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DIMENSIONS AND CORRELATES OF

CONCEPTUAL MODELS OF BEHAVIOR

by

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A THESIS

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ABSTRACT

Three conceptual models of behavior (T - theological, I - illness and P- psychological) were described and an instrument, the Beliefs-About-Behavior Inventory (BABI) was constructed to measure the relative extent to which subjects use each of the models.

Using analysis of variance and Scheffe multiple comparisons of means, major hypotheses of no significant differences between groups on each of the three BABI scales (T, I, P) were tested. Subjects were grouped on the basis of variables theoretically related to the BABI scales.

Major findings indicate that subjects who score high on the theological scale tend to be of low integrative complexity, dogmatic, religously devout and intrinsically oriented and members of fundamentalist Christian churches. These subjects were also relatively low on the psychological scale. Subjects with opposite characteristics evidenced the reverse pattern on the BABI, that is, they were high on the psychological scale and low on the theological scale.

Various subject groups, significant in terms of their roles as socializing agents, (e.g., clergy, social workers, psychologists, education students) were also tested on the BABI.

Interpretation of the findings was made in terms of conceptual systems theory and the functions of 'training agents' in the development of conceptual models of behavior.

ACKNOWLEDGEMENTS

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CHAPTER I

THREE CONCEPTUAL MODELS OF BEHAVIOR

The study of how people conceptualize and respond to

the behavior of others is a basic area of concern in

contemporary psychology, and is also the concern of

religion, psychiatry, sociology, education and the ju-

diciary. These concerns about the kinds of basic responses

people make to the behavior of others are often highlighted

in writings about mental illness. As Hagmaier (1959)

contends

The philosopher continues to exhort such sufferers to
"think positively, and use will power to snap themselves
out of it". The courts profess to cure such mental
disorders as juvenile delinquency, alcoholism, and sexual
depravity by punishing and imprisoning. A wing of the
medical profession, subtly denying the sensitive and
spiritual character of human personality, hopes one day
to cure all emotional derangements with drugs, brain
surgery, electro-chock and other purely mechanical devices
(quoted in Gassert and Hall, 1964, p. 43).

In reference to these concerns, Albee (1967(a)) asserts

that "The conceptual model[1] we use to explain causation

---

[1] "Conceptual model" will be used throughout this document
to describe "the manner in which a particular thinker (or
group of thinkers) describes and conceptualizes mental
phenomena, including the assumptions implicit in these
descriptions (Simon and Weiner, 1966, p. 304)". This is
in contrast to the use of the term model to mean
"representations or likenesses of certain aspects of
complex events or systems made by using symbols or objects
which in some way resemble the things being modelled
(Chapanis, 1961, p. 115)". The usage of the term con-
ceptual model in this document is similar to that used by
Brown and Long (1968) in a review of the "medical model
issue", and is consistent with frequent use in the literature.

(of behavior, normal and abnormal)... determines the kinds of institutions we develop and they, in turn, determine the kind of manpower that is required (Albee, 1967(a), p. 24)". The conceptual models of behavior which are used by teachers, counselors, physicians, clergymen, social workers and parents would, therefore, be of significance in individual, institutional and societal functioning and development.

Some applied areas where a study of the "models" used in conceptualizing behavior may be useful include the selection and training of candidates for certain professions, the development of community mental health programs and related public education, and the promotion of social and behavioral studies in schools. Many of these areas which require study are clearly listed in a number of publications (which highlight the problems, although they do not deal specifically with models) (Beilin, 1958; Combs, 1965; Combs and Soper, 1963; Calabresa, 1966; Cohen, 1967; Franck, 1966; Freed, 1966; Gilbert and Levinson, 1961; Hilton, 1966; Joint Commission on Mental Health, 1961; Kling, 1959; Mackey, 1967; Stolsky and Rhetts, 1967; Von Fange, 1962; Wallace and Rashkis, 1959; Weber, 1965).

Historically, various models for the conceptualization of behavior, especially 'abnormal' behavior, have been developed, popularized and widely utilized. Sarbin

(1967) briefly traces this history and points out that the
demoniacal model of conduct disorders codified in the
fifteenth century <u>Malleus</u> <u>Mallificarum</u> embraced all conduct
that departed from the existing norms and that this code
was policed by the Church. Progress is indicated in that

The beginnings of humanistic philosophy, the discovery
and serious study of Galen, and the renunciation of
scholasticism created an atmosphere wherein a shift from
demons to 'illness' as the cause of conduct disturbances
took place. By employing the metaphor 'as if sick' it
was implied that practitioners of physic rather than
clergymen should be the responsible social specialists
(Sarbin, 1967, p. 448).

It is obvious that we have progressed markedly from
the historical period when, according to Szasz (1960),
"... explanatory concepts such as deities, witches and
microorganisms appeared not only as theories but as self-
evident causes of a vast number of events (1960, p. 113)".
Even today, however, many of us are enmeshed in menta-
listic models, "the myth of mental states, like all myths,
resists extinction ... Behaviorist psychologists,
positivists and empiricists of various persuasions have,
however, tried to show that the concept of mind was a
mistake based upon the transformation of a metaphor into
a myth (Sarbin, 1964, p. 632)". In this regard, Anderson's
(1964) analysis of Cassirer's philosophical account of
metaphor is pertinent:

Cassirer hypothesizes that the linguistic metaphor and
myth and their correlative 'metaphorical thinking' are
the products of some postulated undifferentiated primitive
state of symbolic consciousness (Anderson, 1964, p. 57).

Bandura and Walters (1963) maintain that

theories of psychotherapy, in which demons reappear in the guise of 'psychodynamic forces' still reflect the mystical thinking that once predominated in science... (and that) in contrast, social-learning theory, instead of regarding internal processes as primary links in causal sequences that generate deviant patterns of response, treats such processes as mediating events, the nature of, and modifications in which, must be inferred from the conjunction of certain manipulable stimulus conditions and observable response sequences (1963, p. 30).

The problem of identifying the dimensions and correlates of significant conceptual models of behavior involves far more than the question of what labels are used or the relative clarity of labels, for as Szasz (1960) points out (with reference to "abnormal behavior"), the concept of mental illness functions as a disguise, it serves as an amoral and impersonal thing, as an "explanation" for problems in living. With regard to the significance of 'labels', Katz (1967) points out the significance of the child's learning "to use language as a device for acquiring and processing the kind of information that is transmitted... (1967, p. 139)".

Szasz (1960) goes on to note that the 'myth of mental illness' mitigates against calling attention to conflicting human needs, aspirations and values, and that a belief in mental illness requires therapy along medical or psychotherapeutic lines, whereas a demonological conception of problems in living gives rise to therapy along theological lines. For example, Mowrer (1960) maintains that

psychology would be wise to regard the behavior disorders

as manifestations of sin rather than of disease (p. 302).

In contrast to the theological and illness concepts

of behavior is Bandura's position that

the day may not be far off when psychological disorders
will be treated not in hospitals or mental hygiene clinics
but in comprehensive 'learning clinics', when clients will
be considered not as patients suffering from psychic
pathologies but responsible people who participate in
developing their personalities (Bandura, 1967, p. 86).

Abundant documentation is available to make clear

the reality and intensity of the theoretical and applied

problems which continue to arouse so much debate, es-

pecially that between the 'medical' and the 'psychological'

models of behavior (Adams, 1964; Albee, 1967(b); 1967(c);

Ausubel, 1961; Bailey, 1960; Ellis, 1967; Mariner, 1967).

Other attempts at clarifying the problem of conceptual

models of behavior produced Daws' (1967) taxonomy of

putative causes or explanations (of mental disorders),

Simon and Weiner's (1966) "Models of mind and mental

illness in ancient Greece", and Klausner's (1966) "Rat-

ionalism and empiricism in studies of behavior".

It is here proposed that in terms of historical

development and of contemporary usage, three models of

behavior be defined: theological, illness (psychodynamic)[2]

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[2] This "illness" model is not synonymous with biological
or medical models. As later discussed, this model
includes concepts of psychodynamic "defects" to which
causation is attributed and it includes the conceptua-
lization of abnormal behavior "as if" it were a
"manifestation of illness".

and psychological.

In the theological model, human behavior is seen as being, to a considerable degree, a function of the exercise of free will. Many kinds of undesirable and inappropriate behaviors are caused by defects of the will and these may be indications that the person is somewhat out of harmony with the Divine Will. Prayer, the loving help of God, His Church and His ministers can be major sources of aid for people who are using undesirable or failing to use desirable behavior. Virtue, goodness and proper behavior are all closely related and these characteristics are the opposites of sinful habits. The true meaning of man is spiritual and man can only be fully understood by recognizing this fact. Learning God's will, developing moral strength, and overcoming the evil tendencies of man are the paths to proper and successful behavior. For example, Card (1960), in reference to the Canadian Prairie Provinces, states that the churches "were outposts of civilization as well as religion ... They acted as the West's moral conscience (1960, p. 25)". He further notes that

despite cumulating evidences at mid-century of increasing secularism, particularly in the cities, religion as an institutional field was generally more robust, more fundamental than liberal, and simply and practically fused with other aspects of society and culture (1960, p. 27).

In the illness model, all behavior is seen as ultimately understandable in terms of the physical organism

but abstractions of defective personality capacities are
often useful explanations of the causes of abnormal or
inappropriate behavior. For example, "to summarize the
personality-deficit point of view, Ausubel and Bettelheim
assume that the lower-class Negro emerges out of child-
hood psychologically incapable of adjusting to _any_ type
of organized social environment ... (Katz, 1967, p. 137)".
The best approach to understanding and correcting behavior
is through diagnosis and treatment, much of which should
be carried out in an adequate clinic or hospital under the
supervision of a properly trained doctor. People dis-
playing abnormal or inappropriate behavior should be regarded
as being, to some degree at least, sick and in need of
treatment both to cure them and to prevent further develop-
ment of the illness. Underlying disease processes exist
in cases of disrupted social functioning (Bandura and
Walters, 1963, p. 30).

In contrast to both the theological and illness models
of behavior, the eclectic psychological model of Bandura
and Walters (1963) utilizes "a single set of social-learning
principles (to) account for the development of both
prosocial and deviant behavior and for modifications of
behavior toward greater conformity or greater deviation
(1963, p. 32)". It is clearly a scientific model which
seeks relationships between variables and does not use

religious notions of free-acting forces and faculties such as will, moral goodness, harmony with the Divine, or state of grace. It does not seek the determinants of behavior in autonomous internal agents or processes or underlying disease entities and in these ways radically differs from the illness model. For example, consider the modeling theory of aggression presented (with the support of empirical data) by Bandura and Walters (1963, pp. 69-70).

The psychological (social-learning) model sees behavior as learned in the course of the person's experiences. 'Normal' and 'abnormal', appropriate and inappropriate behaviors are all learned in the same way. Prevention of or changes in inappropriate behavior are best carried out as a process of re-learning. The kind of program or institution which would best organize such services would be of an educational nature, and the personnel would be specialists in human learning. The social-learning model is not inconsistent with or used without awareness of the human as a biological entity. (The significance of the anatomy and physiology of the organism in relation to conceptual models of behavior is concisely presented by Bailey (1960)).

These models constitute sets of beliefs and attitudes regarding the causes of and methods of changing behavior. They embody direction as to the basic approaches for the study of behavior and for the selection and development of

personnel and institutions to serve society's needs in the promoting of certain behaviors and changing of others. The relationships between the various behaviors used by individuals are differentially viewed and explained, and patterns of appropriate ways of regarding those displaying deviant behavior are suggested.

The conflict between the illness and psychological models of succinctly put by Bandura and Walters (1963, pp. 29-32), and has been widely discussed in professional and scientific journals and organizations (for example, see Albee, 1967(b); Mariner, 1967; and Szasz, 1960, 1961).

The conflict between the theological and psychological models is set out by Skinner (1953, pp. 350-358). The nature of religious belief is described by Brown (1966) as a "predominately cognitive activity, acquired and sustained by social influences and expressed in a number of ways including religious practices (1966, p. 270)". He goes on to suggest that religious beliefs are categories by which people can explain, interpret and cope with the natural world. If, as Feigl (1953) points out, "by religion one refers to an explanation of the universe and a derivation of moral norms from theological premises, then indeed there is a logical incompatibility with the results, methods, and general outlook of science (1953, p. 16)". This issue is further considered by MacLeod (1953)

in "Religious perspectives in college teaching".

In relation to conceptual models of behavior, the problem of values in psychology becomes quite central. The matter is aptly discussed by Smith (1961) with the following general conclusions: (a) we ought to be concerned with the role of the psychologist (or other training agent) in proposing positive criteria of mental health, (b) although values are matters of personal option, they are not detached from cause or consequence, (c) the humanist and the moral philosopher are especially equipped to draw on human history and culture and to sensitize us to differentiations and potentialities of human experience, (d) the behavioral scientist is particularly qualified to examine and explain the causal network in which value choice is embedded, and (e) the behavioral scientist might profitably carry out research on personality development and functioning including exploration of empirical correlates of value attributes of personality.

The research proposed in this document is directed toward the construction of an instrument adequate to measure the extent to which individuals and/or groups utilize one or more of these three conceptual models of behavior. A second stage of the project will involve a study of certain psychological and sociological correlates theoretically related to the differential use of the various models.

The significance of the study is seen in the need to clarify the position of the social-learning model, its use and its correlates. This psychological model is herein strongly supported because it is the only thoroughly scientific model, and because it is basically educational in nature. For an educational institution, the significance of the study is clearly implied in the assertion made by Albee to the National (U.S.A.) Association for Mental Health:

I am convinced that once society learns that most neurotic and functionally psychotic behaviors represent learned patterns of disturbed behavior the institutions which will be developed to deal with these will be educational in nature (1967(a), p. 26).

CHAPTER II

REVIEW OF THE LITERATURE AND

STATEMENT OF THE PROBLEM

1. <u>Basic Literature</u>

Throughout the abundant number of publications on
the general topic of beliefs and attitudes about normal
and abnormal behavior, two limiting characteristics
recur: inadequate conceptualization of significant con-
structs or variables, and inadequate measurement.

