THE CONSTRUCTION OF AN INSTRUMENT

TO ASSESS HEATH TYPOLOGIES

IN A RESIDENT ADVISOR

POPULATION

by
Jane Leslie Agar

Thesis submitted to the Faculty of the Graduate School
of the University of Maryland in partial fulfillment
of the requirements for the degree of
Master of Arts
1978

APPROVAL SHEET

Title of Thesis: The Construction of an Instrument to Assess
Heath Typologies in a Resident Advisor
Population

Name of Candidate: Jane Leslie Agar
Master of Arts, 1978

Thesis and Abstract Approved: _L. Lee Knefelkamp_____
L. Lee Knefelkamp
Assistant Professor
Department of Counseling and
Personnel Services

Date Approved: 12-8-78

ABSTRACT

Title of Thesis: The Construction of an Instrument to Assess
Heath Typologies in a Resident Advisor
Population

Jane Leslie Agar, Master of Arts, 1978

Thesis directed by: L. Lee Knefelkamp, Assistant Professor,
Department of Counseling and Personnel
Services

This study focuses on the application of Roy Heath's theory of personality style to a specific population of undergraduate student assistants within the resident hall environment.

A primary objective was to develop an instrument which could be used as an alternative to the Heath Modes of Existence test for assessing the style of particular individuals. To this end, the Resident Advisor Heath Typology Instrument was created. This instrument contained 48 items and was constructed using a likert type scale. It was administered to 45 Resident Assistants enrolled in a leadership training course at the University of Maryland. These students also completed Heath's Modes of Existence test. In addition, a group of expert raters were asked to assess the Heath style of these 45 resident assistants.

Analysis of these three sets of data indicated that Heath and likert typings agreed in 66.67% of the cases; Heath typings and expert ratings agreed in 77.53% of the cases; and likert typings and expert ratings agreed 84.10% of the time.

These results show both the Modes of Existence test and the Resident Advisor Heath Typology Instrument to be valid measures of personality style. These results also support the hypothesis of the author that accurate typology assessments could be

obtained from a specific population within a particular
environment.

DEDICATION

This thesis is dedicated to Sun. Without his patience, support, caring, and daily assistance, this project could not, and would not, have become a reality.

ACKNOWLEDGMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

Chapter I

Introduction

The purpose of this study was to develop an instrument that could assess the personality style of a group of undergraduate residence advisors. In recent years there has been a growing diversity and richness in the study of the college student and the process of development. In addition, attention is increasingly being focused upon the context in which the individual student finds himself, and the often times very special nature of the challenges and rewards that this environment presents.

Purpose

The residence environment has been a continuing focus of study and investigation on student development. Our understanding of the of the significance, and the potential impact of this environment continues to grow. As this understanding develops, attention has been focused upon the tole of the student residence advisor. The student advisor is seen as one who cannot only administer a wide variety of services, but who can also counsel, advise and promote the development of their peers in residence.

It is clear that the role of, and the demands placed upon these student assistants have not only grown, but have become more sophisticated as well. Yet, while many writers have described, and many

practitioners have implemented comprehensive training and development programs, one critical element seems to be lacking- a focus on resident advisors, as ends in themselves and not just means to the residence life program.

As we develop jobs, and job descriptions that include multiple roles, we need also to focus our attention upon the individuals who will be filling these roles. It is unreasonable to assume that all students will be able to perform all behaviors equally. There are individual differences in approach and performance. It becomes, therefore, a responsibility of the professional/practitioner to be able to identify and to understand these individual difference, and to base training and development of these students upon this understanding.

The utilization of a theoretical framework allows to take two important steps:

> (i) to identify behaviors and patterns of behavior, and
>
> (ii) to understand the underlying dynamics and determinants of behavior.

As is common, many questions arise when we seek to understand those around us. Yet the issue becomes more complex, for as educators we are both professionally and philosophically committed to promoting and facilitating student development. And in our work with a specific group of resident advisors there are pragmatic concerns as well, for if we can make them better at what they do, the effect will be transmitted to the larger community as well.

Roy Heath's work provides us with a framework for conceptualizing individual differences, and perhaps for developing answers

for some of our questions. Moreover, the model, which includes an anal-
ysis of three basic personality types, is centered in the context of
higher education and is easily understood. Additionally, the model
has a dual focus in examining individual style along a developmental
dimension. Heath explores the movement towards maturity of each of
the three types, thus enriching our understanding of the interaction
of individual differences and development.

The Problem: Developing an Instrument to Assess Heath's Personality Styles

Heath's model provides a framework for understanding personal-
ity style and the nature of individual differences. The model is
intended to further our understnading of the students with whom we
work. However, if this model is to be both useful and usable, there
must be an effective and efficient method to assess style. Heath has
based his model and assessment promarily upon his clinical observa-
tions. And while the publication of the "Modes of Existence" test
in 1976 provided the first written approach to typology assessment,
the instrument is clinical technique whose scoring rules are ambi-
guous and thus whose usefulness to the practitioner is limited.
Therefore, the question that this study seeds to answer is:

> Can a behaviorally oriented instrument be
> developed to assess the Heath typology of
> a specific group of students within a
> particular environment?

If we are able to do so, then not only have we narrowed the gap between
theory and practice, but we have also created new avenues for under-

standing the special needs of our students, and for developing effective approaches based upon this understanding.

Chapter II

Review of the Literature

This study will focus on the application of a particular theory of college student development to a specific population within the residence hall environment. In studying college students, and theorists of student development, we can look to three primary school of thought: cognitive developmental theorists, person-environment theorists and ego-identity theorists. While each school has its own set of assumptions, they share a common perspective in the belief that development occurs as a result of the interaction between the individual and the environment.

Cognitive Developmental Theorists

Cognitive developmental theorists talk about the ways in which a person organizes and perceives his world. The individual is seen as actively interpreting the external world in selectively attending to and imposing order onto stimuli.

Cognitive developmental theory assumes a mediating structure (some type of relatively fixed pattern for experiencing the world) which is central in determining how a person perceives and interacts with external reality. Development is seen to occur through the interaction of the person and the environment, as the environment presents disequilibriating or dissonant stimuli which cannot be handled through existing structures. Therefore, the individual is moved to develop in order to admit more complexity (Knefelkamp, 1976). Development proceeds sequentially and hierarchially (with respect to complexity) through stages, with each stage

both including those that have preceeded it, and previewing
the stage to come.

Person-Environment Theorists

Theorists in this area focus on the interaction between
the press of the environment and the needs of the individual.
Person-environment theorists believe that an individual's
actions represent the needs of the individual, and that these
interact with the "press"- the challenges or demands presented
through the environment. However, there are several different
conceptual approaches taken by theorists in this area.

The Subcultural Approach

A primary assumption of theorists in this area is the
existence of subcultures, or groups of people that "...interact
with one another...are mutually attracted to one another...and
are aware of their common orientation" (Walsh, 1973, p. 41).
Clark and Trow (1960,1966) have proposed a model in which four
subcultures are identified. These subcultures are   based
upon the extent to which students identify with ideas and with
their college. A subculture in which the members strongly
identify with both ideas and the school is termed "Academic".
A "Collegiate" subculture is one where members identify
strongly with the school, but are not involved in academic
persuits. Individuals in the "Vocational" subculture do not
identify with with the school or with an academic orientation.
However, members of this subculture share a vocational
orientation, a belief that the college experience will prepare
them for a job or career. The fourth subculture that Clark
and Trow have identified is termed "Nonconformist", and is

composed of individuals who are not strongly involved with either the school or with academic activities. However, there is not a shared orientation among members of this particular group; it is simply composed of those who did not fit elsewhere.

Clark and Trow believe that students may participate in more than one subculture, but that an individual's orientation will most often be determined by his participation in one primary subculture.

Needs Press

This theory has its foundations in the work of Kurt Lewin (1936), who proposed that behavior is a function of the person and the environment. Using this formulation, Murray (1938) developed a needs-press model, an approach that has as its most current advocate George Stern (1970).

The primary assumption of this approach is that behavior is a function of the relationship between the individual and the environment. Two underlying assumptions are that the psychological significance of people can be inferred from behavior, and that the psychological significance of the environment can be inferred from behavioral perceptions (Walsh, 1973). Needs are characterized by the tendency to perform particular actions, and are assessed by Stern's Activities Index. Environmental press has been defined by Stern as the demands of the environment as they are perceived and reported by members of the environment. Moreover, Stern believes a congruent relationship between the needs of the individual and the press of the environment will produce satisfaction, while a dissonant person-environment relationship will result in stress.

John Holland

Holland has been classified as a person-environment theorist, although he is also recognized as a theorist of human personality development. Holland assumes that people may be characterized by their resemblance to one or more personality types, which are a cluster of personal attributes. Holland has defined six types: Realistic, Investigative, Enterprising, Artistic, Social and Conventional, as well as six corresponding environments. Holland hypothesises that individuals search for, and are most satisfied within environments that match their personality type. That is, a congruent person-environment relationship is seen as leading to satisfaction and optimal development for the individual, and that the outcomes from such a relationship (which include vocational choice, stability and achievement) are predictable and can be understood from a knowledge of the typologies.

Like Heath, Holland's conceptualization of personality types developed through his clinical experiences. Holland developed the Vocational Preference Inventory (Holland, 1965) as a means of assessing typology. This instrument is based upon the assumption that an individual's occupational preference is an expression of personality. Model environments (corresponding to the personality types) can be assessed using the Environmental Assessment Technique (Astin and Holland, 1961), a means of evaluating an environment through assessing the population.

Holland's theory has stimulated a great deal of research using typology theory and model environemnts, and Walsh reports (Walsh, 1973) that the research generally supports both

the existence of the types and environments, as well as the prediction that an individual will seek an environment that is consistent with his personal orientation.

Ego-Identity Theorists

Ego-identity theorists view development as a life-long process in which people move through stages of development. Within each of these stages a crisis is posed by the individual's encounter with the norms and expectations of society. This crisis is a developmental task, and positive resolution of this task will mean that the person is moved to confront another task. Additionally, as development is viewed as a cyclical process, when this developmental issue is again encountered (possibly in the form of new tasks) the individual will be able to resolve it more easily and with a greater degree of self-awareness and understanding. However, as development is seen as sequential and hierarchical in nature, negative or unsuccessful resolution of a task will hinder the individual in dealing with further issues.

Arthur Chickering

Chickering (1969) describes seven vectors, or stages of development. These vectors are presented in sequential, hierarchical order, with the establishment of identity as the central vector. It is the successful resolution of the first three vectors (developing a sense of competence, managing emotions, and developing autonomy) that provides the individual with the basis for establishing identity. This, in turn, establishes the framework for the freeing of interpersonal relationships, and the development of purpose and integrity.

In addition to describing these seven major vectors of

development, Chickering offers an analysis of how these vectors are related to and affected by six aspects of the educational environment: clarity and consistency of objectives of the college, the size of the institution, curriculum/ teaching/evaluation, the residence hall, faculty and administration, and student culture.

Roy Heath

Roy Heath developed his model of personality while at Princeton University in the early 1950's. Heath became the academic and personal advisor for thirty-six male freshmen. He met with these students, both individually and in small groups, over the course of their college career.

In order to fully understand the Heath model, it is helpful to have a perspective on Heath himself. He is a clinical psychologist and faculty member; a scholar of the analytic school who used clinical techniques in conducting his research. His model was developed from his observations of, and interactions with these students, especially with respect to three primary areas: (i) the individual's view of self, (ii) the quality of relationships with others, and (iii) the nature of academic interests and satisfactions.

Heath initially observed significant differences in the interview behaviors of students in the study, and on the basis of these differences grouped his advisees into four areas. In examining the differences between students in each area, Heath began to develop his model along two dimensions: development and temperment. The primary construct of the developmental dimension is "ego-functioning", which is defined as "...the

manner in which the self interacts with the world, achieves its satisfaction, and defends itself (or fails to defend itself) from threats to its survival, both external and internal" (Heath, 1964, p. 9). The tempermental dimension is characterized by basic individual differences in impulse control. In a later work (Heath 1973), Heath has added the constructs of "form" and "flow". Form corresponds to the developmental dimension, and is defined as one's "attitude or stance toward life" (p. 57). Form can be seen as a reflection of ego-functioning, with "good form" indicative of "effective" ego-functioning.

Along the tempermental dimension, flow is defined as "...an underlying process regulating the stream of consciousness. It governs the extent of one's awareness at any one point in time" (Heath, 1973, p. 57). That is, this "consciousness filter" regulates the "flow" of stimuli into awareness, and reflects, Heath believes, both individual differences (differences within an individual at various points of time) and differences among individuals (intrinsic differences in capabilities).

Heath views development as movement towards integrated ego-functioning. Although he was able to observe changes in his advisees along the developmental dimension, there did not appear to be changes in temperment, or individual style. These continuing stylistic differences formed the basis for Heath's characterization of three general personality types. The behaviors, and the underlying dynamics of each of these types will be described in the following sections.

The X

Originally termed "the Non-Committer", the X has been described as "friendly" and "likeable", yet "bland" and "neutral". At a "poor form" (that is, low level of development) this appears to be a "deeply embedded" personality, alienated from inner feelings and impulses. Here, the "consciousness filter" described earlier is seen as tightly constricted, allowing only a small number of items into consciousness. Further, negative items are repressed, or kept out of consciousness, and the X is able, therefore, to focus primarily on the positive, or "happy" items. Thus the description of the X as friendly, but bland. Additionally, as a result of this alienation from his own inner wishes and impulses, the X tends to be shaped by external factors, and to respond to the expectations of others, rather than his own feelings.

The X is also characterized by a tendency to avoid involvements, and personal entanglements, as they are seen as reducing one's freedom in the event of conflict (which, as a "negative item" is to be avoided at all costs). X strongly values safety and security, and is not likely to voluntarily take risks. He will seek a safe and protective environment even though in so doing "...he is compromising the fulfillment of his basic nature, the expression of his deeper wishes and strivings" (Heath, 1964, p. 15). For these reasons, X will seek to be an accepted part of a group, even though the group may not offer an opportunity for self-expression.

The X is further characterized at this "poor form" level by a lack of strong interests. Heath (1973) states:

> For him repression is serving well as an isolating
> mechanism and this causes him to be removed from

strong feelings of all sorts, including strong
interests. Obviously, one cannot repress success-
fully and still remain involved in the world (p. 60).

In seeking to understand why it is so crucial for the X
to retain his neutrality, his lack of active involvement,
Heath discovered an underlying, deeply held "...myth...of
invincibility, of high potentiality" (1964, p. 16). That is,
Heath describes the X as believing that he can accomplish just
about anything, if and when he chooses to do so:

> The longer he forestalls the day, however, the
> greater the investment in the myth, the more important
> it becomes to his self-esteem. To go all out pre-
> sents a horrendous risk, namely the discovery that
> the myth has no basis in fact. Non-X's seldom
> realize what high stakes many an X puts on the line
> when he decided the moment has come to act (1964, p. 17).

These then, are the general characteristics of the X, at
a low level of development. "Friendly", "bland", "likeable",
a cautious individual. Alienated from and unaware of his
inner drives and feelings, the X hesitates to break through
his protective shell.

The Y

Heath originally termed this type "The Hustler", because
of a marked tendency towards constant activity, achievement and
concrete success (1964, p. 20).

At a poor form the Y's "filter range" is not as constricted
as that of the X. That is, a variety of items, both positive
and negative, permeate consciousness. The nature of the Y's
filter does not permit the repression of negative items;
however these items are supressed. Inner drives and feelings
are rejected, resulting in a personality that seems to be "at
war with itself" (Heath, 1964, p. 22).

Much of the Y's activity and behavior stems from this

distrust and rejection of the inner self. Y sets and main-
tains high standards of achievement for himself, and Heath sees
this never-ending activity, this focus on the "here-and-now",
as a way of avoiding introspection, and thus avoiding the
opportunity to confront his inner feelings and thoughts. As a
result, the Y creates and maintains a defensive superstructure,
or "pseudoself" to protect him from his unwanted inner life.
While the Y, unlike the X, does have strong interests, these
interests are pursued in order to further develop the external
self, and to strengthen it so as to protect the real, inner-
self from threat.

In his drive for achievement, the Y takes an aggressive
stance. In contrast to the X, who avoids conflict, the Y
welcomes the opportunity to "demonstrate his worth and superior-
ity over others"(Heath, 1964, p. 20). He can, as a result of
this competitiveness, be insensitive to the feelings of others,
even though he hopes to be thought of favorably. Finally,
while a hard worker, and one who plans far in advance in order
to accomplish his objectives, Heath finds that the Y is often
hindered by his lack of inner reflection and originality.

The Z

Heath describes the Z as the least common, and perhaps
most unusual of the types. The Z was originally termed "The
Plunger", a term intended to connote the Z's tendency to
"plunge" into new areas and activities, with little regard for
propriety.

