# PERSONALITY INTEGRATION AND THE THEORY OF OPEN SYSTEMS: A CROSS SUBCULTURAL APPROACH

By

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A DISSERTATION PRESENTED TO THE GRADUATE COUNCIL OF
THE UNIVERSITY OF FLORIDA
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1978

ACKNOWLEDGMENTS

Many people provided support and help at various stages of this dissertation, from the discouraging initial contacts with countless military and seminary institutions, through my long distance, cross-country finish.

My entire committee was understanding and helpful well beyond the limits I would have allowed myself.

Dr. Franz Epting, my chairman, was consistently supportive, and most importantly, available, especially during my two week write-a-thon.

Dr. Robert Ziller, my co-chairman, provided enthusiasm, support, and stimulating conversation, both during the dissertation project, and throughout my graduate student career.

Dr. Paul Schauble, my first counseling supervisor and unofficial "training director," was an important teacher and collaborator in many ways, and his use of imagery and metaphor has had continuing growthful impact on my work as a therapist.

Dr. Harry Grater was continually stimulating, supportive, and challenging in all of our interactions, and I thank him for each.

Though I worked less closely with Dr. Ellen Amatea, she was consistently interested and enthusiastic about the

research, and her comments and questions were helpful and appreciated.

Although many people helped with aspects of the research, without Cindy Villis' caring and help, it would probably still not be done, and I might still be in Murphysboro.

Thanks, too, to Chuck Landis, Director of the Counseling Center at Southern Illinois University, for making time available to collect the data, and to the administrators and students at the institutions which did participate in the study, for their time and sincere cooperation.

To Mom and to Robin, thanks for your continuing love and interest. I would also like to express my appreciation of the love and caring always shown to me by my late father, Arthur Amerikaner.

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December 1978

Chairman: Franz Epting
Major Department: Psychology

The study of personal growth and high level personality functioning has been a recent focus of study for humanistically oriented psychologists. Current theoretical perspectives and empirical work is reviewed from a framework suggested by general systems theory. The focus is upon theoretical and empirical work with the construct of "personality integration." The generalizability of earlier results is seen as constrained by limited population sampling and by measurement shortcomings.

The present research was designed to study personality integration, conceptualized from an open system perspective, in three subcultures--military cadets, seminarians, and college fraternity members, thereby extending research to a variety of populations.

The study was designed to test hypotheses that highly integrated subjects would differ from contrast subjects by

exhibiting greater cognitive differentiation and integration, more complex self-concepts, greater openness to social experiences, and time orientations characterized more by a future orientation, and less by a past orientation. It was further hypothesized that these differences would be independent of value orientation and subcultural group affiliation.

The procedure involved the administration of the Allport-Vernon-Lindzey Study of Values, the Bieri Role-Construct REP Test, the Cottle Time Orientation Inventory, and the Ziller Self-other Orientation Inventory to a sample of 44 highly integrated and 46 contrast subjects, comprised of military cadets, seminary students, and fraternity members. These were selected on the basis of scores on Duncan's Personality Integration Reputation Test administered to a large sample (total N = 226) of subjects from the three institutions.

Results indicate support for the hypotheses that personality integration is not dependent on value orientation or subcultural identification, and moderate support for the complexity and openness hypothesis. The time orientation hypothesis was not supported. Results are discussed in terms of the system theory position discussed earlier and their implication for counseling.

# CHAPTER I

## INTRODUCTION

Psychologists who have chosen personality growth and development as their focus of study have often offered conceptualizations of "healthy" or "ideal" functioning from their particular theoretical framework. Such high level functioning has been variously labeled "self-actualization" (Goldstein, 1939; Maslow, 1968), "full functioning" (Rogers, 1961), "healthy personality" (Jourard, 1974), "mature personality" (Allport, 1961), "adequate personality" (Combs, Richards, & Richards, 1976), and "optimal personality (Coan, 1974), among others. This list of terms is not to suggest that all theoretical descriptions are equivalent except for the chosen label, or even that the various theoretical positions converge in agreement upon the level of personality functioning for given individuals. Rather, the list of constructs simply points to the diverse, yet consistent emphasis this area of study has received in psychology, especially within the branch which, over the last 20 years, has been called "humanistic" psychology.

Richness in conceptualizing, however, has been accompanied by a relatively impoverished bank of research methods and data. Maslow's pioneering efforts were based

upon interviews with, discrete observations of, and biographical information published about a small group of people which fit his vision of self-actualized persons. Though valuable and acceptable as an initial approach to research, the admittedly (Maslow, 1970) tentative and highly subjective methods of subject selection and data collection needed development if research in the larger population would be possible.

The remainder of this introduction will be focused upon four issues. The first is a brief critique of the major approach taken to the study of "self-actualization" over the last 15 years. This will be followed by the presentation and development of an alternative theoretical position which is seen as useful for the understanding of personality growth and for integrating the diverse theoretical positions mentioned earlier. The next section will describe a method which has been developed by Seeman and his associates (Duncan, 1964, 1966; Seeman, 1966) to study the construct of "personality integration" (Seeman, 1959), and the studies having used this method will be reviewed. The relationship of Seeman's theoretical position to the open systems theoretical approach to be developed here will then be discussed, leading to a description of the rationale for the research undertaken in this study and a statement of the specific research hypotheses to be tested.

The most widely used approach to the study of healthy personality functioning has been the utilization of

self-report questionnaires, and specifically, the Personality Orientation Inventory (POI) published by Shostrum (1966). Since its development there have been literally hundreds of studies using it to both select samples of self-actualized subjects and to measure change in level of actualization as a function of some treatment or intervention strategy. As Oakland and his colleagues (Oakland, Freed, Loukin, Davis, & Camilleri, 1978) point out in their recent critique, "a close look at this test is appropriate" (p. 76), since conclusions drawn from this body of research rest, at least in part, upon the validity of the instrument. The Oakland et al. review points to serious problems with the POI, in areas ranging from theoretical basis to test construction to reliability and validity data. As an example of the theoretical difficulties, Oakland et al. note that Maslow specifically states that, by his criteria, only a small percentage of the population would be categorized as self-actualized, and that self-actualization does not occur in young, college age people. Yet, POI scores for college samples routinely fall in the self-actualized range, and are used as an independent variable selection criterion. Problems they cite with test construction include the ambiguous wording of some items and the nonexclusivity of supposedly polar opposite item choices. Additionally, the very structure of the test (forced-choice) is theoretically questionable, since Maslow's (1968) conception of self-actualization includes heightened ability to

relinquish "either-or" thinking, to transcend and integrate dichotomies, and to be flexible in making choices, depending on the current life context. Ironically, while using a forced-choice format, one of the POI's own subscales is designed to measure "flexibility in applying values" (Shostrum, 1966).

Oakland et al. (1978) also point to questions surrounding the data which have accumulated as apparent support for the validity of the POI. A central concern has been the ability of subjects to "fake" high scores if they have knowledge of the concepts and language used to describe self-actualization, and as they note, Braun and LaFaro (1969) demonstrated that college subjects exposed to relevant concepts can raise their POI scores. Thus, it is at least questionable whether studies using a pre-post design showing changes in POI scores following some intervention such as therapy (Shostrum & Knapp, 1966) or marathon groups (Guinan & Foulds, 1970) can be said to demonstrate that subjects have become more self-actualized, or have learned the necessary language to score higher on the instrument. Additionally, both Oakland et al. (1978) and Kay, Lyons, Newman, and Mankin (1978) point out that relatively poor test-retest reliability data raises questions of interpretation of results; when test scores change without any systematic intervention by a researcher, it is difficult to attribute post-intervention score changes to the intervention strategy

employed in the research. In sum, the problems surrounding the use of the POI as a research and clinical instrument are rather extensive and severe, and argue against its use in research designed to study the process of personality growth and development.

A second questionnaire approach to this area of research should be mentioned here. Coan (1974, 1976) constructed a battery of instruments which were designed to measure aspects of personality functioning thought to be components of the "optimal personality." His factor analytic work investigated the extent to which the data indicated either an integrated, general dimension of "optimal personality," or autonomous, individual and/or mutually exclusive personality dimensions which would be incompatible with a general definition of optimal functioning. Coan (1974) interprets his results as supporting the latter view; that is, that no general definition is empirically supported, since the scores on his battery did not tend to covary. There are, however, serious methodological shortcomings with this research. As mentioned in the earlier POI discussion, most theoretical descriptions of self-actualization suggest that high level functioning is relatively "rare" and is not to be expected in relatively young people. Coan, however, collected his data from undergraduate psychology students, with no independent measures of adequacy of personal functioning. It is not surprising to find that the different

dimensions did not covary, since this integration of functioning would only be expected in a relatively small percentage of the population. Coan's results, therefore, demonstrate that in a college population, the dimensions he attempted to measure do not systematically covary, but this says nothing about the personality characteristics of independently selected, highly integrated people. A second, and possibly more serious criticism of Coan's research concerns the validity of his instruments. Most of the measures were newly designed for this study, and yet no independent validational studies or data are reported; that is, there is no evidence reported which demonstrates that the instruments measure the personality dimensions which are claimed (e.g., "openness to experience," "personal control," "time orientation," etc.). It appears that his approach was to assume the validity of his measures, have a large number of students complete the battery, and report the results of a factor analysis of this uncertain mass of data. Conclusions and generalization from such research are confusing and empirically unsupportable. It is interesting to note, however, that in discussing his research Coan (1974, 1976) continues to identify two major dimensions which are important to personal growth. These he calls being "open" and "ordered," and are conceptually similar to the "openness to exchange with the environment" and "hierarchial organization," which will be discussed below as characteristic of the open system functioning suggested as a model of personality development.

The focus now shifts from a critique of earlier methodological approaches to a description and discussion of personality functioning based upon a model known as general systems theory. The introduction concludes by reviewing a research method which is both an alternative to the POI and is based upon theory related to the open-systems theoretical position developed here.

## General Systems Theory and Personality Integration

The presentation of systems theoretical constructs is based upon the work of von Bertalanffy (1967, 1968). After the major systems constructs are presented and defined, they will be discussed in relation to current theories of healthy personality functioning.

From a general systems theory perspective (von Bertalanffy, 1967, 1968), people are seen as functioning analogously to other systems, and, optimally, the dynamic qualities of open systems (as opposed to those of "closed" systems) would be characteristic of them. In other words, to the extent that the properties of a well-functioning open system are applicable to an individual's personality functioning, then that personality might be seen as a healthy one. Taken further, a person's areas of "blockage" or nongrowth might be seen as the ways in which his functioning is no longer open and has become more like a closed system. The characteristics of open systems will not be discussed as they

pertain to the major conceptual dimensions to be used in discussing the healthy personality constructs.

When conceptualizing system "process," the nature of change is of primary interest.

1. An open system is defined as becoming more complex over time. This process is further defined as follows: Though remaining identifiable, unique, and integral through time, the system develops from a more general and homogeneous to a more specialized and heterogeneous condition. This is called "progressive differentiation." One aspect of differentiation is a process called "centralization," through which the action of some components comes to exert greater influence over the system than do others. This is more fully discussed below, under "structure."

2. Change is continual, since exchange with the surrounding environment never ceases.

3. Change within one component of the system is seen as affecting the system as a whole. Structural relationships, as discussed below, are important here, since some components are seen as more influential than others.

4. System change is irreversible; one cannot reverse the process and return to a prior condition.

5. The system may reach a state of development, called a "steady state," where the system as a whole remains relatively constant and integral, but there is continual exchange of component material with the environment.

6. System movement towards this steady state, or "dynamic equilibrium" (von Bertalanffy, 1968, pp. 131-32), is marked by increasing self-regulation. This self-regulatory function is aided by the use of positive and negative feedback. As described by Miller (1969) positive feedback is the use of information by a system to increase distance from a steady state, or in other words, to initiate change, whereas negative feedback is information used to maintain or return to a steady state. Feedback is called "internal" when the feedback loop never passes outside the system boundaries (e.g., temperature control in mammals); it is called "external" when the loop passes beyond the boundaries of the system as when an individual asks assistance from another in returning to an equilibrium state ("Will you bring me a glass of water?"). Whether internal or external, the use of feedback is seen as important to two of the basic processes of all organisms--both maintaining a state of relative dynamic equilibrium and moving towards a more final steady state (i.e., the process of growth).

The "structural" dimension is primarily concerned with the ordered relationships between components of the whole. A primary characteristic of a system is its development of a hierarchical structure. Within this structure, some few components are relatively dominant in their influence over system behavior, such that a change in one of these (called a "leading part") leads to large change throughout the system.

In focusing upon "content," discussion centers on the components themselves. What are they? From what do they develop? Systems theory, since it was developed to account for a wide range of phenomena, says little about the content of any particular system. It is pointed out, however, that systems are made up of identifiable component parts which, on their own level of analysis, can often be described as systems in their own right.

