning of the law violation, and the <u>treatment methods</u> should relate specifically to the goals. This idea, when put forth with examples, makes the greatest kind of sense to the practitioner who is supposed to 'do something' about delinquent behavior." (Emphasis is Warren's)

It should be noted that not all workers in the field of delinquency would agree with the need for a typology of individuals with relevance to different causes or reasons for the delinquency. Some may believe in a completely

individualized approach with no formal classification. At the other extreme, there may be some who believe that the same approach would be appropriate for all delinquents. Between these extremes there are those who would see less importance in a typology of offenders than what is being promulgated by Warren and others who classify delinquent offenders.

The question now becomes one of how to classify - how should we best type delinquents as to maximize the goals of treatment, management, and research? Warren describes five approaches to classification in terms of content and the bases for classification. They are: (1) prior probability approaches; (2) reference group typologies and social class typologies; (3) behavior classifications; (4) psychiatrically-oriented approaches; and (5) social perception and interaction classifications. She also mentions typologies based on multiple measures using empirical-statistical methods (Warren 1966b). In order to fully answer the questions raised at the beginning of the paragraph, one must know the context in which the classification will be used. The context inclues the goals of the organization, the limitations and potential for differential treatment, the setting, number of staff and "clients", age and other characteristics of the population, etc. Ideally, a classification system should be a summary of the major variations among the population which can be measured with efficiency and objectivity, which leads to the most accurate predictions about the individual, which then leads to differential "handling" of the individual, and finally, results in outcomes closer to the goals of the organization and for the individuals they serve than were possible without the use of the classification system.

II. I-Level Classification System

Project Sequil concerns itself with the Interpersonal Maturity Level or Integration Level (I-Level) theory and typology. This system is a widely known classification system in the field of juvenile corrections. The I-Level typology has been used as an integral part of the California Youth Authority's Community Treatment Project since 1961 (Community Treatment Project Staff, 1963). Other projects in the Youth Authority have also used the I-Level typology (Andre and Mahan, 1971: Jesness, 1969). In addition, many state, local, and foreign correctional agencies have shown interest in the typology.[2] In fact, the interest in learning this classification system and its concommitant treatment strategies was so great that the Center for Differential Treatment was set up by Marguarite Warren in 1967 for purposes of training in the I-Level system (Warren, 1969). Several dissertations and dissertation proposals (Grenny 1971; Miller 1971; Zaidel 1970) use the I-Level classification. This system of classification has many implications for treatment, management, placement, research, and staff assignment (Warren 1966a). A detailed description of the theory underlying the typology and the categories defined by the typology will follow. Programs in which the I-Level typology has been used will then be mentioned and references will be given.

The I-Level typology is based on a theory of human development first published in an article in 1957 (Sullivan, Grant & Grant). First of all, the I-Leve

[2] See Appendix B for a list of some of these agencies as well as others who have expressed an interest to the Project regarding the typology.

typology is based on a theory of progressive, hierarchial human development revolving around ego development and manifested in the ability of the individual to differentiate and understand himself and the outside world. Seven stages of development conceptualized as stages of integration of ego functions and resolution of crucial interpersonal problems are described. Experience is organized and assimilated around a "core structure of personality" which is a "central reference scheme or cognitive world, in which the experienced world of the person is integrated with, and modified by personal needs and expectations". The authors' description of the core personality sounds very much like a definition of the ego, although ego functions may be broader than what is subsumed under the core personality (Loevinger 1966). The overall process of development in the I-Level theory is described as follows: (Sullivan, Grant & Grant 1957)

> "The normal pattern of emotional-social development follows a trend toward increasing involvement with people, objects, and social institutions. These involvements give rise to new needs, demands, and situations. Inherent in many of these new situations are problems of perceptual discrimination with regard to the relationships existing between self and the external environment. As these discriminations are made and assimilated, a cognitive restructuring of experience and expectancy takes place. A new reference scheme is then developed; a new level of integration is achieved. However, the potentiality for change and the direction, intensity and character of reorganization are determined in part by the characteristics of the prevailing organization. The foundation for subsequent integrations is laid in preceding levels; the synthesis and integration of one set of stimuli and problems are essential to the perception of the next. Each new level of integration may be regarded as the psychological analogue of an increasingly efficient optical lens. The more advanced the sequel of integration, the less the likelihood of perceptual distortion. The person can see himself and the world more accurately and can operate more effectively".

It should be noted here that perceptual discrimination with regard to the relationships between self and external environment (including other people) is

a key element in the measurement of I-Level using interview and sentence completion methods. The measurement of I-Level is the major focus of Project Sequil.

The seven levels of integration (stages of development) described by Sullivan, Grant & Grant (1957) are as follows:

Level 1 - At level 1 the discrimination of differences between self and nonself occurs. This is, initially, a very gross differentiation and both people and objects are treated as suppliers of basic needs. There is very little awareness of the reality of the world beyond the self and its needs.

Level 2 - At level 2 the environment is differentiated into persons and objects with some appreciation of the characteristics of each. The major developmental problem at this level is how to control the outside world, how to integrate these primitive differentiations of the outside world to provide satisfaction.

Level 3 - At level 3 the perception of rules which govern the relationships between people and objects occurs as well as the ability and awareness of more complex ways of dealing with others. The integration of rules and contingencies is the major problem area at this level.

Level 4 - At level 4 the perception of the influence and psychological force of others occurs. Individuals come to see themselves as both a stimulus to others and as a respondent. The major developmental problem is the integration of conflict and response to the conflict, both within the individual and between the individual and others. New levels of awareness of both himself and others bring about these conflicts.

Level 5 - At Level 5 the perception of stable action patterns in self and others occurs. The individual begins to perceive patterns of relationships and becomes aware of the continuity in his own life and in the lives of others. The integration of continuity is the major developmental problem at this level.

Level 6 - At level 6 the individual is able to perceive the difference between one's self and the social roles which he enacts. The self can now be perceived as separate and distinct from any specific relationship with others. The person can perceive self-continuity and self-consistency. The separation of self from role becomes the major integration problem at this level.

Level 7 - At level 7 the perception of the integrating process in self and others occurs. At this level the person is not only aware of self and roles, but also begins to comprehend integrating processes in himself and others. The person at this level is able to see and understand a variety of ways of perceiving and integrating in others.

These seven theoretical stages represent what can be considered a universal progression of differentiation, perception, and coping. Each stage is built upon the preceding stage. Most people do not progress to the highest stages. The authors do not deal extensively with the reasons for failure of continuity of development but suggest that, in general, threats to the individual which are too extreme or intense lead to fixation at a particular level and subsequent resistance to change. No discussion of possible regression is found in the Sullivan, Grant & Grant paper.

When the I-Level theory was first applied to the differential treatment of delinquents a further dimension of classification was developed. In addition to levels of integration (levels of interpersonal maturity) subtypes were also described (Grant 1961). Subtypes represent relatively distinct patterns of behavior in response to the way a person perceives and integrates himself and his world. In other words, the same level of perceptual differentiation and integration can lead to different patterns of behavior. The relevance of subtype classification to dealing with the offender is as important, if not more important (Jesness 1971a) than the level. Warren and her associates (Warren 1966a) have described 9 subtypes: 2 under the second level of integration (I-2), 3 under the third level of integration (I-3), and 4 under the fourth

level of integration (I-4)[3]. When the Community Treatment Project began to work with juvenile offenders they found that by using the I-Level theory and an interview for classification purposes, practically all of their sample were classified at the second, third and fourth levels with the greatest preponderance at the third and fourth levels. There were very few I-5's in their sample. It should be noted that the subtypes, not the levels, are based on delinquent samples and represent typical patterns of delinquent adjustment found in the Community Treatment Project.[4] Subtypes were developed empirically rather than theoretically as were the levels.

Since most delinquents have been shown to be at levels 2, 3, and 4 a further description of these levels and the subtypes associated with these levels will follow. Listed below are the level and delinquent subtypes along with the symbols used for their identification throughout the remainder of this report. The descriptions are paraphrased from the manual developed by the Community Treatment Project (Warren 1966a).

Code Name	Delinquent Subtype
Aa	Unsocialized, Aggressive
Ap	Unsocialized, Passive
Cfm	Conformist, Immature
Cfc	Conformist, Cultural
Mp	Manipulator
Na	Neurotic, Acting-out
Nx	Neurotic, Anxious
Se	Situational Emotional Reaction
Ci	Cultural Identifier

---

[3] Palmer (Palmer 1969, 1971b, 1971c) the present principal investigator of the California Community Treatment Project has made further differentiations within the level and subtype groups based on intake interviews, case files and parole agent reports. However, no method of classification has been devised for these further refined levels and subtypes.

[4] Jesness used the Jesness Inventory on elementary, junior and senior high school students to classify them according to I-Level subtypes and found most falling into the I-4 level, more than in the delinquent samples. However, it should be noted that the I-Level and subtype norms of the Inventory were from delinquent samples and that there are no norms for levels 5 or above.

Maturity Level 2 (I-2)

The two subtypes, Unsocialized Aggressive (Aa) and Unsocialized Passive (Ap) in the second maturity level are much alike in their characteristics. The I-2 perceives the world in an egocentric manner, being concerned primarily with his own needs. His own behavior is impulsive, and he shows limited awareness of its effect on others. He blames others for denying him, but does not understand why they do this or what they expect of him.

His perception of reality is often distorted, but in spite of present difficulties and conflicts, he is optimistic about the future and frequently makes unrealistic plans. On the other hand, he feels he is a "receiver of life's impact", unfortunate things just happen to him.

His responses to the world of adults are in terms of resentement and complaints about not having his needs fulfilled. In an attempt to achieve gratification, the I-2 attaches himself to anyone who shows him kindness or gives him something. This boy lacks ability to handle frustration or control incoming stimuli. The I-2's stance is that the world should take care of him. He defines other people in terms of whether they give or withhold things from him. Beyond this, he has little conception of interpersonal differences and cannot accurately explain, understand, or predict behavior and reactions of others. As a result, some react suddenly, sometimes violently, seldom expressing remorse about their behavior. Under stress, the I-2 may attempt to withdraw from the situation. An appearance of complete docility often hides feelings of resentment and of being misunderstood.

The I-2 suffers poor peer relationships and is often the object of scapegoating. He has few social skills, and his attempts at relating often appear insincere and clumsy.

Delinquency seems to stem from poor impulse control or inability to cope with external pressures, including those exerted by his peers.

The most important differentiating characteristic between the Ap and the Aa is in the nature of their response to frustration or demands; the Aa more typically reacts in a hostile or aggressive manner; the Ap complains or passively withdraws.

Maturity Level 3 (I-3)

The I-3 attempts to manipulate his environment to get what he wants. In contrast with the I-2, he is aware that his own behavior has something to do with whether or not he gets what he wants. His efforts to attain his ends may be in the form of conformance to the perceived power structure or "conning" and manipulation. The I-3 seeks structure in terms of rules and formulas for behaving in the immediate social context. He tends to deny the existence of personal problems, describing his difficulties as

external and resulting from a conflict between himself and his environment. Although the I-3 may have learned to play a few stereotyped roles, he cannot empathize fully with others. He has difficulty perceiving personality and behavioral differences among others; and his conceptions of them are usually limited to the roles these people fulfill (mother, teacher, mechanic) or are presented in terms of stereotyped socially desirable descriptions (hard-working, nice, friendly, etc.)

Immature Conformist (Cfm). The Cfm perceives himself as less adequate than others. He may, however, describe himself as "average" and "normal". The Cfm feels that he is expected to conform to the standards of controlling or "giving" figures and assumes their "power" to be overwhelming if he does not meet these expectations. His response is to the immediate power structure, and he may behave somewhat unpredictably in the eyes of his delinquent peers. For this reason, he may not be a close member of the group. Although the Cfm is somewhat pessimistic and anticipates rejection by adults, he has not given up trying to form satisfying relationships.

The Cfm responds to the world with a rather inflexible formula: earning acceptance through immediate conformity to the actual or perceived demands of others or, when this fails, forcing others to reject him due to misbehavior. The Cfm is dominated by his need for social approval and yields as easily to pressure from the peer group as from adults.

Resentement may be present, but these feelings are normally suppressed; instead, this boy appears fearful, passive, and seeking approval for his behavior.[5]

The Cfm does not consider himself as delinquent; and delinquency seems to be the direct result of an attempt to gain peer approval, escape from disappointing, indifferent, or rejecting adults, or an effort to earn rejection due to his perceived failure to live up to the demands made on him.

Cultural Conformist (Cfc). The Cfc considers his life to be comfortable, effective, and satisfactory, and he usually rejects the idea of making changes in himself. He rarely admits to problems, but when he does, he usually attributes them to the external world (school, probation department etc.).

---

[5] Anxiety comes to the Cfm as a result of his rejection by significant adults or peers or when he is faced with unclear standards for conformity. Crises are handled through psychological withdrawal or actual runaway.

His formula for bringing about the desired outcomes is surface conformity to the power structure. He seems comfortable with his delinquent self-label and often defends his behavior as being a means of meeting his own demands in a rejecting society.

The Cfc is alienated toward adults and prefers to rely on peers for social approval and for satisfaction of his needs. He gravitates toward delinquently-oriented peers since his experiences make this group most predictable to him. He presents himself as an adequate person who is in control of himself and his emotions. He perceives others to be guided by the same concern with external structure that directs his actions; and he has little awareness that people possess diverse personalities, motivations, and responses. Anxiety tends to be related to situations which generate uncertainty.

Delinquency seems to be an attempt to gain or maintain peer acceptance, prove masculinity, or gratify material needs.