In contrast to both the X and the Y, Heath hypothesizes
that the consciousness filter of the Z is extremely porus, and
therefore permits neither repression (like X) nor supression

(like Y) of negative items. These items enter freely into consciousness, and the Z at poor form is ultimately able to achieve a type of "exorcism" of these items, or as Heath describes it, "The low Z worries the negative items to their death..." (1973, p. 58) A second, less common response of the Z to continued stress is to "de-cathect", to block the affective response to consciousness. However, this is an extreme response, and is not commonly seen.

Because his actions tend to be guided by subjective, internal criteria, the Z is known for his impulsiveness, and variability of mood. Heath describes the Z as "...at the utter mercy of his feelings. He lacks the emotional shock absorbers of the X" (Heath, 1964, p. 24).

At a poor form level, the Z will develop strong interests, but lack the drive, motivation or confidence to pursue an interest in depth. Projects are begun and then discontinued as mood and interest dictate. Similarly, the Z's participation within a group also reflects his mood, or interest. The Z may appear aloof, but when his attention is captured Z will actively enter the discussion. However, while the Z is often valued for his creative and novel approach, this type is described as having what can be very serious communication difficulties. In that "...many of his expressions are direct outcroppings of an active inner-self, they are apt to appear highly individualistic, even surrealistic. His thoughts zip from one idea to another without apparant connection..." (Heath, 1964, p. 25). Further, Heath finds that the Z is often plagued with the resolution of identity concerns, in that as his constantly shifting persona can tend to obscure the more

genuine self.

The Concept of Development

In developing his model Heath noted that each of the types made progress towards maturity, or integrated ego-functioning during their college careers. However, different factors were associated with development for each type. That is, because of the differences in the underlying dynamics of the types, Heath found that different conditions and factors tended to facilitate individual development.

Development of X's

Heath (1964) found that the development of the X was stimulated by a moderate degree of challenge, and exposure to what he termed "inner life activators" (p. 57). He finds that the X must be exposed to a moderate, although not overwhelming amount of challenge in order to be shaken from his sense of complacency. In general, the challenge of the academic environment provides a sufficient degree of challenge for the X. Heath also found that exposure to "inner life activators", most notably certain disciplines within the humanities, will stimulate or arouse the deeper feelings of the X, and allow him to begin the process of "reuniting the inner self of fantasy with the outer self of social and world interaction" (1964, p. 60). The growth of the X is manifested in greater assertiveness and self-expression, as well as in the ability to take more risks (Heath, 1964, p. 62). In the mid-level, or medial X, the consciousness filter is more porous, allowing greater awareness. There remains, however, a tendency for X to focus on the "bright side", and to push negative items to the periphery of conscious-

ness. Heath (1973) describes the medial X as follows.

> The medial X shows more initiative and liveliness than his less formed brother. He is a highly social being who enjoys good order and protocol. He cherishes the role of harmonizer midst the minor disputes among his friends and collegues (p. 60).

Development of Y's

Development of the Y involves breaking through the defensive "pseudo-self" that the Y has constructed to protect himself from his underlying impulse life. This pseudo-self is maintained and enhanced through the Y's achievements- money, good grades and success. As long as the Y can keep successfully achieving (and has visable, tangible proof of success) he can block himself off from a recognition of his deeper wishes and impulses. Heath found that it is necessary to break through the pseudo-self in order to reveal this inner self to the Y. Heath believes that this outer shell can be broken, perhaps as the result of a crisis, or that it can be "melted" through the sustained exposure of the Y to the love and affection of others for the genuine, or underlying self. When the pseudo-self is destroyed, the re-uniting of the Y with his inner-self can occur. The developing Y is characterized by "...more genuine self-acceptance and greater psychic freedom to be productive and even slightly creative" (Heath, 1973, p. 60). Heath (1964) describes the medial Y as follows.

> Through reconstruction he loses his intellectual rigidity, social insensitivity and obsessive drive. He can be expected however, to retain a capacity for three things: hard work, a staunch adherence to his values, and a good fight (p. 67).

Development of Z's

A primary task for the developing Z is to integrate the

diverse parts of the self into a more unified and coherent whole. As the Z is a strong individualist, Heath feels that the Z is more likely to grow in an environment that is tolerant of expressions of individuality. The process of integration is also aided by the presence of a strong advisor or friend, one who can serve as an external reality base for the Z. Ultimately, the success of the Z will depend upon his ability to develop "...a broad philosophical framework which provides a loom for the poorly integrated threads of the inner-self" (Heath, 1964, p. 69). In order to do so, the Z must be encouraged and required to develop coherence in both thought and articulation. Heath notes that in the medial Z the porosity of the consciousness filter is not altered. That is, the same amount of information enters into the consciousness. However, there is a greater order within and relationship between the inner and outer selves of the Z at this level.

The Reasonable Adventurer

In his initial work with his advisees, Heath found that a small number of these students were characterized by their reflective behavior as a result of their involvement with their academics and with others. These students, termed "Reasonable Adventurers", represented not a type, but a point of maturity in development, a high level of functioning that Heath has called "good Form". In moving towards this point one finds more effective ego-functioning and successful integration of the inner and outer selves.

Heath describes the Reasonable Adventurer (hereafter RA) as one who is able to create his own opportunities for satisfaction. Heath has identified six characteristics of the RA:

1. Intellectuality- an approach of alternating in-
volvement and detachment; a combination of the
"curious and the critical".

2. The ability to develop and maintain close friend-
ships in which the communication of deep feelings
leads to the development of a new perception, a new
way of looking at oneself and the world.

3. Independence in Value Judgements- movement away
from the dependence upon external authority in
decision making; a growing reliance upon the authority
of one's own experience.

4. Tolerance of Ambiguity- the RA is less likely to
categorize matters into black and white, and is more
willing to suspend judgement when he does not have
the information necessary to make a decision.

5. Breadth of Interest- an eagerness to pursue an
interest or activity in depth; an "uncommon interest
in the commonplace".

6. Sense of Humor.

Full-Being

Heath (1973) has elaborated further upon his model in

his discussion of a quality of life he terms "Full-Being".

This term is used to describe a condition that can be attained

as the result of a long period of high level functioning at

"good Form". Heat hypothesizes that Full-Being is attained

after an extended period of relationships with all living

things in the world. As Heath describes it:

> The beings with whom one has developed a loving re-
> lationship gradually become internalized into our
> own being....The world "out there" comes to abide in
> the world "in here". This process can only take
> place where the entity is affirmed without any attempt
> to dominate it, or in some other way violate its
> integrity (1973, p. 61).

The Modes of Existence Test

The Modes of Existence test was developed by Roy Heath

in 1976 as a means of assessing an individual along the

dimensions of temperment and of development. The respondent

is presented with a series of eleven "modes". Each mode

consists of from one to five paragraphs describing individual

characteristics and preferences. The respondent is asked to

do three things:

1. Read all modes and select those that "most closely
resemble your own self image".

2. Distribute the two or three top choices (modes
most similar to one's self) along a scale of 4-10,
with ten representing a "degree of resemblance" that
is "practically identical with yourself" and four
representing "only moderate resemblance to yourself".

3. Indicate in a separate box the mode which bears
the least resemblance to self.

The instructions also encourage the respondent to alter the

modes by adding or deleting words or phrases in order to make

the mode more characteristic of one's self.

Scoring

Nine of the eleven modes represent "types", with three

modes representing each type. In addition, each mode also

represents a developmental level- low, medial or high. The

remaining two modes are discounted from the scoring process.

One of these modes functions as a disclaimer for individuals

who do not like to respond to these types of tests. The second

mode that is discounted Heath believes to be a developmental

variation of the Y; however this is currently under investiga-

tion. A scoring diagram has been provided by Heath. This

diagram is contained in Appendix A. It is a reproduction of

Heath's model in that each mode occupies a position along the

dimensions of temperment and development.

While this scoring diagram is available for use with the

modes of existence instrument, Heath has not provided any

guidelines for its use. Therefore, a set of scoring decision

rules and procedures was adopted for use in this study. The
steps taken in scoring the Modes of Existence test can be found
in Appendix A, along with Heath's scoring diagram.

Critique of the Model

Strengths

This model provides an opportunity to focus on and ex-
plore the nature of individual differences, especially with
respect to movement towards maturity. Because it has been
developed within the context of higher education, the model
lends itself to application and comparison.

Limitations

While this model was developed within the context of
higher education, it does not adequately explore or explain
the effect of a particualr environment on development. Un-
like, for example, Chickering (1969) who systematically
explores various components of the collegiate environment
vis a vis their effect on development, Heath does not include
this type of analysis in his model. Both the nature and
process of development, as well as the effect of various
factors within the environment upon development are
lacking.

A second area of weakness, and one that resulted in
the development of this study, lies in the instrumentation.
Prior to the creation of the Resident Advisor Heath Typology

Instrument, the Modes of Existence instrument was the only method available (other than individual clinical analysis) for typing individuals. However, the usefulness of this method is questionable for a variety of reasons. The instrument itself is more a clinical than a statistical assessment measure, as is evidenced by the lack of established scoring guidelines. Additionally, scoring often depends upon the judgement of the scorer in interpreting the results, a fact which leads to serious questions regarding the validity and reliability of the results. Another factor is that the Modes of Existence instrument is unyieldy to use in that it presents the respondent with a significant amount of reading (eleven modes) and yet collects only a small amount of information from the respondent in return. Assessment of the individual is generally based upon their selection of three modes, as well as the interpretation of any alterations that the subject may have made on the instrument.

Residence Staff

The residence hall environment is one that has been extensively studied and written about. Numerous authors (Chickering, 1969; DeCoster and Mable, 1974; Riker, 1965) have discussed the significance and potential of this environment in fostering individual development. However, it is the nature of the role of the undergraduate resident assistant that is of primary interest to this study, as the research presented here has focused on the individual's accomplishment of specific responsibilities of this multifaceted position.

Clearly, a student working in the residence halls is often

called upon to assume diverse, and perhaps even conflicting,
roles- roles that require a broad behavioral repertoire.
Delworth Sherwood and Casaburri (1974) have described
several of the most common roles. In looking at these respon-
sibilities one is provided with a sense of the demands placed
upon the individual student assistant. The roles described
by Delworth Sherwood and Casaburri include:

> counselor- An extremely complex function, and one
> that Delworth maintains is often not clearly defined.
> In general, however, this function typically in-
> volves the application of knowledge about counseling
> theory to the concerns of an individual resident.
>
> advisor- This involves having a knowledge of avail-
> able resources, as well as an understanding of the
> context of the residence environment within the
> total educational community. Delworth defines the
> role of advisor as one who provides direction, as
> well as who facilitates communication among members
> of the residence community.
>
> limit-setter- This is a role that has moved from one
> that is primarily disciplinarian in nature to
> encompass the analysis of, and response to, behavioral
> problems in the living unit.
>
> administrator- This very visable function involves
> the student assistant as the front-line representative
> of the residence hall organization and the services
> it offers to students in the halls.

Other writers have described the changes in definition
and in scope of the residence hall assistant. Brown (1972)
notes the addition of education programmer to the more
traditional counselor and disciplinarian roles. Greenleaf (1974)
and Stimpson and Simon (1974) cite the necessity for clearly
delineated job descriptions for residence staff, which will tie
the accomplishment of their responsibilities into the fulfill-
ment of organizational goals and objectives.

In summary, it can be seen that there is definitely not

a shortage of expectations for residence staff. The job description of the subjects in this study, contained in Appendix B, provides further evidence of the broadly based demands that are placed upon these students.

Summary

Our knowledge and understanding of student development has grown in the last several years, and we can look to the work of theorists in three major areas to help us understand the student's development: cognitive developmental, person-environment and ego-identity. While the underlying assumptions may differ, we find in these three areas a similarity of focus upon the interaction between the individual and the environment. This study focuses on the work of Roy Heath in order to look at personal style within a particular job context, that of the residence advisor.

Chapter III

Design of the Study

This study was designed to create an instrument that would reflect the experience of a select population of students with respect to Heath typology characteristics. Towards this end a sample was chosen, a likert instrument was developed, and three sets of data concerning the sample were collected:

1) Heath typings from the Heath Modes of Existence instrument,

2) typings from the newly created Resident Advisor Heath Typology Instrument, and

3) personality typings from a group of expert raters. These sets of data and the correlations between them from the basis of this study.

The Sample

The sample consisted of sixty undergraduate students at the University of Maryland. These students were employed as resident assistants in a community of approximately 3500 students. As staff members they functioned in a variety of roles, including as managers of the living units, peer counselors/advisors, and as program developers.

All staff were required to attend a three credit leadership training course as a condition of employment. This course, "The Paraprofessional in Residence Halls," was offered through the Counseling and Personnel Services Department at the University of Maryland. The course was designed using

the principles of "developmental instruction" (Knefelkamp 1974; Widick 1975) and had as its dual focus the transmission of content knowledge and the development of the individual student. Two sections of the course were offered. Instructional staff included a course coordinator, who was a doctoral student in the graduate program in student personnel, and three masters level students from the same department. The latter (of whom the author is one) were also employed as graduate residence staff, and in some cases were the instructors for resident assistants whom they supervised as well. The instructional staff worked in teams, and met weekly with a faculty consultant who assisted with planning and teaching techniques.

Data Collection

Forty-five sets of data concerning students in the two sections of the residence hall leadership course were collected. A set of data consists of three items:

1) a completed Heath Modes of Existence instrument,

2) a completed Resident Advisor Heath Typology Instrument, and

3) type ratings from the three expert raters

Information for the study was not collected from individuals who did not attend class on the day that the likert and Heath instruments were administered, thus the difference between the sixty students enrolled in the course and the sample of forty-five students for the study.

Table 3-1 breaks down the subjects in the study by sex and class standing.

TABLE 3-1

BREAKDOWN OF SUBJECTS BY

SEX AND CLASS STANDING

	MALE	FEMALE	TOTAL
Freshman	0	0	0
Sophmore	10	1	11
Junior	13	7	20
Senior	6	8	14
Total	29	16	45

Instrumentation

The instrument used in this study was developed as a "Heath" instrument; that is, as a means of assessing an individual's personality typology within Roy Heath's schema. The instrument has been named the "Resident Advisor Heath Typology Instrument"; however it will hereafter be referred to as the likert instrument.

In designing the instrument several factors were important:

1) The instrument needed to provide a comprehensive picture of the individual , according to the Heath typo-- logy model.

2) The instrument was to be used with a select group of paraprofessional staff and as such needed to reflect their experience.

3) Individual items on the instrument had to clearly represent the perspective of a particular "type".

Each of these three items was taken into consideration in the

development of the instrument used in this study.

In order to obtain as much information about the individual as possible, the instrument was designed using a likert scale. A likert scale asks an individual to respond to a statement along a continuum, and provides a range of possible responses. For example:

Item 1. President Carter is doing a good job as President.

disagree   agree

On the above item the respondent is asked to place himself on the scale relative to his agreement with the statement. The major advantages of using a likert scale, as opposed to a non-likert format are that it allows the respondent greater freedom and range of choice in selecting a response, and that it provides specific and accurate information about the individual. The scale used in this study provided five possible responses (never, rarely, neutral, sometimes, often) and students were asked to circle the response that best represented their feelings.

In order to develop likert items that would be reflective of the experience of a resident assistant, job related responsibilities were identified. A list of position functions was compiled from a resident assistant job description. This list included: assuming a leadership role within the residence hall, peer advising/counseling, program development and implementation, and administrative tasks. Using these broad areas of responsibility as a foundation, specific behaviors and approaches to tasks could be identified and incorporated into likert items.

Using Heath's theory likert items were constructed so that

each statement could be characterized as an "X", "Y" or "Z" item. That is, each item was constructed to represent the perspective of a particular type. Therefore, an individual could be expected to endorse to a greater degree those items that matched or represented his type, as opposed to items which did not illustrate a perspective characteristic of his style.

Organization of the Instrument

As previously noted, one design concern was to ensure that the instrument elicited a comprehensive range of information about the individual in order to support the assignment of type based upon likert results. In order to accomplish this, likert items were developed in four general areas, or categories. These categories were used as a framework for organization. It should be noted that these areas are not mutually exclusive, and that some likert items might fit comfortably in more than one area. What is important is not necessarily the distinctions between the areas, but that taken together they provide a holistic picture of an individual's characteristics and inter- active style. The four categories are as follows:

I. Interpersonal Interaction Style

This area contains questions developed to examine the ways in which an individual interacts with others on a one-to- one basis. For example, what type of relationships prove rewarding for an individual, and which pose problems? In what ways does an individual seek support from others, and when does he seek to function autonomously? For the resident assistant these interactions often involve working as a peer counselor or advisor with residents of the living unit, and likert items

in this area were designed to reflect this.