A "time orientation" perspective can also be examined. Here, the relationship of time dimensions to personality functioning is examined, with a special focus upon the position taken by each theorist towards the future's influence upon current behavior. The orientation of systems theory is primarily towards the future. Systems behavior is described with future-oriented terms such as "purposeful," or "goal-directed," and end states or goals are seen as influencing current system process. The past is recognized as important, but not in an absolute, deterministic sense. A characteristic of closed systems is that initial conditions of development determine the final state, since there is no interaction with the environment, and alteration of the initial conditions results in absolute change of the final state. Open systems, on the other hand, are guided by the "principle of equifinality," which suggests that an end state can be reached in spite of changes in the initial conditions or changes in conditions along the way (i.e., blockages or

difficulties need not keep a system from ultimately reaching its final state, and implicitly it is not necessary to go back to or "undo" previous blockages in order to move forward; indeed, the irreversibility of change described under "process" suggests that this would be an impossible undertaking).

This brief presentation of some major systems theory concepts develops from a conceptualization of man functioning as an open system; a unique system, to be sure, with "components" (e.g., abilities, physical structures) unlike those of others, but, on his own level, a system nonetheless. From this view, the healthy or optimal personality is one which is most clearly describable by the characteristics of open systems discussed above, and nonoptimal or dysfunctional states are those in which the system is "closing down" in some respects. This conceptualization will now be developed by moving to a discussion of some major constructs used by psychological theorists in describing healthy personality, especially those which define their position in relation to the dimensions outlined above (process, structure, content, time orientation), and examine how these might fit into the systems theory framework.

## Process Constructs

All theories of optimal personality must deal with "how" or process questions; therefore, it is not surprising that many constructs are used by theorists in their attempts to describe the functioning of healthy persons over time.

Rogers (1961) is clear in his emphasis on the process dimension and points to the "willingness to experience oneself as process" as a goal or therapeutic change. Several theorists describe optimal process as including increasing self-direction and autonomy and decreasing confluence with, and dependence on the outside environment. Rogers (1961), for example, describes the "fully functioning person" as one who has developed an "internal locus of evaluation," such that he, rather than aspects of his environment, is the source of his valuing process. This lack of dependence on others allows for occurrence of the "organismic valuing process," in which organismically experienced needs and satisfactions come to be the source of values. Similarly, Perls (1969) discusses maturation as a process of developing from environmental support to self-support or "organismic self-regulation." Maslow's (1968) description of the perceptual processes of self-actualized people suggests a clear perception of other people as distinct from oneself, unique and whole in themselves, and not existing solely to satisfy one's own deficits. His description of the valuing process is one in which values emerge from the growing organism, rather than being simply accepted from the environment.

Another group of constructs used by theorists in the field seems to emphasize the openness to exchange with the environment that is characteristic of open systems process. The term "authenticity," for example, is used by existential

philosophers and psychologists (Ellenberger, 1958; Gendlin, 1973; Jourard, 1974) to describe the process of free choice of action, rather than automatic responding, in all life situations. Authentic action thus implies clear perception of change in the world, openness to the acceptance of change, and willingness to act in light of change. Jourard (1974) suggests that "authentic being is a sign of healthy personality, and it is the means of achieving healthy personality growth" (p. 168). Rogers' (1961) description of full functioning includes the construct of "openness to experience," in which a person is fully aware of all organismic experiences in all situations, without resorting to defensive distortion or repression to block threatening messages from the environment. Related to this view are the implications of Kelly's (1955, 1963) metaphor of "man the scientist." This process involves hypothesizing, observing, and revising one's hypotheses. The "optimal scientist"--one who is most fresh in his hypothesizing, most clear in his observations, and most willing to drop habitual constructions and revise them in light of new "data" or new situations. The poor scientist clings to his hypotheses, selectively sees only that which is confirming, and closes himself off to revision and change.

The next sets of constructs are those involving the process of becoming more complex and differentiated, yet whole and integral. Regarding complexity, Kelly's (1955)

description of process is again relevant; the good scientist is continually revising his hypotheses and reconstruing his situations, and the creation of new constructions seems to imply an increasingly complex and differentiated world view. Rogers (1961), too, suggests that the fully functioning person enjoys a "greater richness of life," involving a wider range and greater variety of experiencing than "the constricted living in which most of us find ourselves" (p. 195). His construct of "congruence," also characteristic of healthy functioning, involves the matching of experience, awareness, and communication into a unified whole, so that this greater variety in experience can be lived fully. Another conception of becoming "healthy" or achieving "self-realization" is that of Jung's (1968; Singer, 1973) process of individuation. This lifelong process involves growing awareness of the complexity of one's personality (e.g., the several archetypical components) and integrating them into a larger, more unified whole. Again, the focus is on increasing differentiation as well as growthful integration.

The last set of process constructs to be presented are those which describe the overall functioning of the healthy individual. In the systems model presented above, it was noted that open systems often reach a state known as "steady state" or "dynamic equilibrium," in which the system maintains a relatively integral structure, though open exchange with the environment remains continual. The optimal

personality, when fully matured, can be seen in similar terms: Maslow's (1968) "self-actualized" person is described as having all needs met and a relatively stable, biologically based value system which allows for free perception of and interaction with the environment, yet maintenance of uniqueness and autonomy. Rogers' (1961) "fully functioning person" has developed to a point where all aspects of one's organismic experience are available to awareness, suggesting a mature, whole, and autonomous functioning, yet quite open to new situations and experiences. The "self-realized" individual in Jung's (1968) theoretical system has matured such that his life processes demonstrate a dynamic balance between polar opposites, such as ins and outs, hero and victim, extraversion and introversion; this mature person is described as "individuated" or autonomous from the collective, though, of course, not closed off to interaction with others.

## Structural Constructs

The basic structural characteristic of the system is that of "hierarchy." Hierarchical structure suggests that some components exist prior to, or are more fundamental or basic to, the system than the others. A related psychological position is Kelly's (1955) view of construct systems, which are made up of relatively core and peripheral (superordinate and subordinate) constructs. Following the description of hierarchical order given earlier, the core constructs may be seen as holding central importance to the system as

they subsume the more subordinate constructs extending to the periphery. It does not seem unreasonable to see core constructs as analogous to the "leading parts" described in the earlier "structure" section. Though Kelly does not discuss construct systems in this way, it may be that healthy or optimal men have systems which have developed hierarchically, with a relatively stable core structure; change would then occur principally in the periphery, where less stress would be exerted to the overall system per "unit change" than would change in the core. The unhealthy system might be characterized by a nonhierarchical structure, such that most any change or new event is likely to induce stress and shifting throughout the entire system (i.e., all or most constructs take on the role of "leading parts").

Other theoretical systems, though not written in quite this way, can be seen as structuring personality functioning around certain key elements. Ellis (1973) suggests that difficulties in living can be traced in the belief systems to a few central "irrational beliefs." Implied here is that healthy functioning develops from a core of "rational beliefs," the acquisition of which is the goal of his therapeutic procedures. Berne's (1964) position suggests that healthy or nonhealthy functioning is basically an elaboration or "life script" developed from a person's position in respect to the fundamental dimensions of I'm OK (not OK); you're OK (not OK). Adler (1964) considered a person's psychological processes,

or "style of life," to be structured around a central "final goal"; the relative health of the life style is directly related to the degree of social feeling inherent in the goal. A more temporal hierarchy, in which certain events precede and are fundamental to others, is evident in the theoretical view of Maslow (1968). Using his motivational construct of the "hierarchy of needs," self-actualization results from the satisfaction of successively emerging deficit needs, which are necessary precursors to the emergence of "Being" or actualization needs. At the risk of stretching a point, Jung's (1968) description of the psyche may also be seen as hierarchical, with the collective psyche as fundamental, both motivationally and temporally (or historically). The personal unconscious and, in time, conscious sphere acquire greater influence over the individual's personality system, as more material from both collective and personal unconsciousness emerges into consciousness and is "conquered" or integrated through the individualization process. Though not described hierarchically, Jourard's (1974) construct of the "self-structure" places the authentic or "real" self in a key role, with the health of the personality system being directly related to the "positioning" or the other self-structures (public self, self-concept, self-ideal) vis-a-vis the real self (i.e., as the other structures become congruent with the authentic self, the system becomes healthier).

Though the nature of their structural theories are in many respects quite different, the theorists discussed above share an emphasis on the relationship between components of the personality system and especially the importance that key or fundamental components extend over system functioning as a whole.

## Time Orientation Constructs

This dimension focuses upon time perspective, and especially the view of the future. For several theorists, the relative health of a personality system is directly related to a person's orientation towards future events. It will be remembered that systems were described as future-oriented or goal-oriented; similarly, goal orientation is prominent in several theoretical systems. The most explicit example here is that of Adler (1964), whose description of personality is clearly future-oriented and specifically focuses upon goals as the key to understanding human functions. As was mentioned earlier, Adler sees behavior as organized around the attainment of goals, with one's "fictional final goals" in particular as organizers of the life style. "Discouragement" results from goals lacking in social feeling, while health is attainable when one's goals are contributions to and development of mankind.

For Jung (1968), too, personality function is defined in primarily teleological terms. Both mankind in general, and each person in particular, are developing towards

attainment of goal-states. For the individual, self-realization is the goal, and one's life is organized around the processes needed to attain it; the healthy personality is one which achieves this goal.

Though Maslow (1968) does not include specifically goal-oriented constructs in his theorizing, the state of self-actualization is an implicit goal-state for all persons. His is a biologically based purposiveness, in that as the organism's needs are satisfied, new ones emerge, and are satisfied, continually, until the "Being" state is attained. Maslow's insistence on a biological basis suggests that, given a sufficiently rich environment, the organism will naturally develop towards this more fully grown or healthy state.

Kelly's (1955, 1963) position is also future oriented. His fundamental postulate suggests that all behavior derives from the ways in which people "anticipate events." However, he clearly rejects a teleological construction of personality functioning (1963). Thus, the healthy person lives within his world based on the most system-elaborative constructions he can make, and revises his anticipations as needed, though he is not motivated towards attainment of any particular goals or state of potential being. Kelly does reject a goal model of development, although his work suggests that at any given moment a person's "goal" is to anticipate the future accurately, and attainment or nonattainment of the goal is reflected in the degree of revision necessary in the person's

constructing process. Again, though Kelly does not word his theory in this way, it seems reasonable to suggest that a long range goal of an individual is to become progressively better at anticipating events, with "optimal man" the one who is consistently effective at anticipating the wide range of events in his life. The development of this anticipatory ability is not clearly described by Kelly; the "choice corollary" suggests that persons are continually making "elaborative choices," which extend and define their systems. Yet, it seems that some people are "better at" construing than others; that is, their systems are more effective at anticipating events than others--they are functioning more effectively, in other words, than those who find their lives difficult, discouraging, or full of despair. The systems perspective underscores the importance of this issue and offers a conceptual framework for understanding this developmental process. It is the relatively open system which is in continual exchange with the environment and progressively differentiating, whereas the closed system is not. It may be, then, that as long as one's construct system is functioning in an open way, it is operating elaboratively; that is, extending and defining its capabilities to anticipate one's changing world. The relatively closed, or "unhealthy," system is then marked by continual nonelaborative choices, resulting in a constant effort to construe the world with a limited system, and failure to extend and redefine in the face of failed anticipation.

It is as if one is "locked in" to a constricted and ineffective system of construing, and experiences an inability or unwillingness to "open up" and elaborate or "reconstrue." At any rate, even if the liberties taken with Kelly's theory are held aside, it is clear that the time dimension, and especially one's orientation to the future, is central to the position.

Another theorist for whom the time dimension is important is Perls (1969). However, his position regarding the future seems inconsistent. One of the central themes of gestalt therapy is that of living "in the here and now," involvement with future goals is "rehearsing," and "fantasy" to be avoided, and only the present moment is to be experienced. However, the theory suggests that all behavior is oriented towards the future, in that it seeks "completion" or "closure," and will move in that direction. From this perspective, gestalt formation (completion) is the "goal" of behavior, and anticipation of the optimal ways of attaining closure would seem to be healthy and growth promoting. Though Perls' emphasis on bringing a person "out of his head" and "into his senses" serves a useful therapeutic purpose, the concurrent practice of idolizing the present seems an unfortunate by-product. Gendlin's (1973) existential experiential construct of "carrying forward" is revelant here. Similar to the gestalt concept of completion, Gendlin suggests that change involves the "carrying forward" of any

feeling through its bodily felt continuity to completion. Gendlin explicitly recognizes, however, that the future is important here, in that an authentic choice of one's future is necessary to carry forward one's experienced present; an inauthentic choice of the future simply blocks the carry forward process.