Probably of least value is the non-research oriented
discussion of "views of public attitudes toward mental
illness" such as that of Cumming and Cumming (1959). A
traditional dichotomy of disciplinarian-libertarian is
used in a consideration of education, child-rearing and
clinical practice. The result of this approach con-
tributes little to our understanding of the phenomena
involved, or to our formulation of new ways of studying
the issues.

A similar dichotomy is used in the work of Gilbert
and Levinson (1956); however, greater relevance to the
'mental hospital' is introduced through clarifying the
dimension as custodialism-humanism, and some effort is
made to construct an instrument for the measurement of
the extent to which a person's relevant attitudes are

characterized as being at one or the other end of the dimension.

Cohen and Struening (1962, 1963(a), 1963(b)) carried the measurement and conceptual efforts in the area to a greater degree of precision through the use of a more extensive item pool (70) and the use of factor analysis to identify significant dimensions of the attitudes they were tapping. Five factors were identified: authoritarianism, benevolence, mental hygiene ideology, social restrictiveness and interpersonal etiology. These factors are, of course, a function of the item content which was not theoretically clustered in the original item selection (items were taken from other inventories and scales which seemed relevent).

The Cohen and Struening instrument is known as the Opinions about Mental Illness Scale (OMI) and it shows weak relationships with age, sex, education and occupational variables. Occupation clusters were identified for clergymen, non-medical mental-health workers, and psychiatrists. The OMI was used by Stotsky and Rhetts (1967) with psychiatric nurses and they found a significant relationship with age -- the older nurses were higher on the authoritarianism and social-restrictiveness scales. The authors interpret this to be a function of the older nurses' instruction which was oriented more toward a descriptive

classificatory approach to diagnosis and treatment. Although this seems to be an oversimplification, it may indicate that the training factor is significant.

Nunnally (1961) published a complete volume on <u>Popular Conceptions of Mental Health</u>. His data were gathered by using questionnaires and semantic-differential instruments with the public and with 'experts'. Among his many reported findings, he states that "the average man is relatively unsure of his opinions about mental health phenomena. Consequently, he eagerly looks to experts for answers (1961, p. 233)". Subgroups in the population were found to have slightly different attitudes toward the mentally ill and to be differentially well-informed. Younger, better-informed physicians tend have "better" attitudes toward mental patients and they tend to see problems of mental illness in terms of personality rather than as matters of will power -- but they are more likely to 'treat' these 'patients' themselves.

The Nunnally questionnaire was used by Rabkin and Suchoski (1967) in a study of teachers' attitudes toward and information about mental illness. They concluded that teachers, like the rest of the public, have more favorable attitudes toward the professional more closely identified with general medicine than the one identified with psychological medicine. The teachers do appear to

have more positive attitudes toward the mentally ill than
do the general public, but careful inspection of the data
and efforts to interpret them in terms of the nature of
the instrument leaves us with unstable and hazy conclusions.
Relevant to this matter is the conclusion by Kvaraceus
(1960): "the various studies which indicate the types ·
of behaviors considered most serious by teachers and prin-
cipals suggest that careful analysis should be made of the
personalities of the responding and judgement-making
respondents (1960, p. 137)".

Larson (1967) introduced an improvement in this area
of research by constructing a lengthy inventory containing
five scales: causes of mental illness, attitudes about and
responsibility for treating emotionally-disturbed persons,
and opinions about adequacy of training. With the
reservation that the items do not constitute sets of
theoretically inter-related components, his findings with
a sample of 1868 clergymen are interesting and suggestive
of further work. He found "better" attitudes in younger,
urban clergymen, in those with higher levels of education,
social science majors (cf. Bible study, religion), and
formal training in pastoral counseling. "Conventional
Protestants" were closest to the mental-health professionals
in understanding mental issues; fundamentalists were most
at odds. Catholics were midway. Religious differences in

lay attitudes toward the more specific area of alcoholism were found by Linsky (1965).

A more conceptually adequate study was carried out by Klausner (1961). He developed a typology of 'images of man' through a content analysis of 591 books and articles written by ministers and psychiatrists. He defined an image of man as a "model describing what man is and how he becomes what he is... Implicitly, the image influences specific concepts of man's personality, social relations and culture (1961, pp. 60-61)".

Four images were identified: scientistic, magical, social, and idealistic. Using this typology in a study of clergymen and psychiatrists, Klausner found that clergymen more often used magical and social images while the psychiatrists more often used scientistic and idealistic images. Younger subjects and those without a strong religious reference group preferred the scientistic image; members of fundamentalist Christian churches least preferred the scientistic image. Also, he found that certain clergymen (for example, those in counseling work) were becoming more scientistic while religion in general was not.

Specific studies of concepts of human nature and beliefs about behavior as used by various groups have indicated that (a) "community culture does exert considerable influence on the organizational behaviors of mental

health associations and the value beliefs and organizational
participation of community leaders... (O'Donnell, 1966,
p. 436A), (b) in meanings of mental illness to caregivers
and mental health agents, greatest differences were found
between police officers and mental health agents (MacKey,
1967, p. 3122A), (c) many teachers have primitive ideas
about the nature of the learning process (Weber, 1965),
(d) mental hygiene courses have relatively little effect
on graduate education students' attitudes and opinions
concerning mental illness (Costin and Kerr, 1966), and
(e) "the image of man propounded by (Allport, Ash, Fromm,
Maslow and Rogers)... is less a product of descriptive
empirical research, and more a result of their normative
preconceptions, and related to the ethical and social
doctrines espoused by them... (Franck, 1966, p. 1079A).

A summary consistent with these findings takes the
following form: the socializing agents of any group
(Skinner, 1953, pp. 323-329) inculcate in the individual,
by using accepted principles of learning, the groups'
traditional beliefs which include the general conception
of the nature of man and his functionally associated
behavior. The success of this inculcation varies in terms
of the extent and intensity of the acceptance of these
beliefs measured in terms of their effects on behavior.
In this regard it is significant to note that training

agents who are particularly concerned with custodial, punitive and control functions are selected (or self-select) on the basis of their agreement with traditional beliefs (Getzels, 1957; Ryans, 1960, p. 303; Toch and Schulte, 1961; Goodman, 1964; Kozol, 1967).

2. The Problems and Conceptual Framework

Given these three conceptual models of behavior, (Theological, Illness, Psychological) the present investigation is specifically concerned with a search for "... causal factors to account for a given individual's position on these dimensions (Eysenck, 1962, p. 300)" and the provision of a more general theory accounting for the origin of any belief systems.

This immediately brings up a sizeable problem. Whereas Eysenck's dimensions - neuroticism (emotionality) and introversion-extraversion have either a clear physiological basis or can be accounted for in the older behavioristic concepts of stimuli and responses (Goss, 1961(a), p. 285), the dimensions, the use of which is currently contemplated in this investigation, are partly behavioristic in nature, as is the case with the psychological dimension (Bandura and Walters, 1963, p. 44) and partly cognitive, as is the case with the theological and illness (psychodynamic) dimensions. The impasse set up by these general orientations

to the analysis of behavior, which has broken out again
(Weitzman, 1967), is so persistent and basic that Pear's
(1965) tracing of them to temperamental differences is not
quite so insulting as it first appears.

The present investigation, using mixed dimensions,
must be committed to Goss's (1961(a)) general position
about the use of cognitive or mediative processes in the
explanation of behavior:

When events A, B, and C occur in sequences A B C, and
A C, and the probability of occurrence of C's is actually
greater or less than C is preceded by A B than when C is
preceded by A alone, B can be described as a mediating
process or event (1961(a), p. 286).

These mediating processes, which clearly exist (Goss,
1961(b), p. 248) as determinants of behavior and yet can-
not be dealt with in the older stimulus-response terms,
can profitably be considered as verbal in nature and an
adequate tentative representation of conceptual (cognitive)
phenomena.

The existence of these phenomena in the form of ex-
plicit and then implicit verbal mediating responses has
been demonstrated by very plausible inference (Kendler and
Kendler, 1962) or, in a more clearly scientific way, by
studying the effects of experimentally-controlled verbal
pretraining on problem-solving behavior which may legiti-
mately be described as of a conceptual sort. For example,
see Bower (1967).

There seems to be no good reason for relating such
a formulation exclusively to concept formation, via verbal
mediating responses, in problem solving and learning
(Luria, 1961). For example, Godd (1961(b)) offers the
following inference on the basis of one of his own
experiments:

> ... the most common meaning of abstract set or attitude and
> hypotheses in concept formation is, conceived narrowly, the
> occurrence of verbal mediating responses and stimuli.
> Conceived more broadly, this meaning subsumes the largely
> pre-experimentally established patterns of relationships
> ... between initiating stimuli and mediating responses,
> where the latter are names for dimensions and values as
> well as for common elements or variable features, or where
> they are common responses or meanings that define subsets
> of initiating stimuli... (1961(b), pp. 264-265).

Again, Krasner (quoted in Baer et al, 1963), dealing with
social-learning behaviorism in relation to psychotherapy,
notes that the key concepts in this therapy related to
behavior control, are, among others "... values, training
(programming), types of reinforcements, schedules of
reinforcement, atmospheres, antecedent contacts, instrumental
set... awareness... learning models and social imitation".
(Baer et al, 1963, p. 604.)

Anderson (1965) has taken up this position with respect
to values and extended it by dealing in detail with the
independent and cognitive variables which, largely borrowed
from Bandura and Walters (1963), inform value behavior or
conceptions of the desirable. The basic position is that
parents or other significant models transmit values by means

of explicit instruction and implicit modeling in terms of their own behavior. There seems to be no good reason why the instruction should not contain statements, to be rehearsed openly by the child and then implicitly (Luria, 1961, p. 14) concerning beliefs as well as values. The latter would comprise statements about what is good, desirable, seemly and appropriate, whereas the former would comprise statements about (for example) the nature of man, the nature of the learning process, and about what are efficient methods of behavioral change.

The main categories of independent variables listed by Anderson include: (a) the parents and significant others as models and their selective reinforcement of the child's appropriate behavior (imitative statements and behavior). An unpleasant, but powerful, example of this comes from Kozol (1967):

The teacher who administered the whipping gave the order to hold out his hands. He wouldn't answer. He was the image of someone in torture. Again the teacher standing above him, passed down the order. He wouldn't do it. The teacher, now losing his patience, ordered it a third time. And still he wouldn't answer or comply. A fourth time. Yet still this frozen terror. So the decision is made: he will get it twice as many times... Comment from a passing teacher: 'The little bastards don't mind acting up but when it's time for them to take their punishment they suddenly lose all their nerve'. He can't hold out forever. And finally he gives in. He breaks down and stops resisting. Hands out. He gets the beating (1967, pp. 15-16).

In this example of selective reinforcement of a child's behavior by a training agent, the submissive behavior (with

its concomitant emotions toward the self and toward
authority) was probably reinforced by the anxiety-reduction
finally felt by the student.

With regard to what is selected by training agents as
behavior to be reinforced, there frequently is conflict
(dissonance) between their statements and their behaviors
about what ought to be promoted. For example, Horowitz
(1962), describing the 1960 disturbances on the Berkeley
campus, complains that

we are told, '... knowledge enriches life. It is signifi-
cant for its own sake. But then the degree is made all
important, not the knowledge. The service is never open to
us without the degree; the area for helping others is...
closed without the credentials.
If a degree is all-important, then is it any wonder that
students will even resort to dishonesty to get it? Is it
any wonder that colleges begin to organize themselves to
produce degrees, that the whole system of education with
its grades and grade-points, becomes a slave to the social
demand for credentials (1960, p. 12)?

The second of the independent variables listed by
Anderson (1965) is (b) the homogeneity of values among the
socializing agencies. This is effectively illustrated by
Goodman (1966)

... when there develops an establishment of managers and
experts who alone licence and allot resources, and it
deludes itself that it knows the only right method and
is omnicompetent. Then common folk become docile clients,
maintained by sufferance, or they are treated as deviant
(1966, p. 13).

A third independent variable is (c) the extent and
speed of technological change which may raise problems
insoluble by the traditional beliefs, values and even

knowledge purveyed by the older training agencies (Anderson,

1965, p. 208). As Pervin (1963) has shown,

in the hypothesis that predictability of a threatening
stimulus is preferable to and less anxiety-arousing than
unpredicatability. This is true even when predictability
does not result in escape, avoidance, or termination of the
situation. With predictability, conflict is reduced, psy-
chological and physical preparation are at an optimum, and
surprise is avoided (1963, pp. 585-586).

Or in Berlyne's (1960) opinion, "uncertainty is manifestly

one of the burdens the human frame is least equipped to

stand (p. 206)".

This makes sense of Katz's (1960) position regarding

the knowledge function of attitudes, and brings our use of

the term 'belief' into perspective. He describes the

individual's need to give adequate structure to his universe

through the organization of perceptions and beliefs so that

clarity and consistency is felt and maintained. This

position is congruent with Festinger's (1957) theory of

cognitive dissonance which emphasizes, for instance, the

individual's efforts to cluster beliefs so that internal

consistency is secured.

Accordingly, it is a fair assumption that the beliefs in

the form of conceptual models of behavior held by children

and adults are a product of three different kinds of

parental modeling of appropriate behavior, emphasis on

appropriate behavior and explicit reinforcement of that

behavior. The theological model may be a basic hidden

resevoir of explanation in all of us. Wheelis (1958) makes
this clear:

One who lives out his life in the town of his birth derives
much superego support from proximity to family and relatives,
and from their continuing expectations of him... If the
culture of the community is relatively homogeneous, con-
science is strengthened also by the continuing pattern of
known traditions, customs, and values (1958, p. 100).

As a dominant conceptual model, used and believed in
to the extent that the individual is deeply involved in its
accuracy, the theological model can be taken to be a pro-
duct of child-rearing (and later socialization) wherein
the training agents model and selectively reinforce theo-
logical explanations of and expectations regarding behavior.

The psychological basis of the illness model would
seem to be the socializing agencies, particularly the mass
media, which offer simplified conceptions of behavior.
This information-giving is supported by the reinforcements
available to assenters in that the use of illness concepts
are closely associated with "being humanitarian" and "not
expecting too much of others", rather widely valued be-
haviors, but not necessarily (or best) associated with the
illness model of behavior only.