II. Group Interaction Style

This category contains items that focus on the roles that the individual assumes when working in groups. Given the demands of the staff position most of the "group-work" involves planning, leading and/or actively participating in dormitory meetings. Items in this area examine how the individual functions, both as a leader and group member.

III. Interaction of the Individual with the Organization

Items in this category examine the role of the individual as a staff member of a large organization (Resident Life). In contrast to Category 2, which focuses on interactions between the resident assistant and those residents that he is responsible for, items in this area explore relationships between the RA and his peers and supervisors. Other items pertaining to the individual's role as an organization member, such as one's perception of job performance, and the impact of organizational demands, are also included in this area.

IV. Individual Characteristics

Items in this area, in contrast to the other three, are not closely linked to the specific context of the RA position. Rather, they are drawn directly from Heath's theoretical descriptions of the styles. Included in this area are items representing those characteristics unique to a particular type, as well as items which differentially illustrate (by type) a common characteristic (such as communication style).

Question Sets

Within each of these four areas questions were developed

in trios. Each trio was composed of an "X", "Y" and a "Z" item. In developing questions in sets such as these, respondents were provided with an opportunity to endorse most highly the item that represents his perspective most closely. Table 3-2 illustrates the breakdown of questions into categories and the sets, or trios of questions within each category. Theoretical type designations are indicated in the table. The reader is referred to Appendix C for a list of likert questions.

An examination of question sets will illustrate the relationship between the three items in a set. Some sets were constructed around a specific theme, or content area. For example, items:

4. When dealing with rules and regulations I'm comfortable with those that are not relevant. (Z)

7. I really need to know the rules and regulations of the organization because I think it's important to know what the guidelines are. (X)

10. I really need to know what the rules and regulations of the organization are so I can get around them when necessary. (Y)

are similar both in terminology and in focusing on organizational regulations. Other sets, for example:

3. I like it when the other RA(s) in my building look to me for unusual and innovative ideas. (Z)

6. I like it when the other RA(s) in my building took to me for leadership. (Y)

11. I like it when other RA(s) in my building seek me out for support. (X)

are even more similar in that they share the same stem, "I like it when ...". The endings of each of these items vary in order to illustrate the perspective of each type. Other question sets may appear dissimilar but in fact are thematically

TABLE 3-2

BREAKDOWN OF LIKERT QUESTIONS INTO

CATEGORIES AND TRIOS OF X, Y AND Z ITEMS

	X	Y	Z
I. INTERPERSONAL INTERACTION STYLE	11	6	3
	35	25	29
	28	30	26
	40	34	41
II. GROUP INTERACTION STYLE	23	16	22
	18	14	17
	24	20	13
	15	21	19
III. INTERACTION WITH THE ORGANIZATION	12	9	8
	27	32	36
	7	10	4
	48	43	38
IV. INDIVIDUAL CHARACTERISTICS	5	1	2
	31	39	33
	37	47	46
	45	42	44

linked. For instance, items

42. I find that I think quickly and then express my ideas forcefully. (Y)

44. I like to toss out new and different ideas to get a discussion going. (Z)

45. I tend to carefully think through what I'm going to say before I offer an opinion. (X)

describe, from a theoretical perspective, communication styles of the three types. Other question sets have been linked because each question illustrates a characteristic unique to a particular type. These questions fall in the "Individual Characteristics" area, and in general are not closely related in content or theme. However, the organization of questions in trios was maintained in order to consistently provide an equivalent number of items representing each type. Questions 31, 39 and 33 illustrate such a trio, and can be found in Appendix C.

To summarize: the likert instrument was developed by first identifying the general areas that would encompass the personal and job-related experience of a particular group of resident assistants. Within each area questions were developed in trios, with one member of each trio representing the perspective of a particular type, "X", "Y" or "Z". At this point it will be helpful to more closely examine each of the four categories, and the kinds of questions contained in them.

The Four Categories

Within Category 1, "Interpersonal Interaction Style" questions

35. I don't mind working with an individual's problems, but it would make me pretty nervous to have to try and resolve a group problem. (X)

25. I generally don't get too involved with my residents' personal lives, because I think that they should take care of themselves. (Y)

29. Unusual behaviors on the part of my residents are more interesting than bothersome to me. (Z)

explore how an individual responds to the personal concerns of others. Question 35 was designed as an "X" item, as the X is generally more at ease on an individual, as opposed to group level. This question also seeks, in the way that it is worded, to reflect the passivity of the X. That is, the X is described as bland, or neutral; and the phrase "I don't mind..." is meant to key into this quality. The X would not tend to express a strong preference for one choice over another, and the wording of this item is meant to illustrate the X's non-committal nature. Question 25 embodies the philosophy of the Y as Heath has described it- that people "should take care of themselves." This stance, in conjunction with Y's general lack of sensitivity to the feelings of others, illustrates why the Y is one who does not typically become involved with the personal concerns of others. For the Z, who operates from a primarily subjective frame of reference, it is that which is unique, or "out of the ordinary" that tends to excite his interest. For this reason, as question 29 suggests, unusual behaviors will be perceived not as a problem (as they might for the low-risk X) but as an interesting diversion. Thus the Z would be expected to most highly endorse item 29.

Within Category 2, "Group Interaction Style", questions

24. The best dorm meetings are those in which a well planned agenda is followed. (X)

20. The best dorm meetings are those in which my ideas are accepted. (Y)

13. The best dorm meetings are those in which new and novel ideas are discussed. (Z)

illustrate the use of common stems that have been completed differentially using type perspective. The X seeks, and is supported by structure. In question 24, developed as an "X" item, a "well planned agenda" represents this supportive structure, especially in light of the active role that residence staff typically need to assume in dormitory meetings. Additionally, in a highly structured setting such as this, the degree of risk, as well as the possibility of conflict (both of which are salient issues for the X) will be minimized. Question 20, as a "Y" item, illustrates the sense of satisfaction that the Y individual obtains from being in a leadership role. Unlike the X, the Y individual welcomes conflict as a means of achieving; and this item can be read to imply achievement over others. That is, one's ideas are "accepted" through debate and instead of the ideas of others, which should appeal to the competitive nature of the Y. Item 13, the third in this trio, is a "Z" item, and is thematically similar to question 29 (discussed above) in that it focuses on the importance of a novel and stimulating environment for the Z.

Within Category 3, "Interaction of the Individual with the Organization," questions 4, 7, and 10 (mentioned earlier in this chapter under Question Sets) graphically illustrate how personality style effects an individual's understanding, and perhaps definition, of his environment. These items persent the significance of organizational rules and regulations from the perspective of the three types. The X is one

who needs to know what the boundaries of permissible behavior are, presumably so as not to step outside these limits. The Y seeks to understand the boundaries in order to be able to manipulate them when necessary. For the Z, rules and regulations are irrelevant, as his behavior is guided by internal rather than external criteria.

In Category 4, "Individual Characteristics" questions

45. I tend to carefully think through what I'm going to say before I offer an opinion. (X)

42. I find that I think quickly and then express my ideas forcefully. (Y)

44. I like to toss out new and different ideas to get a discussion going. (Z)

represent a description of the communication styles of the three types from a theoretical perspective. These items illustrate the ways in which personality style is expressed through and within an individual's interactions.

Rating of the Data

The Expert Ratings

In addition to the typology information obtained from the Heath and likert instruments, a third assessment of personality style was compiled. A team of raters, deemed "expert" because of their personal knowledge of the subjects, and their knowledge of Heath's theory, was asked to provide typology assessments of individual subjects.

The expert raters were the three graduate instructors of the course. These raters were also residence life staff members, and had therefore been involved in the selection and training of some subjects in the population. Additionally, some of the subjects were under the supervision of the

graduate instructors, and so had regular contact with the raters outside of the classroom environment.

The raters were asked to assess only those individuals that they knew well enough to type with a fair degree of accuracy. They were also instructed to provide their assessment of a subject's primary, or dominant type, rather than the dominant and sub-dominant typings that Heath's instrument provides. Additionally, the raters were asked to provide, for each individual typed, a measure of the extent of reliability of their typing. That is, the rater was asked to supply a quantitative measure of confidence in the accuracy of his rating. This measure was to reflect, in general, how well the rater knew the individual rated. However, it is also an indication of the "strength of type" of an individual. That is, in addition to being able to more confidently assess the style of those individuals that are personally known, a rater was also able to more confidently assess the style of an individual who exhibits behaviors that are primarily associated with one of the three types. Raters were asked to furnish their "measure of confidence" in percentage figures. As such, these percentages reflect the probability that a given expert rating is accurate, from the point of view of the expert doing the rating. Raters were instructed to provide typology ratings for individuals that they could assess with a "degree of confidence" above fifty percent.

Procedures in Analyzing the Data

The raw data for this study consists of the responses on the Heath and likert instruments, and the expert ratings (including percentages of confidence) of the three graduate instructors. There were two primary tasks in analyzing this data. The first task was to develop typology assessments of individual subjects based upon the Heath, likert, and expert ratings. The second task involved measuring the degree of agreement among these three sets of typings.

The initial step in analyzing the data was to assign types to individuals based upon their responses to the "Modes of Existence" instrument. This was completed as described in Chapter 2. Following this, for each question of the likert instrument a mean, standard deviation, and a series of z-scores, one for each possible likert response, was computed. The z-score provides information as to how many standard deviations from the mean a particular response lies. This figure indicates whether a respondent is endorsing or rejecting a particular item, and to what extent. A z-score of zero reflects neither endorsement nor rejection relative to the mean; whereas a positive z-score indicates endorsement, and a negative z-score indicates rejection.

A major goal of the study is to test theoretical assumptions about type endorsement against empirical evidence collected from the likert instrument. It was therefore necessary to compile information regarding how the three types (X, Y, and Z) responded to particular likert items. Two kinds of information were necessary: first, how an

individual responded to an item relative to other individuals (regardless of type) and secondly, how an average individual of a particular type responded in relation to the average individual of the other types. The first kind of information is provided by the z-score for a particular individual on a particular item. The second was obtained by assuming the Heath typings were accurate, and computing mean z-scores for the three types.

For each question the sum of z-scores assigned to all X respondents was divided by the total number of X respondents. This provided the average z-score given to X's on that question. The same procedure was carried out for the Y and Z respondents. These figures, the average z-scores for a type, enabled a determination to be made as to whether a particular question was more highly endorsed by X's, Y's or Z's. The highest mean z-score is the type that has endorsed the item to the greatest extent. Mean z-scores for the three types on each question also provides information about the relative success of the item in differentiating between X, Y, and Z. For example, consider the following sets of mean z-scores:

1) X=.02   Y=-.05   Z=.12
2) X=.20   Y=-.57   Z=.50

Item 1 illustrates a small range of responses between X, Y, and Z. There is a generally low level of endorsement, and the differences between the mean z-scores is small. The highest endorsement (Z) is separated from the lowest (Y) by only .17. Item 2, in contrast, is being highly endorsed by

Z's, and is strongly rejected by Y's. While item 1 has not differentiated between types very well, item 2 obviously does this much better as the difference between z-scores is much greater.

Using this information it was possible to determine how well likert items "worked". That is, did the item differentiate between the three types, and did the type that most highly endorsed an item match the theoretical expectations for that item? With this information it was then possible to evaluate each item on the likert instrument, and to take one of the following actions:

1) remove or discard the item

2) retain the question, but alter its theoretical designation (That is, if there were strong empirical evidence, an item originally designed as an "X" item would remain on the instrument, but would be designated as a "Y" or "Z" item for typing individuals using the likert instrument.)

3) retain the question with its original (expected) theoretical designation.

Each of these options will be considered in the following discussion.

Decision Rules for Likert Items

Questions that were discarded from the likert instrument were those items where both of the following conditions existed: the type expected by theory to most highly endorse the item did not do so, and no other type endorsed the item to an extent sufficient to justify changing the theoretical designation of the item. For example, consider the following set of mean z-scores for an item designed by theory to be a Y

item:

$$X=.33 \qquad Y=-.40 \qquad Z=.29$$

These z-score results indicate that the Y's have strongly rejected this item, while X's and Z's have endorsed it almost equally. Based upon the empirical evidence it is not possible to designate this item as either an X or Z, for their level of endorsement is similar, and the question is not differentiating between these two types. Therefore, questions of this sort, which do not fulfill theoretical expectations, and where the empirical evidence does not provide a basis for retention, were removed.

An examination of the z-score results from other items showed the following conditions to be true: a type other than that expected by theory (i.e., the designated type) had strongly endorsed the item, and the designated type had either rejected the item or had endorsed it to a much smaller degree. For example, consider the following mean z-scores for a question desiged as an X item:

$$X=-.35 \qquad Y=-.23 \qquad Z=.40$$

Here we find a rejection by the theoretically expected type and an endorsement by another type (Z) sufficient to justify altering the theoretical designation of the item. That is, in cases such as this the theoretical assumptions have not been supported, and further, the empirical evidence necessitates a re-evaluation of the original theoretical expectations.

Items that were retained on the instrument with their original theoretical designation fell into two groupings: those in which the theoretical assumptions (type designation) of the item were supported by the empirical results (these

questions were considered to have "worked"), and those where the empirical findings showed that the question did not significantly distinguish between the types. In the latter case, a low level of endorsement or rejection from all three types was obtained. This flat distribution of z-scores indicates that the item was not being strongly responded to by any of the three types. In some cases the expected type endorsed the item slightly more than the other two, while in other cases another type endorsed the item most highly (although not to a significant extent). In these two cases the empirical findings were not strong enough to justify either the removal of the item from the study, or a change in the type designation of the item. These questions were retained in the study, and were considered on the basis of their original theoretical designation.

Likert Typings of Individual Subjects

After examining all questions and assessing their effectiveness (as described above) a determination of type for each individual was computed using the items retained in the likert instrument. The following procedures were used.

For each question an individual's likert response was assigned a z-score value. Each subject's responses were then grouped by type according to the final typology assignments for each question. These two steps provided three sets of data for each individual: z-scores for all "X" items, z-scores for all "Y" items, and z-scores for all "Z" items. From this a mean z-score was computed for "X", "Y" and "Z" items. These figures represented the average endorsement (of an individual) for the items of each type. Using this data each

subject's typology rating on the likert instrument could be
determined. The set of items (X, Y or Z), having the highest
mean z-score represented that individual's type assignment.

Indexes of Agreement Between the Data

With the results obtained from the likert instrument,
the Heath Modes of Existence test and the data from the
expert raters, three indexes could be computed. These
correlations: 1) between Heath and likert, 2) between Heath
and the expert ratings, and 3) between likert and the expert
ratings, will be discussed below.

Of these three, the Heath-likert (hereafter referred to
as H-L) was the easiest to compute, as it merely involved
computing the percentage of cases in which the likert and
Heath typings agreed. For the purposes of computing this
percentage only the major, or dominant types from the Modes
of Existence instrument were considered. In those cases in
which either the Heath or likert provided a dual typing (that
is, two types equally dominant) the following procedure was
used. If the Heath and likert both gave double types and
agreed on these two types, this was regarded as agreement in
typing. If both instruments double typed and agreed on only
one of the two typings this was regarded as one-half agree-
ment. In cases in which one of the instruments gave a double
typing while the other gave a single typing, if the single
type was one of the two types given on the other instrument
this was regarded as one-half agreement between the two instru-
ments. Half agreements were treated as might be expected.

The same procedures were used in computing agreement

between the Heath instrument and the expert rating and between the likert instrument and expert ratings. (Heath-expert and likert-expert indexes' will henceforth be referred to as H-E and L-E indexes' respectively.) First, using the typings and percentages given by the three expert raters, a consensus rating (which will be called the "Expert" rating) was derived. This figure was arrived at in the following manner. Cases where the experts disagreed on the typing of a particular individual were eliminated. In these cases, lack of agreement by the experts was deemed to invalidate the ratings. In cases where one expert double typed an individual, and another single typed (using one of the two types), the one type that the experts agreed upon was taken as the consensus expert rating for the individual.

The second factor to be considered, after typology, was the "percentages of confidence" furnished by the raters. For each subject an average percentage was computed by taking the arithmetic mean of the percentages given by the experts who had typed that individual. A "weighted actual correlation" between the Expert rating and the Heath (or likert) was then computed, and this figure was divided by the "expected correlation" between the Expert rating and the Heath (or likert) instrument. The second figure, the "expected correlation", was arrived at by taking the arithmetic mean of all the percentages of individuals typed in the consensus Expert rating. The first figure, the "weighted actual correlation", was obtained in the following manner. The weights assigned in determining this figure were the percentages of the expert

raters. To compute the agreement between the Expert rating and the Heath (or likert) the weights of those cases where the Expert rating agreed with the Heath (or likert) were added, and this figure was divided by the sum of all the weights assigned by the Expert rating. The weighted actual correlation as so computed is similar to the H-L index described earlier. The primary difference between the two correlations is that in the H-L indexes all agreements and disagreements are counted equally. In the weighted actual correlation the agreements and disagreements are treated according to the degree of certainty (or confidence) of the expert raters; and therefore those that count more are those that the experts are more certain of.