In partial summary, then, it seems clear that the time dimension is an important one to many theoretical views of healthy function, and one's conceptualization of, orientation towards, and mode of dealing with the future are of primary concern.

## Content Constructs

The dimension along which theories seem to differ the most is that of defining "what" makes up the personality system, or more precisely, what are the key elements or components to healthy functioning. Happily enough, it is precisely here that the systems framework has the least at stake. Being primarily descriptive of process and structure, the labels chosen to describe component parts are seen as less important than the interactions over time of whatever components are focused upon.

It is, of course, the hypothetical content constructs employed which tend to give each theory its distinctive "flavor" or identity. Ellis (1973), for example, considers "beliefs" to be the components of primary concern; Kelly focuses upon personal constructs. For Jung (1968), the

personality is made up of components such as archetypes, the shadow and the self, each of which has specific, though complex, functions in the system. Maslow (1967) sees values as central and discusses the role played by different kinds of values in personality development. For Jourard (1974), the components of the self-structure (real self, ideal self, public self, and self-concept) are important, and their "positioning" in relation to one another is an important aspect of personality function, while Adler (1964) focuses upon "life-goals."

In presenting this section, the attempt is certainly not to dismiss or devalue the theoretical constructs pertaining to content, or pretend that the differences between theories are insignificant. Rather, the emphasis is to point out that each discusses personality from a unique perspective, and as a result each emphasizes different life components or dimensions along which people's behavior may vary. Therefore, the evaluation of personality on a dimension of relatively high or low level functioning will, for each theorist, be in terms of "his" components (i.e., the subsystems he chooses to emphasize) and the theoretical role played by these competents in the theorist's view of human process. As Kelly (1966) points out, theories are built to account for different areas of interest (i.e., have different ranges and foci of conveniences) and thus theorists would be expected to use different constructs in building their positions. Further, theorists differ in the degree to which their content categories should

be taken literally or metaphorically. Jourard does not expect to find a part of the nervous system which "is" the public self, and Jung would probably not expect to be able to cut an anima out of the brain in the same way one might cut out the hippocampus. These are metaphors for describing some aspect of experience which is construed as psychologically interesting and important by the theorist. Maslow (1967), on the other hand, insists that human values are "really" rooted in biology, that there is a "natural value structure." Clearly, direct comparisons of components from one theoretical system to another are rather difficult. Since, however, when theorists theorize, they generally theorize "about something," the something will probably be described as composed of definable components capable of being labeled and measured. This is likely to continue, and does serve a useful conceptual function. It may be, however, that the focus of theorizing about personality functioning may need to shift more and more towards the process dimension as the existential theorists (Bugental, 1965; Gendlin, 1973; May, Angel, & Ellenberger, 1958), with their emphasis on experience, have long been doing. It is within the "how" or process dimension that we experience, and blockages or difficulties in process are, from this perspective, the sources of personality dysfunction.

This discussion of a systems perspective for personality integration is abstract, and replete with constructs and assertions that are quite difficult to reformulate in

empirically testable terms. For example, when terms such as "boundaries," "feedback," and "differentiation" are applied to human functioning, they are hypothesized to be meaningful descriptors, and yet are not directly observable or measurable. However, to suggest that a theoretical portion has scientific merit necessitates its being conducive to empirical research. Though the position developed here has not been directly investigated up until now, there has been research into relevant variables, from a closely related theoretical perspective.

A program of research by Seeman (1959) and his associates has, for the past fifteen years, been investigating the construct of "personality integration" (PI). Defined as "a configuration of behavioral subsystems . . . that interact in an adaptive and effective manner" (Thomas & Seeman, 1972, p. 154), and emphasizing the effective use of a maximum amount of information (Seeman, 1959), the perspective is similar (but not identical), to the systems theory position outlined above. Though there are conceptual differences between the approaches, the research undertaken by Seeman and his colleagues has produced evidence which is supportive of ideas derived from systems theory.

Their data suggest that highly integrated persons differ from less integrated contrast subjects in several subsystems of personal functioning. Cognitive processing of highly integrated subjects is characterized as being both more

complex (Thomas & Seeman, 1971) and more efficient, as measured by GPAs, but high PI subjects are not more intelligent, as measured by scores on the College Entrance Examination Boards and the American Council of Education Test of Intelligence (Duncan, 1966; Seeman, 1966). Interpersonally, highly integrated persons demonstrate greater "environmental contact," defined as involvement in a variety of activities (Duncan, 1966; Seeman, 1966) and are more positively oriented towards and less threatened by the social environment (Hearn & Seeman, 1971). Based upon Rorschach protocals scored according to Klopfer's method, highly integrated subjects demonstrated more imaginative and constructive modes of thinking about people, as well as a capacity for more empathic relationships with people (Thomas & Seeman, 1971). In the affective domain, high PI subjects have been found to be more comfortable with, and better able to express the affective components of their lives, as well as demonstrating greater variability in feeling states (Hearn & Seeman, 1971). Additionally, highly integrated men have demonstrated more internal loci of control and loci of evaluation (Duncan, 1964, 1966) but this finding has not been replicated in women (Seeman, 1966), which Seeman suggests may indicate a culturally based "sex-linkage" to some behaviors and beliefs irrespective of level of integration.

The data presented here can be seen as conceptually related to the description of high level functioning based

on systems theory, which would predict greater complexity of component parts, more openness to the environment ("environmental contact," "positive orientation to social environment"), and more effective perception and usage of relevant information ("effective perceptual styles," "intellectual efficiency as opposed to intelligence"). The locus of control data, too, suggest that integrated males perceive themselves as in sufficient control over the events in their worlds to be potent decision makers in forming goals and moving towards them.

It was mentioned earlier that systems theory recognizes the interrelationship of different levels of systems, such that from another perspective, individual systems can be seen as components of a higher level system, and the adequacy of functioning of the levels is interdependent. Interpersonally, this has been an emphasis of family theorists (e.g., Satir, 1967), and the implication of this position has been receiving increasing research interest. In a study supporting the conceptual relationship between the functioning of persons-as-systems and families-as-systems, Odom, Seeman, and Newbrough (1971) found that children identified as highly integrated (using a child-relevant nomination method similar to the Personality Integration Reputation Test [PIRT] procedure described below) came from families whose communication patterns differ qualitatively and quantitatively from the families of poorly integrated children. The families of high PI children were characterized as exhibiting more

cooperation, more warmth, less dependence, more direct and clearer communication, more flexibility in reaching decisions, and more clearly defined roles than the contrast families of poorly integrated children. These findings are also convergent with the systems theory conceptualization of high level functioning, and lend support to the position from the family unit level of analysis.

These studies are an important beginning in the study of personality integration as the construct is related to the systems position developed here. However, there are limitations to the conclusions that can be drawn from them when developing a description of high level personality functioning, and several of the questions which arise from these limitations form the basis and rationale for the present study.

The limitations of the studies cited above center in two areas. The first is that of population sampling; the second is in the methodology employed and more specifically, the instruments chosen to measure dependent variables. As Wright, Bond, and Denison (1968) pointed out, all of the research discussed above (except the family study by Odom et al., 1971) have used undergraduate college students who lived in fraternity or sorority houses, or were dormitory residents. This is understandable, in that the PIRT method requires a long term group relationship among people who know quite a lot about many facets of each other's lives. Though these populations do fit the criteria, they form a rather limited sample from which to speak about "personality integration" as a

general phenomenon. It seems important, therefore, to extend the study of personality integration to people who differ from these groups on several parameters, including a variety of ages, socioeconomic classes, subcultures and even international cultures, in order to investigate the dimensions which consistently differentiate highly integrated people from others. Of course, no one study can incorporate all of these variables, and for the purposes of this research, the cross subcultural dimension emerges as an important focus. From the open systems perspective discussed earlier, the issue can be conceptualized as a need to study groups which differ in "content" areas (values, beliefs, life-styles) to identify the process variables which are characteristic of highly integrated persons across subcultural groups. The present study is designed to investigate this area.

The second area of limitation pointed to concerned methodology, and specifically, instrumentation. Several of the studies cited earlier used instruments with little validity data to support their use, such as the "environmental contact" measure and the "locus of evaluation" instrument in Duncan (1966) and Seeman (1966). In the Thomas and Seeman (1971) study, it is not clear what, specifically, they were measuring with their assessment of cognitive complexity; they employed a simplified REP test which elicits from subjects the ways in which groups of people are similar and different from each other. The score is total number of discriminations

made by the subject, which makes no attempt to separate the number of "words" from the number of true construct dimensions (i.e., several words may have been different labels for the same underlying construct dimensions). Thus, their results are difficult to interpret, although they are theoretically sound, and are convergent with the work of Wexler (1974), who found that high scores on the previously critiqued POI (Shostrum, 1966) were more cognitively complex than lower scoring subjects, based upon a differentiation-integration assessment of their verbal descriptions of emotional experiences. The issue being focused upon here is the need to continue with what Campbell and Fiske (1959) call a "multitrait, multimethod" approach to the study of the complex phenomenon of personality integration. In the present study, several variables which from a systems theory perspective are hypothesized to be characteristics of personality integration are studied in several subcultural population settings. The study makes use of both (a) multiple methods for assessing a single personality dimension, such as "complexity"; and (b) the measurement of multiple "traits" by using the instruments which measure the same or conceptually related dimensions as those in earlier studies but are methodological alternatives to the measures previously employed. The rationale here is that the study of a construct as broad as personality integration necessitates divergent methods of measuring relevant personality

characteristics both within a single study and as part of a program of theory testing research. For example, the selection of instruments for this study was guided, in part, by a desire to employ methods requiring varying modes of response (i.e., not using all forced choice, verbal questionnaires). In sum, the present study is designed to further the study of personality integration by (a) expanding the population base of subcultures not previously studied; (b) continuing the multitrait, multimethod approach of previous studies by studying personality dimensions not previously examined (time orientation) as well as using alternative instrumentation in measuring similar personality dimensions; and (c) providing a comprehensive theoretical basis for conceptualizing high level personality functioning by employing a general systems theoretical framework.

## Hypotheses

The open systems perspective, as discussed earlier, discriminates between "process" and "content" dimensions, suggesting that the former is of central concern in understanding high level functioning, while giving less weight to the latter. Therefore, the hypotheses which follow are based upon an overriding hypothesis that personality integration can and does occur within a broad range of subcultural groups which differ from one another in value orientation and life style ("content dimensions"), and that highly integrated people differ predictably from less integrated peers along specifiable

"process dimensions." The content dimension investigated in this study is operationally defined as value orientation, and is measured by using the Allport-Vernon-Lindzey Study of Values (1960). The process dimensions included (a) complexity of the self-concept, (b) cognitive differentiation, (c) cognitive integration, (d) boundary permeability (openness to social experiences), (e) self-esteem, and (f) time orientation. The instruments used to measure these dimensions are, respectively, Ziller's (1973) Complexity of Self-Concept Scale; Bieri, Atkins, Briar, Cobeck, Miller, and Tripodi's (1966) REP Test for b and c above; Ziller's (1973) Self-Esteem Measure; and Cottle's (1976) Time Orientation Inventory (which includes the Experiential Inventory, Circles Test, and Lines Test). The justification for selecting these instruments and supporting validity data is presented in the Methods Chapter. The specific hypotheses to be tested in this study are as follows:

Content Dimensions

1. There will be no difference between Personality Integration (PI) and contrast subjects on the Allport-Vernon-Lindzey (AVL) value profile scores.
2. There will be significant differences between subcultural groups on the AVL value profile scores.

Process Dimensions

3. PI subjects, compared to contrast subjects, will demonstrate greater complexity of the self-concept

by scoring higher on the Ziller complexity of the self-concept instrument.

4. PI subjects, compared to contrast subjects, will demonstrate greater cognitive differentiation by having higher FIC scores on the Bieri grid.
5. PI subjects, compared to contrast subjects, will demonstrate greater cognitive integration by having higher ordination scores on the Bieri grid.
6. PI subjects, compared to contrast subjects, will demonstrate more permeable social boundaries by scoring higher on the Ziller "openness" instrument.
7. PI subjects, compared to contrast subjects, will demonstrate greater self-esteem by scoring higher on the Ziller self-esteem instrument.

Time Orientation

8. The PI subjects, compared to contrast subjects, will demonstrate less orientation to the past by having higher scores on the Cottle Experiential Inventory.
9. The PI subjects, compared to constrast subjects, will demonstrate more present and future orientations and less of a past orientation by more often being categorized as present and/or future dominant and less often past dominant on the Cottle Circles Test.

PI Validity Check

10. PI subjects, as compared to contrast subjects, will have higher scores on the Personality Integration subscale of the Tennessee Self-Concept Scale.