Manipulator (Mp). The Mp maintains much the same self-satisfied attitude toward his way of life as does the Cfc and is equally reluctant to make an actual commitment to change.

As the name implies, the Mp's formula involves manipulation to control others in order to satisfy his own needs. Use of this formula is rigid and apparently self-reinforcing. Since the Mp only seems to assimilate that part of incoming information congruent with his frame of reference, he does not appear to learn from experience. He ordinarily receives his reward from the means (the manipulative process itself) rather than the end.

The Mp perceives the world in terms of power and control, and he fights those in power both subtly and overtly. It is important to him to be in the controlling position, or at least to be able to manipulate those who are in power.

Antisocial behavior is accepted as part of his life, a way of outsmarting others and dealing out what they deserve. Since he considers the motivations of others to be the same as his own, that is "to get others before they get you," he feels that people will try to "use" him.

Although initially capable of making a positive impression on others, the Mp usually alienates both adults and peers. His delinquency is generally an attempt to gain or maintain control, a direct gratification of impulses or an expression of hostility.

Maturity Level 4 (I-4)

The I-4 has internalized a set of standards by which he judges his and others behavior. He may experience guilt about his failure to live up to these standards. Sometimes it is not guilt over self-worth but

conflict over values that create problems. For those I-4's who manage to avoid internal conflict, the difficulty arises from admiration and identification with delinquent models. At the I-4 level, the boy begins to show some ability to look for and understand reasons for behavior, and he shows some awareness of the effects of his behavior on others and their behavior on him.

Neurotic, Acting-Out (Na) The Na is characterized by the presence of guilt based on the internalization of a negative or "bad" self-image. As a result, anxiety is not situationally determined but is constantly with him. The Na attempts to "overcome" immediate problems without necessarily trying to uncover or unravel long standing conflicts. He does however, want to improve himself and his life, particularly to hurt himself less or to stop hurting others.

Friendships with peers are made on a very selective basis. With adults the Na usually anticipates a parent-child type relationship focused on attempts to control his behavior; and since he expects adults to treat him in an authoritarian manner, he constantly "tests" adults to determine whether or not they are supportive figures or persons to whom he can relate.

The Na's overt stance is one of adequacy coupled with emphatic striving for autonomy. However, apparently because this stance is a cover-up for an early "bad me" image of inadequacy or unacceptability, he is reluctant to reveal much of himself or allow people to become too close for fear that they might discover the "bad me".

Delinquency for the Na is usually the acting-out of either a family problem or a long-standing internal conflict, particularly a conflict involving the internalization of a parental or authority image. Therefore, the delinquency is a function of some private purpose and does not simply reflect a desire for material gain.

Neurotic, Anxious (Nx). The Nx, like theNa, is characterized by internalization of the "bad me" self-image. Anxiety, a constant factor in this boy's life, is typically related to perceptions of self as inadequate and to chronic internal conflicts. In contrast to the Na, the Nx places value upon introspection and investigation of the past causes of his present problems.

The Nx shows a greater desire than the Na to establish friendships with both adults and peers. He searches for understanding persons who can see and respect his "good me" and at the same time accept and forgive the "bad me". The Nx is as likely as the Na to expect a parent-child relationship with adults, but is more willing to accept considerable parental or adult guidance if it will earn him the approval and personal acceptance he seeks.

His self-description may, on the surface, be one of actual or potential worthiness or accomplishment, but this overlays conscious feelings of inferiority or inadequacy. The Nx is able to criticize himself for his failings and shows some awareness of the relationships between his self-critical feelings and a primitive "bad me" perception of himself.

Situational Emotional (Se). The Se evidences no long-term psychoneurosis or psychopathy, but does experience distress or conflict over some current problem. This conflict, which has precipitated the Se's involvement in delinquent activities, could have involved personal and family problems or environmental situations.

He is able to relate with others in a selective, noncompulsive manner. He develops friendships which are personal in nature as opposed to associations with whomever fulfills the friendship role.

His self-image is relatively positive and nondelinquent. Although he shows pride and self-respect, the Se will ordinarily judge his own misbehavior severely and wish to compensate for the difficulty he has caused others.

Cultural Identifier (Ci). The Ci, nonneurotic in nature, has internalized the value system of a deviant subculture. He perceives inequities and injustices along socioeconomic and racial lines and, as a result, has antipathy for the core (middle-class) culture. He suffers little from anxiety and defines any problems he may have as conflict between himself and society or himself and his environment.

The Ci has flexibility in that he can shift roles according to the requirements of a particular situation. He responds to others mainly in terms of their integrity, having little liking for hypocrites or "phonies" and he respects those who stand up for their convictions even though he may not personally agree with their values.

He perceives himself as adequate, independent, and self-responsible. He considers himself able to function in both delinquent and nondelinquent worlds. He takes pride in living up to his own standards, which often include a stance of attacking society. His delinquency, then, is viewed more or less as a successful means of attaining his ends and as expressing both loyalty to delinquent peers and contempt for the core culture.

III. Uses of the I-Level Typology

The typology based on the I-Level theory has been translated into general and specific programs and program elements over the years. The Community Treatment Project has been using this system since 1961. In fact, the subtypes within the I-Levels were developed and refined in this project using their experience with juvenile offenders. The classification has been an integral part of the various phases and sub-programs within the Community Treatment Project. Prior to the Community Treatment Project the concept of levels was applied to a differential treatment approach to military offenders using treatment team styles as the differential treatment variable (Grant & Grant 1959). Offenders were classified as high (I-4 and I-5) or low (I-2 and I-3) maturity. It was discovered that when the treatment teams working with the offenders were classified as internally vs. externally oriented, there was a strong interaction effect between maturity level and team style on later recidivism. This was the first strong evidence of the potential effects of differential treatment using the I-Level system.

The Community Treatment Project (CTP), funded by a grant from the National Institute of Mental Health to the California Youth Authority, has been operating since 1961 involving several phases and a complex, thorough research component. It was during the project that the subtype categories were developed and a series of differential approaches to dealing with delinquents in the community were tried and modified.[6]

In 1966 general guidelines for treatment and characteristics of each level

[6] A review of the CTP has recently been published (Palmer 1971a).

and subtype were described (Warren 1966a). Suggestions for treatment were presented under the following headings: goals, placement plan, family, school, job, peer group recreation, kinds of controls, treatment methods, suggested techniques for achieving goals, and parole agent characteristics. Further refinement of treatment plans and strategies has continued up to the present.

The matching of staff to ward has been an important feature of CTP and Palmer has published a special report on matching, describing the characteristics of workers for each of the subtypes and providing a schedule for interviews with workers to determine their most comfortable "style". (Palmer 1967). Data presented in CTP reports over the last 10 years have indicated lower recidivism rates (revocation of parole) for CTP subjects compared to control subjects assigned to an institution and released to regular parole units. There have been several published criticisms concerning the CTP recidivism rates (Lerman 1968; Beker and Heyman 1971). The main point of these criticisms is that the differential recidivism rates between experimental (CTP) and control subjects is due to differential decision-making by the Youth Authority Board (in terms of revoking or restoring parole once a ward's parole has been suspended) rather than differential delinquent behavior. Palmer has recognized these criticisms but still believes that some of the difference in recidivism rates and "good" discharge from Youth Authority jurisdiction is due to changes in the CTP wards (Palmer 1968c, 1970). Changes in psychological test scores on the California Psychological Inventory and the Jesness Inventory showed a complex pattern among subtypes, between experimental and control subjects and taking both experimental-control status and subtype into consideration. See Palmer (1971a) for a summary

of outcome data on the Community Treatment Project.

Although strong criticisms have been levelled at CTP and the I-Level typology (Lerman 1968; Gibbons 1970; Beker and Heyman 1971) and many questions remain unanswered, widespread interest in the I-Level typology has been generated by the project. The typology has provided CTP with a treatment-relevant basis for a rational approach to dealing with different kinds of delinquents in a community setting.

The Preston Typology Study (Jesness 1969) was the first large scale attempt to apply I-Level typology to an institutional setting. Wards arriving at the California Youth Authority's Preston School were diagnosed as to I-Level and subtype. Subjects were randomly assigned to either an experimental or control group. Experimental wards were placed in living units homogeneous as to subtype whereas control subjects were placed in living units without regard to I-Level classification.

Staff were trained in the characteristics and treatment of the particular subtype in their living unit. There was an attempt to match staff with a particular living unit subtype on the basis of questionnaire data on the staff member's personality, interests and working style. Each living unit developed a somewhat differential program for dealing with wards of a particular subtype. There were differences between experimental and control units in both observer and ward perceptions of the treatment orientation of the staff. The major difference between experimental and control units was the smaller number of serious behavioral incidents occuring in the experimental units. Some changes in psychological and behavioral measures favoring the experimental subjects were also shown for some of the subtypes. However, data after the

wards were released to parole showed no overall difference between experimential and control groups in recidivism rates at 15 or 24 month exposure period. There were minor differences in recidivism rates for different subtypes within both the experimental and control groups.

In discussing the implications of the study and its results, Jesness states that the ... "effects were most apparent in the changed attitudes and behavior of Preston staff. The introduction of the I-Level classification system contributed to increased professionalism and enthusiasm on the part of the treatment personnel, some of whom had the reputation of being 'old line' supervisors not noted for their openness to change. Providing a rational classification and treatment approach made it possible for these staff members to become increasingly knowledgeable about the behavior and treatment of one or more classes of delinquents (Jesness 1971a). Although the success of the experimental programs in leading to desired changes on psychological and behavioral measures was not emphatic and there was no greater parole success (recidivism rates) on the part of the experimental wards, Jesness sees great utility in the I-Level typology. He states: (p.51)

> "The present I-Level classification system seems to provide a functional system for the integration of traits and characteristics that enables a variety of statements to be made concerning the individual. These statements include material relevant to the probable origin or explanation of the subject's delinquency; his perception of himself, his family, his peers; his attitudes toward adults; his probable response to certain treatment intervention strategies, and so forth ... Furthermore, and probably most important, the adoption of this system could immediately make possible the exchange of more meaningful data from researchers using different populations in different parts of the country. It would probably be generally agreed that the usefulness of a classification system such as that of I-Level is related to its power in enabling the greatest number of useful predictions to be made regarding a subject's response to a variety of critical situations."

Other Youth Authority facilities such as the Los Guilicos School and several parole units have learned and use the I-Level classification system. Some research reports on these and other programs have analyzed outcome and other data by the level and subtype of the subjects in the program (Pond 1969). For example Knight (Knight 1970), studying a 3 month intensive institutional program emphasizing group meetings, open discussion, and confrontation, found that those classified by the highest Jesness Inventory probability as Na had a lower recidivism rate than those so classified Nx. This was a post-hoc analysis as the program did not deal with classification or systematic differential treatment. A knowledge of the I-Level classification can lead to valuable information concerning response to treatment programs even if these programs do not take the classification into account. Consistent evidence in favor of certain types of programs for certain classes of subjects can lead to the formation of classification-related differential treatment. If these programs were then subject to intensive research and good experimental design, much information about the utility of specific classification-related differential treatment programs could be obtained.

The I-Level classification typology has been used to a limited extent in the Youth Center Research Project (Jesness, Loehr, McCormick & Wedge 1968). This project, conducted at two adjacent Youth Authority institutions compares the effects of programs based on transactional analysis (O.H. Close School) and behavior modification using contingency management (Karl Holton School). Subjects have been classified as to I-Level and subtype using the Sequential Classification Method discussed later in this report. While subtype was often

taken into account in assigning subjects to living units, programs at each of the schools were not based primarily on the classification. Analyses of the classification made by the sequential method will use data from subjects in this study, data such as behavioral and attitudinal changes as a function of type of treatment and I-Level classification. Concurrent, construct, and predictive validity information on the classification by the sequential method will also come from Youth Center data.

The I-Level classification has been used in an ESEA funded project at the Youth Authority's Paso Robles School, called the Differential Education Projec (Andre & Mahan 1971). This project involves an experimental-control design. Experimental subjects were assigned to classrooms homogeneous as to subtype. There were four experimental classrooms, one for Cfm's, one for Cfc's and Mp's together, one for Nx's and one for Na's. Control classrooms were heterogeneou with regard to classification. Teachers for the experimental classes were chosen on the basis of their style of working with youngsters. Results were measured in terms of reading and arithmetic achievement, perception of classroom atmosphere, self concept on the semantic differential, personality change on the Jesness Inventory, observations of teacher and pupil behavior in the classroom, as well as teacher reports of behavior difficulties and special commendations. A curriculum model for each of the subtype groups used in the study was presented which contained objectives, setting, methods and procedures and subject matter (Andre & Mahan 1971). Results varied with subtype and the type of outcome variable measured. Again, although some of the data was not in the predicted direction, there was enough favorable results for the Cfm, Cf

Na and Nx subtypes to show promise of using a differential educational approach based on the I-Level classification.

Some other Youth Authority institutions and parole offices have used the ward's classification in an informal manner. Most of the first admissions to the Youth Authority have been classified according to I-Level and subtype since 1968. Beginning in the final months of 1970, this classification has been made by means of the present provisional sequential system. The classification is available in the clinical report prepared by the Youth Authority Reception Center Clinics.

The interest in the Community Treatment Project and the I-Level classification became so great that Marguarite Warren and several experienced diagnostic-treatment staff from CTP set up the Center for Training in Differential Treatment (CTDT). This training center, funded by the National Institute of Mental Health, provides intensive coursework in I-Level theory and diagnosis plus some treatment information (Warren 1969). Presently, the course lasts five weeks. Representatives of correctional and other agencies from all over the country and some foreign countries have attended. The Center provides follow-up consultation on diagnostic accuracy and treatment programs.