Using the formula

$$H\text{-}E(L\text{-}E) = \frac{\text{weighted actual correlation (wac)}}{\text{expected correlation (ec)}}$$

the H-L and L-E ratios could be computed for each of the three expert raters. Although not directly germane to the study, these figures are of interest, and have been included in the presentation of results in Chapter IV.

Finally, in using the consensus Expert rating, the formula H-E(L-E)=wac/ec provides the information that is of most interest- indexes between the Heath or likert instrument and the Expert rating. The H-E agreement index obtained when the weighted actual correlation is computed using the Expert rating and the typings from the Modes of Existence instrument. Similarly, the L-E agreement indexis obtained when the results of the likert instrument are used.

Summary

A likert scale instrument was created in order to assess
the Heath typology of a select group of undergraduate
residence hall assistants at the University of Maryland.
Using the responses from the likert instrument, as well as
typology ratings obtained from the Heath "Modes of Existence"
instrument and ratings collected from a group of expert
raters, the following steps were taken:

1. The mean and standard deviation for each likert item,
and z-scores for each likert response were computed.

2. For each likert item mean z-scores for X's, Y's and
Z's were computed (using Heath typings to determine X's, Y's
and Z's).

3. **Final** decisions were made as to the type of each
question based upon theory and the empirical data collected at
step two.

4. Mean z-scores for X questions, Y questions and Z
questions were computed for every individual (the highest
figure representing the individual's likert typings).

5. Heath-likert indexes were computed (taking the
percentage of times they agreed).

6. The consensus expert rating (called the "Expert" rating)
was computed for each individual. This was done by

      a. eliminating cases of disagreement between experts

      b. taking the mean of given percentages.

7. Using the formula

$$H-E(L-E) = \frac{\text{weighted actual correlation}}{\text{expected correlation}}$$

the H-E and L-E indexes were computed, where the expected

agreement equals the mean of all percentages in the Expert rating, and the "weighted actual correlation" equals the sum of the percentages in cases where the Expert rating and the H(L) agree divided be the sum of the percentages in the Expert rating.

Note: Simple correlation or index of agreement (when there are no weights and when EC= 100%, which equals one) is the "degenerate case" of the mathematical procedures employed here.

Chapter IV

The Results of the Study

This chapter presents the findings of the study. The major empirical results that are of interest are the Heath, likert and Expert typings and their correlations. In addition, the results of preliminary steps that were taken to obtain typings and correlations will be presented and discussed.

Steps in Analyzing the Data

Heath Typings using the Modes of Existence Instrument

Heath typings were obtained by scoring the Modes of Existence instrument. The reader is directed to Chapter II, where the scoring of this instrument is described. Appendix D contains the results of the Heath and likert typings, and the expert ratings for the forty-five subjects in the study.

Heath Typings using the Resident Advisor Heath Typology Instrument

Several steps were necessary in order to obtain the likert typings. First, on each likert item mean z-scores for each Heath type were computed. Questions were then analyzed and decisions were made to retain or to remove the item, or to alter its theoretical designation. Finally, typings of individual subjects were compiled.

Mean z-scores of X's, Y's and Z's on each question were computed using procedures described in Chapter III. The results of these computations, mean z-scores by type for the original forty-eight likert items, are contained in Appendix E The figures thus obtained were then used to analyze each item on the likert instrument to determine the extent to which the empirical findings matched theoretical expectations.

Decision Rules

Criteria were formulated concerning how to treat likert items. The steps that could be taken included altering the theoretical designation of the item, removing the item from the study, or retaining the item with its original theoretical designation. Each of these will be considered in the following discussions.

Changing Theoretical Type

Some items were retained on the instrument; however their type designation was altered. The type of an item was changed when the following two conditions were found to exist: (1) a type other than the expected type had endorsed the item to the greatest extent, and (2) there was a difference of .30 or greater between the highest and second highest mean z-scores on the item. When these two conditions were found to hold the type of the item was changed to the type receiving the highest mean z-score endorsement. The difference between the mean z-scores of the two types (highest and second highest endorsement) was taken as an indication of the relative strength of endorsement by one type over the others on an item. This difference represents the extent to which the most highly endorsed type on a particular item is the strongest preference of the three types. For example, on an item designed as an X item, where the mean z-score results

$$X=-.20 \qquad Y=.36 \qquad Z=.38$$

are obtained, Z is the type most highly endorsing the question. However, Y is endorsing this item almost equally with Z. Based on these results it would not be possible to

designate this item as a Z, as the results do not indicate a strong preference of Z over Y. In addition, since the item was developed as an X item, there is no theoretical basis or support for changing the designation of the item to Z.

Removing an Item from the Study

A decision to remove an item from the instrument was made when the results of the data analysis indicated the following three conditions to be true.

First, the highest mean z-score was obtained by a type other than the expected type.

Second, the sum of the difference(s) between the mean z-score for any type(s) endorsing the item more highly than the expected type, and the expected type itself was .15 or greater.

And third, there was not a level of endorsement by a type other than the theoretically expected type sufficient to justify changing the type designation of the item. That is, the conditions (described previously) that would support changing the type designation of an item were not met.

Questions Retained in the Study

Questions that were not changed or removed based upon the above criteria remained in the study with their original type designation. These items fell into two groupings. In a majority of cases the items were more highly endorsed by the theoretically expected type. That is, the empirical results matched theoretical expectations. The second grouping consists of a small percentage of cases in which the results were somewhat inconclusive. These items were slightly more highly endorsed by a type other than the theoretically

expected type. However, this level of endorsement was not great enough to support altering the theoretical designation of the item. Strong empirical evidence (as described, a difference of .30 or greater between mean z-scores) is needed to support altering the designation of an item; and the results on these questions do not constitute that evidence.

It should be noted that in determining meaningful decision rules and in computing mean z-score differences it was important to examine the relationships between all three types, as opposed to considering only the difference between the expected type and the most highly endorsed type. This is true because the population does consist of three types, and the relationship of the third type to the other two will effect the interpretation of the results. For example, consider the results of two hypothetical items, each designed as an X item:

1) $X=-.05$ $Y=.07$ $Z=.08$
2) $X=-.05$ $Y=-.35$ $Z=.08.$

Looking at these two items, the inadequacy of interpreting the results based only upon the expected (in these cases X) and the most highly endorsed (Z in both items) type becomes clear. The endorsement of the third type (Y) plays a critical role in the analysis of the results. In this example, the empirical results obtained indicate that the mean z-score for X in item 1 is the same as the mean z-score for X in item 2. The same is true for Z. However, for Y the mean z-score on item 1 shows a slight endorsement; while item 2 shows a significant rejection by Y.

The small differences between the z-score results of X's and Z's on these items may be due to the small number of these types in the sample. It is possible that with a larger sample the results obtained will show a z-score for X greater than the z-score for Z, although the differences probably will not be great. Yet were this to occur, the results of question 1 would only evince a flat distribution of z-scores, because of the small endorsement by Y's. However, if further study shows a slightly greater endorsement by X than Z in item 2, the results will indicate X's and Z's to be slightly endorsing the item, and Y's strongly rejecting it. While this is not an ideal result, the question would be distinguishing X's from Y's well, and for this reason we would want to retain it in the study for the purpose of typing individuals. Therefore, the empirical results obtained from these two items support a decision to remove item 1 from the study, and to retain item 2 for further investigation.

In the analysis of the 48 likert items, the third type has been considered in the development and application of all decision rules. It is explicitly stated (condition 2) in the rules for removing an item from the study. The third type has also been implicitly considered in items retained in the study, both with their original or an altered designation. One condition for altering the type designation of an item is that the difference between the highest and second highest mean z-score is al least .30. Therefore, the difference between the highest and the lowest type endorsement must also be at least .30. Questions that were left in the study with

their original designation were questions whose results fit
neither the conditions for removing the item or changing it's
theoretical designation. Since these conditions employ all
three types, questions remaining in the study of necessity
take the three types into account as well.

Analysis of the Resident Advisor Heath Typology Instrument

In this section the results of the decisions made about
likert items will be discussed. Using the results of the
empirical analysis, as well as the theoretical assumptions of
type, the effectiveness of each of the 48 likert items was
assessed. The steps that were taken included changing the
theoretical designation of an item (5 questions), removing the
item from the study (10 items) and retaining the item in the
study with its original type designation (33 items). Each of
these options will be described in the following discussion.

Changing Theoretical Type

Of the 5 items that were changed to another type 2 were
designed as Z items, and 3 were designed as X items. Both Z's
became Y's, and the three X items became Z questions. As
previously discussed, the empirical evidence from these items
indicated that a type other than the expected type had most
highly endorsed the item. The range of differences between
the highest, and the next highest mean z-score extended from a
low of .33 (question 37) to a high of .59 (item 12). Table 4.1
illustrates the 5 items whose types were changed, the mean
z-score results for the three types, and the difference between
the highest and second highest mean z-scores. The chart also
contains the original and the final type designation for each
item.

TABLE 4-1

QUESTIONS WHOSE ORIGINAL TYPING WAS CHANGED

Q#	MEAN z-SCORE FOR HEATH X's	MEAN z-SCORE FOR HEATH Y's	MEAN z-SCORE FOR HEATH Z's	HIGHEST-SECOND HIGHEST MEAN z-SCORE	EXPECT-ED TYPE	TYPE CHANGED TO
3	-.2916	.2918	-.3287	.5834	Z	Y
12	.2154	-.1488	.8048	.5894	X	Z
37	-.1507	-.0167	.3115	.3282	X	Z
41	-.1697	.1977	-.2724	.3674	Z	Y
48	.0170	-.2154	.5904	.5734	X	Z

Removing an Item from the Study

Of the 10 items removed from the instrument, 3 were designed as X items, 4 as Y items and 4 as Z items. On these items the sum of the differences between the mean z-score of type(s) endorsing the item more highly than the expected type, and the mean z-score of the expected type varied from a low of .18 (item 21) to a high of .80 (items 19 and 46). This figure indicates the extent to which types other than the expected type have more highly endorsed an item. A larger figure indicates greater endorsement by a type or types other than the expected type; and a lower figure indicates small differences between the mean z-score endorsements of the expected type and other types. Table 4-2 presents the ten questions removed from the likert instrument, and the following information:

a) the mean z-scores of each of the three Heath types

b) the sum of the differences between mean z-scores of any type endorsing the question more highly than the expected type and the expected type

c) the originally expected type (theoretical designation)

d) the difference between the highest and second highest mean z-scores on the item.

The final figure (d) is provided so as to allow for comparisons between these items and items whose types have been altered (Table 4-1).

TABLE 4-2

QUESTIONS REMOVED

Q#	MEAN Z-SCORE FOR HEATH X's	MEAN Z-SCORE FOR HEATH Y's	MEAN Z-SCORE FOR HEATH Z's	EXPECT-ED TYPE	HIGHEST-SECOND HIGHEST MEAN Z-SCORE
9	.0502	-.0873	.1632	Z	.0930
11	-.2696	.1250	.1121	X	.0129
15	-.1396	.0268	.1673	X	.1405
16	.1652	-.1114	.0313	Y	.1339
19	.1093	.0455	-.3224	Z	.0638
21	-.0015	-.0352	.1041	Y	.1066
25	.2294	.0341	-.4995	Y	.1953
28	-.0353	-.0663	.2524	X	.2877

Questions Retained in the Study

As state earlier in this chapter, the 33 items retained on the instrument with their original type designations fall into two broad areas. In one grouping of 8 items the highest endorsement was by a type other than the theoretically expected type. Of these, two were designed as X's, three as Y's, and three as Z items. The sum of the differences between the mean z-scores of type(s) endorsing the item more highly than the expected type, and the mean z-score of the expected type varied from .02 (question 5) to .12 (questions 1 and 13). In all eight items the expected type gave the item the second highest endorsement. The empirical evidence thus obtained did not support either removing the item or changing its type designation. These items will require further attention when additional data is collected. Table 4-3 illustrates these eight questions and gives the following information:

a) the mean z-scores for each Heath type

b) the difference between the higher mean z-score and the mean z-score of the expected type

c) the theoretically expected type of the item (type designation).

The second grouping of items retained with their original type designation consists of the remaining 25 items where the results showed the expected type to be the most highly endorsed type. Eight of these items were designed as X items, nine as Y items, and eight as Z items. The data illustrates that some of these items were stronger than others; where the strength of the item is considered in terms of the extent to which the expected type has more highly endorsed the question than the

TABLE 4-3

QUESTIONS RETAINED BUT ENDORSED MOST HIGHLY BY

A TYPE OTHER THAN THE ONE EXPECTED

Q#	MEAN Z-SCORE FOR HEATH X's	MEAN Z-SCORE FOR HEATH Y's	MEAN Z-SCORE FOR HEATH Z's	HIGHEST-SECOND HIGHEST MEAN Z-SCORES	EXPECT-ED TYPE
1	-.2873	.0996	.2169	.1173	Y
5	.0823	-.0853	.1009	.0186	X
13	.2196	-.1695	.1028	.1168	Z
24	.0820	-.1126	.1800	.0980	X
26	.4199	-.3826	.3653	.0546	Z
30	.1330	.0810	-.4659	.0520	Y
33	-.2764	.1534	.0431	.1103	Z
43	.1544	.0836	-.5103	.0708	Y

other types. On these items the sum of the differences between the mean z-score of the expected type, and the mean z-scores of the other types ranges from a low of .20 (item 20) to a high of 1.96 (item 14). This figure indicates the extent to which the expected type is more highly endorsing the item than the other types. A low figure indicates that the distribution of z-scores is flat; a larger figure indicates greater endorsement by the expected type relative to the other types on the item. Table 4-4 presents these 25 questions, and the following information:

a) the mean z-scores for each Heath type

b) the sum of the differences between the mean z-score of the expected type and the mean z-score of other types on the item

c) the theoretically expected type of the item (type designation).

TABLE 4-4

QUESTIONS THAT WORKED

Q#	MEAN Z-SCORE FOR HEATH X's	MEAN Z-SCORE FOR HEATH Y's	MEAN Z-SCORE FOR HEATH Z's	EXPECTED TYPE
2	-.1990	.0606	.1741	Z
4	-.0936	-.0305	.2512	Z
6	-.2701	.3904	-.6499	Y
7	.1310	-.0575	-.0640	X
8	.0592	-.2477	.6086	Z
10	-.1921	.2396	-.3529	Y
14	-.4740	.4726	-.5292	Y
17	.2273	-.2306	.2652	Z
18	.1275	-.0804	.0080	X
20	-.1351	.0609	.0609	Y
22	.1023	-.1042	.1203	Z
23	.1742	-.1078	.0053	X
27	.2123	-.1053	-.0687	X
29	-.2762	.0757	.2661	Z
31	.1200	-.0892	.0460	X
32	-.0185	.1409	-.0372	Y
34	-.0696	.2522	-.6035	Y
35	.2002	-.1420	.0576	X
36	-.1620	.0298	.1976	Z
39	-.0630	.2111	-.4964	Y
40	.4632	-.4249	.4108	X

Q#	MEAN Z-SCORE FOR HEATH X's	MEAN Z-SCORE FOR HEATH Y's	MEAN Z-SCORE FOR HEATH Z's	EXPECT-ED TYPE	
42	-.2831	.2832	-.3197	Y	1.1692
44	-.1601	.0488	.1401	Z	.3915
45	.3050	.0669	-.7265	X	1.2696
47	-.3014	.1790	.0129	Y	.6465

The Results of the Expert Ratings

Typology ratings were obtained from three expert raters, and represented their assessment of the personality style of individual subjects in the study. For each individual typed, the raters also provided a percentage estimate of the accuracy of their rating. Out of a total of 45 subjects, Rater 1 typed 9 individuals, Rater 2 typed 26 individuals and Rater 3 typed 15. In 16 cases two raters typed the same individual. On 10 of these cases the raters agreed on individual typings; on 6 they disagreed. Information about particular expert ratings is contained in Appendix D.

Indexes of Agreement

Table 4-5 presents three sets of information.

1) For each of the three raters, their expected agreements, weighted actual correlations for Heath and likert, and the final H-E and L-E indexes. . The weighted actual agreement indicates the percentage of times that the expert typing agrees with the Heath or likert typing (with the weights assigned to the expert rating taken into account).

The expected Agreements represents the percentage of times that a rater could expect his rating to agree with Heath or likert ratings. (This figure is the average of the rater's percentage weightings.) The final H-E and L-E agreement index are derived by taking the weighted actual agreement (for Heath and likert respectively) and dividing this figure by the expected agreement. The resulting figure provides information as to the reliability of the Heath or likert, based upon the assumption that the expert ratings reflect the most accurate typology information.