Other Variables

The following variables will also be investigated for the relationships to the independent variables of PI level and group membership, although they are not specifically related to the theoretical position developed here, and thus no directional hypotheses will be offered.

1. Meaningfulness of construct dimensions, as measured by the Bieri REP Test.
2. Temporal relatedness, as measured by the Circles Test.
3. Scores on the categories of the Lines Test (Historical Past, Personal Past, Present, Personal Future, Historical Future, Lifetime).
4. GPA (as reported by subjects).
5. Age.
6. Length of membership in group (Group Tenure).

# CHAPTER II

# METHOD

## Subjects

The procedure for selecting the personality integration (PI) and contrast groups required relatively large groups who knew each other well over an extended period of time. For the theoretical reasons discussed above, it was important that the selected groups could be assumed to differ in value orientation (which would then be empirically investigated). Additionally, it was desirable for selected groups to be equated in age and SEC. Based upon Seeman's (1966) discussions of sex differences in PI, it was decided to limit this investigation to male subjects, recognizing the limitations that this approach places on conclusions and generalizations from the data. For these reasons, it was decided to select subjects from groups of the following types: military cadets, seminarians and college fraternities. Letters were sent, and follow-up telephone calls were placed to the administrators of many institutions which met these criteria, and arrangements were completed with a military academy in the southeastern part of the country, a Protestant seminary in the northcentral region, and social fraternities at a public midwestern university.

The final group of subjects was selected from larger preexisting groups at each of the institutions by employing the Personality Integration Reputation Test (PIRT). At the military academy, this refers to members of companies with the PIRT nomination data collected from a total of 175 volunteers, resulting in a PI group of N = 17 and contrast group of N = 23. At the seminary, 75 volunteers from dormitory units constituted nominating groups, resulting in a PI group of N = 15 and contrast group of N = 11.

The initial fraternity group consisted of 76 volunteer participants from social fraternities, resulting in a PI group of N = 12 and a contrast group of N = 12. In total, 226 subjects completed the PIRT nomination instrument, with 44 PI subjects and 46 contrast group subjects.

## Procedure and Instruments

At each setting, the PIRT instrument (see below) was administered to each large group at one session. The final group of PI and contrast subjects, selected as described below, completed the remaining instruments singly in a follow up session. The selection of instruments was made based upon two major criteria. The first was the degree to which the personality dimensions they purported to measure were theoretically relevant to the hypotheses being tested. The second, which was more a limiting factor than a legitimate "criterion," was the element of time restriction. The subjects' participation was completely voluntary in all three groups,

and thus no negative sanctions or rewards were available for not returning to follow up sessions or staying to complete all instruments. Therefore, it was decided that one hour was all the time that could reasonably be asked of the subjects in the follow up testing session. In one case, such a restriction was necessary to receive permission from the institutional administrators to arrange any of the data collection. Therefore, it was necessary that the total time for completing all dependent measures not exceed one hour, which eliminated the selection of several alternative or additional instruments (e.g., Bieri, Atkins, Briar, Cobeck, Miller, & Tripodi's [1966] "construct provided" form of the REP test was used rather than a more time-consuming "construct-elicited" form; the use of the PI subscale of the Tennessee Self-Concept Scale [Fitts, 1964], rather than the more widely used POI [Shostrum, 1966]). Though it could be argued that fewer instruments should have been used or fewer personality dimensions should have been investigated, it was decided that in an exploratory study such as this, it was justifiable to begin by examining the relationship of several dimensions to personality integrations, rather than doing a more thorough investigation of one or two.

Instruments

Personality Integration: The selection of "integrated" and "contrast" subject groups followed the Personality Integration Reputation Test (PIRT) method described by

Duncan (1964, 1966) (see Appendix A). In this method, each subject was presented with six components of personality integration (based on the work of Jahoda, 1958), and for each dimension, the subject was asked to nominate three group members who most closely fit the description given (e.g., "Who are the three persons who seem the most able to deal effectively with everyday tensions and anxieties?"). The resulting highly skewed distribution allowed for selection of a small group of "integrated" subjects; the contrast group was randomly selected from the remaining group members receiving at least one nomination. Thus, the contrast group was not at an opposite "extreme" from the PI group, and was not likely to be made up of "pathological" or dysfunctional group members. Duncan (1966) has reported split half reliability coefficients of .82, .78, and .85 for this instrument, and a test-retest reliability coefficient of .88, with the second set of nominations resulting in an identical set of names for inclusion in the high PI group. The series of studies reviewed above evidences the extent to which PIRT has demonstrated its validity in college age populations. Additionally, a series of studies by Wright (1966, 1967a, 1967b) provided further construct validity, reliability data, and evidence for a single "personality integration" factor, respectively, for the use of PIRT.

As discussed earlier, both peer nomination and self-report measures have been used in selecting groups for

research in this area. For the reasons presented in Chapter I, PIRT was chosen in the study as the basis for selecting "high" and "contrast" PI groups. It was decided, additionally, to explore the relationship between PIRT and self-report methods from the cross subcultural perspective developed here by administering the 25 item PI subscale of Fitts' (1964) Tennessee Self-Concept Scale (TSCS) to all subjects. This subscale is empirically based, representing the items which best differentiated "a group of subjects judged, by outside criteria, to have a better-than-average level of adjustment" (Radford, Thompson, & Fitts, 1971, p. 45). Fitts (1964; Fitts, Adams, Radford, Richard, Thomas, Thomas, & Thompson, 1971) reports no further validity data for using scores on the PI subscale as a criterion for selecting high PI subjects, although he reports (1971) several studies demonstrating the high PI subjects chosen by other criteria have "healthier" scores on many of the TSCS scales than control groups (e.g., total P [positive] scores, indicating a more favorable self-concept, and lower total conflicts scores, reflecting less internal conflict or contradiction in their self-concepts). In the only other study reported which used the PI subscale by itself (without the remaining items on the TSCS), Dunn's study of college students (1969, reported in Fitts et al., 1971) reported a significant intercorrelation between the PI subscale and two other self-report measures (Shostrum [1966] POI, and Barron's [1963] ego strength scale,

the PI subscale demonstrated little correlation to sociometric ratings [two versions of PIRT]).

Cognitive Complexity: Two instruments were chosen to measure different dimensions of cognitive complexity. In the Bieri et al. (1966) REP Test subjects were provided with eight construct dimensions, and asked to rate each of eight persons who fit provided role-descriptions on each construct dimension (see Appendix C). The resulting 8 x 8 grids were then individually analyzed to produce scores on dimensions of cognitive differentiation, integration, and meaningfulness, using a procedure developed by Landfield (1977b). The major criterion for selecting the provided form of the REP Test was time, in that this form takes 15 minutes or less to complete, whereas the elicited form developed by Kelly (1955) takes considerably longer. Though there is controversy in the field, Bieri et al. (1966) present evidence based on the research of Kieferle and Sechrest (1961) and Tripodi and Bieri (1963) that distribution of complexity scores obtained by provided and elicited forms from the same populations are not significantly different, supporting the contention that the provided form is an acceptable alternative to the more common elicited form for the purposes of this study.

Ziller's (1973) complexity instrument was used as a measure of complexity of the self-concept, a more delimited area of complexity than the generalized complexity dimensions assessed by the Bieri procedure. Ziller's instrument is a

109 item adjective checklist (Ziller, 1973). The instrument has demonstrated acceptable split half reliability ($r = .92$ in an adolescent population [Ziller, 1973], and test-retest reliability of $r = .72$ [Ziller, 1973]). The validation of the measure has included studies which demonstrate its independence from other personality dimensions (self-esteem, intelligence) and a significant positive correlation to self-described complexity and complexity of photographic self-portraits. Also demonstrated has been a significant relationship to degree of social interaction, with physically handicapped and terminally ill patients having less complex self-concepts than matched controls (see Ziller, Martell, & Morrison, 1977, for a more complete discussion of the validation process for this instrument).

Self-esteem, openness: These dimensions were assessed by using selected parts of Ziller's (1973) Self-other Orientation Inventory, a group of primarily nonverbal items which are purported to measure self-esteem, and openness to social experiences and interaction. For the self-esteem scale, Ziller (1973) reports split half reliability coefficients ranging from .80 to .89 for student and adolescent groups. Validity data include demonstrations that sociometric "stars" have higher self-esteem than sociometric "isolates" (Ziller, 1973) and normal (nonclient) groups had higher self-esteem than neuropsychiatric patients (Ziller, 1973).

The "openness" items have been developed more recently and have less supportive construct validity data. The only reported study thus far demonstrates that high scores on the "openness" items include significantly more people in a photographic self-description task than do low openness scores (Ziller & Smith, 1978).

Value Orientation: In this study, the "content" dimension discussed in Chapter I is operationally defined as value orientation, and more specifically, the profile of scores obtained on the Allport-Vernon-Lindzey Study of Values (1960). This instrument is a 45 item inventory, providing an ipsative profile of scores on six value dimensions developed from the work of Spranger. It is a widely used instrument for counseling and research purposes, with supporting validity presented by the authors (1970) demonstrating its ability to discriminate between varied occupations, to predict chosen occupation in 5 to 15 years, and to predictably change as a result of life experiences such as type of education.

Time Orientation: The instruments used to assess time orientation were selected from the battery of tests developed by Cottle (1976) in his exploratory study of how subjects perceived themselves in relation to a range of temporal dimensions. The instruments selected for the present study were designed to assess the relative importance or impact on current functions that subjects attribute to their conceptions of past, present, and future events respectively.

Specifically, the instruments included (a) the Experiential Inventory, which measures the frequency with which important life events reported by subjects occur in different "time zones" (e.g., "distant past," "near future"); (b) the Circle Test, which uses the positioning and size of circles representing the past, present, and future time zone as a spatial, nonverbal assessment of time orientation which can be analyzed to produce scores on the dimension of Temporal Zone Dominance and Temporal Relatedness; and (c) the Lines Test, in which time zones are linearly defined by subjects larger or smaller units of a continuous line segment representing "time-as-a-whole" (see Appendix B). These instruments have not been extensively used for research purposes, and thus supporting reliability and validity data are still minimal. The results presented by Cottle (1976) include a discussion of the different patterns of time orientation exhibited by his subjects and the relationship of scores on one section of the inventory to scores on other parts. There is, however, no presentation of data that demonstrates construct validity of the instruments. However, the dimensions which Cottle's instruments attempt to assess approximate the theoretically relevant time dimensions discussed earlier, and the instruments took relatively little time for subjects to complete. In the absence of available alternative instrumentation, therefore, it was decided to include these measures as an interesting preliminary exploration of the relationship

between personality integration and time perception and orientation.

Other Data: A biographical information sheet was also given to all subjects. This recorded data on age, class in school, and duration of group membership.

Scoring

The several instruments were scored according to the following procedures:

Personality Integration Reputation Test: Following the procedure described by Duncan (1964), the scoring of PIRT is a straightforward count of the total number of times each individual's name is nominated, summed across the six items. The resulting distribution is highly skewed, with a small number of individuals receiving a large number of the nominations. These persons were identified by simple observation of breaks in the distribution of nominations.

The number of subjects above the break in each group is partially dependent upon the size of the nominating group itself, and thus the larger cadet group had more members receiving a large number of nominations. This is reflected in the larger number of both PI and contrast subjects within the cadet group, compared to the seminary and fraternity groups.

Allport-Vernon-Lindzey (AVL) Study of Values: Detailed instruction for scoring are provided with the

instruments. Items on Part I ask subjects to distribute 3 points, 2 alternative indications personal preference. For example, choice "a" might get 2 points, while "b" gets 1 point or a 3-0 spread might be chosen. Each choice is designed to reflect one of the six value dimensions. Part II provides four alternatives, which are rank ordered by the respondent, with 4 points assigned to the most preferred alternative, and 1 point to the least preferred. Scores are basically the sum of points assigned for each value across all items. The final score, therefore, is six numbers, corresponding to the total number of points given to each of the six value dimensions. No alternatives were made in the standard scoring procedures, resulting in an ipsative profile of scores for each subject on the six values.

Self-other Orientation Method: Scoring procedures for completing of the self-concept, self-esteem, and openness followed Ziller's (1973) method. The complexity scores for each subject were the sum of items check on adjective checklist. Openness was scored by summing the number of circles connected to "self" on each of the six openness items of the instrument.

Self-esteem was scored by counting, from right to left, for each of the six esteem items in the instrument, the number of the circle marked "yourself." The extreme right circle was scored "1," the second circle "2," etc. The scores

from each item were summed, yielding a total score for each subject.