Unfortunately, there is no central location where one may obtain reports on the use of I-Level. We would guess that most agencies using the system do not systematically report about its use. It would be very helpful if agencies using the I-Level system would report on how the diagnoses were determined, the distribution of diagnoses, staff reactions to I-Level programs, treatment and management techniques based on the classification, response of inmates to the

programs, outcomes of these programs, innovations, etc. It would be ideal to have competent research personnel investigating the use of the I-Level typology in various agencies.

IV. Methods of Determining I-Level and Subtype Classification

The methods and procedures used to classify individuals into an I-Level and subtype category represent a crucial problem area which has ramifications to all other aspects of I-Level: research, treatment, and outcomes. The methodology of determining the level and subtype is the focus of Project Sequil.

In the beginning, the classification was based on a one and one-half to two hour interview with the subject. This is the method used by the Community Treatment Project, and it is the one taught by the Center for Training in Differential Treatment. A 1966 publication by CTP (Warren 1966a) contains a long interview schedule covering many areas of the subject's life, thoughts, and perceptions. Some of the areas are: expectations of the Youth Authority; offenses, and attitude toward the commitment offense; perception of family; perception and attitudes toward each parent (or substitue), siblings and self; handling problems and emotions; perceptions of friends; the future; and feelings toward the interview and interviewer. The interviewer is instructed to ask broad questions at first in an open-ended manner, following the lead of the interviewee into more specific questions. The specific questions listed in the schedule need not be asked in the manner stated but serve as a guideline for the type of information needed.

After the interview is completed the interviewer, or someone who has listene to a taped recording of the interview, rates the interviewee on each of the numerous characteristics listed for each of the three I-Levels (2, 3, and 4) on a four point scale ranging from no information to markedly or extremely characteristic. For the I-2, three additional traits are listed to separate Aa's from

Ap's. Subsequently, the interviewer rates each characteristic listed under each subtype only for the chosen level. Many of these characteristics are rather "global" or "clinical" and probably not easily operationalized. The interviewer's interpretation of what the interviewee said in relation to the listed characteristics determines the ratings.

The interviewers' determinations of level and subtype in the CTP have not been made on the basis of these ratings. Over the years the chief diagnosticians have been the research personnel who have developed and worked with the system. They are considered the "experts" on classification. Their level and subtype diagnosis have been done on a "clinical" or "global" basis using the information from the interview and their interpretations of the meaning of this information in terms of the crucial dimensions differentiating levels and subtypes. The ratings have been done more for research purposes. The diagnostic impressions from the interview are not based on actuarial or statistical data.

The sequential system of i-Level classification was developed from experience in the Preston Typology Study (Jesness 1969). The basic differences between the sequential method and the CTP-CTDT method (to be called the clinical or interview method henceforth) are both the method of data collection and procedures for combining the data. The present sequential method relies mainly on psychometric data (Jesness Inventory) while the other method relies completely on a clinical interview. In the sequential method, the combination of data from different instruments, when necessary, is done by mechanical means. In the interview approach, only the data from the interview is integrated by clinical means using the knowledge and interpretations of the interviewer.

In the Preston Typology Study, classification was based on three instruments administered and scored for all subjects with the final classification made at a staff meeting at which time information from all three instruments was integrated. Occasionally the ward's case file was used as an aid in settling a difficult classification problem. A great deal of data was collected with regard to the three instruments, their inter-relationships, their relationships to the final staff diagnosis, and modal patterns of responses for each of the levels and subtypes. This data formed the basis for the provisional sequential I-Level classification system. Jesness described the classification process at Preston as follows: (Jesness 1969, pp 51-52)

> "The procedure for classification followed in the Preston Typology Study involved the careful integration of material from three sources: the interview, the inventory and the sentence completion test. All three were regarded as fallible sources of data which were given approximately the same weight in arriving at final classification... Initially, however, possibly to the disadvantage of accuracy of classification, the staffing team tended to give the interview more weight than psychometric data. With experience, the classification team learned to recognize those situations where greater or lesser weight could be placed on any one of these instruments. For example, it was found to be hardly conceivable for an individual functioning at the I-2 level to present a set of sentence responses which were unambiguously ratable as Na or Nx responses, and in such instances the sentences were given much more weight. The accuracy of individual interviewers varied, and any tendencies to favor certain subtype classifications were gradually learned and where possible were taken into account.

A fairly systematic staffing procedure evolved which seemed to provide the best means for integrating data. The members of the staffing team were first informed of the inventory probabilities and diagnostic ratings of the sentences. At that point, the interviewer presented his diagnostic impressions. When there was sufficient agreement among the instruments, no further discussion about classification was needed. In about 40% of the cases the interviewer's impression was confirmed by the inventory and/or sentence data, and the staffing team was able to move quickly to another case. In the remaining cases where there was less instrument

agreement or where the interviewer felt some need to discuss the case, the interviewer presented a complete report of his i : interview to the staffing group. Members of the group listened carefully to this material, keeping in mind all possibilities suggested by the instruments. The task of the staffing group was to suggest a hypothesis which would reconcile the apparent inconsistencies. Where adequate interviews had been held and the data fully reported, the staffing team found that those members who listened to the report of the interview were often in a better position than the interviewer to evaluate the data objectively. There were occasions when the staffing process developed into a struggle for dominance or a competition between conflicting points of view. However, when all staff assumed responsibility for arriving at the most accurate diagnosis, it was possible to approach the staffing as an intellecutal challenge to integrate conflicting material into a single coherent explanation consistent with a particular subtype classification."

The final staff diagnosis produced on almost 2,000 Youth Authority male wards in the Preston Study provided the criterion groups for determining the scoring guides for the three instruments used in the present provisional sequential system.

Measurement Instruments Used in the Present Provisional Sequential System

Jesness Inventory - The Jesness Inventory is a personality-attitude test devised for the purposes of discriminating between delinquent and non-delinquent youth and among delinquents of different types. It contains 155 items which are answered true or false by the respondent. By means of cluster and factor analysis 11 scales were derived including an indicator of delinquency proneness (the Asocial Index). A brief description of these scales follow (Jesness 1969, pp 44-45).

Social Maladjustment - measures a set of attitudes associated with inade-

quate or disturbed socialization as defined by the extent to which an individual shares the attitudes of persons who demonstrate inability to meet environmental demands.
Value Orientation - measures a tendency to share attitudes and opinions characteristic of persons in the lower socioeconomic classes.
Immaturity - measures the tendency to display attitudes and perceptions of self and others which are usual for persons of a younger age than the subject.
Autism - measures a tendency, in thinking and perceiving, to distort reality according to one's personal desires or needs.
Alienation - measures the presence of distrust and estrangement in a person's attitudes toward others, especially toward those representing authority.
Manifest Aggression - measures an awareness of unpleasant feelings, especially of anger and frustration, a tendency to react readily with emotion, and perceived discomfort concerning the presence and control of these feelings.
Withdrawal-Depression - measures a perceived lack of satisfaction with self and others and a tendency toward isolation from others.
Social Anxiety - measures perceived emotional discomfort associated with interpersonal relationships.
Repression - measures the exclusion from conscious awareness of feelings and emotions which the individual normally would be expected to experience, or his failure to label these emotions.
Denial - measures a reluctance to acknowledge unpleasant events or aspects of reality, often encountered in daily living.
Asocial Index - measures the generalized disposition to resolve problems of social and personal adjustment in ways ordinarily regarded as showing a disregard for social customs or rules.

In order to use the Jesness Inventory for the measurement of I-Level and subtype an analysis was made of the responses of Youth Authority wards in the Community Treatment Project (CTP) classified with a high degree of confidence (N=204). Nine scales, one for each subtype, were developed by means of item analysis. Items selected for a particular subtype were those which differentiated that subtype from all others as a total group. A multiple discriminant

functional analysis[7] was then performed using the 10 original psychological scales as well as the 9 newly-derived subtype scales as predictor variables. The multiple discriminant fuction is a statistical technique which distinguishes between known groups for whom common measurements are available. This technique "locates" a subject's response pattern relative to patterns of the known criterion groups and provides a probability statement as to the "nearness" of this pattern to each of the criterion groups. The probabilities of being a member of each of the nine subtypes (nearness to the average pattern of the CTP criterion groups) were used in the classification process in the Preston Study.

The process of developing subtype scales from the Jesness Inventory and performing a multiple discriminant analysis using these and other scales from the Inventory was repeated two more times. The last criterion group includes the original 204 from CTP plus 1,790 classified subjects from the Preston Typology Study.

Sentence Completion Test

A second personality measurement used in the provisional sequential system

---

7 In technical terms a multiple discriminant function is a series of several linear discriminant functions. The first function is the linear combination of variables which best maximize the ratio of between-groups variance to within-groups variance. The second discriminat function is the one which does the second best job of maximizing this ratio, and so on. There are similarities to factor analysis and multiple regression analysis. In order to obtain a score for an individual the centroid of each criterion group is determined. Contours of equal density about each centroid are computed in multidimensional space corresponding to the number of discriminants. The locations of the individual with respect to these contours around the centroids of each criterion group determines his score for each group. The higher the probability, the closer the individual is to the centroid of that group.

is an incomplete sentence test. The Preston Typology Study Sentence Completion Test consists of 13 sentence stems and three topics. The respondent is given 75 seconds to complete each stem and 3 minutes for each topic. The stems and topics are listed below:

1. I like ...
2. Rules are ...
3. When I am criticized ...
4. Parents ...
5. I feel satisfied when ...
6. When someone tells me what to do ...
7. When I am on my own ...
8. I hate ...
9. If I could ...
10. I feel bad when ...
11. Cops ...
12. When I take something ...
13. When I am not sure ...

Topic 1. What has your life been like?
Topic 2. What sort of person are you?
Topic 3. Why do you think you got into trouble with the law?

The original guideline for using the test in classification came from an analysis of the responses of 60 CTP wards. Guidelines for subtype classification were further refined through the analysis of the responses of the first 195 subjects classified in the Preston Typology Study. Most of the sentence tests were rated as to subtype independently by two members of the research staff whose diagnostic impressions were based on global impressions of the entire protocol.

Classification Interview

Because of the time pressures involved and the large number of wards who had to be classified in the Preston Typology Study the interview was shortened from that done by CTP. A semi-structured interview of about 30 minutes dura-

tion was developed which included the main diagnostic areas covered by the CTP interview. Interviewers, who included the research staff and many Preston staff, were expected to elicit and record the subject's responses, in direct quot if possible, to the major points in the interview guide. This guide suggested the type of material to be obtained from the interviewee, and the content areas. to be explored. The nine interview content areas were: nature of delinquency, friends, description of parents, attitude toward life, self-description, change from the past, changes anticipated in the future, awareness of personal problems, and plans for the future. The interviewer was also instructed to observe the general behavior of the subject during the interview. Based on his general knowledge of I-Level descriptions the interviewer came up with a diagnostic impression. There were no formal guidelines for classifying interview responses. Problems encountered with the interview during the Preston Study were described (Jesness 1969, pp. 34-35)

> "With an inventory, unreliability is associated primarily with subject (response) variability. The interview is vulnerable to the additional unreliability associated with variation in presentation of the stimuli to the subject, the kind of rapport established between interviewer and subject, and errors in the conclusions reached by the interviewer ...
>
> Almost all interviewers occasionally become emotionally involved and defensive about the interviews. At other times it proved difficult for the interviewer to consider the possibility that his impressions could be wrong or his technique faulty. It was apparent that the question of one's ability to conduct an interview tended to threaten personal security, and the staffing group was aware on several occasions of having accepted the interviewer's diagnosis rather than to further alienate the interviewer by continued questioning.
>
> In order to minimize these problems, interviewers were encouraged to view their essential function as that of presenting reliable and complete information to the staffing group ... Since the role of the interviewer was structured as being primarily that of an observer and reporter, the weight given to intuitive impressions was necessarily minimized. This did not mean that staff were not encouraged to pursue their hunches, but they were expected to provice explicit data to substantiate their hypotheses. Sometimes exploration of these minimal and difficult-to-verbalize clues provided the basis for the satisfactory synthesis of what appeared to be hopelessly conflicting information".

Data from this study, as well as other literature reporting numerous studies on the relative merits of clinical vs. actuarial prediction, convinced Jesness that the interview method was a relatively unreliable, inefficient way of determining classification. Therefore the interview becomes the least influential step in the sequential classification system. However, it was felt that in some instances data from the Jesness Inventory and Sentence Completion Test would not produce clear enough information to determine a diagnosis. The interview would only be used for these hard-to-diagnose cases, and in conjunction with the other two instruments.

Some of the results using this three instrument approach to I-Level classification in the Preston Typology Study are presented in the following tables. Table 1 shows the percent agreement between the three instruments and the final staff diagnosis. It should be remembered that this does not represent independent data because all three instruments were used in arriving at the final diagnosis.

Table one shows that the first interview impression was most highly related to the final staff diagnosis, with the Jesness Inventory probability second, and the sentence diagnosis last. Lowest agreement between each of the instruments and the final staff diagnosis was shown for the wards classified as Aa.

TABLE 1

Percent Agreement Among Highest Jesness Inventory Probability, First Sentence Diagnosis and First Interview Diagnosis with the Final Staff Diagnosis

(Preston Typology Study)

Final Staff Diagnosis	Highest J.I. Probability N=1,656	First Sentence Diagnosis N=1,639	First Interview Diagnosis N=1,753
Aa	21%	5%	36%
Ap	35%	42%	43%
Cfm	58%	43%	61%
Cfc	44%	25%	63%
Mp	40%	40%	58%
Na	54%	28%	54%
Nx	59%	33%	60%
Se	49%	27%	58%
Ci	41%	6%	38%
Total Agreement LEVEL:	70%	62%	73%
Total Agreement SUBTYPE:	49%	35%	57%

Table 2 presents data on the percent agreement among the instruments. The data reflects the convergent validity among different types of independent measures designed to measure the same thing.