2) The same information (expected agreement, weighted actual agreement for Heath and likert, and H-E and L-E indexes of agreement) is provided, but is based upon a summation of the results of the three expert raters. This summation differs from the consensus Expert rating (#3 below) in that it includes those six cases where experts have not agreed in their individual typings; and also in that it counts twice the ten cases where the experts have agreed on typing.

3) The figures, expected indexes, weighted actual agreement for Heath and likert, and final H-E and L-E agreement are presented for what has been termed, "the Expert rating," or consensus ratings of all three experts. Here, the six cases in which experts have disagreed on typings have been eliminated, and the ten cases of agreement by the experts is not counted twice. This was accomplished by taking the mean of the percentages given by the two experts, and by using this figure as the degree of confidence for the consensus typing.

TABLE 4-5

EXPERT RATINGS AND AGREEMENT INDEXES

WITH EXPERT RATINGS

	WEIGHTED ACTUAL AGREEMENT	EXPECTED AGREE-MENT	FINAL AGREEMENT INDEXES WITH EXPERTS
Expert #1	H-E= $\frac{3.40}{6.55}$ = .5191 L-E= $\frac{3.75}{6.55}$ = .5725	.7278	H-E= $\frac{.5191}{.7278}$ = .7132 L-E= $\frac{.5725}{.7278}$ = .7866
Expert #2	H-E= $\frac{9.150}{18.675}$ = .4900 L-E= $\frac{9.700}{18.675}$ = .5194	.7183	H-E= $\frac{.4900}{.7183}$ = .6822 L-E= $\frac{.5194}{.7183}$ = .7231
Expert #3	H-E= $\frac{6.05}{10.80}$ = .5602 L-E= $\frac{6.70}{10.80}$ = .6204	.7200	H-E= $\frac{.5602}{.7200}$ = .7781 L-E= $\frac{.6204}{.7200}$ = .8617
Summation	H-E= $\frac{18.600}{36.025}$ = .5163 L-E= $\frac{21.150}{36.025}$ = .5593	.7205	H-E= $\frac{.5163}{.7205}$ = .7166 L-E= $\frac{.5593}{.7205}$ = .7763
"Expert"	H-E= $\frac{10.575}{19.800}$ = .5341 L-E= $\frac{11.775}{19.800}$ = .5947	.7071	H-E= $\frac{.5341}{.7071}$ = .7553 L-E= $\frac{.5770}{.7071}$ = .8410

A comparison of the Heath and likert typings indicates that these two methods of assessing personality typology have agreed in 30 of 45 cases. That is, the final Heath-likert agreement .. is 66.67%. Moreover, the data results summarized in Table 4-5 indicates that in all cases a greater correlation was obtained between the likert and expert typings than between the Heath instrument and the expert ratings. Overall, the likert-expert agreements ranged from a low of 4.1 percentage points greater than the Heath-expert correlations, to as much as 9.4 percentage points higher than the H-E agreements (expert raters two and three respectively). Heath-expert agreements ranged from 68.22% to 77.81%, and the likert-expert agreements from 72.31% to 86.17%.

Of most interest to this study are the agreements between the Heath and likert instruments and the consensus Expert rating. These results are: Heath-Expert 77.53%, and likert-Expert 84.10%. These figures represent a measure of the reliability of the Heath and likert instruments.

The information presented is the the first reported stastical evidence of the validity of the Heath instrument known to the author. It shows the "Modes of Existence" instrument to be a successful measure of personality typology. The results indicate that the likert instrument is also a successful measure of typology. Moreover, the results find the likert to be the more reliable of the two instruments. Therefore, the results also support the hypothesis of the author that accurate typology assessments of a specific

population within a particular environment can be obtained.

The results support further investigation in this area in order to obtain additional data about the effectiveness of these two instruments. Additional research is in fact necessary, as the findings of this study cannot be generalized due to the small and non-random sample population used in the research.

Summary

Based upon the results of the analysis of the data the following decisions were made regarding items on the Resident Advisor Heath Typology Instrument:

1) the typology designation of 5 likert items was altered,

2) 10 likert items were removed from the study, and

3) 33 likert items were retained in the study with their original type designation.

Using the ratings from the Heath and likert instruments, as well as typings from three "experts", the following indexes were obtained:

Heath-likert= 66.67%

Heath-Expert= 77.53%

likert-Expert=84.10%.

Chapter V

Discussion of the Project

The objective of this study was to determine if a theoretically based instrument could be developed that would successfully assess the personality style of a particular population of college students. The purpose of this chapter is to

1) discuss the methodological difficulties encountered in developing and administering such an instrument,

2) discuss some of the issues involved in the analysis of the data in the study,

3) present a description of the theoretical types based upon the research findings,

and

4) discuss the conclusions that can be drawn from this study, and the the implications for future research.

Methodological Difficulties

In general, three types of methodological difficulties were encountered: (i) difficulties with the sample, (ii) difficulties with the design of the likert instrument, and (iii) difficulties encountered in the use of expert raters. Each of these concerns will be discussed in the following sections.

Difficulties with the Sample

The sample population for this study was composed of a select group of undergraduate students, hired on the basis of their leadership qualities and potential. These individuals were enrolled in a course whose successful completion was a

requirement of continued employment, and in some cases course instructors were also the supervisors of students in the class, Both the Heath and likert instruments were administered as part of a unit on individual style, and students were aware that the instruments would be collected and reviewed by the instructors. Given these circumstances, the context in which the instruments were administered, it is possible that respondents may have perceived the instruments as evaluative, rather than as descriptive, tools.

The effect of this context upon the subjects' responses on the instruments cannot be discounted. One effect might be for an individual's responses on either the likert or the Heath instrument to be reflective of one's "ideal" (in this case as a staff member) rather than real self. Moreover, it is important to note that by design the likert instrument focused on job responsibilities and behaviors, which may have served to further cloud the descriptive vs. evaluative nature of the instrumentation.

A final point related to sample difficulties is that the data used in this study was collected only from those students who attended class on the day that the instruments were administered. Therefore, "class attendance" was also a factor that affected data collection. For these reasons, the value of this study arises from the descriptive information it provides about this population, as well as from the avenues for exploration that the results suggest. However, it is not possible to generalize these findings to other populations because of the lack of randomization of the sample.

Discussion of Items on the Resident Advisor Heath Typology

Instrument

As was previously described, the results of the empirical analysis were used to make decisions about the status of each item on the instrument. Three possibilities existed: an item could be removed from the study; the theoretical designation of an item could be altered; or an item could be retained in the study with its original theoretical designation.

In this section likert items from each of these three areas will be discussed. Characteristics and qualities of the three styles are also included in these discussions. The reader is directed to Tables 4-1 through 4-4 for a listing of the likert items in each area.

Items Removed from the Study

Three X items were removed from the study:

11. I like it when other RA's in my building seek me out for support.

15. Dorm meetings are uncomfortable for me when people are arguing.

28. It is important for me to have a close relationship with other RA's in my building.

A central concept underlying the development of items 11 and 28 was the need of an X individual for support and a sense of belonging. The investigator hypothesized that of the three types, the X would be the one who would seek to fulfill his need for support through the development of close interpersonal relationships. This seemed likely because Heath describes the Y as competitive and, in interpersonal relationships, aggressive and often insensitive to the feelings of

others. The Z can also be insensitive to the feelings of others, since he is often preoccupied with his feelings and mood of the moment. However, items 11 and 28 were not endorsed to a significant extent by any of the types, and were removed from the study. While these X items were not supported by the empirical findings, other X items provide inofrmation about the nature of X's interpersonal relations. Consider items:

26. My best moments as an RA have been when I've been able to help a resident with a really unique problem.

27. Ideally, I see my role as one where my primary responsibility is to help residents in my unit to live together in harmony.

48. As an RA, I get real satisfaction out of bringing people together.

Both items 26 and 27 were highly endorsed by X, supporting the hypothesis that X derives satisfaction through assisting others to resolve problems, or to live together harmoniously. (It is interesting to note that both Y and Z have slightly rejected item 27.) Yet, in contrast, X's have not endorsed items 28 and 48.

While the results are inconclusive, several points should be considered. Theoretically, the X's need for support and belonging is counter-balanced by a fear of getting involved, of becoming entangled. Heath believes that the X individual avoids becoming closely involved with others because of his feeling that such involvement reduces one's freedom, especially in a conflict situation.

A second point, and one that has been raised through the findings on the empirical analysis, needs to be considered.

Items such as 26 and 27, that involve working closely with a resident and his concerns, tend to be highly endorsed by X's. Yet two other items (11 and 28) that involve working closely with one's peers (other staff members) have been rejected by X's. These results indicate that X's are responding differentially to the idea of working with staff versus working with the residents in their living units. For the X individual, the development of a close working relationship with other RA's may be viewed as a long-term "entanglement"; whereas assisting a resident may be seen as short-term, or not as personally involving. Items 11 and 28 could have been perceived as implying the development of a long-term relationship; and this underlying implication may have contributed to the failure of these items. While these results are not conclusive, they raise interesting questions regarding the development of effective staff relations within an organization like the Office of Residence Life.

Item 15 was designed to examine the role of the X individual in a conflict situation. While this question was not endorsed by X's, and was removed from the study, it is interesting to note that item 27 ("Ideally, I see my role as one where my primary responsibility is to help residents in my unit to live together in harmony"), a more positive statement of interest in the development of harmonious relationships, has been endorsed by X's. It is likely that the negative wording (and orientation) of item 15 has had an adverse effect on the responses to this item.

The results from these items provide direction for future investigation of the X, in more directly addressing the issue

of involvement and entanglement, and in further exploring the response of X to conflict situations.

Four Y items were removed from the study. The theme of three of these items is strikingly similar.

9. One of the frustrations of being an RA is when we waste so much time talking about problems, rather than figuring out solutions.

16. It is frustrating to me when people at dorm meetings spend a lot of time kicking ideas around rather than doing some concrete planning.

21. I get bored in dorm meetings when the discussions are long and we waste a lot of time.

Heath has described the Y as one who thrives on "purposeful activity", as well as having a high need for achievement and concrete success. Further, Heath states that for the Y, "wasting time is a cardinal sin, a lost opportunity" (p. 20). In extrapolating from Heath's description of the Y it seems likely that this desire to achieve a visable, tangible and successful outcome would be manifested in the Y's approach to his job, and might characterize the nature of Y's relations with others. However, this assumption was not supported, as none of these items were significantly endorsed by the Y. One reason for the failure of these items may lie in their wording; in each case the respondent is being asked to endorse a negative response to one's job, such as "frustration" or "boredom". This is one place in which the context the instrument was given may have been a significant factor. This context might have effected the Y's response in either of two ways. First, the fact that the instrument was administered in a course which was a requirement of employment may have caused Y's to not respond to items 9, 16 and 21 honestly, for to have done

so would reveal "unacceptable" RA behaviors or attitudes.
Secondly, "talking about problems", "kicking ideas about" and
engaging in "long discussions" might be perceived by an RA as
part of doing one's job. For this reason, these activities
may be looked upon as productive activities.

Item 25 ("I generally don't get too involved with my
resident's personal lives because I think that they should
take care of themselves") was the fourth Y item removed from
the study. There are several problems with this item. First,
the item is negatively oriented. It asks respondents to
endorse not doing something. Secondly, the item presents a
conflict with stated job expectations (peer-counseling).
Finally, the phrase "should take care of themselves" is an
emotionally charge one, and this perhaps obscures the issue.
A more positively oriented item such as "I generally don't get
involved in my resident's personal lives because I think that
it is important for people to be able to resolve their own
problems" might be a more workable item to consider in a
future study.

Three Z items were removed from the study.

19. I find that people have a lot of trouble in following
    my train of thought when I'm explaining something in
    meetings.

38. One of the things that I enjoy most in my job is when
    I am able to come up with innovative ideas and programs.

46. Even though I'm basically a worrier, I can live with
    a lot of anxiety in my life.

Heath describes Z's as people who tend to have difficulties
with communication, and adds that as their expressions "are
direct outcroppings of an active, inner self, they are apt to
be highly individualistic, even surrealistic" (p. 25). As the

thoughts of the Z often <u>appear</u> to be unconnected, Heath states that the Z is frequently misunderstood by others. However, the results obtained from items developed to explore the communication style and possible difficulties of the Z did not conclusively support Heath's position. Item 44 ("I like to toss out new and different ideas to get a discussion going") was not significantly endorsed by Z. However, item 45 ("I tend to carefully think through what I'm going to say before I offer an opinion") was strongly rejected by Z. While this last item was developed as an X item, the response from Z (a strong rejection) is consistent with theoretical assumptions. The failure of item 19 may be tied to the wording of the item. It is strongly worded ("... a lot of trouble"), and it describes a current situation. It is likely that the population in this study, generally upperclass people who are in a leadership position, would have focused on and sought to resolve communication difficulties in the past. This item could be re-worded, "I really had to learn to organize my thoughts in order to be understood by others" in a future study.

Item 38 is similar to question 3 ("I like it when the other RA's in my building look to me for unusual and innovative ideas"). However, neither of these items has been successful as Z items. Question 3 became a Y item, and item 38 was removed from the study. These results indicate that this population of Z's does not care to assume the role of innovator, perhaps (as has been previously discussed) because this is seen more as a leadership role.

Item 46, the final Z item removed from the study, is an item from the "Individual Characteristics" area of the likert

instrument. This item was developed to test Heath's assumption that the Z is an active worrier, and one with a high tolerance for anxiety. Surprisingly, this item was rejected by Z's, but slightly endorsed by X's. While the endorsement by X is not sufficient to justify altering the theoretical designation of the item, it does suggest avenues for future exploration.

Items whose Theoretical Designation was Altered

The empirical results of several likert items supported changing the theoretical designation of the item. A re-examination of these items in view of the empirical findings suggests possible reasons for the results obtained. For example, questions

3. I like it when other RA's in my building look to me for unusual and innovative ideas.

and

41. Sometimes an idea will really strike my fancy and I'll immediately start working on a new and different project.

were designed as Z items, and both were subsequently changed to Y. In each case, the item was most highly endorsed by Y, and was rejected by both X's and Z's.

One possible explanation for these endorsements is that the salient aspect of the item, for the respondent, may be the activity, or behavior presented, rather than the description of that behavior. For instance, item 3 may be being perceived as presenting an aspect of active leadership. That is, the respondent may be focusing on the fact that other staff members are are looking to him to develop ideas, provide direction, etc. Theoretically, these functions and behaviors are most characteristic of the leadership-oriented Y; and it

is the Y who has endorsed this item. Similarly, item 41 may have been perceived and responded to in terms of the behavior it describes- having a good idea and following it through. Here again, the behavior is most characteristic of the Y, as he is one who thrives on activity and achievement.

The empirical findings here illustrate what is probably a flaw in the design of these items. Adjectives such as "unusual and innovative" and "new and different" are typically associated with the perspective of the Z; however their use here does not serve to make thse items Z items.

Two other likert items originally developed as X items, were changed to Z,

12. Tension in "the system" is a hard thing for me to cope with.

and

37. Deep down I know that I have very high potential to do things of great significance.

In contrast to the previous two items, it is difficult to determine why these items have been most highly endorsed by a type other than the expected type. These items are not specifically ties to the context and behaviors of the RA position. Rather, they illustrate theoretical constructs that Heath has attributed to the X. Yet, in each case Z most strongly endorsed the item. (In fact, the endorsement by Z on item 12, .8048, was the highest endorsement by Z in the study.) With these results, it is only possible to conclude that the empirical findings have not supported theoretical assumptions. Additional study with a larger population will be necessary in order to further explore these issues.

Items Whose Endorsements Matched Theoretical Expectations

As has been previously described, items that worked fell into two groupings. In the first, eight items were retained in the study with their original theoretical designations even though the highest endorsement received was by a type other than the "expected" type. Generally, there is not a large difference between the type that has most highly endorsed the item and the theoretically designated type, and the differences may be a result of the small size of the sample. However, several examples of these items will be considered below.

The results of item 26 ("My best moments as an RA have been when I've been able to help a resident with a really unique problem") are consistent with what might be expected from this paraprofessional population. The item was developed as a Z item, and was endorsed by Z's, although there was a slightly higher endorsement by X's. Here again, the descriptor "unique", expected to be a significant factor in the responses to the item, was probably not salient for respondents. As has been found with other items (for example item 27, described in a previous section) X's in this sample tend to highly endorse items that involve assisting a resident. While this item works will in sorting out Y's (they have rejected the item), it is not as successful in differentiating X's from Z's.

Two other items in this area:

13. The best dorm meetings are those in which new and novel ideas are discussed.

and

24. The best dorm meetings are those in which a well planned agenda is followed.

have been cross-endorsed. Item 13, a Z item, was most highly endorsed by X; while question 24, an X item, has been more highly endorsed by Z. Although the general level of endorsement on these items is not great, the results raise interesting questions about the relationship between X and Z. While it is possible to see how any type might endorse item 13 (few RA's would reject having an interesting meeting), item 24 provides more provocative results. The desire for a structured and orderly environment is very definitely a significant factor for the X, but can be seen to be antithetical to the impulsive and spontaneous Z. This is clearly an area that will require further exploration.