The psychological model is difficult to acquire because
of its considerable incompatability with the other models
offered by more conventional and specifically desirable
socializing agencies in the form of the church and school
against the psychologist and counselor. Skinner (1953) has

made this point very clear:

We have not wholly abandoned the traditional philosophy of human nature; at the same time we are far from adopting a scientific point of view without reservation... If this were a theoretical issue only, we would have no cause for alarm; but theories affect practices. A scientific conception of human behavior dictates one practice, a philosophy of personal freedom another. Confusion in theory means confusion in practice (1953, p. 9).

3. Correlates

What about the correlates of these models? It is proposed that the correlates of beliefs about behavior developed from the parental and other significant models and make them relatively internally consistent, and usable in the organization of perceptions and interpersonal responses. For example, a person brought up to use a theological model must also be trained to be dogmatic in the face of its being at odds with the facts of life. At the other end of the scale, a person using a psychological model must be trained to be curious, hesitant and ready to accommodate himself to change which is not too sudden. For example, Medawar (1967) quotes Claude Bernard to the effect that

when propounding a general theory in science, the one thing one can be sure of is that, in the strict sense, such theories are mistaken. They are only partial and provisional truths which are necessary... to carry the investigation forward; they represent only the current state of our understanding and are bound to be modified by the growth of science... (1967, p. 153).

Eysenck (1962, pp. 299-300) says exactly the same of psychological theorizing.

How best can these correlates be represented theore-
tically in a way that is consistent with their origin and
powerful claims to assist in the determination of behavior
so apparently varied as problem solving, learning and the
acquisition of beliefs and values? Conceptual systems
theory (Harvey et al., 1961) lays a claim on our attention
in this respect for various reasons. In the first place,
it postulates a kind of gradient of behavior from simple
to complex.

In terms of conceptual systems theory (Harvey, Hunt
and Schroder, 1961; Schroder, Driver and Streufert, 1967),
information processing in a given situation involves the
perception and subsequent organization of various kinds of
information. The stimuli are scaled along x dimensions
(differentiation) and organized. The degree of integrative
complexity in the organization of the differentiated
dimensions (attributes) is the major variable.

The dimensions are the units of conceptual functioning
-- the content of thought. The number of dimensions is
not necessarily related to the integrative complexity of
the conceptual structure, but the greater the number of
dimensions, the more likely is the development of inte-
gratively-complex functioning.

In the second place, this gradient is described by
Schroder et al. (1967) as running from <u>concreteness to</u>

abstractness, and its chronological development is remark-
ably similar in terms of training conditions to the con-
ceptual models. For example, in the summaries of Harvey,
Hunt and Schroder (1961) and Tuckman (1966), system 1
individuals are highly concrete, categorical, rigid,
intolerant of ambiguity, tend to overgeneralize and rely
on externally-imposed structure (authority, norms, rules).
These are likely to espouse a simple theological model.

Similarly, system 4 individuals are maximally abstract.
They maintain an informational, interdependent relationship
with their environment. Their thinking is characterized by
openness, flexibility, and an orientation toward diversity.
These resemble Eysenck's description of people who use a
scientific psychological model.

System 2 individuals are "negatively independent"
(Harvey et al., 1961), oriented away from and against
external sources of control. It may be predicted that they
may, therefore, be low in their use of the theological model,
and relatively high on the psychological model, but not for
the same reason that system 4 individuals would be high on
the psychological model.

Finally, system 3 individuals, accommodating to
societal statements and demands, are oriented toward people
as a source of pleasure and guidance (especially regarding
role expectations), and they are moderately abstract. They

are likely to reflect their socially accommodating ways in a relatively flat profile across the three conceptual models of behavior.

Now if this eclectic kind of theorizing represents what is the case, certain important and widely established correlates of the conceptual systems must emerge as the as-yet-unknown correlates of the behavioral models. Clearly the most elegant and economical way to establish this is to find discriminants among the three, or perhaps the two or three models which will also discriminate among the various conceptual systems. These correlates are considered in the following discussion.

3.1 Religious Membership

Lenski (1961), a sociologist, conducted research in the Detroit area on the significance of religion in social life and concluded that religious organizations not only are remaining vigorous and influential in contemporary American society, but that there is evidence of an increase in "associational" vigor. He interpreted the evidence as indications that religion acted in a causal way and was not merely correlated with certain kinds of behaviors and events. This is consistent with Brown's (1966) conclusion that religious beliefs are categories by which people explain, interpret, and cope with the natural world.

Stark (1963), writing on the incompatibility of religion

and science, suggests that men with strong religious commitment are seldom scientific and have not often been major contributors to the on-going scientific quest. Anne Roe's (1952) study of 64 selected scientists supports this contention. Stark's analysis is explained by him in terms of religion's ultimate adherence to a non-empirical system with the position that man's reason is subordinate to faith as a means to truth. Thus, he notes, "... we are concerned with those faiths which posit the existence of a relevant supernatural being, world, or force, and generally ingnore those which retain only ethical positions (Stark, 1963, p. 4)".

The variables related to empiricism were studied by Klausner (1961) who concluded that the tendency to be empiricistic is related to younger professional age groups, introversion, and low religious orthodoxy and devoutness. "These findings bear witness to the power of extrascientific personal and social factors in the development of science (Klausner, 1966, p. 340)".

Hilton (1966) studied the meaning and function of guilt in psychological theory and contemporary formulations of preaching. In distinct contrast to our social-learning model, preaching was seen as tending to interpret guilt as the result of a voluntary, conscious action which is contrary to established morality. The resolution of guilt for preaching involves some kind of Divine encounter which leads

to forgiveness.

Denominational variations in attitudes and other psychological variables have been identified by Linsky (1965) (differences in attitudes towards alcoholism and its treatment), Larson (1967) (differences in clergymen's attitudes concerning mental health), Ashcraft (1964) (differences in perception of others) and Webster (1966) (differences in dogmatism and psychological health). This last study concluded that the religious subjects in the sample were "poorer in mental health" (clinical observations), lower in "psychological health" (measured by Shostrom's Personal Orientation Inventory), and higher in dogmatism. Fundamentalist subjects were highest in dogmatism and lowest in psychological health. The significance of religious membership among university students has been studied recently by Hartnett and Peterson (1967) who report that (1) students indicating no formal religious preference were less dependent on their families and peers and they scored higher on "Cultural Sophistication" than those students who did indicate formal preference and (2) that those whose religious preference was "fundamentalist Christian" scored lowest on "Cultural Sophistication".

The denominational classification used in this study follows that of Linsky (1965). The Protestant groups, in order of high-to-low secularity are: Group 1 -- Anglican,

Presbyterian, and Congregationalist; Group (2) -- Lutherans,
Methodists, Baptists and Disciples of Christ; Group 3 --
Fundamentalists such as Mennonite, Pentecostal, Christian
Reformed, Evangelical, Nazarene, Moravian and Inter-
denominational. Other groups include (4) no religion,
(5) unclassified, (6) Greek Catholic and Greek Orthodox,
(7) Roman Catholics, and (8) United Church.

3.2 Religious Orientation

A further refinement of the study of religious vari-
ables identifies the "intrinsicness" or "extrinsicness" of
one's religious orientation. "Intrinsicness" refers to
the extent to which the individual "lives" his religion,
while "extrinsicness" refers to the extent to which the
individual "uses" his religion.

Wilson (1960) concluded that orthodoxy or fundamentalism
is a less-important factor than extrinsicness of religious
orientation. He used a 15-item scale to measure extrinsic
(utilitarian-institutional) orientation, but he assumed
that low extrinsic score was equivalent to a high-intrinsic
orientation.

Allport and Ross (1967), in researching the relation-
ship between religious orientation and prejudice, found a
curvilinear relationship, and, on further analysis of the
data, identified three basic orientations: intrinsic,
extrinsic, and indiscriminately pro-religious. The subjects

with an intrinsic orientation were lowest on the prejudice measure, the extrinsics were higher, and the indiscriminately pro-religious were highest.

Allport and Ross proposed that "the common factor underlying prejudice and the indiscriminately pro-religious orientation seems to be 'cognitive style' -- undifferentiated thinking (1967, p. 441)". They suggest that people with undifferentiated styles of thinking (low conceptual complexity) may resort to religion (or remain with religion) to provide the security which they lack due to their inadequate coping with the demands of living in a world requiring differentiation. The category of nonreligious or indiscriminately anti-religious was noted by the authors although their sample did not contain such subjects.

3.3 Devoutness

This variable, measured as frequency of reported religion-related activities engaged in by the subjects and their families, was studied by Quinn (1965) in relation to dogmatism and other variables. He found a curvilinear relationship with moderate devoutness related to lowest dogmatism. The results, partly due to very small N's at the extremes of devoutness, are, however, only suggestive. The conclusion of such a curvilinear relationship is, however, suggested by the earlier work of Struening (1957).

3.4 Conscience

Moulton, in a study of parental affection and disciplinary dominance (1966), developed a short paper-and-pencil measure of guilt or conscience. He cited support for the validity of such a self-report measure and carried out his own clinical validation. Since religion, in many instances, uses the development of guilt and prescribed methods for the avoidance of higher levels of guilt and for guilt reduction, the variable was considered pertinent to our present study.

3.5 Dogmatism

General dogmatism, conceptualized as openness or closedness of belief systems with the emphasis on structure rather than content (Rokeach, 1960) is concerned with "how" a person believes, with cognitive functioning, and, in terms of conceptual systems theory, with the intergrative rules more than with the dimensions (content) of thought. A factor analysis of the Dogmatism Scale by Kerlinger and Rokeach (1966) found a second-order factor which they labeled "general authoritarianism" that is independent of particular ideological content (p. 397).

In terms of psychological health and teaching effectiveness, Dandes (1966) found dogmatism to be negatively correlated with all scales of the Shostrom Personal Orientation Inventory. He concluded that "the relationship is as

predicted: the greater the psychological health, the greater the possession of attitudes and values characteristic of effective teaching (p. 305)".

Dogmatism has been found to be positively related to religion (Rokeach, 1960; Young et al., 1960; Webster, 1966) and positively related to an insensitivity to the personality characteristics of others and to the use of simple, power-related categories to understand the behavior of other people (Schodel and Mussen, 1953). With reference to education, Von Fange (1962) found a disproportionately large number of judgemental as against perceptual (Myer-Briggs Inventory) people at all levels in teaching. This Myers-Briggs dichotomy resembles that of dogmatism, especially in the attributes of perceptual and conceptual openness-closedness to input (Anderson and Hunka, 1963). Harvey (1966) reports dogmatism as a correlate of simplicity-concreteness of cognitiive functioning.

3.6 Philosophies of Human Nature: Complexity Scale

Wrightsman's (1964) research with the Philosophies of Human Nature Scale has investigated, in general, the expectancies people have that others will behave in certain ways (p. 743). The total scale consists of six sub-scales, one of which is called "complexity" and which is designed to measure the extent to which subjects see human behavior as "complex and hard to understand or simple and easy to

understand (ibid., p. 744)". In terms of the previous

discussion of intergrative complexity, religion and

dogmatism, this variable is apparently closely related

to the relative use of various conceptual models of

behavior. As Wrightsman (1967) noted,

most psychologists appear to be in agreement that a goal
of psychological training is to develop a stronger belief
in human complexity... yet there is little theorizing on
the subject, with the exception of George Kelly's role
construct theory (1955, 1963) and the work of Harvey, Hunt
and Schroder (1961) on four levels of conceptual systems
(1967, pp. 14-15).

Specific evidence regarding the relationships between

the Complexity Scale and religious variables is provided

by Wrightsman and Satterfield (1967) who found complexity

positively related to the "general sophistication of the

(university) students" and negatively related to strong

religious affiliations, and Ewing (1966) who found a strong

negative correlation (.44) between "intrinsicness" (on the

Allport-Ross Religious Orientation Scale) and complexity,

and a weak (.15) negative relationship between "extrinsic-

ness" and complexity.

Females were found to be higher on the complexity

scale than males, and, with reference to education, guidance

counselors were not high on the complexity scale (Wrights-

man and Satterfield, 1967). With regard to the relation-

ship of the complexity scale to the other five scales of

PHN, Wrightsman (1964) reports negative correlations of

.20 with Trustworthiness, .21 with Altruism, .16 with

Independence, and .26 with Strength of Will. A positive

correlation of .40 is reported between the complexity scale

and the extent to which subjects see individual differences

and "basic changeability" in human nature (Variability

Scale).

3.7 Agreement Response

Couch and Keniston (1960), in a study of acquiescence

set, report positive correlations (.45 to .50) with pre-

judice, anxiety, dependency and impulsivity. Negative

correlations were found between agreement response

(acquiescence set) and achievement via indpendence, social

responsibility and tolerance. They identify high-scorers

on agreement response as "Yeasayers" and describe them as

characteristically admitting stimuli to consciousness

without censorship, alteration or assimilation, and by

agreeing with, acting out and otherwise yielding to the

pressures of stimuli exerted upon them. Low-scorers are

generally characterized by opposite types of information

processing and interpersonal behavior. This may be

interpreted, in terms of conceptual systems, as an

indication that "yeasayers" are simple-concrete while

"naysayers" are complex-abstract.

3.8 Other Variables

Birth Order. Schachter (1959) hypothesizes that
first-born individuals react to stress with more anxiety
than laterborns, and that, under anxiety-arousing conditions,
they have a greater need to affiliate. The early theorizing
in this area goes back to Adler (1927) who proposed that
a child's personality organization reflects behavior patterns
developed because of distinctive experiences resulting from
his position in the family constellation.

Terman (1925) found firstborns overrepresented among
his gifted children, and Altus (1965) reported that a
disproportionate number of firstborns go to college. First-
born children have been found to be more susceptible to
social pressure and are more dependent than laterborns
(Sears, 1950; Becker and Carroll, 1962; Carrigan and
Julian, 1966). Stewart (1967) found firstborns (among an
all-male sample) to be more field-dependent than later-
borns. Becker et al. (1966) report confirmation of the
hypotheses that firstborn persons are more responsive to
normative influences while laterborn persons are more
affected by informational influences. This makes the
birth-order variable relevant to conceputal systems,
socializing variables and the relative use of conceptual
models of behavior.

Age. Many of the variables used in this study have

been found significantly related to age. Among the relevant findings are those of Stotsky and Rhetts (1967) who report that older nurses in nursing homes are more authoritarian and socially restrictive, Larson (1967), who reports that younger clergymen have "better" mental health attitudes than do older clergyment, and Klausner's (1966) report of a negative correlation between age and empiricism. Getzel's (1957) discussion of teachers' values suggests that older teachers are more traditionally oriented, a significant dimension in this study.