TABLE 2

Percent Agreement Among the Highest Jesness Inventory Probability, First Sentence Diagnosis and First Interview Diagnosis

(Preston Typology Study)

Diagnosis	Inventory vs. Interview N=1,640	Inventory vs. Sentences N=704	Interview vs. Sentences N=1,622
Aa	10%	11%	0%
Ap	28%	25%	27%
Cfm	40%	37%	34%
Cfc	26%	24%	18%
Mp	27%	32%	34%
Na	30%	21%	21%
Nx	33%	28%	26%
Se	9%	27%	13%
Ci	28%	0%	11%
Total Agreement LEVEL:	59%	53%	54%
Total Agreement SUBTYPE:	31%	33%	26%

Most of the relationships among independent instruments were statistically significant. It should be remembered that on the basis of chance alone the relationships would average about 33% agreement for levels and around 11% for subtypes assuming an equal distribution of all levels and subtypes. Jesness states that the "overall agreement figures ... support the validity of both the measures and the classification system." (Jesness 1969).

Sequential I-Level Classification System

The provisional sequehtial system represents a modification of the procedures used in the Preston Typology Study described in the previous section. It employs the same three instruments (Jeshess Inventory I-Level and subtype probabilities, the sentence completion test, and a short, structured interview). The sequential system is an improvement upon the system used at Preston in the following ways:

1. Reduces time for diagnosis for most subjects.
2. Has explicit rules for using the three instruments to determine a diagnosis - no staffing necessary, no personal influence in making the diagnosis.
3. Provides written guidelines for scoring the sentence completion test and interview.
4. Allows for a high degree of consistency between different groups of diagnosticians.

The sequential procedure is embodied in a set of logical, sequential, and exhaustive rules (See Appendix A). They provide explicit directions for using information from the Jesness Inventory (level and subtype probabilities), the two diagnoses made from the Sentence Completion Test, and the two diagnoses made from the interview. I-Level is first determined, then subtype. The sequence involves the use of data from the Inventory, sentences, and interview in that order. Unlike the procedures at Preston, all instruments are not needed for all subjects.

All subjects are administered the Jesness Inventory and the sentence completion test. The Inventory is scored by computer program for I-Level and subtype. If the rules determine that a diagnosis can be made from the Inventory probabilities alone, no further instruments are needed. If the probabilities

do not allow for both a level and subtype diagnosis, the Sentence Completion Test is scored for level and subtype. This is the second step of the sequential procedure. If there is convergence (agreement) between the sentence diagnoses and the high Inventory probability, a final classification can be made. If there is no convergence between the sentence diagnoses and the Inventory a short structured interview is administered and scored for level and subtype. The diagnoses made from the interview are compared with the Inventory probabilities. If there is convergence a final classification is made; if not, the interview diagnoses are compared to the sentence diagnses, and a final classification made on this basis. In a few cases the rules provide that if there is no convergence among the three instruments on subtype but there is convergence on level, the final subtype diagnosis is made on the basis of the highest Inventory subtype probability within that level. The rules make some special provisions for obtaining convergent information for the rarer level (I-2) and subtypes (I-4 Se and I-4 Ci).

The rules take into account almost all of the many possibilities for convergence among the instruments. As they are written, an I-Level and subtype diagnosis can be made on practically all subjects if all three instruments are administered (less than 1% unclassified).

The rules in Appendix A are provisional and will be changed. The major goal of the second year of Project Sequil is to develop more efficient rules that will include other diagnostic instruments.

It should be noted that according to the present rules, the Jesness Inven-

tory is given the most weight (see Table 5 page 57). Even when the sentences and interview are needed, the final diagnosis depends on their convergence with the higher Inventory probability. It is rare that the final classification is based on the convergence of sentence and interview diagnoses. Only the Jesness Inventory can determine the final classification by itself. The writing of the rules "around" the Jesness Inventory reflects the Project's goals of developing a system based chiefly on actuarial procedures using easily administered psychometric instruments. The present system is provisional and we hope to reduce the need for sentence and interview diagnoses for purposes of classification. However, it is acknowledged that for some individuals psychometric instruments will not provide enough clear diagnostic evidence and more qualitative methods will be employed such as sentences and/or interview.

The sequential classification rules can be followed by anyone who is provided the Jesness Inventory probabilities for level and subtype, two sentence diagnoses, and two interview diagnoses. The use of this information is objectiv with no disagreement over the way it is used or over the final diagnosis. Applying the rules is strictly a clerical function.

In addition to the Sequential Classification Rules, written guidelines for the scoring of the sentence completions and the interview have been formulated (Jesness & Wedge 1970). These guidelines were based on the typical response to the 16 stems and topics and to the nine interview content areas of a sample of 351 wards classified during the Preston Typology Study (Jesness 1969). They described the typical responses of each of the nine subtypes to each stem, topic and interview area. During the first year of Project Sequil supplementary

guidelinews were developed which provided additional examples of responses to each of the sentence items and interview areas and clarified the original guidelines.

Given these guidelines, scoring is more objective than in the Preston Study where the diagnosticians made their diagnosis from a global impression based on the entire sentence protocol or interview. In the sequential method each stem, topic and interview content area is individually scored for level and subtype. Sentences and interviews are scored by different people who have no information about the ward. The scorers' first and second diagnostic ratings for each of the 16 items of the sentence completion test and nine c content areas of the interview are recorded. The scorer than totals the firs and second ratings for each level and subtype. This produces a distribution of scored responses. The method for determining a final first and final second sentence diagnosis from these distributions is specified. No formal rules for determining diagnoses from the distributions of interview responses have been written but similar procedures are used as with the distribution of sentence responses. In general the level with the most first diagnoses and the subtype within that level with the most total number of first and second diagnoses is the first final diagnosis.

In making the classification from the sentence completion test and the interview there is no differential weighting of items. Scoring is predicated on the assumption that most frequent, i.e. the modal response, represents the individual's most typical way of functioning.

Advantages of the Sequential System Relative to the Interview Method

Project Sequil was undertaken because of a felt need by the California Youth Authority for a more efficient and more reliable method of obtaining the I-Level classification. Some of the known and potential advantages of th

sequential system relative to the clinical interview method of I-Level classification are:

a) less time and effort needed for staff training.

b) less staff time needed for classification activities.

c) more open to changes in procedures which could produce even more savings of staff time in training and classification activities.

d) does not depend on one instrument.

e) does not rely on "experts" or people with many years of experience or great clinical skills.

f) provides for greater consistency in procedures and outcomes for groups working apart from each other.

g) greater specificity of the actual operations determining the classification.

a) Less time and effort needed for staff training

Project Sequil found that one week is often sufficient to train people to score sentences and to administer and score the interview. A background in the I-Level system, of course, facilitates the learning of the scoring systems. Little training is needed to administer the Jesness Inventory and the Sentence Completion Test. As little as four hours of training have been found sufficient to train clerical personnel in application of the sequential classification rules. On the other hand, the Center for Training in Differential Treatment spends five weeks in training. Although training at the training center includes discussion of theory and treatment as well as diagnosis, the bulk of the program is devoted to classification. Trainers at the Center feel that even more experience is necessary after the training in order for one to become a qualified I-Level diagnostician. The Center has also found that not all trainees are able to become good I-Level diagnosticians or interviewers. Although these

individual differences are also a factor in training persons to be good sentence raters and interviewers in the sequential system, the guidelines for administration and scoring allow for more people to be qualified with much less training and experience.

b) Less staff time needed for classification activities

The tests used in the Sequential system can be administered to large groups using a taped recording; the inventory takes about 40 minutes and the Sentence Completion Test in an additional 20 minutes. The interview in the sequential system requires about 30-45 minutes and 30-45 minutes for scoring. A sentence protocol can be scored in less than 30 minutes by experienced scorers. It should be remembered that the need for sentence ratings is limited to about 50% of all cases and only about 20% need interviews using the present provisional system (See Table 5 page 56). The traditional interview method took from 1½ to 2 hours per subject for all subjects. Data from the Youth Authority clinics showed that an average of 1 hour and 48 minutes per I-Level interview was previously used to arrive at classification by the interview method. Each second rating of recordings of these interviews took an additional hour and 20 minutes. If we use the above estimate of time for the various diagnostic activities we can compare the interview with the sequential method. Assuming an intake of 100 individuals to be diagnosed according to the I-Level typology we have a breakdown of staff time as follows:

Sequential Method (100 subjects)

1. Testing in groups of 20 = $1\frac{1}{4}$ hours x 5 = 6 hrs. 15 min.
2. Sentence scoring on 55% = 30 min. x 55 = $27\frac{1}{2}$ hrs.
3. Interview on 20% = $1\frac{1}{2}$ hrs. x 20 = 30 hrs.
4. Clerical time in applying the rules and other associated duties = approx. 1 min/subject = 1 hr. 40 min.

TOTAL staff hours needed to classify 100 individuals = approx. 65 hours

Interview method (100 subjects)

1. Interview at 1-3/4 hrs. per person = 175 hours
2. Second ratings on a sample of 20% = 1 hr. 20 min. per person x 20 = 26 hrs. 40 min.

TOTAL staff hours needed to classify 100 individuals = approx. 202 hours

It can be seen that the sequential method is much more efficient in terms of staff time than the interview method. However, a greater delay is involved in getting the data needed for the sequential classification, primarily because of the time needed to send the Inventory answer sheets to an available computer center for scoring, and return to the user.

c) More open to changes in procedures which would produce even more savings of staff time in training and classification activities

As it was previously stated, the present sequential method is provisional. The next revision will include the Jesness Behavior Checklist - Self Appraisal along with the Inventory. This will further reduce the need for data from the sentence completion test and interview, and thereby further reduce staff time needed for classification.

d) Does not depend on one instrument

Although the Jesness Inventory is the main classification instrument, two other instruments are used in about half the cases to provide additional evidence

Thus, using the sequential method makes it possible to partially compensate for weaknesses in any one instrument. All instruments are fallible and convergence of data from different sources appears to provide greater certainty in many cases than is possible through the use of one instrument only.

e) Does not rely as much on "experts" or people with many years of I-Level experience or great clinical skills

The sequential method is partly objective and requires less expertise and clinical skills than an interview method. Providing specific rules for scoring the instruments as well as for combining data to produce a final classification lessens the need to rely on highly qualified experts.

f) Provides for greater consistency in procedures and outcomes for groups working apart from each other

Although high agreement between diagnoses based on interviews has been reported (Palmer 1968a; Molof 1969; Cross & Tracy 1969), the degree of agreement has been questioned (Beker & Heyman 1971). There is some evidence (Jesness 1969; Molof 1969) that groups of diagnosticians using the interview method and working apart from each other obtain much lower agreement than do persons working together. The sequential method allows for greater consistency because of the mechanical nature of scoring the Inventory, the guidelines developed for scoring the sentences and the interview, and the explicit nature of the rules for combining the data. The interview method is more subject to different interpretations concerning the kind of evidence that is crucial in making specific distinctions among levels and subtypes.

g) Greater specificity of the actual operations determining the classification

The specific procedures and data which lead to the classification are

easier to assess in the sequential method. Although a good interviewer using the interview method may be able to specify what the interviewee said that lead him to his diagnosis, this is not always possible. The interview method is based largely on a "clinical" intuitive process. The scoring guidelines for the sentence and interview as well as the sequential classification rules allow a fairly precise reconstruction of how the diagnosis was achieved.

Advantages of the Interview Method Relative to the Sequential System

a) The diagnostician obtains more information from the individual about his responses in an interpersonal situation. This information may be used for a variety of purposes relating to classification, treatment, and dealing with special problems. The diagnostic interview can serve as an initial stage in treatment. An interview can provide the diagnostician with a greater subjective feeling of understanding the perceptions, feelings, attitudes, and expectations of the subject.

b) Although much more staff time is needed, the diagnosis can usually be arrived at within a shorter period of time. In the sequential system the time for group testing, computer processing, and the time for administration and scoring of the sentences and interview (when necessary) is greater than for the interview method. For example, it may take one to two weeks to complete the sequential process.

c) The sequential method does not currently provide for classification at the I-5 or higher levels. The Inventory probabilities as well as the sentence and interview guidelines were based on Youth Authority wards classified as I-2, I-3

and I-4 only.

Relationship Between CTP and Sequential Diagnosis

Data presented in Tables 3 and 3A show the relationship between the diagnosis produced by the interview method and by the sequential system. The subjects were 67 wards who had been classified at the Northern clinic by the sequential method and assigned to the Community Treatment Project, where they were diagnosed using a clinical interview. Table 3 shows the two distributions and the number of agreements for each diagnostic category. Table 3A is a cross classification of the diagnoses made by each method. Analysis of the data shows a 52.5% agreement on level and 26.9% agreement on subtype. These figures represent a relationship which is not statistically significant (at the 5% confidence level).

Part of the disagreement is attributable to differences in the distributions produced by the two methods as shown in Table 3. CTP classified about 20% more wards as I-4, 20% fewer as I-3, and slightly fewer as I-2. Nearly 50% of all CTP subjects were diagnosed as I-4 Nx by the interview method. On the other hand, the sequential method classified approximately an equal number of subjects as Cfm, Na and Nx. Highest agreement was for wards diagnosed as Nx.