Time Orientation: The time instrument was scored following Cottle's (1976) method. For Experiential Inventory Scores, an arithmetic mean was computed, based upon the numbers assigned by subjects to each of their listed experiences with higher means indicating subjects' time perspective as relatively more future oriented. The Circles Test was analyzed to yield scores for each subject on temporal dominance and on temporal relatedness. Temporal dominance was scored by a procedure where subjects were categorized as past, present, or future dominant if the corresponding circle was drawn significantly larger than the other two circles. If no circle was significantly larger, the subject's category was "none." All classifications were based upon 100% agreement between two trained raters. Temporal relatedness was scored by assigning points based on the degree of overlap between the circles drawn representing past, present, and future. Completely "atomized" or separated circles received a score of zero. Two points were scored each time a circle was drawn touching another circle, while four points were assigned each overlap, and six points for a complete "engulfment" or encirclement of one circle by another (i.e., if one circle was drawn totally within another one). The points were then summed yielding the final relatedness score. The Lines Test was scored by simply measuring, in centimeters, the length

of the line segments demarcated by each subject. The distance between the left edge of the line and the marking for "Birth" was the score for Historical Past, while Personal Past was the distance between that point and the "Past-Present Boundary." From these to the "Present-Future Boundary" was the Present, and Personal Future extended from that boundary to the mark for "Your Death." Historical Future was the distance from this latter marking to the right edge of the line segment. The "Lifetime" score was the total distance in centimeters, from "Birth" to "Death."

Bieri REP Grid: The scoring procedure for the REP Grid followed the procedures discussed by Landfield (1977a), and made use of the FIC-Ordination computer program developed by him (1977b). The program yields scores for FIC, Ordination, and Meaningfulness. Each REP Test Grid was analyzed by matching each construct dimension (each row) with each other construct dimension, and noting each occurrence of agreement in usage of constructs when applied to the same role-title. The fewer the occurrences of overlap, the greater the functional independence of the two construct dimensions; conversely, more frequent overlaps indicate more functionally interdependent constructs. Following Landfield's (1977a) 70% criterion, in this study the cut off point for the independent-dependent criterion was six agreements out of the total of eight ratings made for each construct. The same procedure is applied to the columns of the grid ("People"), to yield FIC

scores for "Constructs" and "People." Those were summed, yielding a "total" FIC score for each subject.

Whereas FIC scores reflect the differentiation of a person's system, the ordination measure was developed (Landfield & Barr, 1976) to assess the degree of hierarchical relationship within an individual's set of constructs (i.e., the degree of integration within the system). There are several assumptions which underly this measure. Constructs are assumed to be hierarchically related, such that systems contain constructs which are superordinate to other, subordinate, constructs. These superordinate constructs are considered more meaningful, relative to the subordinate constructs for the individual. The ordination measure is designed to examine the relative superordinancy within the individual's set of constructs, assuming that relatively high ordination scores indicate a relatively high degree of system integration. The assumption underlying the use of this instrument as a measure of ordination is that a subject's use of a relatively superordinate construct will be reflected by greater ability to make finer discriminations between levels of extremity along that construct dimension. Therefore, when subjects make use of relatively superordinate constructs, they will demonstrate this by applying these constructs across a wider range of levels on the REP Test.

The procedure for obtaining ordination scores is somewhat more complex than that for the FIC scores, and is quoted

from Landfield (1977a). To compute the Ordination score on a given construct:

> . . . if the person has used four different levels of extremeness--for example, for scale points 0, 2, 3, 5, a score of 4 is multiplied by the difference between his highest and lowest ratings (5) and the ordination score is 20. If we want to obtain the ordination level of a particular (person) . . . we observe how he has rated that person across his . . . constructs. Again, the number of levels used is multiplied by the high-low rating difference . . . a correction factor for excessive use of a particular rating is explained by Leitner, Landfield and Barr (1975). (pp. 153-154)

Final Ordination scores are a combination of the average "Construct" ordination scores and "Person" ordination scores.

Meaningfulness scores are the sum of the extremity of ratings (distance from zero, or midpoint) for the construct and person dimensions. See Landfield and Barr (1976), for a more complete description of the computer-program designed to analyze REP Grids and produce the scores discussed here.

# CHAPTER III

## RESULTS

This chapter will present the results of the analyses performed on data collected for this study. The data pertaining to each hypothesis will be presented in order, followed by a presentation of the data analysis for variables about which no hypotheses were generated.

Hyp. 1: There will be no differences between personality integration (PI) and contrast subjects on the Allport-Vernon-Lindzey (AVL) Value Profile scores.

Hyp. 2: There will be significant differences between Groups on the AVL Value Profile scores.

Table 1 presents the results of MANOVA analysis performed on the AVL data. The results showed a significant main effect for groups, which provides support for Hypothesis 1, and no main effect for PI, which supports Hypothesis 2. There was no significant Group X PI interaction effect. To examine how the three groups differed from one another on the AVL, a second set of MANOVA analyses was performed, comparing each pair of groups on the set of AVL variables. These

Table 1

Results of MANOVA: Personality Integration X Groups X Allport-Vernon-Lindzey Scores

| Test Hypothesis | Pillai's Trace Statistic | F (d.f.) | p |
|---|---|---|---|
| No overall effect for Groups | V = .536 | 4.82 (12,156) | p = .0001 |
| No overall effect for PI | V = .070 | 0.98 (6,78) | p = .444 |
| No overall effect for Group X PI interaction | V = .112 | 0.78 (6,156) | p = .668 |

Note: Results for MANOVA tables (1-3) are presented in null hypothesis testing form.

analyses served, essentially as a MANOVA analogue to the a posteriori tests in univariate analysis of variable procedures.

Table 2 presents the results of these analyses. The results show significant differences between Groups 1 and 3, and 2 and 3, with no significant differences between Groups 1 and 2.

No further analyses of AVL scores, such as exploring on which specific values the groups differed, were performed due to the ipsative nature of the instrument. Subjects' scores on the several values are mathematically interdependent, and thus it was decided that value scores should only be analyzed as sets rather than as separate variables.

However, a verbal description of each Group's profile provides an interesting reflection of the Group's value orientation. The rank ordering of the AVL's six values for each Group are as follows: highest scoring values are presented first, with the Group mean score for that value in parenthesis.

Seminarians: Religious (52.4), Social (43.8), Aesthetic (38.8), Political (36.2), Theoretical (35.8), Economic (33.0).

Cadets: Political (44.5), Economic (43.6), Religious (41.0), Theoretical (38.1), Aesthetic (37.5), Social (35.2).

Fraternities: Political (43.6), Economic (43.3), Social (39.2), Theoretical (38.8), Religious (38.2), Aesthetic (36.5).

Table 2

Results of MANOVA: Groups X Allport-Vernon-Lindzey Scores
(Pairwise Comparisons)

| Test Hypothesis | Pillai's Trace Statistic | F (d.f.) | p |
|---|---|---|---|
| No overall effect for Group (Group 1 and 2)* | V = .128 | 1.37 (6,56) | p = .243 |
| No overall effect for Group (Group 1 and 3) | V = .564 | 9.26 (6,43) | p = .0001 |
| No overall effect for Group (Group 2 and 3) | V = .485 | 11.11 (6,59) | p = .0001 |

*Note: Group 1 = Fraternities
Group 2 = Military Cadets
Group 3 = Seminarians

When a relatively large number of dependent measures are used in a study and a series of ANOVA analyses are performed, the risk of Type 1 errors rapidly increases. Therefore, to hold down this risk a MANOVA analysis was performed upon the dependent variables as a group. Table 3 presents the results of this analysis. The univariate ANOVA analyses reported below are based upon this MANOVA; that is, the df and sums of squares for each variable in the tables that follow were calculated within the MANOVA procedure, rather than in separate ANOVA's for each variable. A comment on the multivariate statistic reported in this and other MANOVA tables is relevant here. Olsen (1976) reports that Pillai's Trace (V) is the statistic of choice when there is doubt as to the homogeneity of variance for each dependent variable; it is the most robust of the several multivariable statistics available, and the least likely to inflate the numbers of Type I errors.

The results show main effects for Group and for PI, with no Group X PI interaction. These results both justify the ensuing analyses to determine on which variable there are significant differences between the levels of PI and between Groups, and suggest that any PI X Group interactions which are found in the univariate ANOVA should be considered as spurious.

Table 3

Results of MANOVA: Groups X Personality Integration X Independent Variables

| Test Hypotheses | Pillai's Trace Statistic | F (d.f.) | p |
|---|---|---|---|
| No overall effect for group | V = .636 | 2.75 (27,130) | p = .0002 |
| No overall effect for PI | V = .460 | 4.97 (11,64) | p = .0001 |
| No overall effect for Group X PI interaction | V = .266 | 0.91 (27,130) | p = .586 |

Note: Dependent variables include: Complexity of Self-Concept, Openness, Self-Esteem, Personality Integration (TSCS), FIC, Ordination, Meaningfulness, Experiential Inventory, Age, Group Tenure, GPA.

Table 4 presents the means and standard deviations for each of the dependent variables, categorized by Group and by level of PI, as well as the total sample.

Table 5 presents the results of *t* tests performed on the dependent variable scores for which directional, a priori hypotheses had been made. The results indicate that the complexity of the self-concept variable produced the only scores on which the PI and contrast subjects differed in the predicted direction. The Openness and PI subscale (TSCS) scores approached significance ($p < .07$), while all others were clearly nonsignificant differences.

Hyp. 3: PI subjects, compared to contrast subjects, will demonstrate greater complexity of the self-concept by scoring higher on the Ziller complexity of the self-concept instrument.

Table 6 presents the results of the ANOVA analysis performed on the complexity of self-concept scores. The results indicate a significant difference between levels of PI in the predicted direction, giving support to Hypothesis 3. No significant differences between Groups and no significant Group X PI interaction were found.

Hyp. 4: PI subjects, compared to contrast subjects, will demonstrate greater cognitive differentiation by having higher FIC scores on the Bieri grid.

Table 4

Means and Standard Deviations for Levels of PI, Group, and Total N on Dependent Variables

| Variable | PI | | | Contrast | | | Fraternities | | | Cadets | | | Seminarians | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | SD | N | $\bar{X}$ | SD | N | $\bar{X}$ | SD | N | $\bar{X}$ | SD | N | $\bar{X}$ | SD | N | $\bar{X}$ | SD | N |
| PI Subscale (TSCS) | 11.67 | 4.09 | 42 | 10.09 | 3.33 | 46 | 11.50 | 4.30 | 24 | 9.60 | 3.59 | 40 | 12.25 | 2.91 | 24 | 10.84 | 3.78 | 88 |
| Complexity of Self-Concept | 46.63 | 12.83 | 43 | 38.93 | 17.46 | 46 | 44.96 | 21.42 | 24 | 40.62 | 12.21 | 40 | 43.68 | 14.81 | 25 | 42.65 | 15.79 | 89 |
| FIC | 5.82 | 2.62 | 44 | 5.85 | 3.31 | 46 | 5.63 | 2.87 | 24 | 5.77 | 2.81 | 40 | 6.11 | 3.40 | 26 | 5.83 | 2.98 | 90 |
| Ordination | 32.18 | 8.45 | 44 | 34.05 | 7.44 | 46 | 32.03 | 8.46 | 24 | 33.19 | 8.09 | 40 | 34.06 | 7.45 | 40 | 33.13 | 7.96 | 90 |
| Meaningfulness | 242.75 | 47.82 | 44 | 232.02 | 41.98 | 46 | 215.00 | 51.33 | 24 | 253.80 | 37.99 | 40 | 232.38 | 39.94 | 26 | 237.27 | 44.99 | 90 |
| Openness | 45.19 | 13.04 | 43 | 42.59 | 14.57 | 46 | 42.67 | 13.96 | 24 | 45.43 | 14.79 | 40 | 42.44 | 12.33 | 25 | 43.84 | 13.83 | 89 |
| Self-Esteem | 22.14 | 7.86 | 43 | 22.78 | 5.48 | 46 | 24.63 | 5.70 | 24 | 22.43 | 6.80 | 40 | 20.48 | 7.05 | 25 | 22.47 | 6.70 | 89 |
| Experiential Inventory | 2.61 | 0.55 | 41 | 2.62 | 0.61 | 46 | 2.49 | 0.46 | 23 | 2.77 | 0.66 | 39 | 2.49 | 0.51 | 25 | 2.62 | 0.58 | 87 |
| Age | 20.71 | 1.40 | 41 | 19.91 | 1.20 | 44 | 20.68 | 1.32 | 22 | 20.08 | 0.94 | 40 | 20.30 | 1.87 | 35 | 20.29 | 1.35 | 85 |
| Group Tenure (months) | 32.21 | 11.03 | 42 | 23.30 | 12.49 | 46 | 28.00 | 15.90 | 24 | 29.30 | 9.32 | 40 | 24.20 | 13.43 | 24 | 27.56 | 12.57 | 88 |
| GPA | 2.97 | 0.56 | 42 | 2.50 | 0.69 | 46 | 2.68 | 0.65 | 24 | 2.48 | 0.57 | 40 | 3.15 | 0.66 | 24 | 2.72 | 0.67 | 88 |

Table 5

*T* Tests for A Priori, Directional Hypotheses

| Variable | T | *df* | Significance (One-Tailed) |
|---|---|---|---|
| Complexity of Self-Concept | 2.35 | 88 | .02 |
| FIC | 0.00 | 88 | n.s. |
| Ordination | -0.98 | 88 | n.s. |
| PI Subscale | 1.58 | 86 | .07 (Approx.) |
| Self-Esteem | -0.73 | 87 | n.s. |
| Openness | 1.48 | 87 | .07 (Approx.) |
| Experiential Inventory | -0.39 | 84 | n.s. |

Table 6

ANOVA for Group X Personality Integration
X Complexity of Self-Concept

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 153.95 | 0.32 | .73 |
| PI | 1 | 1333.13 | 5.54 | .02 |
| Group X PI | 2 | 0.23 | 0.00 | .995 |
| Error | 74 | 17817.74 | | |
| Total | 79 | 19387.20 | | |

Table 7 presents the results of the ANOVA performed on the FIC data. The results indicate no significant main effects for Groups, or for PI. There was no significant Group X PI interaction. Hypothesis 4 is therefore not supported by these data.