Sex. With reference to conceptual systems theory, Hunt and Dopyera (1966) found female subjects to be more complex than males. This finding is supported by the recent work of Gardiner (1968). Further evidence is provided by Glixman (1965) who found that women use more categories than do men for a particular realm of stimulus events. Sex differences are also reported with regard to dogmatism (women are lower) (Alter and White, 1966) and philosophy of human nature (women see human nature as more complex than do men (Wrightsman, 1964). Hartnett and Peterson (1967) report that sex differences were relatively consistent across religious groups; the female students were more liberal (on political, economic, social values; social conscience, etc.) than were the male students.

Urban-Rural Residence. Urban residents have been

found to be less authoritarian (Rhodes, 1960; Young et al., 1960), and to have "better" attitudes toward mental health (Larson, 1967). Adolescents in large cities spend less time with their parents and are exposed to greater complexities of life which impose certain pressures on the family and parent-child relationships (Douvan and Adelson, 1966, p. 312). These reports are significant in terms of the basic theory involving the function of socializing agents.

Years of University Training. Reisman and Jencks (1962) maintain that college experiences expose students to a more cosmopolitan world and loosen their imagination from "preconception and ignorance" (p. 77). With specific regard to this study, there are the findings that clergymen with more extensive university training have "better" attitudes toward mental health (Larson, 1967).

4. Hypotheses

The basic null hypotheses state that:

1. There are no significant differences on the T-Scale (Theological) of the Beliefs-About-Behavior Inventory between the various groups.

   (a) subject groups (as outlined in Chapter IV)
   (b) religious membership groups
   (c) religious orientation groups
   (d) devoutness groups
   (e) conceptual systems groups

(f) high and low conceptual complexity groups
(g) high and low dogmatism groups
(h) birth-order groups
(i) sex groups
(j) urban-rural groups
(k) education/other student groups

2. There are no significant differences on the I-scale

   (Illness) of the Beliefs-About-Behavior Inventory

   between the various groups (as in hypothesis #1).

3. There are no significant differences on the P-scale

   (Psychological) of the Beliefs-About-Behavior Inventory

   between the various groups (as in hypothesis #1).

   Minor null hypotheses state that:

4. There are no significant correlations between inte-

   grative complexity (continuous scoring) and

   (a) the T-scale of the BABI
   (b) the I-scale of the BABI
   (c) the P-scale of the BABI

5. There are no significant correlations between dog-

   matism and

   (a) the T-scale of the BABI
   (b) the I-scale of the BABI
   (c) the P-scale of the BABI

6. There are no significant correlations between Con-

   science Score and

   (a) the T-scale of the BABI
   (b) the I-scale of the BABI
   (c) the P-scale of the BABI

7. There are no significant correlations between years

of university study completed and

    (a)   the T-scale of the BABI
    (b)   the I-scale of the BABI
    (c)   the P-scale of the BABI

8. There are no signficiant correlations between intrinsic

religious orientation and

    (a)   the T-scale of the BABI
    (b)   the I-scale of the BABI
    (c)   the P-scale of the BABI

9. There are no signficant correlations between extrinsic

religious orientation and

    (a)   the T-scale of the BABI
    (b)   the I-scale of the BABI
    (c)   the P-scale of the BABI

10. There are no significant correlations between age and

    (a)   the T-scale of the BABI
    (b)   the I-scale of the BABI
    (c)   the P-scale of the BABI

11. There are no significant correlations between the

Philosophy of Human Nature: Complexity Scale and

    (a)   the T-scale of the BABI
    (b)   the I-scale of the BABI
    (c)   the P-scale of the BABI

12. There are no significant correlations between the

Agreement Response scores and

    (a)   the T-scale of the BABI
    (b)   the I-scale of the BABI
    (c)   the P-scale of the BABI

CHAPTER III

CONSTRUCTION OF THE BELIEFS-ABOUT-BEHAVIOR INVENTORY

An inventory, known as the Beliefs-About-Behavior Inventory (BABI), was constructed to measure the relative extent to which individuals use each of three conceptual models of behavior: Theological, Illness and Psychological. An initial inventory was written, and after a trial with a sample of university students, a final inventory was written and psychometrically analyzed. The detailed construction procedures are described below.

1. <u>Construction of the Initial Inventory</u>

A. For each of the three conceptual models (Theological, Illness and Psychological), a descriptive paragraph was written on the basis of relevant literature (see Chapter I).

B. Ten behavioral domains were selected as an adequate sample of behavior relevant to the function of the conceptual models. The behavioral domains were: guilt, suspiciousness, indecisiveness, overconfidence, sex, alcohol usage, overaggressiveness, overcriticalness, fear, and hope.

C. Seven dimensions of conceptual models of behavior were utilized: (1) cause, (2) "cure", (3) how behavior would

best be regarded, (4) the personnel, and (5) the institutions which would best be involved in preventing, "curing", or changing certain behaviors, (6) the nature of behavior, and (7) the relationship of the behavior to other behaviors in the individual's life.

D. Seventy items were written matching each of the ten stems (one for each behavioral domain) with each of the seven dimensions. Each item consisted of the stem plus three alternatives, one from each conceptual model, but consistent in dealing with the same dimension.

For example (item #1 from the initial inventory): People who are over-critical of others are best regarded as:

(a) somewhat sinful, but still they are fellow humans
(b) sick, at least to some degree
(c) using inappropriate behavior

E. The 210 alternatives were typed on cards and blind-sorted as to the model to which they belong by five psychologists. These judges had available the paragraph description of the models. Perfect agreement was reached on all alternatives and the judges' comments were used to improve some of the wordings.

When the items were written (the stems matched with the alternatives), the seventy items were blind-sorted by the same judges as to the dimension to which they belong. Perfect agreement was reached among the judges.

F. Subjects were instructed to respond to each item by
    selecting the alternative with which they most agree
    and to give that alternative a score of 3; then to
    select the alternative which would be their second
    choice and give it a score of 2; the alternative with
    which they least agreed received the score of 1.

G. The subjects' scores consist of the sum of the scores
    assigned to the seventy alternatives belonging to each
    of the three scales: theological, illness and psycho-
    logical. Thus, a subject could obtain a maximum score
    of 210 on any one scale. Since each item has only
    three values to be assigned (3, 2 and 1), the scores
    obtained on the various scales are ipsative and the
    minimum score on any one scale was 70.

H. A trial of this initial inventory was made with 62
    third and fourth year undergraduate education students
    at the University of Alberta. The distribution of
    scores obtained by these subjects is provided in
    Table 1.

I. An item analysis was made using correlations of each
    item with the total score for the relevant scale. Thus,
    item-total correlations were obtained for each of the
    70 items on each of the three scales. These are presented
    in Table 2.

TABLE 1

DISTRIBUTION OF SCORES ON THE THREE SCALES

OF THE INITIAL INVENTORY

Score	Frequencies		
	Theological Scale f	Illness Scale f	Psychological Scale f
200-210		1	1
190-199	1	2	10
180-189		2	12
170-179	1	6	11
160-169		7	* 8
150-159	1	7	7
140-149	3	* 15	7
130-139	2	11	2
120-129	5	7	
110-119	8	3	2
100-109	* 7		
90-99	10	1	1
80-89	14		
70-79	10		
$\bar{X}$ =	102.99	148.02	168.98
S.D. =	25.18	20.72	22.35

N = 62

TABLE 2

ITEM-TOTAL CORRELATIONS, INITIAL INVENTORY (N = 62)

Theological Scale				Illness Scale				Psychological Scale			
Item	r*	Item	r	Item	r	Item	r	Item	r	Item	r
1	.036	36	.665	1	.207	36	.567	1	.281	36	.707
2	.214	37	.835	2	.192	37	.504	2	.295	37	.723
3	.468	38	.741	3	.452	38	.607	3	.343	38	.626
4	.395	39	.664	4	.274	39	.544	4	.201	39	.709
5	.414	40	.696	5	.157	40	.389	5	.258	40	.596
6	.666	41	.707	6	.309	41	.445	6	.430	41	.659
7	.404	42	.521	7	.271	42	.593	7	.442	42	.646
8	.584	43	.757	8	.443	43	.500	8	.533	43	.562
9	.728	44	.615	9	.340	44	.536	9	.486	44	.413
10	.514	45	.483	10	.345	45	.367	10	.439	45	.344
11	.366	46	.615	11	.134	46	.226	11	.326	46	.430
12	.556	47	.734	12	.546	47	.653	12	.561	47	.714
13	.685	48	.649	13	.535	48	.443	13	.499	48	.653
14	.480	49	.511	14	.428	49	.542	14	.275	49	.482
15	.508	50	.488	15	.236	50	.364	15	.329	50	.319
16	.746	51	.716	16	.502	51	.420	16	.517	51	.682
17	.591	52	.732	17	.473	52	.534	17	.538	52	.619
18	.576	53	.641	18	.163	53	.507	18	.308	53	.674
19	.324	54	.551	19	.259	54	.523	19	.232	54	.700
20	.475	55	.586	20	.495	55	.737	20	.444	55	.499
21	.599	56	.275	21	.450	56	.245	21	.552	56	.136
22	.453	57	.200	22	.373	57	.565	22	.287	57	.236
23	.701	58	.563	23	.244	58	.574	23	.250	58	.586
24	.520	59	.470	24	.557	59	.411	24	.493	59	.386
25	.380	60	.628	25	.371	60	.433	25	.527	60	.620
26	.736	61	.545	26	.612	61	.640	26	.580	61	.402
27	.559	62	.481	27	.285	62	.640	27	.523	62	.296
28	.763	63	.547	28	.440	63	.450	28	.650	63	.489
29	.665	64	.667	29	.558	64	.252	29	.551	64	.111
30	.518	65	.389	30	.341	65	.564	30	.503	65	.436
31	.377	66	.724	31	.463	66	.637	31	.271	66	.463
32	.631	67	.690	32	.338	67	.444	32	.478	67	.551
33	.458	68	.750	33	.477	68	.535	33	.413	68	.619
34	.370	69	.746	34	.389	69	.687	34	.422	69	.668
35	.486	70	.469	35	.424	70	.499	35	.534	70	.557

* Correlations above .25 are significant at the .05 level of confidence.

2. Construction of the Final Form of the Beliefs-About-Behavior Inventory

A. Alternatives which correlated .30 or greater with the total score on the relevant scale on the initial inventory were considered suitable for inclusion in the final inventory.

B. The number of dimensions was reduced to four: (1) cause, (2) "cure", (3) regard, (4) personnel and/or institutions. The number of behavioral domains was maintained at the original ten, thus establishing a revised inventory of forty items (10 x 4).

C. The 120 alternatives and the 40 completed items were blind-sorted by the same judges using the same procedures described in section "E", under construction of the initial inventory.

D. The final inventory was administered to 329 subjects consisting of 140 university students, 137 nurses, and 52 senior high-school students. The final form (the BABI) was analyzed for test consistency using item-total correlations for each of the 40 items on each of the three scales. These correlations are presented in Table 3.

E. The final inventory was further analyzed for test consistency by correlating sub-sets of items with the totals for the various scales. These analyses were carried out with three groups of subjects: 136 university students, 89 nursing students, and 52-high-school students. Results of these analyses are presented in Tables 4, 5 and 6.

TABLE 3

ITEM-TOTAL CORRELATIONS, FINAL BABI (N = 329)

Theological Scale				Illness Scale				Psychological Scale			
Item	r	Item	r	Item	r	Item	r	Item	r	Item	r
1	.652	21	.627	1	.504	21	.429	1	.443	21	.384
2	.541	22	.576	2	.478	22	.536	2	.410	22	.430
3	.348	23	.541	3	.295	23	.485	3	.422	23	.471
4	.360	24	.537	4	.253	24	.563	4	.214	24	.377
5	.580	25	.742	5	.445	25	.578	5	.473	25	.592
6	.607	26	.634	6	.394	26	.504	6	.428	26	.560
7	.532	27	.704	7	.436	27	.528	7	.406	27	.483
8	.683	28	.633	8	.509	28	.542	8	.458	28	.559
9	.636	29	.605	9	.523	29	.401	9	.471	29	.510
10	.084*	30	.754	10	.064*	30	.603	10	.165	30	.627
11	.706	31	.678	11	.416	31	.524	11	.496	31	.546
12	.682	32	.677	12	.589	32	.613	12	.550	32	.488
13	.557	33	.455	13	.573	33	.439	13	.540	33	.503
14	.507	34	.719	14	.427	34	.596	14	.440	34	.588
15	.738	35	.562	15	.533	35	.526	15	.565	35	.535
16	.569	36	.685	16	.400	36	.542	16	.396	36	.551
17	.496	37	.555	17	.487	37	.545	17	.404	37	.524
18	.620	38	.715	18	.546	38	.549	18	.541	38	.601
19	.654	39	.425	19	.490	39	.494	19	.473	39	.273
20	.701	40	.554	20	.529	40	.306	20	.601	40	.340

* Not significant, all other correlations significant beyond the .001 level of confidence.

TABLE 4

TEST CONSISTENCY

			Total T*	Total I	Total P
Sub-set	Sub-set Content	No. of Items	r	r	r
1	Guilt	4	.862**	.841	.827
2	Suspiciousness	4	.853	.758	.766
3	Indecisiveness	4	.788	.681	.734
4	Overconfidence	4	.805	.678	.702
5	Sex	4	.755	.678	.652
6	Alcohol Use	4	.792	.616	.537
7	Aggressiveness	4	.834	.804	.766
8	Over-Critical-ness	4	.864	.722	.777
9	Fear	4	.863	.770	.780
10	Hope	4	.727	.779	.660
11	Cause	10	.900	.836	.781
12	Cure	10	.940	.850	.890
13	Regard	10	.901	.843	.809
14	Personnel/ Institution	10	.884	.759	.799

Group: U. of Sask. Students (n = 140)

* T = Theological scale, I = Illness scale, P = Psychological scale.