Data on the relationship between the high Jesness Inventory probability and a different CTP sample showed 60% agreement for level and 32% agreement for subtype. This sample consisted of 204 CTP wards. The discriminant solution used was developed mainly from a criterion group consisting of wards diagnosed in the Preston Study (Jesness and Wedge, 1970).

TABLE 3

Distributions of CTP and Sequential Diagnosis

N=67

Diagn sis	CTP		Sequential		Agreement
LEVEL	N	%	N	%	N
2	2	3.0	4	6.0	0
3	18	26.9	31	46.2	10
4	45	67.1	32	47.8	25
5	2	3.0	0	0.0	0
SUBTYPE	N	%	N	%	N
Aa	1	1.5	0	0.0	0
Ap	1	1.5	4	6.0	0
Cfm	9	13.4	14	20.9	1
Cfc	6	9.0	10	14.9	1
Mp	3	4.5	7	10.4	2
Na	11	16.4	15	22.4	3
Nx	33	49.3	15	22.4	11
Se	1	1.5	1	1.5	0
Ci	2	3.0	1	1.5	0

TABLE 3A

Relationship Between CTP and Sequential Diagnosis

Total Agreement: Level 35/67 = 52.2%
Subtype 18/67 = 26.9%

CTP Diagnosis	SEQUENTIAL Diagnosis				
LEVEL	2	3	4	5	Total
2	C	2	0	0	2
3	2	10	6	0	18
4	2	18	25	0	25
5	0	1	1	0	2
TOTAL	4	31	32	C	67

SUBTYPE	Aa	Ap	Cfm	Cfc	Mp	Na	Nx	Se	Ci	Total
Aa	0	C	1	0	0	0	0	0	0	1
Ap	0	0	0	1	0	0	0	0	0	1
Cfm	0	2	1	2	1	0	3	0	0	9
Cfc	C	0	3	1	0	C	1	C	1	6
Mp	C	C	0	0	2	1	0	0	0	3
Na	0	1	2	3	2	3	0	C	0	11
Nx	C	1	7	2	1	10	11	1	C	32
Se	C	C	0	0	1	0	C	0	C	1
Ci	C	C	0	1	C	1	0	0	0	2
TOTAL	0	4	14	10	7	15	15	1	1	67

The low relationship between the high Inventory probability and CTP diagnosis severely limits the possibility of a higher relationship with the sequential diagnosis. The lack of relationship between the products of the two systems will have to be taken into consideration when the final sequential system is completed. An investigation of the differences between the two systems will be made for a sample of wards for whom there is strong disagreement in the diagnosis.

The evaluation of the validity and utility of a classification system must ultimately be determined empirically. Whether the sequential method or the clinical interview method is preferable will also depend upon the goals of the organizations or individuals who use the typology. The second year of the project will include studies of the validity of the sequential method using data from the Youth Center Research Project (YCRP) and utility provided by feedback from county probation departments and other organizations outside the California Youth Authority.

V. Project Activities

Development of the original sequential system and the initial training of selected staff from the three Youth Authority Clinics took place in 1970. The training for those scoring sentences took one week, and one day was devoted to training clerical personnel in the application of the sequential classification rules. In January 1971, four days of training in the semi-structured interview were provided for selected staff from the three clinics and the Youth Authority's Preston School. By February 1971 a large proportion of the first admissions to the Youth Authority Clinics were being diagnosed according to the sequential system.

Training of additional Youth Authority staff continued during the first year. Project staff trained 6 additional sentence scorers and 8 additional interviewers. Trained clinic staff in turn trained other staff in sentence scoring, interviewing, and applying the sequential rules. Several of the clinic staff who received the initial training from the project had extensive prior experience with I-Level diagnosis using the interview method. These people experienced little difficulty in switching from the clinical interview to the sequential method. The Youth Authority now has a sufficient number of trained staff at their three clinics to classify all wards by the present provisional sequential system.

In addition to the Youth Authority staff, project staff provided training for personnel from the San Diego Honor Camps, where plans are being made to introduce the sequential system. Data from the honor camps will provide evidence about the usefulness of the typology with offenders who are mostly

between the ages of 20-30. The sequential system was based chiefly on data from adolescent offenders from 15 to 18 years of age.

A data collection system has been devised whereby the project, located at the Youth Authority's Northern Reception Center-Clinic, receives data on specially prepared forms for all wards classified by the sequential method. Continual monitoring of the classification procedures takes place. A set of prodedures for transfering information from the three instruments to punched cards was developed and data from a very large sample of wards classified at all three clinics between October 1970 and June 1971 was recorded in this form.

Other data relevant to the validity and utility of the sequential classification system is presently available from the Youth Center Research Project (YCRP). Initial analyses of this data is underway at the present time. The results of these analyses will be reported in future reports.

Several objectives were stated in the proposal for Project Sequil:

Objective 1 - To aid in the implementation of the provisional sequential system into the Youth Authority's I-Level classification system.

Objective 2 - To provide quality control and monitoring of this procedure.

Objective 3 - To develop further refinements of the sequential classification system to the point where it can produce reliable classification for the vast majority of cases.

Objective 4 - To explore similarities and differences of this system with others such as those of Loevinger and Quay, and to contrast the usefulness of the several systems in leading to meaningful, treatment-related predictions.

Objective 5 - To explore the applicability of the system in other settings such as probation and adult corrections.

Objective One has been achieved, with almost all Youth Authority wards classified at the three Youth Authority Clinics by means of the present sequential method. Sufficient staff have been trained by project staff and by experienced clinic staff to carry on the diagnostic functions for all wards. It is expected that the modifications which will be made in the system will necessitate fewer trained staff because of a decreased need to rely on data from the sentences and the interview.

Objective Two has also been achieved. Project staff continuously monitor the diagnostic information received for each ward. Procedures are checked in order to see if the rules have been properly applied. Measures of agreement among the regular sentence raters have been obtained. Agreement between interviewers' diagnoses and those of second raters have also been obtained for a small sample. The amount of agreement, shown in Tables 6 and 7 in the next section, appears satisfactory compared with data from previous studies such as the Preston Study (Jesness 1969), and in light of the complex nature of the task. The monitoring and quality control will continue throughout the duration of the project. There will be an increased need for monitoring when the present system is revised with the introduction of the Jesness Behavior Checklist and a new set of classification rules.

Objective Three is in process of being accomplished. The major focus of the second year of the project will be on modifications and refinements of the present system. Data on the Jesness Behavior Checklist (Jesness 1971L) from the Youth Center Research Project became available at the end of the project year and are now under intensive analysis. It is intended to introduce this

instrument into the sequential system with the objective of producing more diagnoses based on psychometric instruments. Initial perusal of the data on the relationships between the DCL Self Appraisal and the sequential diagnosis shows that it can be successfully employed in the diagnostic system. Other refinements of the present system may also be accomplished using biographical and other data obtained from the clinics and the YCRP. Some consideration is being given to the possibility of re-defining and re-naming the diagnostic categories as to prevent confusion with the diagnosis made by the CTP and other who use their method.

Modifications will be made in such a manner as to maximize reliability, efficiency, validity and exhaustiveness (the number who can be classified). It may prove difficult to accomplish all these objectives with one system. Consequently, it is planned to provide the potential user with several options; that is, with several alternative methods of classification, each requiring different numbers of instruments and somewhat different rules, depending on the purposes to which the classification will be put and the time and availability of staff.

Objective Four has not been completely accomplished. After project staff become fully aware of the considerable time that would be required, a decision was made not to apply the Quay classification system. It was believed more valuable to concentrate effort on the sequential system.

Data on the Loevinger classification are available and comparisons will be made with the sequential diagnosis during the project's second year. Because

the Loevinger classification system is based on a theory that is quite similar to I-Level, additional analyses will be made of the behavior, attitudes, and responses to treatment of subjects classified by this system.

Objective Five has been accomplished to a limited extent. Project staff trained personnel of the San Diego Honor Camps in the sequential method. Staff at the Honor Camps, whose inmates are chiefly late adolescents and young adults, are presntly working to set up the sequential classification system. Starting in April 1972 several northern California probation departments will also be classifying their juvenile offenders by means of the sequential method. In addition, the project has received many requests for information concerning the sequential method (See Appendix B). It is expected that at the conclusion of Project Sequil a product will be available which will be used by many correctional agencies. A few agencies outside California are already using the sequential system or parts of it, especially the Jesness Inventory. Among them are the Colorado Division of Youth Services and the South Carolina Department of Juvenile Corrections.

In summary, the project has achieved or is well on its way toward achieving the goals set forth in the proposal. It is expected that all the major objectives will be accomplished by the conclusion of the project including the publication of a classification "package" available for dissemination to interested organizations.

VI. Data

Relationships Among Instruments

Table 4 presents the distribution of diagnoses based on each of the instruments and the final sequential diagnosis. The sample includes all Youth Authority wards for whom classification information was available between October 1970 and December 1971. Close to 50% of those classified were I-4 with about 6% classified as I-2. It can be seen that the distribution of the final sequential diagnosis (both level and subtype) is very similar to that obtained by using the highest Jesness Inventory probabilities. This reflects the fact that the sequential rules emphasize the Inventory (see pages 34-37). The distribution of diagnoses made from the sentences and the interview both show a greater proportion of I-2's and I-3's than do the Inventory and sequential diagnoses. With regard to subtypes, the sentence and interview diagnoses result in a higher proportion of Cfm's and a lower proportion of Na's and Nx's than was produced by the Inventory and sequential diagnoses.

One explanation for the differences in these distributions lies in the fact that using the present rules, the Inventory by itself classifies a large percentage of I-4's (see Table 5). Thus, a higher proportion of wards who need confirming data from the sentence completion test and the interview show higher I-2 and I-3 probability values on the Inventory. Consequently, a higher percentage of I-2 and I-3 diagnoses appear on the sentences and interview.

Other explanations which could account for the differences between Inventory and sequential diagnoses compared with sentence and interview diagnoses is related to the fact that a higher level of writing and verbal skills is

needed to produce clear I-4 responses on the sentences and interview. In addition, some of the more frequent responses produced by the sentences or the interview are often scored as I-3 responses.

TABLE 4

Distribution of Sequential Diagnosis, Highest Jesness Inventory Probabilities, First Sentence Diagnosis, and First Interview Diagnosis (Clinic Sample, 10/70 - 6/71)

Diagnosis	Sequential Diagnosis N=3,188		Highest Jesness Inventory Score[a] N=3,425		First Sentence Diagnosis[b] N=1,744[c]		First Interview Diagnosis[b] N=458[d]	
LEVEL	N	%	N	%	N	%	N	%
2	202	6.3	209	6.1	145	8.3	55	12.0
3	1421	44.6	1475	43.1	934	53.6	237	51.8
4	1565	49.1	1741	50.8	665	38.1	166	36.2
TOTAL	3188[e]	100.0	3425	100.0	1744	100.0	458	100.0
SUBTYPE	N	%	N	%	N	%	N	%
Aa	47	1.5	82	2.4	34	2.0	19	4.2
Ap	155	4.9	127	3.7	111	6.4	36	7.9
Cfm	610	19.1	609	17.8	488	28.0	112	24.5
Cfc	438	13.7	501	14.6	244	14.0	80	17.5
Mp	373	11.7	361	10.6	202	11.6	45	9.8
Na	661	20.7	698	20.4	271	15.5	59	12.9
Nx	809	25.4	882	25.8	342	19.6	87	19.0
Se	78	2.5	147	4.3	41	2.4	14	3.1
Ci	17	.5	11	.3	11	.6	6	1.3
TOTAL	3188[e]	100.0	3418[f]	99.9[g]	1744	100.5[g]	458	100.2[g]

No Diagnosis = 245[h]

[a] Highest level and highest subtype within that level.

[b] Based on a very large sample of those wards who had a sentence and interview diagnosis.

[c] Including several hundred who did not need sentence diagnoses to determine the sequential diagnosis.

[d] Including a few who did not need interview diagnosis to determine the sequential diagnosis.

[e] There may be a few wards represented here who were diagnosed twice.

[f] Excluding 6 with ties for the highest subtype. Most ties were recorded as showing the level or subtype which was the sequential diagnosis as the highest probability.

[g] Rounding errors.

[h] Based on those wards with information recorded on the Sequential I-Level Classification Summary Sheet. Most lacked the interview which was needed for a sequential diagnosis.

The distribution of the sequential diagnoses differ in some important respects from those obtained using different methods and different populations. The Preston Typology Study showed a higher percentage of I-3's and I-2's than the sequential system, with a corresponding lower percentage of I-4's (18% point less). Distributions of diagnoses from CTP showed a greater percentage of I-4's and lower percentages of I-3's and I-2's, the largest percent differences being in the Nx and Cfm categories. CTP classifies about 9% more subjects as Nx's and about 7% fewer as Cfm's. The study of I-Level diagnoses made by interviews at the Youth Authority clinics (Molof 1969) similarly showed more I-4's and fewer I-3's and I-2's than obtained by the sequential method. However, the sequentially-classified population and the earlier clinic sample included females and wards varying widely in age. Therefore, the above differences are related to both the method of arriving at the diagnosis and, in the case of CTP and Preston, differences in the population classified.

Table 5 shows the number of instruments needed to make the final diagnosis. The I-4 level is most often classified by the Inventory probabilities alone. The rules for determining I-2's are written so as to more frequently require corroborating evidence from the other instruments. Table 4 shows that only about 6% of the wards tested obtained their highest Inventory level probability at I-2. Since the identification of I-2's was deemed very important for placement and treatment decisions, the rules allowed an I-2 diagnosis to be made even if the highest Inventory probability was not that of an I-2 as long as there was convergence with either sentence or interview diagnosis. In order to produce an I-2 Aa diagnosis there must be convergence between two instruments.