Hyp. 5: PI subjects, compared to contrast subjects, will demonstrate greater cognitive integration by having higher ordinative scores on the Bieri grid.

Table 8 presents the results of ANOVA performed on the ordination data. The results indicate no significant main effects for Groups or for PI. There was no significant Group X PI interaction. Hypothesis 5 is therefore not supported by these data.

Hyp. 6: PI subjects, compared to contrast subjects, will demonstrate more permeable social boundaries by scoring higher on the Ziller "openness" instrument.

Table 9 presents the results of the ANOVA performed on the openness data. The results indicate no significant main effect for PI or for Groups and no Group X PI interaction. As reported in Table 5, however, the PI means do differ in the predicted direction ($\underline{t} = 1.48$) which approaches significance ($\underline{p} < .07$). Therefore, Hypothesis 6 receives some moderate support from these data.

Table 7

ANOVA for Group X Personality Integration X FIC Scores

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 2.998 | 0.15 | .86 |
| PI | 1 | 0.023 | 0.00 | .96 |
| Group X PI | 2 | 15.514 | 0.77 | .47 |
| Error | 74 | 747.809 | | |
| Total | 79 | 766.388 | | |

Table 8

ANOVA for Group X Personality Integration X Ordination

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 51.04 | 0.40 | .67 |
| PI | 1 | 61.34 | 0.96 | .33 |
| Group X PI | 2 | 51.33 | 0.40 | .67 |
| Error | 74 | 4749.52 | | |
| Total | 79 | 4909.84 | | |

Table 9

ANOVA for Group X Personality Integration X Openness

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 259.40 | 0.65 | .52 |
| PI | 1 | 439.34 | 2.19 | .14 |
| Group X PI | 2 | 141.32 | 0.35 | .70 |
| Error | 74 | 14873.66 | | |
| Total | 79 | 15672.19 | | |

Hyp. 7: PI subjects, compared to contrast subjects, will demonstrate greater self-esteem by scoring higher on the Ziller Self-Esteem Instrument.

The results of the ANOVA performed on the self-esteem data are presented in Table 10. The results indicate no main effects for PI or Group, with the significant interaction ($p < .05$) seen as statistically spurious, based on the insignificant Group X PI effect in the MANOVA discussed earlier. Therefore, Hypothesis 7 receives no support from these data.

Hyp. 8: The PI subjects, compared to contrast subjects, will demonstrate less orientation to the past by having higher scores on the Cottle Experiential Inventory.

Table 11 presents the results of the ANOVA performed on the Experiential Inventory data. The results indicate no support for Hypothesis 8, with no main effect for either Group or PI; the Group X PI interaction was also insignificant.

Hyp. 9: The PI subjects, compared to contrast subjects, will demonstrate more present and future orientations and less of a past orientation by more often being categorized as present and/or future dominant and less often past dominant on the Cottle Circles test.

Table 10

ANOVA For Group X Personality Integration
X Self-Esteem

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 156.815 | 1.78 | .18 |
| PI | 1 | 23.966 | 0.54 | .46 |
| Group X PI | 2 | 270.901 | 3.07 | .05* |
| Error | 74 | 3259.809 | | |
| Total | 79 | 3713.550 | | |

*Note: Overall MANOVA Group X PI interaction effect was not significant; this effect is therefore seen as spurious.

Table 11

ANOVA for Group X Personality Integration
X Experiential Inventory

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 1.397 | 2.02 | .14 |
| PI | 1 | 0.052 | 0.15 | .70 |
| Group X PI | 2 | 0.491 | 0.71 | .49 |
| Error | 74 | 25.526 | | |
| Total | 79 | 27.434 | | |

The results of chi-square analysis of the Time Dominance categorizations, based on the Circles Test, are presented in Table 12. The overall $X^2$ was insignificant, as were the $X^2$'s for each Group analyzed individually. The data give no support to Hypothesis 9.

Hyp. 10: PI subjects, as compared to contrast subjects, will have higher scores on the Personality Integration subscale of the Tennessee Self-Concept Scale.

The results of the ANOVA performed on the Personality Integration subscale of the TSCS are presented in Table 13. The results indicate no significant main effect for Group, although the effect approaches significance ($p < .06$). A Duncan's Multiple Range Test performed on the data indicates a direction of difference wherein the Cadet Group ($\overline{X} = 9.60$) scored lower than the Seminary Group ($\overline{X} = 12.25$) and the Fraternity Group ($\overline{X} = 11.5$), who did not differ significantly from one another $df = 74$, $MS_E = 13.44$).

The PI main effect did not reach significance, as reported in Table 5 the one-tailed $t$ tests for significance between the PI and contrast group means, which differed in the predicted direction, approached significance, reaching approximately the .07 level.

The results, therefore, give some minimal support to Hypothesis 10.

Table 12

Contingency Table for Group X Personality Integration X Time Dominance Categories

| | | Past | | | Present | | | Future | | | None | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Fr. | Cad. | Sem. | Fr. | Cad. | Sem. | Fr. | Cad. | Sem. | Fr. | Cad. | Sem. | Total |
| PI Level | 1 | 6 | 6 | 6 | 4 | 5 | 6 | 0 | 1 | 1 | 2 | 5 | 2 | 44 |
| | | Total | 18 | | Total | 15 | | Total | 2 | | Total | 9 | | |
| | 2 | 5 | 14 | 3 | 2 | 3 | 3 | 1 | 2 | 2 | 3 | 4 | 3 | 45 |
| | | Total | 22 | | Total | 8 | | Total | 5 | | Total | 10 | | |
| | | Total | 40 | | | 23 | | | 7 | | | 19 | | N = 89 |

Note: 1 = PI Group; 2 = Contrast

1. PI X Time Dominance Categories, $X^2 = 4.83$, $df = 3$, $p = .20$
2. PI X Time Dominance Categories X Group
   For Fraternity Group: $X^2 = 2.95$, $df = 3$, $p = .40$
   For Cadet Group $X^2 = 3.32$, $df = 3$, $p = .35$
   For Seminary Group: $X^2 = 1.96$, $df = 3$, $p = .58$

Table 13

ANOVA for Group X Personality Integration
X PI Subscale (TSCS)

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 77.093 | 2.87 | .06 |
| PI | 1 | 33.810 | 2.51 | .12 |
| Group X PI | 2 | 25.939 | 0.96 | .39 |
| Error | 74 | 994.834 | | |
| Total | 79 | 1140.487 | | |

Tables 14-18 present the results of analyses for the variables for which no theoretical derived hypotheses were made. These variables included Meaningfulness (Table 14), scores on the categories of the Lines Test (Table 15), GPA's (Table 16), Age (Table 17), and Group Tenure (Table 18).

The results of ANOVA performed on the meaningfulness data are presented in Table 14. The results indicate significant mean effects for PI and for Groups. The Group X PI interaction was insignificant. A posteriori analysis showed that the PI group mean was higher than the contrast group. Duncan's Multiple Range Test showed that the Cadet group scored higher than both the Fraternity group and the Seminary group; the latter two groups did not significantly differ from one another ($\alpha = .05$, PF = 74, MS = 1631.41).

Table 15 presents the results of MANOVA analysis performed on the scores for the categories of the Lines test. The results show a main effect for Groups, with no significant mean effect for PI. The Group X PI interaction was not significant. Inspection of the ANOVAs for the separate scores shows a significant Group effect on two scores: Life Time ($f = 3.43$; $p < .04$) and Historical Future ($f = 3.53$; $p < .03$). For the Lifetime scores, a posteriori analysis (Duncan's Multiple Range Test) showed that the means for the three groups were rank ordered as follows: Cadets > Fraternities > Seminary, with the Cadet > Seminary comparison as the only significant difference ($\alpha = .05$, df = 84,

Table 14

ANOVA for Group X Personality Integration X Meaningfulness

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 22032.281 | 6.75 | .002 |
| PI | 1 | 7799.945 | 4.78 | .03 |
| Group X PI | 2 | 2627.156 | 0.81 | .45 |
| Error | 74 | 120724.027 | | |
| Total | 79 | 151910.750 | | |

Table 15

Results of MANOVA: Personality Integration X Groups X Lines Test Variables

| Test Hypotheses | Pillai's Trace Statistic | F (d.f.) | Prob > F |
|---|---|---|---|
| No overall effect for Group | V = .240 | $1.82_{(12,\ 160)}$ | .05 |
| No overall effect for PI | V = .036 | $0.49_{(6,\ 79)}$ | .81 |
| No overall effect for Group X PI interaction | V = .145 | $1.04_{(12,\ 160)}$ | .42 |

MS = 6.845). For the Historical Future scores, a posteriori analysis (Duncan's Multiple Range Test) showed that the Group means were rank ordered as follows: Seminary > Fraternity > Cadets, with the Seminary > Cadets comparison as the only significant difference, ($\alpha$ = .05, df = 84, MS = 7.855). The results indicate that the groups differed on the Lines Test, with Seminary students, as compared to Cadets, recording significantly shorter Lifetime line segments, and significantly longer Historical Future segments.

Table 16 presents the results of ANOVA performed on the GPA data. The results indicate significant mean effects for Group and for PI. The Group X PI interaction was not significant.

A posteriori analysis indicates that the PI subjects reported significantly higher GPA's than the Contrast subjects. For the Group data, Duncan's Multiple Range Test showed that the Group mean GPA's were rank ordered: Seminary > Fraternities > Cadets, with the Seminary mean GPA significantly higher than the other two, which did not differ significantly from one another ($\alpha$ = .05, df = 74, MS = 0.352). It is likely that these results reflect institutional differences in grading policy, rather than "real" differences in scholastic ability, between groups. Therefore, it is difficult to attach much significance to this finding.

The results of ANOVA performed on the Age data are presented in Table 17. Results indicate a significant main

Table 16

ANOVA for Group X Personality Integration X GPA

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 5.147 | 7.31 | .001 |
| PI | 1 | 3.369 | 9.57 | .003 |
| Group X PI | 2 | 0.265 | 0.38 | .68 |
| Error | 74 | 26.055 | | |
| Total | 79 | 35.522 | | |

Table 17

ANOVA for Group X Personality Integration X Age

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 4.354 | 1.25 | .29 |
| PI | 1 | 13.860 | 7.98 | .006 |
| Group X PI | 2 | 0.972 | 0.28 | .76 |
| Error | 74 | 128.532 | | |
| Total | 79 | 148.800 | | |

effect for PI, while neither the Group main effect, nor the Group X PI interaction was significant. Examination of the PI and Contrast means indicates that the PI subjects were older than the Contrast subjects.

Table 18 presents the results of the ANOVA performed on the Length of Group Tenure data. Results indicate a significant main effect for PI, with nonsignificant Group and Group X PI interaction effects. Inspection of the data shows that the PI subjects have been members of their groups longer than the contrast subjects.

Upon discovering the strong relationship between PI and the GPA, Group Tenure and Age variables, which had not been directly predicted, it was decided to use these variables as covariate in a "post-hoc" series of ANOCOVA's, to investigate what effect these variables may have had on the significant impact on the main effects reported in Tables 5 and 13, respectively. ANOCOVA analysis, with age, month, and GPA as covariates of PI X Group for Complexity of Self-Concept resulted in a significant main effect for PI ($F = 5.06$, $p$ .03) with neither the Group nor Group X PI effect being significant. ANOCOVA for PI X Group for Meaningfulness resulted in significant main effects for Group ($F = 4.52$, $p$ .006) and for PI ($F = 6.64$, $p$ .002) with the PI Group interaction remaining insignificant.