** all correlations significant beyond the .001 level of confidence.

TABLE 5

TEST CONSISTENCY

Group: 3rd year
Nurses
(n = 89)

Sub-set	Sub-set Content	No. of Items	Total T* r	Total I r	Total P r
1	Guilt	4	.839**	.792	.801
2	Suspiciousness	4	.765	.805	.694
3	Indecisiveness	4	.835	.787	.735
4	Overconfidence	4	.663	.698	.551
5	Sex	4	.733	.647	.730
6	Alcohol Use	4	.736	.740	.645
7	Aggressiveness	4	.751	.786	.681
8	Over-Critical- ness	4	.844	.788	.632
9	Fear	4	.838	.855	.822
10	Hope	4	.725	.727	.682
11	Cause	10	.859	.765	.781
12	Cure	10	.909	.812	.817
13	Regard	10	.833	.758	.678
14	Personnel/ Institution	10	.871	.795	.758

* T = Theological scale, I = Illness scale, P = Psychological scale.

** all correlations significant beyond the .001 level of confidence.

TABLE 6

TEST CONSISTENCY

Group: High School
Residents
(n = 52)

Sub-set	Sub-set Content	No. of Items	Total T* r	Total I r	Total P r
1	Guilt	4	.821	.714	.778
2	Suspiciousness	4	.784	.718	.713
3	Indecisiveness	4	.627	.625	.555
4	Overconfidence	4	.737	.594	.551
5	Sex	4	.728	.568	.624
6	Alcohol Use	4	.638	.170**	.562
7	Aggressiveness	4	.715	.722	.720
8	Over-Critical-ness	4	.764	.670	.720
9	Fear	4	.725	.754	.744
10	Hope	4	.760	.779	.729
11	Cause	10	.822	.691	.732
12	Cure	10	.853	.753	.839
13	Regard	10	.764	.684	.674
14	Personnel/ Institution	10	.869	.688	.841

* T = Theological scale, I = Illness soale, P = Psychological scale.

** Not significant, all other correlations significant beyond the .001 level of confidence.

F. Reliability of each of the three scales was assessed using the retest method (5 week interval) with 92 university students and a stratified (by behaviors and dimensions) split-half method with five groups as presented in Table 7.

G. Validity was established through: (1) the writing of the items in accord with the descriptions of the models, (2) the blind-sort of items by competent judges, who reached perfect agreement, (3) the analyses of the internal consistency of the scales of the inventory, (4) through the use of criterion groups for the Theological scale (Christian fundamentalists at a Bible camp) and for the Psychological scale (Psychologists).

H. The relative independence of the three scales from each other was estimated by the use of product-moment correlations. The results are presented in Table 8.

TABLE 7

RELIABILITY

Group	N	Type	T* r	I r	P r
U. of Sask students, Nurses, High School stud.	325	1**	.902	.868	.860
Bible Camp	39	1	.847	.700	.710
Psychologists	48	1	.873	.922	.900
Clergy	28	1	.903	.838	.863
Social Workers	23	1	.934	.903	.894
U. of Sask. students	92	2	.744	.713	.642

* T = Theological scale, 1 = Illness scale, P = Psychological scale.

** 1 = stratified split-half reliability; 2 = test-retest reliability, five-week interval.

TABLE 8

INTER-CORRELATIONS* AMONG THE THREE SCALES

OF THE BABI (N = 459)

	Theological	Illness	Psychological
Theological	1.000	-.641	-.606
Illness	-.641	1.000	-.219
Psychological	-.606	-.219	1.000

* All significant beyond the .001 level of confidence

CHAPTER IV

METHODOLOGY

1. Subjects

The entire battery of instruments was administered to some of the subject groups, while only part of the battery was administered to others. Table 9 presents the various subject groups used in the study, and indicates which instruments were administered to each group.

2. Description of Subject Groups

A. University of Saskatchewan Students. These subjects were 140 undergraduate students in their junior and senior years who were registered in psychology and education courses in the regular intersession, 1968. Of the 140, 119 were registered in the College of Education and 21 were in the College of Arts and Science.

B. University of Saskatchewan Psychology Students. These 50 subjects were enrolled in Psychology 221 (Social Psychology) in the Summer Session in the sophomore or junior year of an undergraduate program.

C. High School Students. These 52 subjects were in grades eleven and twelve at an Alberta Roman Catholic residential school for boys which offers a college preparatory academic program.

TABLE 9

SUBJECT GROUPS AND INSTRUMENTS ADMINISTERED

			Instruments								
Subjects	N	1	2	3	4	5	6	7	8	9
U. of Sask. Students	140	x**	x	x	x	x	x	x	x	x
U. of Sask. Psych. Stud.	50	x	x	x						
High School Students	52		x	x			x			
U. of Alberta Ed. Stud.	34	x	x	x	x	x	x	x	x	x
Computer Sci. Students	50		x	x						
Nurses (3rd Year)	88		x							
Nurses (2nd Year)	49		x				x			
Clergy	28		x							
Bible Camp	39		x							
Psychologists	48		x							
Social Workers	23		x							

* No. 1 = Form "B" (Data Sheet
  No. 2 = Beliefs-About-Behavior Inventory
  No. 3 = Interpersonal Topical Inventory
  No. 4 = Dogmatism: Form "E"
  No. 5 = Religious Orientation Scale
  No. 6 = Philosophy of Human Nature. Subscale: Complexity
  No. 7 = Agreement-Response Scale
  No. 8 = Conscience
  No. 9 = Devoutness

** Indicates subject group completed instrument.

D. <u>University of Alberta Education Students</u>. These 34 subjects were in the third or fourth year of a four-year Bachelor of Education program. They had a mean age of 25 with an age range of 19 to 45. Over fifty percent had three or more years of teaching experience. Over seventy-five percent had at least one year of teaching experience.

E. <u>Computer Science Students</u>. These 50 subjects were in the sophomore or junior year of an undergraduate degree program at the University of Alberta Summer Session, and were enrolled in a course in computer programming.

F. <u>Nurses</u>. These 137 subjects were at the end of the second or third year nursing-education program at a municipal hospital school of nursing (second and third year N's = 49 and 88 respectively.

G. <u>Clergy</u>. These 28 subjects were selected from the weekend directory of Churches in the <u>Edmonton Journal</u>, a local daily newspaper. A phone call was made to each of forty clergymen requesting their participation in this research project. Of the 40 solicited, all agreed to take part and 28 returned usable data. The church affiliation of the respondents was as follows: Roman Catholic, 9; Baptist, 5; United Church, 4; Presbyterian, 3; Pentecostal, 2; Missionary Alliance, 2; Anglican, 2; Lutheran, 1. For these subjects the BABI was mailed

with a covering letter (see Appendix A) and a stamped, self-addressed envelope.

H. <u>Bible Camp</u>. These 39 subjects consisted of 30 lay members and 9 missionaries of a fundamentalist Christian church which was conducting a week-end meeting in a camp setting. The BABI was administered by the researcher and an assistant under adequate testing conditions in the dining room of the camp facilities.

I. <u>Psychologists</u>. A sample of 100 psychologists was drawn (every seventh name) from the directory of the Canadian Psychological Association. The BABI was mailed with a covering letter (see Appendix A) and a stamped, self-addressed envelope. Forty-eight usable answer sheets were returned.

J. <u>Social Workers</u>. A sample of 50 was drawn from the mailing list of the Northern Branch of the Alberta Association of Social Workers. The BABI was mailed with a covering letter (see Appendix A) and a stamped, self-addressed envelope. Twenty-three usable answer sheets were returned.

3. <u>Instruments</u>

A. <u>Form "B"</u>. Form "B" was a biographical data sheet requesting information <u>re</u> age, sex, religion, urban-rural residence, years of university study, birth order, and so on (see

Appendix B).

B. <u>Beliefs-About-Behavior Inventory (BABI)</u>. The BABI is
a measure of the relative extent to which subjects agree
with each of three conceptual models of behavior. It
consists of 40 items, each item containing a triad of
alternatives to which the subject responds by allocating
three values: 3, 2, and 1 -- 3 to the one he most agrees
with, 2 to his second choice, and 1 to the one with
which he least agrees. The triads contain one alternative
from each of the three conceptual models, thus providing
for forty items on each model. This inventory is
described in detail in Chapter III, <u>Construction of the</u>
<u>Beliefs-About-Behavior Inventory</u>. The BABI is shown in
Appendix B.

C. <u>Interpersonal Topical Inventory (ITI)</u>. The ITI is an
objective measure of integrative complexity developed
by Tuckman (1966), and consists of six forced-choice
pairs of alternatives in relation to each of six stems.
The six stems are: When I am criticized...; When I am
in doubt...; When a friend acts differently toward me...;
This I believe about people...; Leaders...; When other
people find fault with me... .

   The subject is instructed to select one alternative
from each of the 36 pairs. Of the 72 alternatives
(36 x 2), 18 fall into each of four conceptual systems

and, thus, the subject's score for any one system may range from 0 to 18. The systems increase in complexity from system 1 to system 4. The subjects are assigned to the highest system in which they score (if they reach at least decile 8 of the norm group of 90 Rutgers freshmen), but in the case of tied decile ratings for two or more conceptual systems the subject is unclassifiable.

Tuckman (1966, p. 378) reports a contingency coefficient of .54 between his ITI and Schroder's Paragraph Completion Test (N = 92). A revised scoring system developed by Gardiner (1968) uses a continuous distribution of scores based on one point for each "more complex" alternative the subject chooses. Thus a possible range of 0 to 36 is established, with a higher score indicating higher complexity. Gardiner (1968) found a correlation of .573 between the ITI thus-scored and the Paragragh Completion Test. The ITI is shown in Appendix B.

D. Dogmatism: Form "E". Developed by Rokeach (1960, pp. 73-80), this is a forty-item scale of belief systems yielding a measure of "open" or "closed" mindedness: "the extent to which the person can receive, evaluate and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within

the person or from the outside (Rokeach, 1960, p. 57)".

Reliability figures reported by Rokeach (1960) range from .68 to .93 (p. 89). Ehrlich (1961) reports split-half and five-month retest reliabilities of .75 and .73, respectively. Sawatsky (1968) reports retest (N = 20) reliability of .83 over a three-month interval.

The subjects respond to this measure by indicating their extent of agreement (+1 to +3) or disagreement (-1 to -3) with each of the forty items. Thus a score range of -120 to +120 is possible. A constant of 120 was added to eliminate negative numbers. Dogmatism: Form "E" is shown in Appendix B.

E. <u>Religious Orientation Scale</u>. The Religious Orientation Scale (ROS) is a twenty-item scale which measures the extent to which a person's subjective religious orientation is characterized by extrinsic motivation (he "uses" religion) or by intrinsic motivation (he "lives" religion) (Allport and Ross, 1967). There are 11 items on the extrinsic scale and 9 items on the intrinsic scale. Possible scores are 11 to 55 on the extrinsic scale (high score means high extrinsicness) and 9 to 45 on the intrinsic scale (low score means high intrinsicness).

Those subjects who score at least 12 points less on the intrinsic scale than on the extrinsic scale are classed

as indiscriminately pro-religious, since they agree with a very high number of pro-religious items from both scales. Those who score at least 12 points higher on the intrinsic scale than on the extrinsic scale are classed as indiscriminately anti- or a-religious since they tend to disagree with the pro-religious items of both scales. The ROS is shown in Appendix B.

F. Philosophy of Human Nature: Sub-Scale Complexity. This is a fourteen-item, Likert-type scale which deals with "the extent to which people are complex and hard to understand or simple and easy to understand (Wrightsman, 1964, p. 744)". When this sub-scale is used in the total set of six sub-scales, its split-half reliability is reported (Wrightsman, 1964, p. 746) to be .76 for male undergraduates (N = 50) and .60 for female undergraduates (N = 50). Retest reliability is reported as .52 over a three-month interval.

The possible range of scores is -42 to +42. A constant of 30 was added to avoid negative numbers. This instrument is shown in Appendix B.

G. Agreement Response Scale. This instrument is a shortened form of the Overall Agreement Scale developed by Couch and Keniston (1960) to assess the variable of acquiescence set in personality studies. The Agreement Response Scale (ARS) consists of twenty items to which the subjects

respond at various levels of agreement from +1 to +7.
High scores indicate high agreement response and subjects
at the upper end of the distribution are called "Yea-
sayers" by the authors. Low scores are called "Nay-
sayers". Yeasayers accept stimuli both by admitting
them to consciousness without censorship, alteration
or assimilation, and by agreeing with, acting out and
otherwise yielding to pressures exerted on them. This
instrument is presented in Appendix B.

H. Conscience. This is a five-item instrument designed
to obtain responses which will yield a useful "conscience"
or "guilt" score (Moulton et al., 1966) (see Appendix B).
The validity of a self-report measure of guilt is
supported by several previous studies which indicated
that simple direct questioning with regard to this
characteristic yielded a measure related in expected
ways to other indices of strength of internalization
(Bandura and Walters, 1959; MacKinnon, 1938; Moulton,
1957). On the basis of open-ended questioning, Moulton
et al. (1966) report that 84% of the high-guilt subjects
on the Conscience Test were characterized by active
attempts to relieve guilt feelings, while low-guilt
subjects reported fewer (20%) such attempts (1966, p. 358).

I. Devoutness. This is a five-item instrument requiring
responses which indicate "the frequency of behaviors

directly pertaining to religious practice by the individual respondent and by his family (Quinn, 1965, p. 37)". This instrument is presented in Appendix B. Reported retest reliabilities (N = 117) over a nine-week interval are .74 to .86, with a mean of .80 (Quinn, 1965), p. 107).

4. Statistical Analyses

For each of the three models of the Beliefs-About-Behavior Inventory, Analyses of Variance of groups were made followed (where there were more than two groups) by Scheffe Multiple Comparisons of Means. With respect to type 1 errors in decisions, i.e., when a null hypothesis is accepted when it should not be, Scheffe's method is most conservative in the sense that it leads to the smallest number of significant differences among all possible pairs of group means (Winer, 1962, pp. 88-89).

The sets of groups used were:

A. The 10 subject groups (see this chapter).

B. Subjects grouped by religious membership.

C. Subjects grouped by religious orientation.

D. Subjects grouped by their integrative-complexity system.

E. Subjects grouped by the upper and lower 27 percent on the continuously-scored Interpersonal Topical Inventory. High complexity subjects scored 26 or higher; low complexity subjects scored 19 or lower.