Item 1 ("I like the challenge of developing a new program") is unusual because this Y item was most highly endorsed by Z's. This is one place where Z's have (unexpectedly) responded to the description of the activity. It is possible that the placement of this item on the instrument (first) may account for the Z's ready endorsement. This is likely since item 38 ("One of the things that I enjoy most in my job is when I am able to come up with innovative ideas and programs"), a thematically similar item designed as a Z item, was rejected by Z and removed from the study.

These items, and the others in this area will require special attention when additional data becomes available.

While not characterized within the context of "methodological difficulties", the remaining likert items, where the highest endorsement was given by the expected type, will be considered here.

The results indicate that items developed around the

concept of leadership style and preference consistently
proved to be among the most successful "working" items. For
example, the responses of all of the types on the two
following Y items:

> 6. I like it when the other RA(s) in my building look
>   to me for leadership.

> 14. I like being a leader in dorm meetings.

confirmed theoretical expectations. Y's have endorsed each
of these items, and X's and Z's rejected the leadership role.
(It should be noted that X's response to item 14 is the
strongest response by X in the study- a rejection of -.4740.)
The results of two X items further confirm these findings,

> 18. Although I like to plan dorm meetings, I generally
>   let someone else take the leadership role.

and

> 40. I'm more quiet in my leadership role than people who
>   speak up all the time.

In each case the item has been endorsed by X and Z, and rejected
by Y.

In these four items, the responses of X and Z were
expected to be similar, and these expectations were supported.
This is a graphic illustration, not of the "sameness" of the
types, but of the fact that the behaviors of the three styles
may often be similar. The differences arise from the under-
lying dynamics. For example, while both X and Z have endorsed
a more quiet leadership style, the "quietness" of the X may be
a response to a "risky" situation (for instance talking in
front of a group), while the Z may simply have become engrossed
in another topic or activity.

Other successful working items were found in "sets" or trios. For example:

27. Ideally, I see my role as one where my primary responsibility is to help residents in my unit to live in harmony. (X)

32. Ideally, I see my role in terms of being the one who organizes successful programs in my unit. (Y)

and

36. Ideally, I see my role as one where I can introduce a lot of variety, and create an environment where spontaniety is valued. (Z)

present a statement of the "ideal" role from the perspective of each of the types. These findings from these items are especially valuable in that it would seem that there are many potential influences on how an individual forms his concept of the ideal. For instance, it is reasonalbe to expect that a staff member's concept of the ideal role would be shaped by the expectations of his supervisor in conjunction with the specific needs of the living unit. And yet, the empirical results have shown that these respondents have endorsed a concept of the "ideal" that is consistent with theoretical assumptions of personality style. Each of these three items was most highly endorsed by the expected type (in parentheses), and was not endorsed by the other two types.

Items:

42. I find that I think quickly and then express my ideas forcefully. (Y)

44. I like to toss out new and different ideas to get a discussion going. (Z)

and

45. I tend to carefully think through what I'm going to say before I offer an opinion. (X)

represent another successful "trio" of items. Of special interest is the response of Z to item 45. The strong rejection of Z on this item (-.7625) further confirms the theoretical description of this style.

The Use of Expert Raters

The purpose of this study was to create an instrument that could be used to assess Heath's personality style. At the time that the study was conducted there was no available/published information about the validity of Heath's "Modes of Existence" instrument. Additionally, there were some concerns about the scoring of the Heath instrument (discussed in Chapter II). Therefore, it did not seem as though the Heath instrument in itself could provide a complete standard from which to assess the effectiveness of the likert instrument. and, since there was no way of knowing how accurate the Heath instrument was, a simple agreement . between Heath and the likert would not provide much information about the validity of the likert instrument. If a low correlation were obtained it would not be possible to determine which of the two instruments was more reliable. Moreover, a high agreement index between the two would only indicate that the likert instrument measured the same information as the "Modes of Existence" instrument. A high agreement would not provide information as to how well each instrument can assess personality style. Therefore, it was necessary to find a reliable standard, a way to assess an individual's type independent of the Heath "Modes of Existence" instrument.

For these reasons a group of expert raters were asked to

type subjects in the study. An expert rater was considered to be an individual who was thoroughly schooled in Heath, and who was also closely acquainted with the individuals in the study. The type assignments of the expert raters were considered to be the most reliable assessment of typology, and were used as the standard for evaluation of the Heath and likert instruments.

There were several issues of concern in the use of expert raters. One consideration was that the subjects were known to different extents by the experts. In general, the reliability of an expert rating is contingent upon how well the expert knows the subject. A second issue is that some individuals are more easily typed than others. That is, some individuals will exhibit behaviors characteristic of two or of all the types, while others will consistently exhibit behaviors of one type over the others. Therefore, the ability of the expert rater to accurately type a subject will be a function of the rater's knowledge of the individual as well as the "strength of type" of that individual.

"Degree of Confidence" of Expert Raters

To have used expert ratings without including a measure or weighting of "confidence" would be to assume that all expert ratings are equally correct, or that they are all given with an equal degree of certainty. This assumption is not well-founded. The degree of confidence of an expert's rating, as discussed earlier, is contingent upon factors such as the strength of type of an individual, and the rater's knowledge of the subject. Therefore, the certainty with which a rater can assess an individual will vary, and must be accounted for stastically.

Because each expert rating carries a percentage of con-

fidence, it would not be appropriate to compute the H-E and L-E agreements exactly as the H-L agreement was; that is, by taking the percentages of agreement in typing. When computing H-E and L-E correlations, the degree of confidence of each rating is accounted for through assigning a greater weight to ratings with a higher degree of confidence. The weighting given to each rating is the percentage of confidence provided by the rater. Using these weights the H-E (L-E) correlations can be computed in a manner similar to the H-L correlation. In computing the H-L indexes all percentages and cases of agreement were counted as one. But, when using degrees of confidence cases of agreement are counted differentially (according to percentage of value), and the total number of cases, or maximum agreement, is the sum of all percentages. This figure, the sum of percentages of agreement of the Expert rating and the Heath (likert) typings divided by the sum of the percentages, has been termed the "weighted actual correlation".

In computing indexes, a second consideration again involved the percentages of confidence. The H-L correlation was derived by dividing the cases of agreement by the total number of cases. Since all percentages of confidence were by definition equal (at 100%), confidence ratings did not effect the final index. However, this is not the case with H-E and L-E agreements. In these cases the expected index varies according to the degree of confidence of a perticular expert rating.

The expected indexes for H-E and L-E typings are the arithemetic means of the degrees of confidence of the expert

ratings. This figure represents the percentage of times (on the average) that the experts could expect their ratings to correlate with the Heath or likert typings. The closer the "weighted actual correlation" comes to the "expected correlation" the better the Heath or likert instrument has done. When a great difference between these two figures is obtained, the instrument has not done well.

To determine how well the weighted actual correlation does with respect to the expected correlation, the figure $\frac{wac}{ec}$ is computed. This figure represents the final H-E or L-E correlation, and provides a quantitative measure of how well the respective instrument has done in typing individuals. A percentage of 100 (arrived at if and only if wac = ec) indicates that the weighted actual correlation is exactly as expected by the expert raters. The results are worse as this figure deviates in either direction from 100, the "ideal" result.

Analysis of the Data

In looking at the results of the likert there are two primary areas of consideration: what makes an individual an X, Y or Z; and what, empirically, makes a question an X, Y or Z. Some items, by the nature of their content, will be more highly endorsed by the majority of respondents. That is, one can assume that a group of resident assistants will tend to more highly endorse such items as #1 ("I like the challenge of developing a new program") and #48 ("As an R.A. I get real satisfaction out of bringing people together"). This is likely to occur because the RA selection process tends to select individuals who are interested in performing these kinds

of tasks, and because in the process of becoming an RA (training) one learns that these activities are valued by the organization (Residence Life).

In the same way we can expect that questions such as #17 ("I get bored and don't contribute much in meetings unless the topic strikes my fancy") and #5 ("Problem situations that are hard to define make me worried that I'll do the wrong thing") will receive a lower endorsement, again because of the nature of their content. This lower endorsement is probably a result of the negative orientation of these items. That is, in endorsing these items an individual is admitting to not living up to job expectations-- in #17, being inattentive in dorm meetings, and in #15, not feeling secure about being able to successfully handle difficult problem situations. In general, these types of items imply that one is not a successful resident assistant, and questions like these are not as highly endorsed by a select group of student leaders such as this population. In fact, the mean endorsements for these questions confirm this: #1- 4.24, #48- 4.49, while #17- 2.00 and #5- 2.70.

This illustrates that a question can be an X question because X's on the average "rate it" 2.5 while Y's and Z's rate it 1.5. Or, a question can be an X because X's rate it 4.75 while Y's and Z's rate it 4.0. Therefore, "being an X question", or "being endorsed by X" is a relative notion, and the task is to compute an average that is independent of whether the item is highly endorsed or not. The z-score, $\frac{1-u}{\sigma}$, where l is the likert response of an individual to a particular question, u is the arithmetic mean of all likert responses on

that question, and σ, the standard deviation from the mean, describes the extent to which each question has been endorsed by the subjects. Higher u's indicate a greater endorsement on that item, and a lower u indicates that a question has been more strongly rejected. Taking the figure 1-u abstracts from the relative endorsement of the question in order to determine how each individual has responded to a particular item relative to the endorsement of others. If 1-u is positive, that person has endorsed the question above the mean. If 1-u is negative, the individual has endorsed the item below the mean. Therefore, using 1-u it is possible to obtain meaningful information about the relative endorsement of a subject on a particular item.

The standard deviation (σ) is a reflection of the variance of score distribution from the mean. A low sigma indicates little variance in responses; a greater variance is reflected in a higher sigma. This can easily be seen in the data. For example, consider the likert responses on these two items.

1. (lik=1)-0; (lik=2)-1; (lik=3)-1; (lik=4)-29; (lik=5)-14
28. (lik=1)-3; (lik=2)-3; (lik=3)-9; (lik=4)-19; (lik=5)-10

In item #1 the standard deviation is .6031, reflecting the clustering of scores around likert responses four and five. In item #28 however, sigma= 1.1032, reflecting the greater variation in responses. Now consider two hypothetical questions, a and b, each having u= 4.0. The variation of responses in two such questions can differ signficantly even though the means are the same. That is, in question a most respondents may have endorsed response number 4, while in question b there may be a greater variety of response along

the likert continuum. An individual's response of 5 on question b, in varying from the mean, may be more significant than a similar response of 5 on question a, where the range of responses is greater. Therefore, it is necessary to be able to account for the degree of variation when looking at an individual's response, as an individual's 1-u will be more or less significant depending upon the variability of scores on a question. The figure $\frac{1-u}{\sigma}$, or z-score, provides a measure that is independent of the relative endorsement of the question; that is, independent of both the mean endorsements and the variability of scores.

Through the computation of mean z-scores, individual items could be examined with respect to the empirical findings. That is, to what extent have the theoretical assumptions of type for particular items been supported by the data? Through this examination it was possible to determine: (i) if the theoretical assumptions of type were justified, (ii) if the data was inconclusive, or (iii) if the theoretical assumptions of type were not supported. Those items where the theoretical assumptions of type were supported by the empirical findings were considered to have worked well. When the data was not conclusive the item was retained with its original theoretical designation. More data will be needed in order to evaluate the effectiveness of these items. Finally, in cases where the theoretical assumptions were not supported decisions were made to remove the item from the study or to alter its theoretical designation. The decision rules used in making these determinations (as described in Chapter III) were of necessity arbit-

rary, as there are not standard or established guidelines to refer to in making decisions of this sort. However, the investigator's intent was to develop meaningful decision rules. Guidelines were selected that would keep questions as far away as possible from cutoff points, in order to avoid having items with similar empirical results treated differentially (for example, having one item removed and a second item with similar results retained in the study).

After considering the results of the empirical analysis of the original 43 likert items, final decisions about the type of each item were reached. It was then possible to compute the type of subjects in the study based upon their responses to likert items.

In determining what makes an individual an X, Y or Z, the issues are similar to those addressed in item analysis. An individual's type cannot be determined by the highest likert endorsement, as the nature of the item can significantly impact the level of endorsement. l-u is used to determine the relationship of an individual's endorsement on an item to the average endorsement for that item. If an individual endorses X questions higher than average, and Y's and Z's below, then that individual is an X, even though his average likert response for X questions may be 2.0 and his average likert response for Y and Z questions may be higher.

A second concern in typing individuals is that some questions again because of their wording or content, tend to elicit one or two consecutive likert responses, while other questions by their design allow for a broad range of likert

responses. That is, in some questions the range of responses
will vary greatly, while in other items responses will tend to
cluster. Here again the standard deviation is used to account
for the variation of responses around the mean. The z-score
of each individual for each qeustion provides a measure that
is independent of the relative endorsement and variability of
that item; and therefore the z-score provides more meaningful
and useful information about responses on the likert instrument.

Description of the Types

It is possible, based upon the responses on the likert
instrument, to identify salient characteristics of each of the
types in this study. The descriptions below are intended to
highlight some of these characteristics, and to point out
similarities and differences between this population and that
from which Heath has drawn his conclusions. The information
presented here is based upon the average z-score response of
each type to likert items, and the numbers in parenthesis refer
to particular likert items.

The X's

As the figures in Appendix E illustrate, the X's in this
study are somewhat conservative in their endorsements. Of the
original 48 likert items, only 5 received an average z-score
response of above +.3 or below -.3. In the majority of cases
the responses hovered slightly above or below zero. However,
it is possible to view this pattern of responses as indicative
of what Heath has termed the "blandness" or neutrality of the
X. The strongest response of X was to item 14 ("I like being
a leader in dorm meetings"), which was rejected at -.4740.

One of the other two responses of this magnitude was to item 40 ("I'm more quiet in my leadership role than people who speak up all the time"), which was endorsed at +.4632. Taken together, the strong response of X to these two items are useful in characterizing the X's leadership style.

A review of the empirical results provides a description of the X that is fairly consistent with Heath. X's prefer to operate within a structured setting (7). They do not like to be cast in a leadership role, or look to others for leadership (3,6,14,11). They attest to a "quiet" style, and are not apt to take an active role in initiating ideas or discussion (17,18,36,40,42,44,45).

In their interactions with others, they avoid becoming deeply involved (25,11), and yet have found great reward in such relationships when entered. Item 26 ("My best moments as an RA have been when I've been able to help a resident with a really unique problem"), the only other item in the study to have received an endorsement above +.4 was endorsed at +.4632. As has been previously discussed, X's seem to differentiate between working closely with other staff and with residents, and to endorse the latter while rejecting the former (26,27, 28,11).

In general, many of the characteristics that Heath has attributed to the X have been confirmed in these findings, particularly with respect to leadership style. However, there were some differences. The response of X to tension and conflict was not as expected. Of the two X items developed around these themes, one was removed from the study (item 15,

"Dorm meetings are uncomfortable for me when people are arguing"), while the theoretical designation of the second was altered (item 12, "Tension in the system is a hard thing for me to cope with") to Z. Another theoretical construct that Heath attributes to the X, that of a deeply held feeling of "invincibility" or of "high potentiality" was also not supported in these findings (37).

The Y's

The picture of the Y is also very similar to Heath's characterization, although there are some notable differences. As with the X, however, it is the area of leadership style where the similarities are most apparent. Items that state a preference for being the identified leader have been strongly endorsed by Y (6,14). The Y enjoys taking an active verbal/ leadership role within a group (40,42), and consistently rejects a more "quiet" leadership style (17,18). Consistent with Heath's description, Y works to get the job done (8,34) and does not mind circumventing the rules (10) or using his power as an RA (39) to do so. However, the Y's in this study do not appear to be as concerned with the time element. Heath claims that for the Y, "Wasting time is...a cardinal sin, a lost opportunity" (1964, p. 20). Although several likert items were developed around this theme (9,16,21), this was not found to be a significant concern of the Y's in this study. A final note about the Y's. The general response pattern was similar to that described of X; there was overall a low level of response. Only four likert items were endorsed above +.3 or below -.3 by the Y respondents in this study (6,14,26,40).

The Z's

Of the three types, the Z's provided the most interesting, and at times unexpected, responses. One immediate point of interest lies in the Z's general response. Of the original 48 likert items, Z's endorsed 19 items above +.3 or below -.3. While the strongest (in terms of magnitude) response by X was -.4740 and by Y +.4726, Z's strongest z-score response was +.8048. There were 8 endorsements by Z whose absolute value was above .5 (6,8,12,14,34,43,45,48), and none at this level by either X or Y. In itself, this response pattern can be viewed as characteristic of the Z temperment, in its wide variety and variability.