TABLE 5

Number of Instruments Needed and Final Sequential Diagnosis[a]

(Youth Authority Clinics 10/70 - 12/71)

Sequential Diagnosis	Instruments Needed							
	Inventory Alone		Inventory & Sentences[b]		Inventory, Sentences & Interview		Total	
LEVEL	N	%	N	%	N	%	N	%
2	31	15.4	126	62.4	45	22.3	202	100.1
3	620	43.7	566	39.9	234	16.5	1420	100.1
4	945	60.3	468	29.9	153	9.8	1566	100.0
TOTAL	1596	50.1[c]	1160	36.4[c]	432	13.6[c]	3188	100.1
SUBTYPE	N	%	N	%	N	%	N	%
Aa	2[d]	4.3	30	63.8	15	31.9	47	100.0
Ap	29	18.7	96	61.9	30	19.4	155	100.0
Cfm	289	47.4	221	36.2	100	16.4	610	100.0
Cfc	186	42.6	176	40.3	75	17.2	437	100.1
Mp	145	38.9	169	45.3	59	15.8	373	100.0
Na	408	61.6	189	28.6	65	9.8	662	100.0
Nx	527	65.1	220	27.2	62	7.7	809	99.9
Se	10	12.8	49	62.8	19	24.4	78	100.0
Ci	0	0.0	10	58.8	7	41.2	17	100.0
TOTAL	1596	50.1[c]	1160	36.4[c]	432	13.6[c]	3188	100.1

[a] Does not include wards with no final sequential diagnosis.

[b] In a few instances where the sentences were needed but unscorable or where the subject did not respond to the sentences, the interview diagnoses were used as the second step in the sequential process instead of the sentences. This occurred mainly for those eventually diagnosed as 1-2.

[c] Most cases which did not have a final diagnosis needed the interview. If these cases were included in the table the percent of those needing an interview (three instruments) would be approximately 20%, the percent needing two instruments approximately 34%, and the percent needing one instrument (the Jesness Inventory) approximately 46%.

[d] These two cases were in error since the sequential classification rules do not allow a diagnosis of 1-2 (Aa) from the Inventory alone.

About 45%-50% can be classified by the Inventory alone using the present provisional rules. The diagnoses from the sentence completion test are needed to classify an additional 35%, and about 20% need data from an interview as well.

Reliability of Instruments

Wards who return to the Youth Authority Clinics and again are classified by the sequential system will provide a select sample for estimating reliability of both the sequential classification and the Inventory probabilities over time. Data from this sample as well as pre and post-Inventory scores for wards in the YCRP will be shown in the future reports. Jesness has reported a pre- and post-Inventory agreement of 62% for high level probability and 39% for high subtype probability for a sample of 525 wards in the Preston Typology Study (Jesness 1969). The degree of agreement between pre- and post-tests was greater for those whose highest subtype probability on the pre-test was .50 or higher - 71% for level and 49% for subtype.

In order to estimate reliability of the sentence completion test and the interview, samples of sentence and interview protocols were rated for level and subtype by raters other than the initial rater. Reliability of the sentence and interview diagnoses was measured by agreement between raters. Table 6 shows the percent agreement among experienced sentence raters at the three Youth Authority Clinics. A sample of sentences rated at one clinic and representing all levels and subtypes was sent to experienced raters at the other clinics. Four raters and 173 sentence protocols were involved. The sentences were scored independently and without benefit of any knowledge about the ward.

The most stringent criterion of reliability is the comparison of the initial rater's first diagnosis with the second rater's first diagnosis.

TABLE 6

Interclinic Agreement on Sentence Diagnosis
Among Experienced Raters at the Three Youth
Authority Clinics

Total Agreement on First Diagnosis:	Level	121/173	=	69.9%
	Subtype	75/173	=	43.4%
Agreement on First Level Diagnosis:	I-2 -	10/18	=	55.6%
	I-3 -	68/86	=	79.1%
	I-4 -	43/69	=	62.3%
Agreement on First Subtype Diagnosis:	Aa -	0/3	=	0.0%
	Ap -	7/15	=	46.7%
	Cfm -	22/32	=	68.8%
	Cfc -	12/29	=	41.4%
	Mp -	9/25	=	36.0%
	Na -	14/27	=	51.9%
	Nx -	8/32	=	25.0%
	Se -	3/7	=	42.9%
	Ci -	0/3	=	0.0%

If a less stringent criteria of reliability is used; 1) the agreement of the initial rater's first diagnosis with the second rater's second diagnosis or; 2) the agreement of the initial rater's second diagnosis with the second rater's first diagnosis, plus; 3) the agreement on first diagnosis, the percent agreement on subtype rises to 71.7% (124/173).

The highest agreement is for those sentences initially rated as I-3 Cfm. Less agreement was achieved with other subtypes. A somewhat surprising finding is the low agreement for sentences initially diagnosed as I-4 Nx. Agreement on

Nx diagnoses is usually higher than for other subtypes. The total agreement on both level and subtype is higher than that found in the Preston Study which employed two raters making independent judgements (Jesness 1969). Overall agreement is highly significant statistically even though the strength or degree of relationship is moderate to low for some subtypes. In general, inter-rater agreement on sentence diagnosis can be considered adequate, taking into account the type of material being judged and the number of possible diagnostic categories.

Agreement between project staff sentence diagnoses and those done independently by a sentence rater working in Colorado showed a 72% agreement for first level diagnosis and 40% agreement for first subtype diagnosis. The Colorado rater was not trained by project staff but instead learned how to score sentences using the written guidelines in the Sequential Classification Manual (Jesness & Wedge 1970). The sample consisted of 25 youths at one of the juvenile facilities in Colorado.

Reliability of a sample of interviews was also measured using percent agreement between first and second raters. The second raters were two project staff members and two staff members at the Northern Clinic who were experienced in I-Level diagnosis in both the sequential system and the CTP interview method. The interviewers (first raters) were from the CYA's Northern, Southern, and Ventura Reception Center-Clinics who had been trained in the short structured interview by project staff. Second ratings were made from interview notes recorded by the first rater. The second raters followed the written interview guidelines in making a diagnosis for each of the nine content areas which were

then combined to determine the diagnosis. Table 7 presents the percent agreement between the interviewers' and second raters' first diagnosis. There were 9 different interviewers and as many as 26 subjects in the sample.

TABLE 7

Agreement On Interview Diagnosis

Agreement on First Interview Diagnosis - LEVEL

Total agreement on level = 61/79 = 77.2%

Interviewers vs. Second Rater 1	18/24	= 75.0%
Interviewers vs. Second Rater 2	20/26	= 76.9%
Interviewers vs. Second Rater 3	10/14	= 71.4%
Interviewers vs. Second Rater 4	13/15	= 86.7%

Agreement on First Interview Diagnosis - SUBTYPE

Total agreement on subtype = 34/79 = 43.0%

Interviewers vs. Second Rater 1	10/24	= 41.7%
Interviewers vs. Second Rater 2	12/26	= 46.2%
Interviewers vs. Second Rater 3	8/14	= 57.1%
Interviewers vs. Second Rater 4	4/15	= 26.7%

The percent agreement on interview diagnosis is very similar to that for sentence diagnosis. Again the agreement is statistically significant and respectable, considering the type of material and the number of diagnostic categories. The written guidelines probably contribute to the higher degree of agreement found for both the sentences and the interview as compared with that previously obtained in the Preston Study.

In summary, the reliability of the instruments used in the present sequenti system ranges from 62 to 77 percent for level diagnosis and from 39 to 45 percent for subtype diagnosis.

Agreement Among Different Instruments

The relationships among the three instruments are displayed in Tables 8 and 9 for a sample of wards diagnosed at the three Youth Authority reception centers between October 1970 and June 1971. Wards for whom there are sentence and interview diagnoses represent, for the most part, a special sample of those whose responses on the Jesness Inventory did not provide clear enough evidence according to the rules to make a level and/or subtype diagnosis. Agreement based on a random sample may have been higher.

TABLE 8

Percent Agreement Among Instruments, and with Sequential Diagnosis for Level

Clinic Sample 10/70 - 6/71

	Final Sequential	Highest J.I.	First Sentence	First Inter
Final Sequential Diagnosis**		88.5% (N=985)*	74.5% (N=706)*	79.5% (N=161)*
Highest Jesness Inventory Level			59.6% (N=775)*	44.0% (N=161)*
First Sentence Level				55.9% (N=161)*

* Including only those with a diagnosis on both instruments involved in each cell of the table.

**Not independent measures. The sequential classification rules largely determine the amount of agreement.

TABLE 9

Percent Agreement Among Instruments, and with the Sequential Diagnosis for Subtype

Clinic Sample 10/70 - 6/71

	Final Sequential	Highest J.I.	First Sentence	First Inter.
Final Sequential Diagnosis**		79.0% (N=985)*	46.0% (N=682)*	63.4% (N=161)*
Highest Jesness Inventory Subtype Within Highest Level			29.7% (N=775)*	18.6% (N=161)*
First Sentence Subtype				24.8% (N=161)*

* Including only those with a diagnosis on Loth instruments involved in each cell of the table.

** Not independent measures. The sequential classification rules largely determined the amount of agreement.

With regard to agreement between instruments for specific levels and subtypes the data shows the following:

High Jesness Inventory level vs. first sentence level

I-2 - 33.9%
I-3 - 63.1%
I-4 - 60.3%

High Jesness Inventory subtype (within highest level) vs. first sentence subtype

Cfm - 46.1%
Nx - 38.2%
Ap - 30.0%
Na - 29.0%
Cfc - 25.8%
Other subtypes agreement under 20%

High Jesness Inventory level vs. first interview level

I-2 - 41.4%
I-3 - 42.1%
I-4 - 48.2%

High Jesness Inventory subtype (within highest level) vs. first interview subtype

Ap - 41.7%
Ci - 25.0% (1 agreement out of 4)
Mp - 21.7%
Other subtypes - agreement under 20%

First sentence subtype vs. first interview subtype

Ci - 50.0% (1 out of 2)
Nx - 36.1%
Cfc - 27.3%
Ap - 27.3%
Cfm - 26.2%
Mp - 25.0%
Other subtypes - agreement under 10%

The relationships involving the interview diagnosis are based on a relatively small sample of wards, N=161. The relationship for each pair of instruments for level is statistically significant at the 5% level of confidence[8]. The degree or strength of relationship between pairs of instruments may be considered low to moderate.

The most ideal degree of relationship among independent measures is difficult to specify. One would not desire instruments that relate extremely highly to each other because their use would be redundant. It is desirable

[8] Due to the small numbers in some subtype groups, it was difficult to perform a chi square analysis for subtype because many cells of the contingency table have very small expected values, especially where the interview diagnosis was involved.

for each instrument to make some independent contribution to the final classification, but at the same time show a moderate degree of relationship with each other.

The high degree of relationship between the high Inventory probability and the sequential diagnosis deserve comment. Tables 10 and 10A present the relationship between the high Inventory probability and the sequential diagnosis.

The very high degree of agreement shown in Tables 10 and 10A reflects the fact that the sequential rules were written in such a way as to allow most weight to be given to the high Inventory probability. Table 5 shows that 50% of those with sequential diagnosis were diagnosed as to both level and subtype by the Inventory alone. For the remaining 50% where the sentences or sentences and interview are necessary only in a small percent of the cases does the sequential diagnosis differ from the high Inventory probability. Tables 10 and 10A show that given the present sequential system the Inventory probabilities alone can be used to make a level and subtype classification in a great majority of the cases except for the Aa, Se and Ci subtypes. For all other subtypes there is agreement of 70% or more between high Inventory probability and sequential diagnosis.

TABLE 10

Agreement Between Highest Jesness Inventory Level, and Sequential Diagnosis

(Clinic Sample 10/70 - 6/71)

Highest Inventory Level*	Sequential Level** 2		3		4		TOTAL	
2	41	(75.9%)	10	(18.5%)	3	(5.6%)	54	(100%)
3	24	(5.8%)	352	(84.8%)	39	(9.4%)	415	(100%)
4	1	(.2%)	36	(7.0%)	479	(92.8%)	516	(100%)
TOTAL	66	(6.7%)	398	(40.4%)	521	(52.9%)	935	(100%)

Total Agreement for Level 827/985 = 88.5%

* When there was an exact numerical tie the level which matched the final sequential level was chosen. There were very few ties.
** Only those with a final sequential diagnosis.

TABLE 10A

Agreement Between Highest Jesness Inventory Subtype and Sequential Diagnosis

(Clinic Sample 10/70 - 6/71)

Highest Inventory Subtype*	Sequential Level**																	
	Aa		Ap		Cfm		Cfc		Mp		Na		Nx		Se		Ci		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Aa	8	36.4	2	9.1	2	9.1	6	27.3	1	4.5	2	9.1	1	4.5	0	0.0	0	0.0	22	100.0
Ap	2	6.9	26	89.7	0	0.0	1	3.4	0	0.0	0	0.0	0	0.0	0	0.0	0	00.0	29	100.0
Cfm	0	0.0	7	4.9	119	82.6	1	.7	4	2.8	1	.7	11	7.6	1	.7	0	0.0	144	100.0
Cfc	4	2.6	9	5.9	8	5.3	107	70.4	12	7.9	5	3.3	7	4.6	0	0.0	0	0.0	152	100.0
Mp	1	.9	3	2.7	6	5.5	6	5.5	79	71.8	9	8.2	4	3.6	1	.9	1	.9	110	100.0
Na	0	0.0	1	.5	4	1.9	4	1.9	4	1.9	184	89.3	8	3.9	0	0.0	1	.5	206	99.9
Nx	0	0.0	0	0.0	6	2.3	5	1.9	10	3.8	6	2.3	234	89.7	0	0.0	0	0.0	261	100.0
Se	0	0.0	0	0.0	1	3.1	0	0.0	2	6.3	2	6.3	5	15.6	18	56.3	4	12.5	32	100.1
Ci	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	20.00	0	0.0	1	20.0	3	60.0	5	100.0
Total	15	1.6	48	5.0	146	15.2	130	13.5	112	11.7	210	21.8	270	28.1	21	2.2	9	.9	961	100.0

Total Agreement for Subtype 778/961 = 80.9%

* When there was an exact numberical tie the subtype which matched the sequential subtype was chosen. There were very few ties.