F. Subjects grouped by the upper and lower 27 percent on the Dogmatism: Form "E". High dogmatics scored 125 or higher; low dogmatics score 92 or lower.

G. Subjects grouped by Devoutness scores (high, intermediate, low) on each of the five Devoutness items.

H. Subjects grouped by urban-rural residence, maleness-femaleness, education students-other students, and birth order.

The relationships between certain minor variables (age, number of siblings, years of university study completed, Conscience (guilt) score, Philosophy of Human Nature: Sub-Scale Complexity, and Agreement-Response score) and each of the three scales of the BABI were assessed through product-moment correlation. Integrative complexity (continuous scoring), dogmatism, intrinsic religious orientation, and extrinsic religious orientation were also included as continuous variables in this correlation study to supplement the analyses of these variables which were made by Analyses of Variance and Multiple Comparisons of Means. The correlations provide a measure of relationship between the entire distribution of scores on these variables and the scales of the BABI.

CHAPTER V

ANALYSIS OF RESULTS

1. Major Hypotheses

1.1 Subject Groups

The analysis of variance of the ten subject groups
yielded a very high significance on all three scales of the
Beliefs-About-Behavior Inventory (see Table 10). Signifi-
cance levels were, for the Theological Scale, .000002, for
the Illness Scale, .000003, and for the Psychological Scale,
.000005. Thus, null hypotheses 1(a), 2(a) and 3(a) were
not accepted.

Multiple comparisons of the means of the ten subject
groups indicate that, on the Theological Scale of the BABI,
the Bible Camp groups was statistically significantly higher
than all other groups excepting the male Roman Catholic
high school students and the University of Alberta Education
students (who were mostly older, experienced teachers).
The psychologists were significantly lower than all subject
groups excepting the social workers and the computer science
students (see Table 11).

These findings are congruent with expectations based
upon the research cited in Chapter II. People who are
deeply involved in religious membership, especially of

TABLE 10

ANALYSIS OF VARIANCE, SUBJECT GROUPS

Group	N	T-Scale X̄	T-Scale S.D.	I-Scale X̄	I-Scale S.D.	P-Scale X̄	P-Scale S.D.
U. of Sask. Students	140	61.3	19.6	79.2	19.6	92.5	20.6
Nurses	137	61.2	16.9	85.9	13.6	92.8	13.3
High School Students	52	70.3	15.0	75.2	10.9	94.6	12.1
Clergy	28	79.9	20.3	80.6	17.4	79.6	17.6
Bible Camp	39	104.1	10.5	59.5	9.7	76.5	8.2
Social Workers	23	53.2	21.3	96.1	17.6	90.7	13.4
Psychologists	48	45.9	8.4	88.8	13.1	105.2	12.9
U. of Sask. Psych. Stud.	50	61.4	19.1	82.4	14.2	96.2	15.3
U. of Alberta Ed. Stud.	34	64.3	16.2	82.8	12.1	92.9	11.5
Computer Sci. Students	50	55.0	12.4	84.6	12.3	100.4	11.2
TOTALS	601	63.9	20.9	81.5	16.6	93.1	16.4
		p = .000002		p = .000003		p = .000005	

	T-Scale MS	T-Scale df	T-Scale F	I-Scale MS	I-Scale df	I-Scale F	P-Scale MS	P-Scale df	P-Scale F
Groups	1073.00	9	37.99	3614.33	9	15.96	2937.78	9	12.86
Error	282.46	591		226.43	591		228.39	591	

TABLE 11

PROBABILITY MATRICES*

BABI -- T-SCALE

Group No.					Group No.					
	1	2	3	4	5	6	7	8	9	10
1. U. of Sask. Students	**			0010	0000		0006			
2. Nurses				0009	0000	0618	0007			
3. High School Students					0000	0003	0000			0138
4. Clergy	0010	0009			0001	0000	0000	0111		0000
5. Bible Camp	0000	0000	0000	0001		0000	0000	0000	0000	0000
6. Social Workers			0062	0003	0000		0000		0000	
7. Psychologists	0006	0007	0000	0000	0000	0000		0154	0056	
8. U. of Sask. Psych. Stud.				0111	0000		0154		0056	
9. U. of Alberta Ed. Stud.					0000		0056	0056		
10. Computer Sci. Students			0138	0000	0000					

* Scheffe multiple comparison of means.

** where probabilities are not entered, significance is not reached or approached.

fundamentalist Christian churches (e.g., Bible camp group), use their religious concepts in interpreting and coping with the behavior of others. Psychologists, on the other hand, committed to the scientific method, utilize religious concepts very little in dealing with human behavior. The computer science students, as well, are operating in a scientific mode more so than many other groups and are correspondingly low in the use of Theological Model. The relatively high mean score of the University of Alberta Education students on the Theological Scale may be interpreted as indicative of their use of the conceptual model most congruent with "traditional values" and "institutionalized norms".

On the Illness Scale, the Bible Camp was significantly lower than all other groups, possibly reflecting the slightly less humanitarian attitudes which Kirkpatrick (1949) found characteristic of "religious people", or the relative intolerance which Stouffer (1955) found related to church attendance.

The social workers, psychologists and nurses were highest on the Illness Scale, although significant differences were found only between the social workers and University of Saskatchewan Education students and the high school students, and between the psychologists and the high school students, and between the nurses and the high school students (see Table 12).

TABLE 12

PROBABILITY MATRICES*

BABI -- I-SCALE

Group No.	1	2	3	4	5	6	7	8	9	10
							Group No.			
1. U. of Sask. Students	**				0000	0035				
2. Nurses			0238		0000					
3. High School Students		0238			0044	0004	0163			
4. Clergy					0003					
5. Bible Camp	0000	0000	0044	0003		0000	0000	0000	0000	0000
6. Social Workers	0035		0004		0000					
7. Psychologists			0163		0000					
8. U. of Sask. Psych. Stud.					0000					
9. U. of Alberta Ed. Stud.					0000					
10. Computer Sci. Students					0000					

* Scheffe multiple comparison of means.

** where probabilities are not entered, significance is not reached or approached.

The religion-related groups were lowest in their scores on the Psychological Scale with the Bible Camp group being significantly lower than all other groups, and the Clergy being significantly lower than all other groups except the social workers and the University of Alberta Education students. Predictably, the psychologists were highest on the Psychological Scale (see Table 13).

Table 14 presents ranked means of the various subject groups on each of the three BABI scales.

1.2 Religious Membership

The analysis of variance of the eight religious membership groups showed significance on the Theological Scale (.0004) and the Illness Scale (.039). Significance was not reached on the Psychological Scale. Thus, null hypotheses 1(b) and 2(b) were not accepted, but null hypothesis 3(b) was accepted (see Table 15).

Group comparisons did not yield significant differences on the Illness or Psychological Scales, but on the Theological Scale, the fundamentalist Christian group was significantly higher than the subjects affiliated with the United Church (.009), the Presbyterian, Anglican and Congregational subjects (.012), and Roman Catholic subjects (.04), and approached significance in comparison to the "no religion" group (see Table 16).

These findings are congruent with expectations that

TABLE 13

PROBABILITY MATRICES*

BABI -- P-SCALE

Group No.	1	2	3	4	5	6	7	8	9	10
1. U. of Sask. Students	**			0504	0001		0030			
2. Nurses				0386	0001		0051			
3. High School Students				0384	0003					
4. Clergy	0504	0386	0384				0000	0107		0001
5. Bible Camp	0001	0001	0003				0000	0000	0109	0000
6. Social Workers							1109			
7. Psychologists	0030	0051		0000	0000	1109				
8. U. of Sask. Psych. Stud.				0107	0000					
9. U. of Alberta Ed. Stud.					0109					
10. Computer Sci. Students				0001	0000					

* Scheffe multiple comparison of means

** where probabilities are not entered, significance is not reached or approached.

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TABLE 14

RANKED MEANS BY SUBJECT GROUPS

ON THE THREE SCALES OF THE

BABI

	T-Scale			I-Scale			P-Scale	
Rank	Group	$\overline{X}$	Rank	Group	$\overline{X}$	Rank	Group	$\overline{X}$
1.	Bible Camp	104.1	1.	Social Workers	96.1	1.	Psychologists	105.2
2.	Clergy	79.9	2.	Psychologists	88.8	2.	Computer Sci.	100.4
3.	High School	70.3	3.	Nurses	85.9	3.	U. of Sask. Psych.	96.2
4.	U. of A. Educ.	64.3	4.	Computer Sci.	84.6	4.	High School	94.6
5.	U. of Sask. Psych.	61.4	5.	U. of A. Educ.	82.8	5.	U. of A. Educ.	92.9
6.	U. of Sask. Educ.	61.3	6.	U. of Sask Psych.	82.4	6.	Nurses	92.8
7.	Nurses	61.2	7.	Clergy	80.6	7.	U. of Sask. Educ.	92.5
8.	Computer Sci.	55.0	8.	U. of Sask. Educ.	79.2	8.	Social Workers	90.7
9.	Social Workers	53.2	9.	High School	75.2	9.	Clergy	79.6
10.	Psychologists	45.9	10.	Bible Camp	59.5	10.	Bible Camp	76.5

TABLE 15

ANALYSIS OF VARIANCE, RELIGIOUS MEMBERSHIP GROUPS

Groups	N	T-Scale		I-Scale		P-Scale	
		$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.
No religious membership	24	58.8	20.4	85.4	12.2	95.8	13.7
Roman Catholic	59	59.5	20.7	79.2	22.3	88.7	24.5
Greek Cath. & Orthodox	22	63.3	16.9	80.8	10.6	95.9	15.2
United Church	146	59.3	16.7	85.2	15.6	93.8	15.9
Unclassified	14	69.2	24.6	75.6	15.8	95.1	12.3
Presb., Anglican & Congregat.	35	55.9	17.5	84.1	19.9	93.2	19.7
Luth., Method., Bapt., & Dis. of Chr.	28	63.9	18.2	81.3	16.4	94.7	11.8
Fundamentalist groups	31	74.9	13.2	75.8	12.3	89.3	12.9
TOTALS	359	61.3	18.5	82.4	16.9	92.9	17.2
		p = .0004		p = .0398		p = .4223	

	T-Scale			I-Scale			P-Scale		
	MS	df	F	MS	df	F	MS	df	F
Groups	1260.43	7	3.90	596.14	7	2.13	301.97	7	1.01
Error	323.45	351		279.68	351		298.02	351	

TABLE 16

PROBABILITY MATRICES*

BABI -- T-SCALE

Group No.	N	1	2	3	Group No. 4	5	6	7	8
1. No Religious Membership	24	**							1485
2. Roman Catholic	59								0420
3. Greek Cath. & Gk. Orthodox	22								
4. United Church	146								0087
5. Unclassified	14								
6. Presb., Angl., & Congregat.	35								0123
7. Luthern, Method., Baptist, & Disp. of Ch.	28								
8. Fundamentalist Churches	31	1485	0420		0087		0123		

* Scheffe multiple comparison of means

** where probabilities are not entered, significance is not reached or approached

fundamentalists use the Theological Model more so than other
religious groups, especially those of the United Church and
those of the Presbyterian, Anglican and Congregational
Churches. Table 17 presents the ranked means of the
religious membership groups on the three scale of the BABI
for clarification of these relative positions.

1.3 Religious Orientation

The analysis of variance of the three religious orientation
groups (indiscriminately pro-religious, indiscriminately anti-
religious, and not indiscriminate) showed significance on
the Theological Scale of the BABI, but not on the other two
scales. Thus, null hypotheses 2(c) and 3(c) were accepted
while null hypothesis 1(c) was not (see Table 18).

Group comparisons showed that the "indiscriminately pro-
religious" were, on the Theological Scale, significantly
higher than the "indiscriminately anti-religious" (.008)
and significantly higher than the "not indiscriminate" group
(.026) (see Table 19). Ranked means on each of the three
BABI scales are shown in Table 20.

These findings are supportive of Allport and Ross's
(1967) contention that for the indiscriminately pro-religious
"there is one wide category -- religion is O.K. (p. 441)",
and would indicate that such attitudes toward religion and
use of religious concepts is distinctly evidenced in their
responses to the behavior of others.

TABLE 17

RANKED MEANS BY RELIGIOUS GROUPS

ON THE THREE SCALES OF THE

BABI

T-Scale			I-Scale			P-Scale		
Rank	Group	$\bar{X}$	Rank	Group	$\bar{X}$	Rank	Group	$\bar{X}$
1.	Fundamentalists	74.9	1.	No religion	85.4	1.	Gk Cath+orthodox	95.9
2.	Unclassified	69.2	2.	United Church	85.2	2.	No religion	95.8
3.	LuthMethBapDisp	63.9	3.	PresAngCong	84.1	3.	Unclassified	95.1
4.	Gk Cath+orthodox	63.3	4.	LuthMethBapDisp	81.3	4.	LuthMethBapDisp	94.7
5.	Rom Catholic	59.5	5.	Gk Cath+orthodox	80.8	5.	United Church	93.8
6.	United Church	59.3	6	Rom Catholic	79.2	6.	PresAngCong	93.2
7.	No religion	58.8	7.	Fundamentalists	75.8	7.	Fundamentalists	89.3
8.	PresAngCong	55.9	8.	Unclassified	75.6	8.	Rom Catholic	88.7

TABLE 18

ANALYSIS OF VARIANCE, RELIGIOUS-ORIENTATION GROUPS

Group	N	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Not Indiscriminate	121	61.2	18.4	80.3	18.9	92.4	19.6
Indiscriminately pro-religious	31	71.0	16.8	77.5	13.5	91.5	12.6
Indiscriminately anti-religious	18	52.3	16.9	81.1	11.8	99.6	11.9
TOTALS	170	62.2	18.4	80.4	17.4	92.9	17.8
		$p = .0040$		$p = .2496$		$p = .2506$	

	T-Scale			I-Scale			P-Scale		
	MS	df	F	MS	df	F	MS	df	F
Groups	1836.47	2	5.70	426.00	2	1.40	445.00	2	1.40
Error	322.17	167		304.44	167		318.97	167	

TABLE 19

PROBABILITY MATRICES*

BABI -- T-, I-, AND P-SCALES

T-Scale Group No.	Group No.		
	1	2	3
1. Not Indiscriminate		0264	3163
2. Indiscriminately pro-religious	0264		0081
3. Indiscriminately anti-religious	3163	0081	

I-Scale Group No.	Group No.		
	1	2	3
1. Not Indiscriminate		7260	4209
2. Indiscriminately pro-religious	7260		2514
3. Indiscriminately anti-religious	4209	2514	

P-Scale Group No.	Group No.		
	1	2	3
1. Not Indiscriminate		9655	2875
2. Indiscriminately pro-religious	9655		3122
3. Indiscriminately anti-religious	2875	3122	

* Scheffe multiple comparison of means

TABLE 20

RANKED MEANS BY RELIGIOUS ORIENTATION GROUPS

ON THE THREE SCALES OF THE

BABI

T-Scale			I-Scale			P-Scale		
Rank	Group	$\overline{X}$	Rank	Group	$\overline{X}$	Rank	Group	$\overline{X}$
1.	Indis pro*	71.0	1.	Indis anti	81.1	1.	Indis anti	99.6
2.	Not indis	61.2	2.	Not indis	80.3	2.	Not indis	92.4
3.	Indis anti	52.3	3.	Indis pro	77.5	3.	Indis pro	91.5

* Indis pro = Indiscriminately pro-religious, Not indis = Not
  indiscriminate, Indis anti = Indiscriminately anti-religious.