Other characteristics of the Z temperment are also confirmed in the data. As would be expected, the job performance of the Z varies according to mood (8,17). Rules and regulations are not seen as particularly relevant (4), and the use of power is strongly rejected (34). Like the X's, Z's reject the leadership role (6,14), and describe their style as "quiet" (40,42).

Strong interpersonal relationships appear to be especially important for the Z's in this study. Of the three types, Z's most consistently and strongly endorse items that involve working with others (25,26,28,29,30,48).

Conclusions

In a study such as this the conclusions may seem elusive in that they are primarily in the realm of possibilities. That is, the results of this study indicate that it is possible to develop an instrument, using a theoretical basis, that can effectively assess personality style. Moreover, the results

indicate that it is possible to successfully translate the theoretical construct of "type" into related thoughts, feelings and behaviors. And while this study was conducted within the context of a particular environment, its success indicates that it will be possible to create a behaviorally-oriented instrument that can be used with students in other environments, or across environments- a more generalized approach.

However, there is also a series of more tangible and pragmatic conclusions that can be drawn from the research. That is, this study provides a framework for understanding the thoughts, feelings and behaviors, the "style" of of a group of resident assistants. We can use this information that they have provided for us in their responses in our approach to and work with this population. We have always known that individuals differ, but these results allow us to determine more specifically the nature of these individual differences. Such information can be used in the design of training/development programs. For instance, a group of X's might want to focus on presentational skills, while Y's concentrated on listening and counseling skills. Clearly, there are numerous possibilities. To the extent that we better know and understand our students as individuals, we will be better able to meet their individual needs.

In many senses, a study like this is only a beginning. A great deal of additional research is called for, both to further investigate the types and to test the reliability of the Resident Advisor Heath Typology Instrument as well.

APPENDIX A

MODES OF EXISTENCE TEST, AND SCORING DIAGRAM AND RULES

Modes of Existence Test

(In the interests of space, this instrument has not been reproduced exactly. When administered each mode was contained on a separate page.)

Mode A

I have always been the sort of person who has been able to set and maintain for himself a vigorous pace. This has been true both physically and mentally. I thrive on activity. However, I know that relaxation has its place too. Sometimes, its important to let up, especially where the outcome is not that important.

Another thing: I have to learn a lot about my handling of people. When someone challenges me, I hate to see the challenge go unmet. I never mean anything personal in my competitiveness but people don't always realize that.

Of course, I see the value of relaxing and just enjoying my friends for what they are instead of secretly competing with them all the time.

In my reading, too, I think that relaxing helps. In pressing to get everything done, I sometimes miss the subtle points. With further reflection, I sometimes understand more. And when I relax, more original ideas come to me.

Mode B

I have always been fairly easy to get along with. I am not one to push myself ahead of others the way some people do. I've found that people generally like you to accept them as they are. However, some of them should try the same advice, instead of pushing others into things they can't get out of. I like my own group. Even though we don't talk about it, we sort of understand each other.

As a person I'm not going to set the world on fire. I've got my share of intelligence but I've never been what you call an intellectual. I appreciate good music and art but I seriously doubt I will ever create an artistic masterpiece. If I ever did something substantial along creative lines it wouldn't be way out or avant-garde. I would want it to be something a lot of people could appreciate.

Making decisions is always fairly difficult, especially if someone is on your back or is rushing you. If I can take my time, I can usually make a good decision and stick to it.

Mode C

Of one thing I am sure- people vary in an almost infinite complexity of forms. Frankly, in reading over the various modes of existence I found myself resisting the notion that people can be classified in this manner. I can see aspects of myself in almost all of the statements presented. I might go along and make a few choices but I would like to go on record as being somewhat negative to the whole idea of personality classification. I do not mean, however, that I am opposed to people having a better understanding of themselves. I am not sure, however, that this test is the most effective way of going about it.

Mode D

To be truthful with you, I am pretty mixed up! There are so many sides to me that it's a wonder that anybody under- stands me. Sometimes I doubt that anyone really does, myself included.

If I didn't think so much about things, life would be a hell of a lot more peaceful. Some of my ideas don't seem half bad, especially at the time. When I get a good idea, I can't wait to try it out. This is when I am apt to go off half-cocked and the results show it. I wonder if anyone ever gets as dis- gusted with himself or as far down in the dumps as I do. I hope not.

Things are not always that bad. There are times when the going is good. I have moments, for example, when I feel close to nature, or whatever you might want to call it. Sometimes, too, my thinking moves fast, very fast. Doors start opening up all over the place. Basically, I believe I have a creative turn of mind and could do something special- if I don't mess up my chance.

I know I have real potential. But right now don't be on me- things could go either way.

Mode E

Tempermentally I am a cautious person particularly when it comes to expressing myself freely among people I don't know too well. Once I feel sure about a person, I can relax and feel as free as the next person.

Usually, I try to keep the peace, rather than start something that might upset somebody. However, there are times when you must take a strong stand, in spite of possible conse- quences. Sometimes friends appreciate it more when you reveal both your strengths and weaknesses. Occasionally this will lead to a deeper and more meaningful relationship.

But I still do not like to offend people or get them upset. Everyone has their own peculiar set of problems so that when life does seem to be at least endurable for the other guy, why not let it continue to be that way.

Each of us in our own way should try to make the world a better place to live in. This is the least I can expect of myself. In order to do this however, there will be times when I will have to stand up for myself and let the chips fall where they may.

Mode F

To be honest, I should claim at least three personal faults: moodiness, self-centeredness, and a fascination for anything that is strange or new.

I can be, and quite genuinely so, the life of a party. I'll enjoy it all and so will the others at the party. On other occasions, going to a party is the last thing I want to do. When I am in this mood I would much rather be alone. Not all of my aloneness is unpleasant. Sometimes I will feel very much in tune with the world, and prefer solitude to read, take a walk, or just sit and think.

When I get a good idea or concoct some great scheme I usually can't wait to visit one or two of my friends and tell them about it. When I get excited at times like this my friends, of course, have to do most of the listening.

I have always had the problem of settling down and concentrating on one area only. I become so overextended that I just don't take the time to get any one thing done well. If I discipline myself I can get away from the distractions and concentrate. I know I have the talent to create and bore very deeply into something because I have had occasions when I have done it. The pity is that these occasions don't happen more often.

Even though many people don't understand me I am getting on to myself and honestly enjoy being me, in spite of my moods and irrational moments.

Mode G

I'm the restless sort. I prefer to be busy. Ever since I was a kid, I've been pretty successful in finding things to do. A lot of people waste their time but I feel better when I'm actually doing something worthwhile. I am much happier when I am busily occupied in both work and play.

Many people complain about their lot in life. They would be much better off if they got down to work and began to do something about their difficulties.

Friends are fine but we shouldn't lean on them. In the long run each person has to fight his own battles and win his own wars. Ideas, too, are good but what counts is what we do with ideas.

There are many things I would like to do. It's a good feeling when you do something well. There is nothing better than a real sense of accomplishment. Sometimes, of course, a strong ambition to do well results in other people becoming angry, but this generally isn't too serious, and most people appreciate a job well done.

Mode H

I guess I'd have to call myself a listener. I like to be around a group, and I enjoy hearing other people discuss things. I usually don't say too much in the discussions, although it sometimes turns out that my ideas would have been quite good. In this respect, I am afraid I don't add much to the group.

I have some friends, but I usually listen to them and say comparatively little. There are so many sides to many issues that I am afraid I just don't know enough to make valid comments, although the others sometimes don't know too much more.

Sometimes I worry because I am not really doing anything. It isn't so much that I am lazy as that I have no idea what goals I ought to have. Until I do find myself, I am afraid I will remain quite passive.

Somehow I have to get out of myself. I need to stop holding back my ideas and feelings. I need the courage to let them come out and in so doing find out what they really are and what I really am. Until I do, I will never find the sense of well-being that would come through true self-expression. Otherwise I may continue to have periods of moodiness and even, at times, depression.

Right now I am just trying to expand my horizon, and hope that someday I will get a grip on life.

Mode J

My greatest need is time, particularly to read, think or just do things I have not done before. Although I can get absorbed in an interesting job almost anywhere at any time, there are so many other things to do that I sometimes feel lost in the rush.

Most of my limitations are inherent. My friends are well aware of this. It is the unexpected similarities that keep our friendships going.

Sometimes I think we all take life too seriously; it ought to be fun. If I step back, I find almost everything intriguing or at least smile-able.

Life is a dance.

Mode K

When confronted with a new social situation, I am initially passive, feeling my way while seeking out the most interesting people. In the past this has been a long, often lonely process, for I have often felt as if I were making no headway, at times a prisoner within myself. Still I have persisted in this approach to people and it has proven very successful in the long run. I attribute this success to my real feelings for people, which has manifested itself in a willingness to be a listener, and my ability to appreciate others' problems. Sometimes it takes people a while to appreciate these qualities, but if they are the kind of individuals I am interested in time will bring us together.

On the whole I am moving out into the world more in the way I believe I should. I am still not one to take head-on risks in the manner of some of my bolder friends. I prefer to toy gently with ideas and new situations, to move in gradually. I nibble.

Whatever my involvement, I am not especially analytical. I would rather wait for ideas to gel in the caverns of my sub-conscious and later to emerge in full form. In ways perhaps not noticed by others such experiences can be enlivening.

Mode L

Success and accomplishment have always been important to me but my definition of success has undergone significant changes during my life. The notion that one passes this way only once has always been with me. But relaxing with a good book and having the chance to share deeper feelings with a friend are also essential elements in my being. As a matter of fact, I find that when I do this I am better prepared to accomplish something that is really worthwhile.

I have had to redefine what it means to be strong. The intuitive now reigns more equally with the rational, the subjective with the objective. I know now that I am not all Adam or all Eve. Confrontations with myself are a dialectic. In fact, few of the contrasting strains within my psyche will ever be fully resolved in action either to my satisfaction or to others. At least I can keep the field open to myself and to those others I trust. In sum, my biggest challenge has been to accept myself with all the unwanted and devious undercurrents that flow in my inner being. Now that I do accept them I am more at peace with myself.

I am active, high strung and ambitious. But I find myself more and more amused at my efforts to do things that will make me seem important. It is times like these that I am struck with the reality of my relative insignificance.

Scoring Diagram

Reasonable Adventurer

Temperment (Style) ⟶

The letters in the figure correspond to modes from the Modes of Existence test, and are used in scoring. In 1976, Heath provided the following written scoring instructions.

Key to the Modes of Existence Test

Mode C is not a mode but a disclaimer for those who dislike this kind of test.

Mode H is written for a personality I know to exist but whose position in the model is not yet clear to me. My hunch is that he is a developmental variant of the Y.

Modes K and L need improvement. They tend to attract too many false positives. Many middle Xs, for example, tend to pick mode K and many middle Ys tend to pick mode L.

Mode J has too many false negatives. Some persons whom I consider to be high Zs are turned off by this mode.

Mode F I find attractive to some middle Xs but you will note that when they pick this mode as one of their choices they will characteristically mute it by striking out the negative words, e.g. faults.

Scoring Guidelines for Resident Advisor Study

1. Scorers of the instrument must be knowledgable in Heath's theory.

2. Each instrument is checked for adaptations (additions and/or deletions of words or phrases).

3. Any alteration to a mode is evaluated to determine if it supports or counter-indicates the typology assignment of the mode.

4. The three most highly rated modes are examined in order to determine an individual's dominant and sub-dominant types. In general, only modes receiving a rating of "7" or above are considered in the scoring.

APPENDIX B

RESIDENT ASSISTANT JOB DESCRIPTION

Introduction

A primary goal of residence halls at the University of Maryland is to encourage the awareness on the part of the student that education is a broadly based concept, that it is personal in nature, that it is a process involving his entire life, and that the student must exercise considerable initiative in the process of learning. Students need to develop risk-taking behaviors; they need to learn how to accept responsibility, and how to affect positive change. Residence hall staff members must serve as models and as supporters of the students' efforts.

Students are attracted to and learn best in environments which provide a comfortable, secure atmosphere. Experience indicates that students seek out environments which offer the social and intellectual stimulation to complement their total growth at the university. The building of such an environment in a residence hall requires an on-going effort on the part of both the students and staff in the hall.

Position Description

General

The Resident Assistant contributes to the development of community- a place where:

1. familiarity, concern and respect for others exist.

2. relationship and community problems are aired and can be resolved.

3. personal relationships can be developed.

4. personal growth is encouraged.

5. individual/community rights and responsibilities are cultivated, accepted, and shared.

6. individual differences are understood and respected.

7. individual needs for personal privacy can be satisfied.

8. members' characteristics and purposes can be expressed and developed.

9. members can affect change.

10. feedback is encouraged and provided concerning the individual's effect on the community.

Functions

Advisement

One of the major responsibilities of the resident assistant is that of advisement. This activity could be characterized as one in which the individual is available when a student needs someone to talk with. It could also entail the more formal aspects of advisement such as mediating and arbitrating. Below is a listing of the various functions which comprise the role of the resident assistant as an advisor.

I. Facilitate student-to-student and student-to-staff interaction.

   a. Develop and maintain an on-going relationship with hall residents.
   b. Assist the hall government in the encouragement of hall student gatherings.
   c. Initiate contracts, make introductions, stimulate conversation among residents of adjoining rooms and in the hall.
   d. Initiate contact between students and other staff members.
   e. Initiate contact between students and interest groups according to needs and interests of students.

II. Serve as a knowledgeable consultant for hall students concerning University supporting services.

   a. Be a resource person and referral agent for university and community services such as the counseling center, health service, food service, student activities office, financial aid office, placement center, campus special clinics and services, and off-campus services.
   b. Be a resource person and referral agent for campus services that aid the students' intellectual development.
   c. Be a resource person for university and community agencies able to assist a student in evaluating his vocational skills and interests.
   d. Conduct follow-up with the student for all these university and community services.

III. Assist the student in his desire for personal growth.

   a. Assess with the student his skills in communication and interpersonal relationships and help him establish objectives in these areas.
   b. Act as a referral agent for students desiring professional assistance in this area.

IV. Assist the student in integrating his academic and extra-curricular interests.

   a. Help students identify their academic and extra-curricular interests.
   b. Express rationale for faculty-community/student interaction.
   c. Facilitate contacts, make introductions and stimulate conversation between students and faculty members.
   d. Be a resource person for information regarding the various academic departments and their faculty members.
   e. Be a resource person and referral agent for campus services that aid the students' intellectual development. Conduct follow-up help received by those students referred.

V. Assist the student in making and evaluating vocational decisions.

   a. Initiate contacts and stimulate conversation between students and individuals who may serve as a vocational standard against which the students' own skills and interests can be evaluated.
   b. Be a resource person for university and community agencies able to assist the student in evaluating his vocational skills and interests.

VI. Serve in the role of arbitor and/or mediator.

   a. Interpret, explain and help resolve conflicts related to roommate rights and responsibilities.
   b. Encourage and assist communication among conflicting groups of students.

Programming

In the past, a large amount of the Resident Assistant's time has been spent on administrative paperwork and reactive measures. The evolving emphasis for the Resident Assistant's role is one of a proactive nature. In working with formal and informal student groups and individual students, the R.A. will use his leadership to actively develop academic, social, recreational, cultural, environmental, and security programs in the hall.

I. Develop and implement a program to orient the resident student to the hall and university community.

   a. Provide the student with information about university services such as the counseling center, career development center, financial aids office, housing and food service.

      b. Explain university and hall policies and procedures, and students' rights and responsibilities as hall residents.
      c. Familiarize the student with the various facilities of the hall and the university.
      d. Inform the student of the functions of the various staff positions, and especially the R.A. position.

II. Assist hall government officers in developing a viable governmental system.

      a. Serve as an advisor to hall government and attend hall government meetings.
      b. Identify students in the hall who would be willing and able to take on the responsibility of hall government, community council or related committee work.
      c. Assist the hall government in the encouragement of hall student gatherings.
      d. Assist hall officers by serving as a resource person concerning program ideas, university policies and procedures, available university and community resources, and other assistance as appropriate.

III. Develop hall/community programs.

      a. Identify and assess student needs and interests.
      b. Initiate and facilitate programs/activities which relate to the needs and interests.
      c. Serve as a resource person, being able to refer students to various university and community organizations, individuals, and agencies which facilitate programming.
      d. Attend hall functions.
      e. Develop and implement an evaluation process for all programming efforts.

Management

Management is a practical application of principles of community. The role of manager requires the Resident Assistant to facilitate effective interaction among the residents, staff, and physical environment.

I. Assist in administrative tasks of the hall/area.

      a. Maintain accurate and up-to-date records and reports (e.g., assignment printouts, inventory forms, etc.).
      b. Monitor and ensure maintainance of hall safety systems and devices.
      c. Prepare for and follow-up on residence hall sanitary inspections.
      d. Assist in the development of policies and procedures in cooperation with Central and area staff.

e. Interpret and support university rules, regulations, policies and procedures.