** Only those with a final sequential diagnosis.

Relationship of Sequential Diagnosis to Measures of Intelligence

Table 11 presents data on scores (I.Q.) from the Lorge-Thorndike Intelligence tests and the [illegible] sequential diagnosis.

TABLE 11

Lorge Thorndike I.Q. and Sequential Diagnosis
(Clinic Sample 10/70 - 6/71)

Sequential Level	Verbal Battery		Non-Verbal Battery	
	N	Mean*	N	Mean*
2	47	71.6	48	75.0
3	304	82.0	306	87.8
4	394	95.9	398	99.1
Total	745	88.7	752	93.0
Subtype	N	Mean*	N	Mean*
Aa	15	76.9	15	78.9
Ap	31	68.6	32	72.9
Cfm	118	79.5	120	87.8
Cfc	100	82.1	100	86.2
Mp	82	85.6	82	90.0
Na	158	98.3	160	102.1
Nx	209	93.4	211	96.2
Se	14	106.6	14	103.8
Ci	6	99.5	6	106.2
Total	733**	88.7	740**	92.9

* Based on scores grouped as follows: 59 or less = 50, 60-69 = 64.5, 70-79 = 74.5 ... 130-139 = 134.5. The actual mean scores are probably somewhat higher than shown for those below the total mean and probably somewhat lower than shown for those above the total mean. However, these biases introduced by grouping should not substantially change the relationship between scores and diagnosis.

** Not including some wards with a final level diagnosis but no final subtype diagnosis.

The data in Table 11 shows a high degree of relationship between measured intelligence and I-Level. Similar data based on different measure of intelligence have been found in other studies (Jesness 1969; Molof 1969; Cross and Tracy 1969; Zaidel 1970). In all these studies, with the exception of the Preston Study (Jesness 1969), classification was based on the clinical interview. Table 11 generally shows higher scores for subjects on the non-verbal battery. However, both batteries show the same relationship to level and subtype diagnoses. The correlation between measured intelligence and I-Level should not be surprising. The concepts of perceptual development and cognitive differentiation, and the ability to understand and cope with one's inner and outer worlds should theoretically have in common certain of the attributes measured by tests of intelligence. The relationship between measured intelligence and I-Level should not decrease the potential utility or validity of the I-Level concept, for knowledge of the level and subtype provides information about people and guidelines for action that transcend that provided by intelligence test scores.

Diagnosis and Race

Table 12 shows the relationship between sequential diagnosis and race. These data, as well as data from other reports (Palmer et. al. 1968a; Jesness 1969; Molof 1969; Cross & Tracy 1969; Zaidel 1970), show results that are similar for level diagnosis. The minority group members (Black and Mexican-American) are over represented at the I-2 and I-3 levels and under represented at the I-4 level while the converse is true for Caucasians. These relationships have been moderately high and consistent over the several populations included in the research mentioned above.

TABLE 12

Sequential Diagnosis and Race
(Clinic Sample 10/70 - 6/71)

Sequential Dx - Level*	RACE** Caucasian N	Caucasian %	Mex-Ameri. N	Mex-Ameri. %	Black N	Black %	Total N	Total %
2	14	2.6	17	11.0	30	13.0	61	6.6
3	137	25.2	97	63.0	143	61.9	377	40.6
4	392	72.2	40	26.0	58	25.1	490	52.8
Total	543	100.0	154	100.0	231	100.0	928	100.0

Sequential Dx - Subtype*	RACE** Caucasian		Mex-Amer.		Black		Total	
Aa	1	.2	4	2.7	7	3.1	12	1.3
Ap	13	2.4	11	7.5	22	9.7	46	5.1
Cfm	55	10.3	42	28.6	39	17.2	136	15.0
Cfc	42	7.9	39	26.5	43	18.9	124	13.7
Mp	36	6.8	13	8.8	58	25.6	107	11.8
Na	164	30.8	16	10.9	23	10.1	203	22.4
Nx	198	37.2	19	12.9	32	14.1	249	27.5
Se	16	3.0	3	2.0	1	.4	20	2.2
Ci	7	1.3	0	.0	2	.9	9	1.0
Total	532+	99.9	147+	99.9	227+	100.0	906+	100.0

* Only for those with a sequential diagnosis and punched card data on rac
** Not including 27 of other races with a sequential diagnosis.
\+ Not including some wards with a final level diagnosis but no final sub-type diagnosis.

Data based on diagnoses made from each of the three instruments used in the sequential method show results that are similar to those shown in Table 1; Tables 13, 14, and 15 present the data for the Jesness Inventory, sentence completion test, and interview respectively. All instruments show a substantial over-representation of minority group members in the I-3 category and an under-representation in the I-4 category, with the reverse being true for Caucasian delinquents.

With regard to the distribution of subtypes by race, some differences among the various instruments are found. Using the sequential diagnosis the largest subtype category is Nx for Caucasians, Cfm and Cfc for Mexican Americans, and Cfm, Cfc and Mp for Blacks. When the sentence diagnosis is employed the Caucasians show Nx as the modal subtype while Blacks and Mexican-Americans show Cfm as their modal subtype. The small sample with interview diagnosis again show Nx as the modal category for Caucasians. Cfm and Cfc are the modal subtypes for Mexican-Americans while Cfm, Cfc and Nx as the most frequent subtypes for Blacks.

It appears that essentially similar relationships between ethnic group and diagnosis occur whether classification is based on the clinical interview the sequential system, or separate instruments of the sequential system. Thus, differences are probably not chiefly a function of interviewer bias or lack of rapport between interviewer and minority group interviewee. The Jesness Inventory is scored mechanically and the sentences are scored without knowledge of the subject's race. The data presented lead to a conclusion tha racial differences in diagnosis cannot be dismissed as methodological. Tha

author is not prepared to present an explanation at this time. The potential user of the I-Level typology should be aware that these racial differences can create problems in terms of the disproportional assignment to programs, and living halls as wll as in matching of staff.

TABLE 13

Highest Jesness Inventory probability and Race
(Clinic Sample 10/70 - 6/71)

Hi Jesness Inventory Level	RACE									
	Cauc.		Mex-Amer		Black		Other		Total	
	N	%	N	%	N	%	N	%	N	%
2	15	2.6	23	13.5	23	9.1	3	10.3	64	6.3
3	151	26.4	106	62.4	161	63.9	15	51.7	433	42.3
4	406	71.0	41	24.1	69	27.3	11	37.9	527	51.4

Subtype	RACE									
	Cauc.		Mex-Amer.		Black		Other		Total	
Aa	5	.9	11	6.5	9	3.6	2	6.9	27	2.6
Ap	10	1.7	12	7.1	14	5.5	1	3.4	37	3.6
Cfm	50	8.7	48	28.2	45	17.8	5	17.2	148	14.5
Cfc	57	10.0	43	25.3	60	23.7	7	24.1	167	16.3
Mp	44	7.7	15	8.8	56	22.1	3	10.3	118	11.5
Na	164	28.7	18	10.6	30	11.9	5	17.2	217	21.2
Nx	203	35.5	20	11.8	36	14.2	5	17.2	264	25.8
Se	34	5.9	2	1.2	3	1.2	1	3.4	40	3.9
Ci	5	.9	1	.6	0	.0	0	.0	6	.6
Total	572	100.0	170	100.1	253	100.0	29	99.7	1024	100.0

TABLE 14

Sentence Diagnosis and Race
(Clinic Sample 10/70 - 6/71)

1st Sent. Dx Level	RACE									
	Cauc.		Mex-Amer.		Black		Other		Total	
	N	%	N	%	N	%	N	%	N	%
2	10	2.5	13	9.7	28	14.3	2	9.5	53	7.0
3	149	37.0	91	67.9	125	63.8	15	71.4	380	50.4
4	244	60.5	30	22.4	43	21.9	4	19.0	321	42.6

1st Sentence Dx. Subtype	RACE									
	Cauc.		Mex-Amer.		Black		Other		Total	
Aa	1	.2	4	3.0	8	4.1	1	4.8	14	1.9
Ap	9	2.2	9	6.7	20	10.2	1	4.8	39	5.2
Cfm	90	22.3	52	38.8	66	33.7	8	38.1	216	28.6
Cfc	30	7.4	20	14.9	35	17.9	4	19.0	89	11.8
Mp	29	7.2	19	14.2	24	12.2	3	14.3	75	9.9
Na	85	21.1	9	6.7	20	10.2	2	9.5	116	15.4
Nx	144	35.7	19	14.2	19	9.7	2	9.5	184	24.4
Se	11	2.7	2	1.5	2	1.0	0	.0	15	2.0
Ci	4	1.0	0	.0	2	1.0	0	.0	6	.8
TOTAL	403	99.8	134	100.0	196	100.0	21	100.0	754	100.0

TABLE 15

Interview Diagnosis and Race
(Clinic Sample 2/71-6/71)

1st Interview Dx. LEVEL	RACE									
	Cauc.		Mex-Amer.		Black		Other		Total	
	N	%	N	%	N	%	N	%	N	%
2	11	13.4	3	10.7	10	23.3	1	14.3	25	15.6
3	26	31.7	16	57.1	20	46.5	3	42.9	65	40.6
4	45*	54.9	9	32.1	13	30.2	3	42.9	70*	43.8
1st Interview Dx. SUBTYPE	RACE									
	Cauc.		Mex-Amer.		Black		Other		Total	
Aa	4	4.9	1	3.6	4	9.3	1	14.3	10	6.3
Ap	7	8.5	2	7.1	6	14.0	0	.0	15	9.4
Cfm	12	14.6	7	25.0	8	18.6	0	.0	27	16.9
Cfc	6	7.3	6	21.4	8	18.6	1	14.3	21	13.1
Mp	8	9.8	3	10.7	4	9.3	2	28.6	17	10.6
Na	11	13.4	5	17.9	3	7.0	0	.0	19	11.9
Nx	26*	31.7	3	10.7	7	16.3	3	42.9	39	24.4
Se	5	6.1	1	3.6	1	2.3	0	.0	7	4.4
Ci	3	3.7	0	.0	2	4.7	0	.0	5	3.1
TOTAL	82	100.0	28	100.0	43	100.1	7	100.1	160	100.1

* Includes one I-5.

VII. Conclusion

The sequential I-Level classification system and its eventual modifications will provide correctional organizations with a convenient, efficient, and objective tool for classification. The nature of the method will permit its widespread use. It is through its use and associated research that the utility of the I-Level typology for correctional organizations, its personnel, its clients, and the general public can be evaluated. The development of the sequential method will greatly enhance the potential for meaningful treatment and research in the corrections field.

REFERENCES

Andre, C.R. and JoAnn Mahan. Second Year Report Differential Education Project. Educational Research Series, Report No. 7, 1971, California Youth Authority.

Beker, J. and Doris S. Heyman. A critical appraisal of the California differential treatment typology of adolescent offenders. Unpublished manuscript, 1971.

Community Treatment Project Staff, Community Treatment Project: First Year Report of Action and Evaluation, Sacramento, Research Report No. 2, 1963.

Cross, H.J. and Tracy, J.J. A study of delinquent boys in Connecticut: Applications of the interpersonal maturity level classification system and its relationship to guilt. Final report to the Connecticut Research Commisssion. Storrs, Conn. University of Connecticut, Department of Psychology, 1969.

Gillons, D.C. Differential treatment of delinquents and interpersonal maturity levels theory: A critique. Social Service Review, 1970, 44, 26-33.

Grant, J. and Marguerite Q. Grant. A group dynamics approach to the treatment of nonconformists in the navy. Annals Amer. Acad. Pol. Soc. Sci., March 1959.

Grant, Marguerite Q. Interpersonal Maturity Level Classification: Juvenile. 1961, California Youth Authority Division of Research.

Grenny, G.W. The relationship of treater personality to methods of behavior change: A study of differential treatment in the California Youth Authority. Unpublished Draft of Dissertation, University of California Berkeley, School of Criminology, 1971.

Jesness, C.F. The Preston Typology Study Final Report. Sacramento, American Justice Institute, July 1969.

Jesness, C.F. The Preston Typology Study, an experiment with differential treatment in an institution. J. Research in Crime and Delinquency, 1971, 8, 38-52. (a)

Jesness, C.F. Jesness Behavior Checklist Manual. Palo Alto: Consulting Psychologists Press 1971. (b)

Jesness, C.F., Loehr, J.G., McCormick, P.M., and Wedge, R.F. The Youth Center Research Project: Differential Treatment of Delinquents in Institutions, First Annual Progress Report. Sacramento, American Justice Institute, December 1968.

Jesness, C.F. and Wedge, R.F. Sequential I-Level Classification Manual. Sacramento, Department of the Youth Authority, Division of Research, 1970.

Knight, D. The Marshall Program: Assessment of a short-term institutional treatment program. Part II: Amenibility to confrontive peer group treatment. Sacramento, California Youth Authority Division of Research Report No. 59. August 1970.