1.4 Devoutness

The analysis of variance on the devoutness group shows significance on all three scales of the BABI: Theological Scale (.000005), Illness Scale (.0002), and Psychological Scale (.0331). Thus, null hypotheses 1(d), 2(d), and 3(d) are not accepted (see Table 21).

Multiple comparisons of the groups on each of the three BABI scales did not yield significant differences, but this is a function of widely varying N's, some cells having a very low number of subjects. However, Table 22 shows the ranked means of the groups on each of the BABI scales, and very distinct trends are obvious. Subjects who are high in devoutness are high on the Theological Scale, and low on the Psychological Scale while subjects who are low on devoutness are high on the Illness and Psychological Scales.

Significantly, the devoutness items dealing with the religious activities of the subjects' families figure prominently in these trends, thus providing support for a social-learning interpretation of the development of such conceptual models.

1.5 Integrative Complexity

The analysis of variance of the five conceptual systems groups (systems 1, 2, 3 and 4, and unclassifiable subjects) showed significance on all three scales of the BABI: Theological (.0055), Illness (.0465), and Psychological (.0281)

TABLE 21

ANALYSIS OF VARIANCE, DEVOUTNESS GROUPS

Group		N	T-Scale		I-Scale		P-Scale	
			$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
I go to Church	Hi	10	73.9	30.9	62.9	23.4	77.2	31.3
	Med	73	66.5	19.2	76.3	19.9	90.5	20.0
	Lo	88	56.4	15.6	84.7	14.7	96.1	15.7
Mother goes to Church	Hi	12	71.3	20.5	79.7	15.3	89.1	15.6
	Med	92	62.0	19.3	78.3	20.1	91.6	21.2
	Lo	65	59.4	18.0	82.2	16.3	94.7	17.2
Father goes to Church	Hi	5	75.2	20.3	75.6	17.8	89.2	16.5
	Med	81	64.4	20.3	76.4	20.5	90.0	22.1
	Lo	77	59.7	16.4	84.5	13.1	95.8	12.3
Family prays together	Hi	51	67.9	19.1	76.3	18.5	91.0	19.0
	Me'd	5	74.2	15.2	82.8	16.8	83.0	8.7
	Lo	106	59.3	16.7	83.4	14.9	95.2	15.6
I pray along	Hi	95	67.9	19.2	77.0	18.6	89.8	18.5
	Med	13	55.3	9.1	85.2	10.3	99.4	10.7
	Lo	63	54.3	17.3	83.1	19.2	94.9	21.1
TOTALS		836	62.0	18.7	80.2	17.9	92.8	18.5
			$p = .000005$		$p = .0002$		$p = .0331$	

	MS	df	F	MS	df	F	MS	df	F
Groups	1415.86	14	4.25	920.07	14	2.96	613.21	14	1.81
Error	333.39	821		310.70	821		338.71	821	

TABLE 22

RANKED MEANS BY DEVOUTNESS GROUPS

ON THE THREE SCALES OF THE

BABI

	T-Scale			I-Scale			P-Scale	
Rank	Group	$\bar{X}$	Rank	Group	$\bar{X}$	Rank	Group	$\bar{X}$
1.	fa* church hi	75.2	1.	I pray med	85.2	1.	I pray med	99.4
2.	fampray med	74.2	2.	I church lo	84.7	2.	I church lo	96.1
3.	I church hi	73.9	3.	fa church lo	84.5	3.	fa church lo	95.8
4.	ma church hi	71.3	4.	fam pray lo	83.4	4.	fam pray lo	95.2
5.	fam pray hi	67.9	5.	I pray lo	83.1	5.	I pray lo	94.9
6.	I pray hi	67.9	6.	fam pray med	82.8	6.	ma church lo	94.7
7.	I church med	66.5	7.	ma church lo	82.2	7.	ma church med	91.6
8.	fa church med	64.4	8.	ma church hi	79.7	8.	fam pray hi	91.0
9.	ma church med	62.0	9.	ma church med	78.3	9.	I church med	90.5
10.	fa church lo	59.7	10.	I pray hi	77.0	10.	fa church med	90.0
11.	ma church lo	59.4	11.	fa church med	76.4	11.	I pray hi	89.8
12.	fam pray lo	59.3	12.	I church med	76.3	12.	fa church hi	89.2
13.	I church lo	56.4	13.	fam pray hi	76.3	13.	ma church hi	89.1
14.	I pray med	55.3	14.	fa church hi	75.6	14.	fam pray med	83.0
15.	I pray lo	54.3	15.	I church hi	62.9	15.	I church hi	77.2

* fa = father, ma = mother, fam = family; lo = low, med = medium, hi = high.

(see Table 23). Thus, null hypotheses 1(e), 2(e) and 3(e) are not accepted.

Multiple comparisons of means (Table 24) show system 1 subjects as approaching significance in being higher on the Theological Scale than subjects classified as system 4 (sig. = .0680) and system 2 (sig. = .1313). These trends are clarified in Table 25 which presents ranked means on the BABI scales.

On the Psychological Scale, systems 2 and 4 approach significance in being higher than system 3 (sig. = .1591 and .1288 respectively). These same trends are indicated for the Illness Scale (see Table 25) but they do not approach significance.

The findings on the Theological Scale may be interpreted as indicative of the system 4 subjects' relatively low usage of theological concepts of human behavior; the theological being less than adequate in their complex, abstract, informational, inter-dependent relationship with their environment. The relatively low mean score of the system 2 subjects on the Theological Scale may be a function of their being "negatively independent", oriented away from and against external sources of control. The high scores of the system 1 subjects on the Theological Scale is congruent with expectations in the light of the categorical, rigid conceptual functioning of these subjects who are also less

TABLE 23

ANALYSIS OF VARIANCE, INTEGRATIVE

COMPLEXITY SYSTEMS

Groups	N	T-Scale		I-Scale		P-Scale	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
ITI Unclassifiable	61	64.3	15.1	81.9	12.2	93.8	13.2
ITI System 1	44	66.9	15.5	77.2	12.9	95.8	10.4
ITI System 2	32	55.9	12.9	84.5	10.7	99.6	9.3
ITI System 3	107	63.4	22.2	76.8	20.3	90.6	22.7
ITI System 4	77	56.9	15.9	82.3	17.9	97.6	16.9
TOTALS	321	61.7	18.1	79.9	16.8	94.5	17.4
		p = .0055		p = .0465		p = .0281	

	T-Scale			I-Scale			P-Scale		
	MS	df	F	MS	df	F	MS	df	F
Groups	1188.50	4	3.73	678.75	4	2.44	821.75	4	2.75
Error	318.29	316		277.68	316		298.37	316	

TABLE 24

PROBABILITY MATRICES*

BABI -- T- AND P-SCALES

T-Scale		Group No.				
Group No.	N	0	1	2	3	4
0. ITI Unclassifiable	61	**				
1. ITI System 1	44			1313		0680
2. ITI System 2	32		1313			
3. ITI System 3	107					
4. ITI System 4	77		0680			

P-Scale	Group No.				
Group No.	0	1	2	3	4
0. ITI Unclassifiable	**				
1. ITI System 1				1591	
2. ITI System 2			1591		1228
3. ITI System 3					
4. ITI System 4				1228	

* Scheffe multiple comparison of means.

** where probabilities are not entered, significance is not reached or approached.

TABLE 25

RANKED MEANS BY ITI CONCEPTUAL SYSTEMS

ON THE THREE SCALES OF THE

BABI

T. Scale			I-Scale			P-Scale		
Rank	Group	X̄	Rank	Group	X̄	Rank	Group	X̄
1.	System 1	66.9	1.	System 2	84.5	1.	System 2	99.6
2.	Unclassifiable	64.3	2.	System 4	82.3	2.	System 4	97.6
3.	System 3	63.4	3.	Unclassifiable	81.9	3.	System 1	95.8
4.	System 4	56.9	4.	System 1	77.2	4.	Unclassif.	93.8
5.	System 2	55.9	5.	System 3	76.8	5.	System 3	90.6

tolerant of ambiguity and tend to rely on externally-imposed structure. The finding that subjects of systems 2 and 4 are highest on the Psychological Scale supports his interpretation in that this P-Scale is a measure of a conceptual model of behavior which is clearly scientific, involves the use of many dimensions combined by complex and emerging rule structures and with no reliance on external authority.

The position of system 3 subjects, the "other-directed" group who are noted for their orientation toward people as sources of pleasure and guidance, may be interpreted as some indication of their concern for approval from others and lack of a clear position regarding conceptualization of behavior. Although they are lowest on the Psychological and Illness scales, only on the former does the difference approach significance. Their middle position of the Theological Scale makes for a relatively flat profile across the three scales in contrast to systems 2 and 4 which show marked differences in their relative use of the three conceptual models of behavior: high on psychological and low on theological.

The analysis of variance of the high and low groups on the integrative complexity (continuous scoring) variable supports the above interpretations with regard to the Theo- logical Scale (significance between groups = .0002) and indicates a trend on the other two scales. Thus, the null

hypothesis 1(f) is not accepted, but null hypotheses 2(f) and 3(f) are accepted (see Table 26).

1.6 Dogmatism

The analysis of variance of the high and low dogmatism groups yielded very high significance levels on the Theological (.00002) and Illness (.0008) Scales and a difference approaching significance (.0728) on the Psychological Scale (see Table 27). Therefore, null hypothesis 3(g) was accepted with the recognition of the near significance which was reached, and null hypotheses 1(g) and 2(g) were not accepted.

These findings are congruent with previous research which indicates that high-dogmatism is related to religious thinking (Rokeach, 1960) and to the use of simple, power-related categories to understand the behavior of other people (Scodel and Mussen, 1953). The high-dogmatics in this study are distinctly higher on the Theological Scale and distinctly lower on the Illness Scale. They are also lower on the Psychological Scale.

1.7 Birth Order

The analysis of variance of the five birth-order groups did not show significance on any of the three BABI scales (see Table 28). Thus, null hypotheses 1(h), 2(h) and 3(h) were accepted.

The only distinct trend which appears in these data is

TABLE 26

ANALYSIS OF VARIANCE,

CONTINUOUSLY-SCORED ITI EXTREME GROUPS

(HIGH AND LOW INTEGRATIVE COMPLEXITY)

Groups	N	T-Scale		I-Scale		P-Scale	
		$\bar{X}$ S.D.		$\bar{X}$ S.D.		$\bar{X}$ S.D.	
High (top 27%)	67	54.4 18.1		82.5 19.6		95.7 21.1	
Low (bottom 27%)	76	65.6 17.2		78.7 14.8		92.5 16.2	
TOTALS	143	60.4 18.4		80.5 17.2		93.9 18.6	
		p = .0002		p = .1903		p = .3138	

	T-Scale			I-Scale			P-Scale		
	MS	df	F	MS	df	F	MS	df	F
Groups	4511.87	1	14.50	512.37	1	1.73	355.00	1	1.02
Error	311.10	141		295.84	141		347.52	141	

TABLE 27

ANALYSIS OF VARIANCE,

HIGH AND LOW DOGMATISM GROUPS

Groups	N	T-Scale		I-Scale		P-Scale	
		$\bar{X}$ S.D.		$\bar{X}$ S.D.		$\bar{X}$ S.D.	
High (top 27%)	29	73.1	16.9	75.7	12.4	91.2	13.8
Low (bottom 27%)	28	55.2	11.4	87.6	13.2	97.2	10.8
TOTALS	57	64.3	16.8	81.5	13.9	94.1	12.5
		p = .00002		p = .0008		p = .0728	

	T-Scale			I-Scale			P-Scale		
	MS	df	F	MS	df	F	MS	df	F
Groups	4558.87	1	21.63	2023.25	1	12.38	514.00	1	3.35
Error	210.72	55		163.44	55		153.64	55	

TABLE 28

ANALYSIS OF VARIANCE, BIRTH-ORDER GROUPS

Group	N	T-Scale		I-Scale		P-Scale	
		$\bar{X}$ S.D.		$\bar{X}$ S.D.		$\bar{X}$ S.D.	
First Born	93	63.7	17.4	78.6	14.9	94.9	16.7
Second Born	62	58.9	17.5	79.4	19.7	93.9	21.8
Last Born	47	64.8	18.5	79.3	18.9	90.8	18.2
Only Child	12	57.7	14.4	85.7	13.0	96.7	8.5
Other	60	66.2	20.6	79.8	14.8	93.9	12.4
TOTALS	274	63.1	18.3	79.5	16.7	93.8	17.1
		$p = .1691$		$p = .7556$		$p = .7142$	

	T-Scale			I-Scale			P-Scale		
	MS	df	F	MS	df	F	MS	df	F
Groups	540.75	4	1.62	132.75	4	0.47	157.25	4	0.53
Error	333.55	269		280.72	269		297.06	269	

indicated in Table 29 which shows the ranked means of the five groups on the three scales of the BABI. The "only child" is lowest on the Theological Scale and highest on the Illness and Psychological Scales. This may be a function of the higher educational levels of the parents and consequent child-rearing conditions which would foster the use of more complex, analytical and non-supernatural interpretations of behavior.