Scores for Temporal Relatedness, as measured on the Circles Test, provide data which are ordinal in nature.

Table 18

ANOVA for Group X Personality Integration
X Group Tenure

| Source | df | SS | F | PR>F |
|---|---|---|---|---|
| Group | 2 | 308.489 | 1.26 | .29 |
| PI | 1 | 2443.009 | 19.93 | .001 |
| Group X PI | 2 | 438.095 | 1.79 | .17 |
| Error | 74 | 9072.597 | | |
| Total | 79 | 12155.950 | | |

In order to investigate the relationship of scores on this variable with the PI dimension, a point-biserial Spearman rank order correlation coefficient (rho) was computed; the results indicate no significant correlation between the two dimensions ($r_s = .06$, $n = 90$). Level of personality integration is apparently unrelated to the degree to which the "spheres" of the time dimension (past, present, future) are seen atomistically or interrelatedly as measured on the Circles Test.

# CHAPTER IV

# DISCUSSION

From the theoretical position developed in the introduction, several hypotheses were generated and tested empirically. Taken as a set, the hypotheses proposed that the term "personality integration" is a meaningful and useful theoretical construct. More specifically, it was suggested that people could be identified as currently functioning at different levels of integration and that these levels would be characterized by predictable differences along personal and interpersonal experience-processing dimensions related to the person-as-open-system model described earlier. Further, it was hypothesized that these differences between levels of personality integration would be relatively consistent across groups of people who differed in the "content" of their life choices (i.e., the differences would be independent of differences in value orientation, life style, and life goals). This discussion will focus upon the nature of support and confirmation of these hypotheses presented by the present data, as well as pointing to unsupported aspects of the position. Methodological strengths and shortcomings will then be examined,

followed by brief presentation of questions and issues to be explored by future conceptualizing and research.

Possibly the most striking outcome of this study, providing broad support for both personality integration as a construct, and the Personality Integration Reputation Test (PIRT) as a method, is the consistency of results across subcultural groups. Subjects identified as highly integrated did not differ from one another as a function of group membership; this is represented statistically by the group-PI (personality integration) interaction not having significant impact on the results, although there were multivariate and univariate differences, distinguishing between subcultural groups and between levels of personality integration. Following the open system model developed earlier, the process which characterizes personality growth and integration can occur in a variety of subcultural contexts, to the extent that the groups do not exert forces which require closed-system behavior from its members and/or the individual members cannot successfully modify or eliminate such growth stopping forces. Similarly, of course, less integrated persons can also be identified in a variety of subcultural contexts, and the functioning of these persons can be expected to demonstrate less open--and more relatively closed--system characteristics.

In the present study subjects were selected from groups which differed from each other along several content dimensions. The Allport-Vernon-Lindzey (AVL) data, for

example, demonstrate differences in value orientation. The education and training provided at the three institutions reflect differences in the career goals of its members, with the seminary preparing its students for ministerial and teaching work, the military academy having a strong scientific engineering component to its curriculum, while the fraternity members, enrolled in a large public university were enrolled in major programs ranging from agriculture to prelaw. Similarly, the content of life-style patterns was noticeably different from group to group. Cadets wore uniforms, lived within a relatively structured time schedule, and had parade training grounds in the center of their campus. The seminarians attended daily services, and lived in an environment rich in religious symbolism and reminders, with the Chapel in a central location on campus.

Fraternity functions included rival participation in athletic competition, and inter- and intra-group social activities, and they were housed in physical structures with a large living-meeting-socializing area at their centers. Certainly the physical/social environments, and concomitant value orientations differed between groups, yet the highly integrated subjects differed from the contrast subjects consistently, across groups, on several relatively content free, "process" dimensions. These included complexity of the self-concept, GPA, Age, and Group Tenure, and, to a less clear-cut degree, openness.

This group of variables lends itself to examination as a set, with a pattern emerging which is consistent with the open system perspective. The first and last variables (complexity and openness) pertain directly to the theoretically derived hypotheses, and within the limitations of methodology discussed below, provide support for the relatively greater "complexity" and "openness" attributed to healthily functioning, open person/systems, compared to less integrated and relatively closed person/systems. The GPA and Group Tenure results suggest that along several dimensions, similar to what Adler (1964) called life-tasks, the PI group was highly successful at attaining its goals. In work or career tasks, the higher GPA suggests successful movement towards short term (course work) and long term (career) goals. As noted earlier, Duncan (1964) ascribes the higher GPAs found in PI subjects to more efficient usage or information, rather than to a higher level of intelligence, and his GPA/intelligence data support this suggestion. This is consistent with the position developed here, which suggests that personality integration is associated with increased openness to awareness of, and ability to process goal-relevant information from other, higher order systems. The interpersonal success of the PI subjects is pointed to by the Group Tenure data. Most simply stated, they have chosen to remain in systems within which their style of functioning has proven successful for meeting their needs

and goals. Certainly there are many potential motivators for continued membership, which are not necessarily mutually exclusive, including fear of leaving, and an unwillingness to resist group maintenance forces.

However, the possible prominence of the social success hypothesis for the group of subjects is supported by the very nature of the PIRT nomination procedure. These are the people seen by their peers as being the most interpersonally valued members of the group. This collective perception forms the basis for supportive and powerful feedback to the PI subjects that their interpersonal behavior is seen within the group context, as highly consistent with successful interpersonal goal attainment. In sum, a pattern of increased complexity, openness to and efficient use of information from the larger social system(s) is associated with successful life goal attainment by the individual person/system from within the given group context. As long as the individual's goals remain congruent with the group's values, and its level of interpersonal functioning remains consistent, then the powerful positive feedback system is maintained and developed, and the person continues his relationship with the group.

The relationship between "meaningfulness" of construct usage as measured by the Bieri, Atkins, Briar, Cobeck, Miller, and Tripodi's (1966) REP Test and PI was not predicted, and is worthy of brief, though admittedly speculative discussion

pertaining to both methodology and conceptualization of the findings. The methodological issue relates to the difficulties of interpreting the results of the Bieri grid data. The variables which were predicted to distinguish between PI levels, but did not, were scores on FIC (differentiation) and ordination (integration), whereas, meaningfulness did.

An important point to focus upon here is the method of analyzing grids which was employed. Landfield's (1977a) procedure was developed to analyze how individuals made use of their own (elicited) constructs. That is, he was examining a pattern of construing based upon constructs which had emerged from the subject's own system, and was thus highly individualized. In this study, however, the subjects were provided with a set of construct dimensions to then apply to people they knew. Regardless of how close the provided constructs are to their own personal dimensions, a case can be made that the meaning of the task is qualitatively different in the two situations. The "provided" format seems, in essence, to examine how subjects apply a standard set of stimuli rather than the personal constructs which emerge as most appropriate to the individual for the set of role titles, as in the "elicited" format. With the provided format, FIC scores would then reflect the degree of independent usage of dimensions which may or may not have personal relevance to the subjects. Similarly, ordination scores may, in this format, reflect the degree to which those standard stimuli are

an integrated "subsystem" of the subject's own construct system. Therefore, there would be no a priori reason to expect the resulting score to accurately represent the integration within the subject's entire personal construct system, or to expect PI subjects to differ from contrast subjects on these scores. The alternative explanation, that PI and contrast groups simply do not differ on three complexity dimensions must also be considered, but the previously reported work of Thomas and Seeman (1971), Wexler (1974), and the other complexity data from the present study would argue against such a position. Returning now to the meaningfulness data, an alternative explanation for the resulting difference in extremity ratings is possible. It may be that these scores, which represent the usage of extreme ratings in applying the provided constructs to people, may be the best indication from the grid data of differences in construing style between the two levels of PI. High scores here may reflect greater willingness to risk nontentative certainty in evaluating personal relationship along somebody else's dimensions. In other words, these scores may indicate more efficient and confident decision making and have little to do with the meaningfulness or centrality of these constructs to the subjects' own systems.

It is also possible for extremity scores to represent a "response set," rather than a series of meaningful choices. It may be this factor which accounts for the higher mean

scores for the Cadet Group compared to the other two. That there may be different factors which account for differences between groups on one hand, and for difference between PI level on the other, seems supported by the lack of statistical interaction between the main effects. In other words, the difference between the PI levels was consistent across groups, as was the diference between the Cadet and other groups consistent across PI level, and thus the findings need to be accounted for separately. This, of course, does not rule out the possibility that a common principle accounts for both difference, but does lend credence to the discussion of separate explanations for the two findings.

The Time Orientation data revealed no differences between PI and contrast subjects. Three alternative explanations for the findings, which focus upon the hypothesis, the instruments, and the conceptualizations of the problem, respectively, will be discussed.

The first, which is the most direct extrapolation from the data, is that there are no differences in orientation towards time dimensions which are related to level of PI (i.e., the hypotheses were simply incorrect). Accepting this alternative, however, is also an implicit acceptance that the instruments used were adequately measuring what they were supposed to measure. As described earlier, the validation process for these devices has been minimal, and their usage in the study was exploratory, and in a sense, an attempt to

provide further validation for the instruments. That the devices did not discriminate between the PI levels as predicted leaves the validity question open. The hypothesis may still be viable, but the instruments were a poor empirical test; the instruments may have been adequate, but the hypothesis simply not supported. Of course, both the instruments and hypotheses may have been poorly constructed; the only clear result is that the hypotheses, as tested, were not supported.

Another perspective on these data is also possible, and is possibly the most plausible. It may be that the hypotheses, as worded and tested, were poorly conceptualized in relation to the systems theoretical position. As discussed earlier, open systems were described as goal oriented; that is, they move towards goal achievement rather than functioning purposelessly. Then, well-functioning systems, relative to poorly functioning system, might be expected to (a) have explicitly defined short and long term goals, (b) have explicit plans or strategies for achieving these goals, and (c) be behaving in accordance with these plans. Thus, although the goal directed behavior described here is, in a sense, future oriented, it is not necessarily tied to beliefs about time, or to the relative importance attributed to the past, present, or future time zones by subjects. Thus, for example, a person may demonstrate an active goal-orientation while attributing a great deal of value to his personal and/or

cultural past as the source of his creative ideas or successful behavior. On the Cottle (1976) instruments this person would be likely to have a relatively low experiental inventory score, he might be categorized as Past Dominant, and he might draw long personal and/or historical past line segments, relative to his future segments. His scores on the instruments would be an accurate representation of his beliefs about these time dimensions, yet would not reflect his activity future-oriented and goal relevant behavior.

Indirect support for this position comes from two data sources. The first is from the time instruments themselves, specifically the Lines Test. Though not predicted, there were differences between Groups, with the Seminarians having the shortest Lifelines and longest Historical futures compared to the other groups. These data make intuitive sense when considered as indicative of beliefs about the relative importance of time after death, where the Seminarians would be expected to have more clearly defined and highly valued beliefs about the extended time after one's personal death compared to the other groups. This finding can then be seen as supportive (though in an admittedly post-hoc fashion) of the proposition that the Time Instruments are measuring beliefs about time, rather than providing an indication of the degree to which current behavior is oriented towards explicating and achieving future goals. The second source is the GPA data discussed earlier. To the extent that GPA's

reflect degree of success in short and long term goal relevant behavior, the PI subjects compared to the contrast subjects were clearly more successful than contrast subjects, though they were not necessarily more intelligent (see discussion above), nor did they hold consistently different beliefs about the relative importance of the future, past, or present, as measured by the Time Instruments. In sum, then, the results derived from the Time Instruments do not support the hypotheses as worded. Though no conclusive explanations can be offered, the need for more sophisticated conceptualization and operationalization of Time- and goal-related hypotheses relevant to open systems theory is suggested as important consideration for future work.