Lerman, P. Evaluative studies of institutions for delinquents: Implications for research and social policy. Social Work, 1968, 13, 55-64.

Loevinger, Jane. The meaning and measurement of ego development. Amer. Psychol., 1966, 21, 195-217

Miller, Darlene, R. A construct validity study of the interpersonal maturity level classification system. Dissertation proposal submitted to the Department of Psychology, Univ. of Massachusetts, 1971.

Molof, M.J. I-Level diagnosis at the Youth Authority clinics, August 1968-January 1969. Sacramento, California Youth Authority Division of Research, 1969.

Palmer, T.B. Personality characteristics and professional orientations of five groups of community treatment workers: A preliminary report on differences among treaters. Community Treatment Project Report Series: 1967, No. 1. California Youth Authority, Division of Research.

Palmer, T.B. Community Treatment Project: Research Report No. 9 Part 2, October 1968. California Youth Authority, Division of Research. (a)

Palmer, T.B. Community Treatment Project: Research Report No. 9 Part 3, October 1968. California Youth Authority, Division of Research. (b)

Palmer, T.B. Stages of psycho-social development as reflected in two new levels of interpersonal maturity. Youth Authority Quarterly, Fall 1969, 22, No. 3, 29-43.

Palmer, T.B. Reply to eight questions commonly addressed to California's Community Treatment Project. Community Treatment Project Series: 1970, 2, October 1970.

Palmer, T.B. California's community treatment program for delinquent adolescents. J. of Research in Crime and Delinquency, 1971, 8, 74-92. (a)

Palmer, T.B. Patterns of Adjustment among delinquent adolescent conformists, (Six subgroupings of middle maturity immature conformists). Community Treatment Project Report Series: 1971, 1, 1971 (b).

Palmer, T.B. Non-neurotic, higher maturity delinquent adolescents. Community Treatment Project Report Series: 1971, 3, 1971 (c).

Pond, Esther. Community Delinquency Control Project: Preliminary analysis of parole outcomes. Los Angeles Study Progress Report #2, 1969, California Youth Authority, Division of Research.

Sullivan, C., Grant, Marguerite Q., and Grant, J.D. The development of Interpersonal maturity: Applications to delinquency. Psychiatry, 1957. 24, 373-385.

Warren, Marguerite, Q., and the Community Treatment Project Staff. Interpersonal maturity level classification: Juvenile, diagnosis and treatment of low, middle and high maturity delinquents. 1966 edition, California Youth Authority, Division of Research. (a)

Warren, Marguerite Q., Classification of offenders as an aid to efficient management and effective treatment. Paper prepared for the President's Commission on Law Enforcement and Administration of Justice, Task Force on Corrections, 1966. (b)

Warren, Marguerite, Q., The Center for Training in Differential Treatment: Some history, highlights and hopes. Youth Authority Quarterly, Fall 1969, 22, No. 3, 7-13.

Zaidel, Susan, R.F. Affect awareness, intelligence, and the interpersonal maturity level classification. Unpublished dissertation, University of California Los Angeles, 1970.

APPENDIX A

CALIFORNIA YOUTH AUTHORITY
PROJECT SEQUIL
SEQUENTIAL I-LEVEL CLASSIFICATION RULES
February 1971 Revision

CLASSIFICATION INSTRUMENTS

1. Jesness Inventory probabilities for levels 2, 3, and 4 and the nine subtypes.

2. Sentence Completion Test.

   a. The sentences should be administered and scored as outlined in the manual. An effort should be made at the time of administration to insure that each subject completes the sentences. In the case of an excessive number of omitted responses, the subject should be instructed to complete the sentences. In the case of a subjects's inability to write, the test proctor or other person may record the responses given verbally by the subject.

   b. Each of the 13 stems and three topics should be scored and included in making a diagnosis. The diagnosis should be made on the basis of the frequency of the 16 items (stems and topics) scored for each level and subtype. Two diagnoses should be given, based on the frequency of total responses diagnosed at each level and subtype.

   d. If the sentences are unratable (e.g., illegible responses) be sure to so indicate.

3. Interview.

   a. Special interviews are necessary in those instances in which the Jesness Inventory and Sentence Completion Test do not produce a classification according to the rules.

   b. The interview format outlined in the manual is recommended. Scoring should follow the guidelines provided in the manual.

   c. Two diagnoses should be given based on the frequency of interview areas diagnosed at each level and subtype.

   d. It is suggested that the interviewer not know information regarding the subject's I-Level from the Jesness Inventory, Sentence Completion Test, or other source.

BASIC DATA NEEDED

1. Jesness Inventory step-wise probabilities.
2. I-Level and subtype diagnoses from the Sentence Completion Test (as needed
3. I-Level and subtype diagnoses from an interview (as needed).

RULES

Start with Roman number I on the following page and read each rule (Roman number and letter) until a classification decision is reached. Decide level first, then proceed to appropriate subtype rules. When the combined data of the inventory, sentences, and interview fail to result in a diagnosis, the decision should be referred to the supervisor where the following alternatives may be considered:

1. Second rate the interview
2. Second rate the sentences independently
3. Readminister psychometrics (sentences or Jesness Inventory) or re-interview

I-LEVEL RULES*

I.**If the I-2 probability is > other levels by 20 points call I-2. If the I-3 or I-4 probability is > other levels by 20 points call I-3 or I-4 unless I-2 probability ≥ 30, in which case PROCEED to rule II. If no level is greater than any other by 20 points, go to rule III.

II. I-2 level rules apply if I-2 ≥ 30, otherwise PROCEED to rule III.

A. If either sentence dx = I-2, call I-2; if not, interview.

B. If interview level (first dx) = I-2, call I-2.

C. If not, call any level where J.I. probability is 20 points > other levels.

Otherwise PROCEED.

III. If no level > other levels by 20 points, refer to sentences.

A. If sentence level (1st dx) = higher level probability OR if sentence level (1st dx) = second highest level probability (if within 10 points of highest probability) call that level; if not, interview.

B. If interview level (first dx) = highest level probability or second highest probability (if within 10 points), call that level.

C. If not and interview level (first dx) = sentence level (1st dx), call that level. Then call subtype if either sentence subtype = interview subtype (first dx). Otherwise, go to appropriate subtype rules

D. If J.I. level ≠ sentence level ≠ interview level, refer decision to supervisor.

AFTER I-LEVEL IS ESTABLISHED, GO TO APPROPRIATE SUBTYPE RULES.

* During the years (1962-68) when these measures were being developed, too few subjects were classified as I-5 to enable such an inventory scale to be built.

** The following symbols will be used throughout the rules:

$<$ is less than
$>$ is greater than
$\geq$ is equal to or greater than
$=$ is equal to
$\neq$ is not equal to
dx diagnosis

SUBTYPE CLASSIFICATION RULES

I-2 SUBTYPES

IV. When I-2 level is established:

A. If Ap $\geq$ 70, call Ap. Otherwise, refer to sentences.

B. If <u>either</u> sentence subtype = higher I-2 subtype probability, call that subtype. Otherwise, interview.

C. If <u>either</u> interview subtype = highest I-2 subtype probability, call that subtype.

D. If not, <u>and</u> interview subtype (first dx) = <u>either</u> sentence subtype, call that subtype REGARDLESS OF LEVEL.

E. If not, <u>and</u> any two - highest J.I. level probability, sentence level (first dx), interview level (first dx) - agree on level, call that level. Then call subtype according to the first of the following which is true:

1. If the sentence subtype (first dx) or interview subtype (first dx) as subtype probability for that level $\geq$ 30, call that subtype. If <u>both</u> the sentence subtype (first dx) and interview subtype (first dx) = a probability $\geq$ 30, call that matching subtype with the higher probability.

2. If the interview subtype (first dx) = either sentence subtype, call that subtype.

3. If the sentence subtype (second dx) = a subtype probability $\geq$ 30, call that subtype.

4. If the interview subtype (second dx) = a subtype probability $\geq$ 30 call that subtype.

5. If none of the above, call subtype according to highest probabilit for that level.

F. If J.I. level $\neq$ sentence level $\neq$ interview level, refer decision to supervisor.

SUBTYPE CLASSIFICATION RULES

I-3 SUBTYPES

V. If Mp $\geq$ 55, call Mp. If Mp $\geq$ 35, go to Rule A.

If neither of the above and Cfm or Cfc $\geq$ 55, call that subtype.

If none of the above, go to Rule B.

A. Mp Rule: If Mp $\geq$ 35 and either sentence subtype = Mp, call Mp. If neither sentence subtype = Mp, and Cfm or Cfc $\geq$ 55, call Cfm or Cfc. If not, go to rule B.

B. If either sentence subtype = highest subtype probability, call that subtype*. If not and either sentence subtype = any other I-3 subtype probability within 10 points of the highest subtype probabili call that subtype.** Otherwise, interview.

* If there is a tie for highest J.I. subtype probability, call subtype which matches 1st sentence rating.

** If two or more J.I. subtype probabilities are within 10 points of the highest J.I. subtype, call that subtype which matches the first sentence rating.

C. If interview subtype (first dx) = highest I-3 subtype probability, or second highest subtype probability if within 10 points of highest, call that subtype. Otherwise, proceed.

D. If interview subtype (first dx) = either sentence subtype, call that subtype REGARDLESS OF LEVEL.

E. If not, and sentence level (first dx) = I-4 and Jesness Inventory I-4 level probability $\geq$ 25, call I-4 and go to I-4 subtype rules. Otherwise proceed.

F. If any two - highest J.I. level probability, sentence level (first dx) interview level (first dx) - agree on level, call that level. Then call subtype according to the first of the following which is true:

1. If the sentence subtype (first dx) or interview subtype (first dx) = a subtype probability for that level $\geq$ 30, call that subtype.. If both the sentence subtype (first dx) and the interview subtype (first dx) = a probability $\geq$ 30, call that matching subtype with the highest probability.

2. If the interview subtype (first dx) = either sentence subtype, call that subtype.

3. If the sentence subtype (second dx) = a subtype probability $\geq$ 30, call that subtype.

4. If the interview subtype (second dx) = a subtype probability $\geq$ 30, call that subtype.

5. If none of the above, call subtype according to highest probability for that level.

6. If more than one subtype have the same J.I. probability call that subtype corroborated by additional data (first sentence dx, first interview dx, second sentence dx, and second interview dx in that order).

G. If J.I. level $\neq$ sentence level $\neq$ interview level, refer decision to supervisor.

SUBTYPE CLASSIFICATION RULES

I-4 SUBTYPES

VI. If Se or Ci $\geq$ 50, call that subtype. If Se or Ci $\geq$ 30, go to Rule A.

If neither of the above, and Na or Nx $\geq$ 55, call that subtype.

If none of the above, go to Rule B.

A. Se or Ci Rule: If Se or Ci $\geq$ 30 and eitherssentence subtype = Se or Ci, call that subtype. If neither sentence subtype = Se or Ci and Na or Nx $\geq$ 50, call Na or Nx. If not, go to Rule B.

B. If either sentence subtype = highest subtype probability, call that subtype*. If not, and either sentence subtype = any other I-4 subtype within 10 points of highest probability, call that subtype.** Otherwise, interview.

* If there is a tie for highest J.I. subtype probability, call subtype which matches 1st sentence rating.

** If two or more J.I. subtype probabilities are within 10 points of the highest J.I. subtype, call that subtype which matches the first sentence rating.

C. If interview subtype (first dx) = highest I-4 subtype probability or second highest (if within 10 points of highest), call that subtype. Otherwise proceed.

D. If interview subtype (first dx) = either sentence subtype, call that subtype REGARDLESS OF LEVEL.

E. If not, and the I-4 level probability $\geq$ 75, call subtype according to highest I-4 subtype probability. Otherwise proceed.

F. If any two - highest J.I. level probability, sentence level (first dx), interview level (first dx) - agree on level, call that level. Then call subtype according to the first of the following which is true:

1. If the sentence subtype (first dx) or interview subtype (first dx) = a subtype probability for that level $\geq$ 30, call that subtype. If both the sentence subtype (first dx) and interview subtype (first dx) = a probability $\geq$ 30, call that matching subtype with the higher probability.

2. If the interview subtype (first dx) = either sentence subtype, call that subtype.

3. If the sentence subtype (second dx) = a subtype probability $\geq$ 30, call that subtype.

4. If the interview subtype (second dx) = a subtype probability $\geq$ 30, call that subtype.

5. If none of the above, call subtype according to highest probability for that level.

6. If more than one subtype have the same J.I. probability call that subtype corroborated by additional data (first sentence dx, first interview dx, second sentence dx, and second interview dx in that order).

G. If J.I. $\neq$ sentence level $\neq$ interview level, refer decision to supervisor.

APPENDIX B

Partial List of Organizations Who Have Expressed Interest in the Sequential I-Level Classification System

Training Institution of Central Ohio

Department of Vocational Rehabilitation, Oregon

Department of Criminology, University of Montreal

Boy's Farm & Training School., Shawbridge, Quebec

University of Akron

State Psychopathic Hospital, Iowa City, Iowa

Knox County Juvenile Court, Knoxville, Tenn.

Catholic University of America

Department of Justice, New Zealand

Michigan Department of Social Services

Provincial Court of British Columbia

The Menninger Foundation

Board of Corrections, Georgia

Department of Health and Social Welfare, Alberta

Juvenile Parole Services, Seattle, Washington

Dade County Correctional & Rehabilitation Department, Florida

Youth Welfare Service, Victoria, Australia

Research Unit, Home Office, Manchester, England

Department of Institutions, Washington

Department of Correctional Services, Ontario

Department of Honor Camps, San Diego

Colorado Division of Youth Services

Many California County Probation Departments

END