II. Orient students to the physical environment.

a. Provide the student with information concerning security procedures and concepts.
b. Identify storage, recreational, study space in the hall and surrounding area.
c. Inform the studnet of programs available for affecting change including the Do-it-Yourself Paint Program, AIMS, and the Physical Improvements Committee.
d. Identify the functions of the desk operations and desk personnel.
e. Inform the student of the preventive maintainance program, student cleaner activities, housekeeping staff responsibilities.

III. Promote and aid the physical upkeep of buildings and surrounding community.

a. Encourage and assist residents to maintain a clean, attractive, and safe environment.
b. Investigate and follow-up on room hall, and public area damage.

Staff Responsibilities

An important function of the Resident Assistant arises from his being one member of a total staff. The staff works together to promote the development of community in the hall and the area.

I. Contribute to the development of the staff as a cohesive working unit.

a. Attend staff sessions.
b. Develop and maintain on-going communications with the Resident Director, Assistant Resident Directors, and the other R.A.'s.
c. Be "on duty", check staff communication centers, as assigned.
d. Provide administrative assistance to total staff operation.

II. Participate in staff efforts to upgrade staff performance, personal and professional growth.

a. Attend pre-service training programs.
b. Attend in-service education programs.
c. Negotiate and formulate an individual contract with supervisor based on the Management by Objectives process.
d. Assist in the selection and training of new staff.
e. Assist in the evaluation of area staff (e.g., R.D., A.R.D., R.A., D.R., H.R., Student Cleaners).

APPENDIX C

RESIDENT ADVISOR HEATH TYPOLOGY INSTRUMENT

INSTRUCTIONS: For each statement, please circle the response
which best represents your feelings.

SCALE:

```
     1         2         3         4         5
     /         /         /         /         /
   Never    Rarely   Neutral  Sometimes   Often
```

- -

1. I like the challenge of developing a new program.

```
   1         2         3         4         5
   /         /         /         /         /
```

2. I need a lot of variety in the tasks that I have to do or
I get bored.

```
   1         2         3         4         5
   /         /         /         /         /
```

3. I like it when the other RA(s) in my building look to me
for unusual and innovative ideas.

```
   1         2         3         4         5
   /         /         /         /         /
```

4. When dealing with rules and regulations I'm comfortable
ignoring those that are not relevant.

```
   1         2         3         4         5
   /         /         /         /         /
```

5. Problem situations that are hard to define make me worried
that I'll do the wrong thing.

```
   1         2         3         4         5
   /         /         /         /         /
```

6. I like it when other RA(s) in my building look to me for
leadership.

```
   1         2         3         4         5
   /         /         /         /         /
```

7. I really need to know the rules and regulations of the
organization because I think it's important to know what the
guidelines are.

```
   1         2         3         4         5
   /         /         /         /         /
```

8. I guess you can say that my job performance really fluctuates according to my mood.

```
  1         2         3         4         5
 /         /         /         /         /
```

9. One of the frustrations of being an RA is when we waste so much time talking about problems, rather than figuring out solutions.

```
  1         2         3         4         5
 /         /         /         /         /
```

10. I really need to know what the rules and regulations of the organization are so I can get around them when necessary.

```
  1         2         3         4         5
 /         /         /         /         /
```

11. I like it when the other RA(s) in my building seek me out for support.

```
  1         2         3         4         5
 /         /         /         /         /
```

12. Tension in "the system" is a hard thing for me to cope with.

```
  1         2         3         4         5
 /         /         /         /         /
```

13. The best dorm meetings are those in which new and novel ideas are discussed.

```
  1         2         3         4         5
 /         /         /         /         /
```

14. I like being a leader in dorm meetings.

```
  1         2         3         4         5
 /         /         /         /         /
```

15. Dorm meetings are uncomfortable for me when people are arguing.

```
  1         2         3         4         5
 /         /         /         /         /
```

16. It is frustrating to me when people at dorm meetings spend a lot of time kicking around ideas rather than doing some concrete planning.

```
  1         2         3         4         5
 /         /         /         /         /
```

17. I get bored and don't contribute much in dorm meetings unless the topic strikes my fancy.

```
  1         2         3         4         5
 /         /         /         /         /
```

18. Although I like to plan dorm meetings, I generally let someone else take the leadership role.

```
1         2         3         4         5
/         /         /         /         /
```

19. I find that people have a lot of trouble in following my train of thought when I'm explaining something in meetings.

```
1         2         3         4         5
/         /         /         /         /
```

20. The best dorm meetings are those in which my ideas are accepted.

```
1         2         3         4         5
/         /         /         /         /
```

21. I get bored in dorm meetings when the discussions are long and we waste a lot of time.

```
1         2         3         4         5
/         /         /         /         /
```

22. I think dorm meetings are generally pretty dull because people usually don't want to try anything new, or off-beat.

```
1         2         3         4         5
/         /         /         /         /
```

23. Even if a good point is being made, it really annoys me when people start changing the topic during dorm meetings.

```
1         2         3         4         5
/         /         /         /         /
```

24. The best dorm meetings are those in which a well planned agenda is followed.

```
1         2         3         4         5
/         /         /         /         /
```

25. I generally don't get too involved with my residents personal lives, because I think that they should take care of themselves.

```
1         2         3         4         5
/         /         /         /         /
```

26. My best moments as an RA have been when I've been able to help a resident with a really unique problem.

```
1         2         3         4         5
/         /         /         /         /
```

27. Ideally, I see my role as one where my primary responsibility is to help residents in my unit to live together in harmony.

```
1         2         3         4         5
/         /         /         /         /
```

28. It is very important to me to have a close relationship with the other RA(s) in my building.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

29. Unusual behaviors on the part of my residents are more interesting than bothersome to me.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

30. Given a choice between working in a group or working alone, I prefer to work alone.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

31. I'm sometimes surprised at the consequences of my impulsive behaviors.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

32. Ideally, I see my role in terms of being the one who organizes successful programs in my unit.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

33. I seem to notice little things, and find them more interesting than most people do.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

34. People often say that they see me as hardworking, and that I demand too much of them.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

35. I don't mind working with an individual's problems, but it would make me pretty nervous to have to try and resolve a group problem.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

36. Ideally, I see my role as one where I can introduce a lot of variety, and create an environment where spontaneity is valued.

```
   1        2        3        4        5
  /_____/_____/_____/_____/
```

37. Deep down I know that I have very high potential to do things of great significance.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

38. One of the things that I enjoy most in my job is when I am able to come up with innovative ideas and programs.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

39. I don't mind using the power that I have as an RA in order to best accomplish my job.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

40. I'm more quiet in my leadership role than people who speak up all the time.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

41. Sometimes an idea will really strike my fancy and I'll immediately start working on a new and different project.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

42. I find that I think quickly and then express my ideas forcefully.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

43. As an RA, I get real satisfaction out of meeting the daily challenges of the job.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

44. I like to toss out new and different ideas to get a discussion going.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

45. I tend to carefully think through what I'm going to say before I offer an opinion.

```
    1           2           3           4           5
   /_____/_____/_____/_____/
```

46. Even though I'm basically a worrier, I can live with a lot of anxiety in my life.

```
      1           2           3           4           5
     /_____/_____/_____/_____ ____/
```

47. Deep down, despite my success, I'm afraid that people will find out that I can't live up to my potential.

```
      1           2           3           4           5
     /_____/_____/_____/_____/
```

48. As an RA, I get real satisfaction out of bringing people together.

```
      1           2           3           4           5
     /_____/_____/_____ ____/_____/
```

APPENDIX D

HEATH, LIKERT AND EXPERT TYPINGS OF SUBJECTS IN THE STUDY[*]

	HEATH	LIKERT	EXPERT #1	EXPERT #2	EXPERT #3	CONSEN- SUS
subject #1	XX	X				
subject #2	XY	Y		Y-90%	Y-65%	Y-77$\frac{1}{2}$%
subject #3	XY	X		X-70%		X-70%
subject #4	XX	Z	YZ-70%		X-70%	
subject #5	XX	Y				
subject #6	XX	X				
subject #7	XX	X			X-95%	X-95%
subject #8	XX	X		Y-65%	Y-65%	Y-65%
subject #9	XX	Y				
subject #10	XX	X				
subject #11	XX	X		Y-67$\frac{1}{2}$%	X-60%	
subject #12	XY	X	YX-70%	X-65%		X-67$\frac{1}{2}$%
subject #13	XX	X				
subject #14	XX	X				
subject #15	YY	Y	Y-95%		Y-70%	Y-82$\frac{1}{2}$%
subject #16	YZ	X		X-65%		X-65%
subject #17	YY	Y		Y-90%	Y-75%	Y-82$\frac{1}{2}$%
subject #18	YZ	Y		Y-80%	Y-70%	Y-75%
subject #19	YZ	X	X-60%	Y-70%		
subject #20	YZ	Z		Y-90%	Y-85%	Y-87$\frac{1}{2}$%
subject #21	YX	Y		X-60%		X-60%
subject #22	YZ	Y		Y-65%		Y-65%
subject #23	YY	Y	X-80%			X-80%
subject #24	YX	X		X-60%		X-60%

	HEATH	LIKERT	EXPERT #1	EXPERT #2	EXPERT #3	CONSEN-SUS
subject #25	YZ	Y		Z-70%	Z-60%	Z-65%
subject #26	YZ	Y		Y-80%		Y-80%
subject #27	YY	Z		Y-70%		Y-70%
subject #28	YX	X				
subject #29	YX	Y	Y-70%	Y-80%		Y-75%
subject #30	YY	Y	Y-80%	Z-80%		
subject #31	YX	Y				
subject #32	YZ	Y		Z-65%		Z-65%
subject #33	YZ	Z			X-65%	X-65%
subject #34	YY	Y		Y-65%		Y-65%
subject #35	YZ	X		X-70%		X-70%
subject #36	YY	X			X-65%	X-65%
subject #37	YY	Y		Y-60%		Y-60%
subject #38	ZZ	Z		Y-70%	X-65%	
subject #39	ZZ	Z		$\bar{Z}$-95%	Z-80%	Z-87½%
subject #40	ZZ	Z		X-60%		X-60%
subject #41	ZZ	Z	X-70%			X-70%
subject #42	ZZ	Z				
subject #43	ZY	Z				
subject #44	ZZ	Y	Z-60%			Z-60%
subject #45	ZY	X		Y-65%	X-90%	

*double typing by the Heath instrument represents dominant and sub-dominant types of the individual, while double typing by expert raters represents two equally dominant types.

APPENDIX E

MEAN Z-SCORES FOR ITEMS ON THE LIKERT INSTRUMENT

QUESTION NUMBER	EXPECTED TYPE	MEAN Z-SCORE FOR X's	MEAN Z-SCORE FOR Y's	MEAN Z-SCORE FOR Z's
1	Y	-.2873	.0996	.2169
2	Z	-.1990	.0606	.1741
3	Z	-.2916	.2918	-.3287
4	Z	-.0936	-.0305	.2512
5	X	.0823	-.0853	.1009
6	Y	-.2701	.3904	-.6499
7	X	.1310	-.0575	-.0640
8	Z	.0592	-.2477	.6086
9	Y	.0502	-.0873	.1632
10	Y	-.1921	.2396	-.3529
11	X	-.2696	.1250	.1121
12	X	.2154	-.1488	.8048
13	Z	.2196	-.1695	.1028
14	Y	-.4740	.4726	-.5292
15	X	-.1396	.0268	.1673
16	Y	.1652	-.1114	.0313
17	Z	.2273	-.2306	.2652
18	X	.1275	-.0804	.0080
19	Z	.1093	.0455	-.3224
20	Y	-.1351	.0609	.0609
21	Y	-.0015	-.0352	.1041
22	Z	.1023	-.1042	.1203
23	X	.1742	-.1078	.0053
24	X	.0820	-.1126	.1800

QUESTION NUMBER	EXPECTED TYPE	MEAN Z-SCORE FOR X's	MEAN Z-SCORE FOR Y's	MEAN Z-SCORE FOR Z's
25	Y	.2294	.0341	-.4995
26	Z	.4199	-.3826	.3653
27	X	.2123	-.1053	-.0687
28	X	-.0353	-.0663	.2524
29	Z	-.2762	.0757	.2261
30	Y	.1330	.0810	-.4659
31	X	.1200	-.0892	.0460
32	Y	-.0185	.1409	-.0372
33	Z	-.2764	.1534	.0431
34	Y	-.0696	.2522	-.6035
35	X	.2002	-.1420	.0576
36	Z	-.1620	.0298	.1976
37	X	-.1507	-.0167	.3115
38	Z	.0543	.0235	-.1624
39	Y	-.0630	.2110	-.4964
40	X	.4632	-.4249	.4108
41	Z	-.1697	.1977	-.2724
42	Y	-.2831	.2832	-.3197
43	Y	.1544	.0836	-.5103
44	Z	-.1601	.0488	.1401
45	X	.3150	.0669	-.7265
46	Z	.2411	-.0419	-.3012
47	Y	-.3014	.1790	.0129
48	X	.0170	-.2157	.5904

BIBLIOGRAPHY

Astin, A. W. "Further validation of the Environment Assessment Technique". _Journal of Educational Psychology_, 1963, _54_, 217-226.

Brown, R. D. _Student development in tomorrow's higher education: A return to the academy_. (Student Personnel Series No. 16.) Washington, D.C.: American College Personnel Association, 1972.

Chickering, A. _Education and identity_. San Francisco: Jossey-Bass, Inc., 1969.

Clark, B.R., & Trow, M. "Determinants of college student sub-cultures". Berkeley, Calif.: Center for the Study of Higher Education, 1960. Mimeographed.

Clark, B.R., & Trow, M. "The Organizational Context". In T. M. Newcomb & E. K. Wilson (Eds.), _College peer groups: Problems and prospects for research_. Chicago: Aldine, 1966.

Cross, K. P. _Assessment of student development_. Paper presented at the annual convention of the American College Personnel Association, Atlanta, March 1975.

Dayton, C. M. & Stunkard, C. L. _Statistics for problem solving_. New York: McGraw-Hill Book Company, 1971.

DeCoster, D. A. & Mable, P. "Residence education: Purpose and process". In D. DeCoster & P. Mable (Eds.), _Student development and education in college residence halls_. Washington, D.C.: American College Personnel Association, 1974.

Delworth, U., Sherwood, G. & Cassaburi, N. _Student parapro-fessionals: A working model for higher education_. (Student Personnel Series No. 17.) Washington, D.C.: American College Personnel Association, 1974.

Greenleaf, E. A. "The role of student staff members". In D. DeCoster & P. Mable (Eds.), _Student development and education in college residence halls_. Washington, D.C.: American College Student Personnel Association, 1974.

Heath, R. _The Reasonable Adventurer_. Pittsburgh: University of Pittsburgh Press, 1964.

Heath, R. "Form Flow, and Full-Being," _The Counseling Psychologist_, 1973, 56-63.

Heath, R. The key to the Modes of Existence test, unpublished mimeograph, 1976.

Heath, R. The Modes of Existence test, unpublished mimeograph, 1976.

Holland, J. L. The psychology of vocational choice: A theory of personality types and model environments. Waltham, Mass.: Blaisdell, 1966.

Knefelkamp, L. Developmental instruction: Fostering intellectual and personal growth of college students. Unpublished doctoral dissertation, University of Minnesota, 1974.

Knefelkamp, L. Materials for participants (Student Affairs Conference at the University of Maryland, March 1976). Unpublished mimeograph.

Knefelkamp, L. "Roy Heath's Model of Personality Typologies". In C. Parker (Ed.), New directions in student services- Student development models. San Francisco: Jossey-Bass, Inc. In press.

Lewin, K. Principles of topological psychology. New York: McGraw Hill, 1936.

Murray, H.A. Exploration in personality. New York: Oxford University Press, 1938.

Pace, C. R. & Stern, G. G. "An approach to the measurement of psychological characteristics of college environments". Journal of Educational Psychology, 1958, 49, 269-277.

Riker, H. C. College housing as learning centers. Washington, D.C.: American College Personnel Association, 1965.

Sanford, N. Self and society: Social change and individual development. New York: Atherton Press, 1966.

Stimpson, R. & Kimsey Simon, L. A. "Accountability for the residence program". In D. DeCoster and P. Mable (Eds.), Student development and education in college residence halls. Washington, D.C.: American College Student Personnel Association, 1974.

Walsh, W. B. Theories of person-environment interaction: Implications for the college student. Monograph 10. American College Testing Program. Iowa City, Iowa: 1973.

Widick, C. A. An attribute-treatment interaction model of instruction—Based on cognitive developmental theory. Unpublished doctoral dissertation, University of Minnesota, 1975.