The data concerned with Hypotheses 7 and 10 (the self-esteem and PI subscale instruments) remain to be discussed. Neither of these hypotheses were supported by the data. The self-esteem results are particularly surprising, in that the PI subjects, in comparison to the contrast group, are both perceived as more successful interpersonally by their peers (demonstrated by their PIRT nominations) and are experiencing greater academic success, as shown in GPA's. Given these "ingredients," it makes theoretical sense that the PI subjects would demonstrate higher self-esteem, as they have other studies (Fitts, Adams, Radford, Richard, Thomas, Thomas, & Thomspon, 1971). Such counter-intuitive results suggest four considerations. The first, which is

theoretically unlikely, is that self-esteem is not related to personality integration, and the data are accurate representations of this independence. The second possibility is that the PIRT instrument is not a good instrument for selecting groups of subjects differing on level of PI; the construct validity data cited earlier, as well as the other results of this study, however, provide support for the PIRT method. A third possibility would be that the instrument does not adequately measure the dimension, and thus the results would not be expected to differentiate PI levels. The validity data for the esteem instrument presented earlier, however, suggest that a simple "no validity" disclaimer is not sufficient. The fourth consideration, which seems more likely, is that the PI and contrast groups did not differ enough in degree of personality integration for this self-esteem instrument to discriminate between the groups. As mentioned earlier, the contrast group members were not an "extreme" group, since all had at least one PIRT nomination. The esteem instrument's validity data, however, were based on relatively extreme groups (e.g., sociometric "stars" and "isolates"), and extreme situations (e.g., political winners and losers) (Ziller, 1973), and it may simply not be sensitive to differences between nonextreme groups such as these. An empirical exploration of this issue would be possible by employing the Ziller instrument along with other self-esteem instruments which have been used to measure subtle differences or changes

in self-esteem, such as the complete TSCS, and/or a "self-ideal" Q-sort procedure, to see if the results from alternative instruments do indicate significant differences as predicted, and if the Ziller instrument remains consistent in not detecting differences.

The PI subscale of the TSCS was employed as a "validity check" under the hypothesis that PI subjects, selected by the peer nomination PIRT method, would score higher than contrast subjects on the written scale format of the TSCS. The results provide marginal support, with the differences between levels of PI being in the predicted direction, and approaching, but not reaching, the designated level of significance.

Again, there may be more than one reason why the difference between PI levels was not as strong as had been predicted. First, the effect of utilizing the subscale items separated from the entire TSCS is an unknown factor, which was necessitated by the time limitation discussed earlier. Second, and probably more influential, is the difference between the subject selection method used in this study and the procedures used in previous studies utilizing both the TSCS and PIRT. These have tended to base their selection of high PI subjects on nominations from more total subjects divided into more subgroups than the present study. For example Seeman (1966) used 695 initial subjects from 16 subgroups (dormitories, sororities), resulting in a sample of

23 PI and 20 contrast subjects. Thus, his selection of PI subjects focused upon, roughly, the two subjects from each subgroup receiving the most nominations. This was considerably more selective than the present study, in which more subjects from each of the considerably smaller number of groups (three) were included in the PI sample.

Additionally, Seeman's (1966) contrast group was selected via a random selection process of all 695 subjects, whereas the present study selected contrast subjects only from those receiving at least one nomination. This latter procedure is considerably more restrictive, effectively excluding the very poorly integrated subjects from the sample, whereas Seeman's study may well have included relatively poorly functioning people in his contrast group. In other words, the selection process in this study worked against finding PI-Contrast group differences by the systematic inclusion and exclusion, respectively, of subjects who might have influenced the degree of difference between group means. This argument, of course, holds for the other dependent variables too, and provides additional impact for the differences which were found between levels of PI, since the selection process was working against, rather than towards, finding significant differences.

Exploratory studies of this type, which make use of a variety of instruments in several population groups while investigating abstract constructs such as personality

integration, often raise many more questions than are answered. Certainly the present study is no exception. The results here do support the construct validity of personality integration across subcultures, and suggest that there are identifiable process dimensions which differentiate highly integrated persons from less integrated peers. The generalizability of the results to female populations, however, requires further research. Important questions surrounding methodology, theory, and application remain, as well. Methodologically the measurement of theoretically relevant dimensions remains a difficult area for future research to pursue. Specifically, the validity problems discussed above concerning the provided form of the Bieri grid, and the possible misapplication of the Time instruments in assessing the "future goal orientation" that is theoretically relevant suggests that reexamining these dimensions with more appropriate instruments, such as an elicited grid format would be fruitful to examine before dropping the hypotheses that construct system complexity and future goal orientation are differentiating characteristics between PI and construct subjects.

Other processes were described earlier as descriptive of healthy system functioning, yet were not directly investigated in this study. These included, for example, the maintenance of flexible boundaries, and efficient use of internal and external feedback in movement towards goals.

Both of these present difficulties in measurement, since they involve problems with identifying the relevant data or behavior. For example, from whose perspective is external data either goal-relevant feedback, or simply additional, extraneous "noise"? How does the "boundary" of a personality system get identified, let alone rated as to its relative flexibility? These issues, though difficult, are not necessarily insurmountable. Fisher and Cleveland's (1968) work with "barrier scores" derived from projective assessment instruments is a potential starting point, although the validity of this score as a measure of boundary permeability would need empirical investigation. Another possibility would include developing a grid method whereby boundary permeability is examined indirectly by assessing change in construing as a result of new data from a variety of social situations.

Though beyond the scope of this study, the potential implication of the open-systems model for the counseling process will also need elaboration and research. For example, one set of parameters in the selection and training of counseling trainees may be the degree to which characteristics of open systems are descriptive of the trainee's interpersonal functioning (e.g., complexity, openness, effective use of feedback). The importance of the complexity dimension (i.e., increasing diversity and integration of the system) is given theoretical support from Kelly's (1955) "sociality corollary,"

which contends that a person may be involved in a social relationship with another only to the extent that that person can construe the construct system of the other person. Implicit here is a hypothesis that persons with relatively more complex systems, which include more construct dimensions, will more easily be able to play important social roles (e.g., counselor) to a wider range of people (clients) than will counselors with less complex systems.

Also germane here is conceptualization of counseling process. The constructs used to describe both personal difficulties and the goals and techniques of intervention can be considered in systems terms, as Hofstatter and Manat (1973) pointed out. To the extent that (a) personality integration is considered a goal of counseling, and (b) the open system characteristics described here are descriptive of integrated people, then the assessment of personal problems and the formulation of counseling goals can be conceptualized in open-system terms. For example, how has the client's functioning taken on characteristics of a relatively closed system? Are boundaries closing to feedback? How is potential feedback not being used in moving towards goals or in changing unrealistic goals? In what areas of a client's life has a "growth stoppage" occurred wherein movement towards more complex construing and acting became stagnant (due, possibly, to boundaries grown impermeable to exchange of information with relevant positions to the client's world). In sum, the

concepts developed and used in describing personality integration from a system's perspective are potentially useful in conceptualizing both the problems presented by clients and desired directions for the counseling process.

To briefly recapitulate, this chapter has discussed the degree to which results of the study supported the research hypotheses, and these were seen as lending moderate support to the overall open systems discretion of personality integration. Difficulties in instrumentation and conceptualization were elaborated upon, followed by suggestions for future empirical and theoretical work.

# APPENDIXES

# APPENDIX A

# PERSONALITY INTEGRATION REPUTATION TEST

PERSONALITY INTEGRATION REPUTATION TEST--Duncan, 1964

Instructions used:

On the following pages there are some questions which deal with certain kinds of actions. For each question, you will be asked to nominate the three persons who are members of this group who seem to exemplify this behavior more than others. In making your decisions about who to nominate for each question, try to think back and recall actual instances when the person displayed the described behavior. The questions are not trying to discover the most popular members of the group, so try to eliminate that concept in making your decisions.

You should nominate three separate persons for each question. However, you may use the same name as many times as you like on different questions. The order in which you list the names is unimportant.

QUESTIONS FOR PERSONALITY INTEGRATION REPUTATION TEST

1. Who are the persons who seem best able to express their feelings without hurting the feelings of others?
   (1) _____
   (2) _____
   (3) _____

2. Who are the three persons in the group who seem to understand themselves best, that is, are aware of their shortcomings and strengths?
   (1) _____
   (2) _____
   (3) _____

3. Who are the three who seem best able to keep an open mind and not jump to premature conclusions?
   (1) _____
   (2) _____
   (3) _____

4. Who are the three persons who seem the most able to deal effectively with everyday tensions and anxieties?
   (1) _____
   (2) _____
   (3) _____

5. Which three people seem most capable of forming deep and profound relationships with others, and seem to be genuinely concerned with other people?
   (1) _____
   (2) _____
   (3) _____

6. Which persons seem to you to have been the most successful in all phases of their life: social, personal, and educational, etc.?
   (1) _____
   (2) _____
   (3) _____

# APPENDIX B

# TIME INVENTORY

1. Experiental Inventory

Your Number: _____

Please list the ten most important experiences of your life. These may be experiences that you have had, you are having, or/and experiences you expect to have. You only need to write a few words for each experience. You may list your experiences in any order you wish.

1. _____ _____
2. _____ _____
3. _____ _____
4. _____ _____
5. _____ _____
6. _____ _____
7. _____ _____
8. _____ _____
9. _____ _____
10. _____ _____

Now that you have listed 10 experiences, please study the time zones below:

1. Distant Past
2. Near Past
3. Present
4. Near Future
5. Distant Future

Take each experience and decide if it has occurred, is occurring, or will occur. Then choose the number of the time zone that best represents the time of each experience and write this number on the dotted line in front of each experience. For example, if the first experience you listed will happen in the distant future, you would place a "5" on the dotted line next to your description of this experience. Do this for all ten experiences.

2. Circles Test

Your Number: _____

Think of the past, present, and future as being in the shape of circles. Now, in the space below, arrange these circles in any way you want that best shows how you feel about the relationship of the past, the present, and the future. You may use circles of different sizes. When you have finished, label each circle to show which one is the past, which one the present, and which one the future.

3. Lines Test

Your Number: _____

Think of the line below as representing the passage of time. Make 4 marks to represent the moments of your birth, your death, and the boundaries of the present: where the past ends and the future begins. Please number each mark as follows:

1 = Birth
2 = Past-present boundary (where the past ends)
3 = Present-future boundary (where the future begins)
4 = Your death

# APPENDIX C

# BIERI REP TEST

Your Number: _____

INSTRUCTIONS

In each of the eight spaces provided at the right, please list the first names or initials of one person who most closely matches the provided description. These should be people that you know personally. Do not repeat any names. When you are finished you may keep this list of names, so write the name or any other identifying information on the lines just so you will know who that person is.

Next, I want you to rate each of these eight persons on a number of characteristics which are listed on the following pages. On each page you will find a list of eight characteristics, one next to each name. Begin by deciding how you would rate person "1" (yourself) on the first characteristic ("decisive-indecisive"). "+6" means person 1 is very decisive; "-6" means he is very indecisive. You may also use +5, +4, +3, +2, +1, -1, -2, -3, -4, or -5 to indicate your estimate of this person on this characteristic. You should use the "0" rating only if the characteristic does not apply to that person.

After you have rated person 1, move to the next characteristic and rate person 2, again using +6, +5, +4, +3, +2, +1, 0, -1, -2, -3, -4, -5, -6. After you have rated all eight persons, go on to the next page and begin again with person 1. There are 8 pages to be completed; please do not leave any blanks and work quickly, as I will stop you after 15 minutes have elapsed.

| +6 | +5 | +4 | +3 | +2 | +1 | 0 | -1 | -2 | -3 | -4 | -5 | -6 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | decisive | | | | | | | | | indecisive | | | _____ | 1. | _____ 1. |
| 2. | considerate | | | | | | | | | inconsiderate | | | _____ | 2. | _____ 2. |
| 3. | adjusted | | | | | | | | | maladjusted | | | _____ | 3. | _____ 3. |
| 4. | dominant | | | | | | | | | submissive | | | _____ | 4. | _____ 4. |
| 5. | cheerful | | | | | | | | | ill-humored | | | _____ | 5. | _____ 5. |
| 6. | outgoing | | | | | | | | | shy | | | _____ | 6. | _____ 6. |
| 7. | friendly | | | | | | | | | unfriendly | | | _____ | 7. | _____ 7. |
| 8. | interested in others | | | | | | | | | self-absorbed | | | _____ | 8. | _____ 8. |

OVERLAY SHEET

1. Write your name in the first blank here.
2. Write your father's name here. If you grew up with a stepfather, write his name here.
3. Your closest opposite sex friend (or spouse, if married).
4. Your closest friend of the same sex.
5. Write your mother's name here. If you grew up with a stepmother, write her name here.
6. A person you would most like to help or for whom you feel sorry.
7. The person you dislike most.
8. The most successful person you know.

Note: There were 8 pages with these constructs listed such that each construct is paired with each role title.

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# BIOGRAPHICAL SKETCH

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Martin J. Amerikaner was born in New York City on September 29, 1950. He graduated from Newtown High School in June, 1968, and later received a BA degree from the State University of New York at Albany. He enrolled at the University of Florida for graduate study in personality and counseling psychology in Fall, 1973, and received an MA degree in 1975. He is currently a candidate for the Ph.D. degree at the University of Florida, and is employed as an Assistant Professor, Department of Counselor Education, University of Houston.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Franz R. Epting, Chairman
Associate Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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