1.8 Sex

Females were found to be lower on the Theological Scale (sig. = .119), and significantly higher on the Illness Scale (.001) (see Table 30). Thus, null hypothesis 1(i) was accepted (with recognition of near significance), but null hypotheses 2(i) and 3(i) were accepted.

These findings may be interpreted as indications of the female's indentification with the mother, the more affectionnate, "humanitarian" parent, and consequently the learning of greater tolerance of behavior differences among other people; thus, a higher Illness Scale score in comparison with the males, who, for the most part, identify with the "disciplinarian" parent, the father.

1.9 Urban-Rural Residence

Only on the Illness Scale was a significant difference found between the two groups, the urban group with a higher mean score (sig. = .012) (see Table 31). Thus, null hypo-

TABLE 29

RANKED MEANS BY BIRTH-ORDER GROUPS

ON THE THREE SCALES OF THE

BABI

T-Scale			I-Scale			P-Scale		
Rank	Group	$\bar{X}$	Rank	Group	$\bar{X}$	Rank	Group	$\bar{X}$
1.	Other	66.2	1.	Only child	85.7	1.	Only child	96.7
2.	Last born	64.8	2.	Other	79.8	2.	First born	94.9
3.	First born	63.7	3.	Second born	79.4	3.	Second born	93.9
4.	Second born	58.9	4.	Last born	79.3	4.	Other	93.9
5.	Only child	57.7	5.	First born	78.6	5.	Last born	90.8

TABLE 30

ANALYSIS OF VARIANCE BY SEX GROUPS

Groups	N	T-Scale $\overline{X}$	T-Scale S.D.	I-Scale $\overline{X}$	I-Scale S.D.	P-Scale $\overline{X}$	P-Scale S.D.
Females	277	60.8	18.2	83.8	16.0	92.7	16.3
Males	185	63.4	16.9	79.1	14.7	96.2	14.9
TOTALS	462	61.8	17.7	81.9	15.6	94.1	15.8
		p = .1191		p = .0013		p = .0190	

	T-Scale MS	T-Scale df	T-Scale F	I-Scale MS	I-Scale df	I-Scale F	P-Scale MS	P-Scale df	P-Scale F
Groups	762.00	1	2.44	2507.00	1	10.43	1369.00	1	5.54
Error	312.51	460		240.42	460		247.31	460	

TABLE 31

ANALYSIS OF VARIANCE BY URBAN-RURAL GROUPS

Groups	N	T-Scale $\bar{X}$	S.D.	I-Scale $\bar{X}$	S.D.	P-Scale $\bar{X}$	S.D.
Urban	209	61.1	17.8	83.3	16.7	92.1	16.3
Rural	204	63.5	19.1	79.1	17.1	93.8	18.1
TOTALS	413	62.3	18.5	81.2	16.9	92.9	17.2
		p = .1997		p = .0121		p = .3322	

	T-Scale MS	df	F	I-Scale MS	df	F	P-Scale MS	df	F
Groups	563.00	1	1.65	1803.00	1	6.34	280.00	1	0.94
Error	341.22	411		284.22	411		297.11	411	

theses 1(j) and 3(j) were accepted while null hypothesis 2(j) was not. The greater relative use of the Illness model by the urban group may be interpreted as indicative of the greater influence of "treatment institutions" on the attitudes and concepts about behavior held by these urban subjects.

1.10 Education Students Compared with Other University Students

The undergraduate Education students were almost significantly higher than "other" university students on the Theological (.060) and Illness (.057) Scales. Significance was not approached on the Psychological Scale (see Table 32). Therefore null hypotheses 1(k), 2(k) and 3(k) are accepted with the note that 1(k) and 2(k) indicate a distinct trend.

The higher Theological scores of the Education students support the contention that teachers, as a group, tend to hold to a traditional, non-empirical way of interpreting and coping with the behavior of others. In addition, they tend to be relatively higher than other university students in their use of the Illness model which may reflect the greater extent to which Education students follow the "institutionalized norms" for the sick (Parsons, 1951) and apply these to behavior problems.

2. Minor Hypotheses

The integrative complexity variable, using continuous

TABLE 32

ANALYSIS OF VARIANCE BY EDUCATION

STUDENTS - OTHER STUDENTS

Groups	N	T-Scale		I-Scale		P-Scale	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Education students	188	61.4	18.5	82.0	16.1	93.9	16.6
Other students	87	56.8	18.8	77.6	21.8	94.6	23.7
TOTALS	275	59.9	18.6	80.6	18.1	94.1	19.0
		$p = .0603$		$p = .0572$		$p = .7978$	

	T-Scale			I-Scale			P-Scale		
	MS	df	F	MS	df	F	MS	df	F
Groups	1228.75	1	3.56	1188.00	1	3.65	24.00	1	0.07
Error	345.20	273		325.78	273		365.20	273	

scoring, was found to be significantly correlated with all three scales of the BABI: -.233 (sig. = .000) with the Theological Scale, .123 (sig. = .028) with the Illness Scale, and .164 (sig. = .003) with the Psychological Scale. Thus, null hypotheses 4(a), 4(b) and 4(c) are not accepted. Table 33 presents the correlations relevant to the minor hypotheses.

These findings are congruent with the findings and discussion relevant to hypotheses 1(e), 2(e) and 3(e) which deal with the variable of integrative complexity using discrete classification of subjects by conceptual systems.

The dogmatism variable, using the entire range of scores (and, thus, all subjects tested) was found to be significantly correlated with all three scales of the BABI: .424 with the Theological Scale (sig. = .000), -.291 with the Illness Scale (sig. = .001) and -.225 with the Psychological Scale (sig. = .014).   Thus, null hypotheses 5(a), 5(b) and 5(c) are not accepted.

The conscience (or guilt) variable was found to be significantly correlated with the Theological Scale (r = .176, si.g = .022) and with the Illness Scale (r = -.197, sig. = .010), but not with the Psychological Scale.   Thus null hypothesis 6(c) was accepted, but 6(a) and 6(b) were not.   These findings are congruent with expectations that people with higher levels of guilt feelings will (a) be

TABLE 33

CORRELATES OF THE THREE SCALES OF THE

BABI

Correlate	$\overline{X}$	S.D.	N	T-Scale		I-Scale		P-Scale	
				r	SIG	r	SIG	r	SIG
Integrative Complexity (ITI)	22.16	3.8	319	-233*	.000	123	.028	164	.003
Dogmatism	109.24	25.6	118	424	.000	-291	.001	-225	.014
Conscience (guilt)	14.73	3.8	169	176	.002	-197	.010	-025	.NS
Years of University Study	2.77	1.3	220	-141	.036	-027	.NS	202	.003
Religious Orientation - Intrinsic	25.52	8.9	166	442	.000	-283	.000	-277	.000
Religious Orientation - Extrinsic	28.85	6.8	166	-080	.NS	103	.NS	003	.NS
Age	25.26	8.3	319	-083	.NS	161	.004	-071	.NS
Phil. Human Nature - Complexity	40.73	11.0	267	-087	.NS	013	.NS	075	.NS

* all decimal places omitted.

more represented among religious groups, and (b) more likely use Theological and Illness models in conceptualizing and coping with the behavior of others. Their theological thinking, a function of their religious training, and the Illness concepts act as guilt-reduction mechanisms.

As expected, the number of years of university study completed acts either as a selective variable or a training variable with the result that a positive correlation was found in relation to the Psychological Scale (.202, sig. = .003) and a negative correlation was found in relation to the Theological Scale (.141, sig. = .036). No significant relationship was found between the years of university study completed and the Illness Scale. Thus, null hypothesis 7(b) was accepted, but 7(a) and 7(c) were not.

The hypotheses related to religious orientation were tested by an examination of significance of product-moment correlations between the intrinsic scale of the Religious Orientation Scale and each of three scales of the BABI, and between the extrinsic scale of the ROS and each of the three BABI scales. The ROS extrinsic scale did not correlate significantly with any of the BABI scales and, therefore, null hypotheses 9(a), 9(b) and 9(c) were accepted. However, the ROS intrinsic scale was found to be positively corre-lated with the Theological Scale (.442, sig. = .000) and negatively with the Illness Scale (.283, sig. = .000) and

the Psychological Scale (.277, sig. = .000). Therefore, null hypotheses 8(a), 8(b) and 8(c) were not accepted.

These findings support Allport and Ross's (1967) contention that people with an extrinsic religious orientation "use" their religion and may not reflect their religion in many of life's affairs or in their thinking, while the people who are intrinsically oriented, truly "live" their religion including, as our findings suggest, using religious thinking in interpreting behavior.

A low positive correlation was found between age and scores on the Illness Scale (.161, sig. = .004), probably reflecting a compassionnate tendency among the older subjects but without a corresponding tendency toward more empirical thinking about behavior that would be reflected on the Psychological Scale.

No significant correlations were found between the Philosophy of Human Nature: Complexity Scale, and the scales of the BABI. This is probably, in part, a function of the psychometric inadequacy of PHN-C in discriminating subjects along the variable of "how complete" they think human behavior is. Similarly, zero-order Correlations (N = 136) were found between Couch and Keniston's (1960) Agreement Response Scale and the three scales of the BABI. Thus, null hypothesis 12(a), 12(b) and 12(c) were accepted.

CHAPTER VI

SUMMARY AND IMPLICATIONS

The Beliefs-About-Behavior Inventory, which was
developed as part of this study of three conceptual models
of behavior, has been established as an adequately re-
liable and valid instrument for research use with groups
in providing measures of the extent to which they, rela-
tively, use Theological, Illness and Psychological models
of behavior as defined in Chapter I.

The Theological and Psychological Scales are especially
significant in terms of theoretical formulation and empirical
findings. Fundamentalist Christians, devout church members,
high dogmatics, subjects high on intrinsic religious
orientation and those of low conceptual complexity show
a distinct tendency to score higher on the Theological
Scale and lower on the Psychological Scale of the BABI.

Conversely, subjects who were low on devoutness, low
on intrinsic religious orientation, low on dogmatism, and of
high conceptual complexity showed a distinct tendency to
score higher on the Psychological Scale of the BABI.
Additionally, subjects closely associated with scientific
investigation (i.e., psychologists and computer science
students) were higher on the Psychological Scale of the
BABI than were other subjects. These science-associated

subjects also evidenced distinctly low scores on the
Theological Scale of the BABI.

These major clusters of findings indicate that the
empirical, analytic ("psychological") approach to inter-
preting and coping with behavior is very much "in competi-
tion" with the Theological model, even today. The specific
nature of the characteristics (e.g., dogmatism, religious
dogma, conceptual systems) associated with the high use
(relative to groups not displaying these characteristics)
of the Theological model and the low use of the Psychological
model suggest that strong, pervasive socializing conditions
(e.g., parental models, child-rearing techniques, institu-
tional values differentially influencing various members of
the general society) are casual factors in the development
of ways of conceptualizing and responding to the behavior
of others. This interpretation is supported by previous
studies which found that conceptual level scores were
related to parental training conditions (Cross, 1966) and
that the related variable of cognitive differentiation
is related to family experiences (Dyk and Witkin, 1965).

For schools and other training and social planning
institutions, the implications are significant. There is
little question that teachers' beliefs about behavior in-
fluence the content and conduct of the activities they
engage in with their students (Combs, 1965; Harvey et al.,
1968). The implications, however, go beyond teachers and

schools when we conceptualize as "training agents" (Hunt, 1966), all those who, through significant roles, affect the personality development of others. Hunt explains the common feature among education, psychotherapy, social case work and child-rearing as the provision of "an interpersonal environment for the person or group with whom (the training agent) interacts (1966, p. 137)".

The selection and training of these training agents may usefully be considered in terms of the findings of the research project reported in this document. For although Riesman and Jencks (1962) maintain that "what a college does is to nationalize the student, taking him out of his ethnic, religious, geographic and social parishes, and exposing him to a more cosmopolitan world in which the imagination is less restricted by preconception and ignorance (p. 77)", it appears that many of the results of early (and continuing) social-learning experiences are evidenced in the relative use of the three conceptual models of behavior by the subjects studied.

It appears that Anderson's (1968) comments on the accommodative behaviors which are valued and fostered by schools are relevant to our findings and to the interpretation of the implications to "training agents". The school-promoted behaviors he lists are

social adroitness, a reliance on external criteria for judging people, a willingness to get along without making

trouble for established authority which is, after all, only
trying to do its job, and a rejection of discrimination
which reflects private standards of what is valuable
(Anderson, 1968, p. 9).

These behaviors would mitigate against advances to an accept-

ance of a truly scientific model of behavior, and con-

sequently, would impair the training agent's power to

accelerate behavioral development in others whether it be

in the situations of child-rearing or public education or

psychotherapy. Perhaps Friedenberg's (1967) words may well

be interpreted in terms of socializing agents' efforts to

grasp and use a non-empirical, theological model of behavior

at the expense of promoting the very possible advance to an

empirical, psychological model:

(Some youngsters)... retain both a standard against which
to judge the pattern of values the school conveys and a
source of self-esteem beyond its control. But these ...
would also constitute a threat to mass society if they were
allowed to mature. The function of the school, in
socializing them, then, is to deprive them of access to
that source of self-esteem and to shake their confidence
in the standard from which it is derived (1967, p. 182).

In educational terms, the standard Friedenberg talks

about might very well approximate the desirable behaviors

which, according to what appears to be a consensus of

many educators, the teacher should foster, "... independence,

creativity (cf. Tisdall, 1962; Cawley and Chase, 1967; Kozal,

1967, pp. 2-3), diversity of interests, enjoyment and

intrinsic motivation" (Harvey et al., 1966, p. 375). As

Harvey has shown, these behaviors are exhibited and radiated

disproportionately more often by high-abstract than by low-abstract agents. The former are scarce in elementary school teaching, the later plentiful: Harvey et al. (1968, p. 155) classified 50 out of 67 elementary teachers as belonging to system 1, while 8 were "weak instances" of system 4.

To repeat, if these findings and those of the present investigation are representative, then Hunt's (1966) assertion, that "the aim of education is to produce persons who are questioning, inventive, original, critical, creative and, if need be, different" (Hunt, 1966, p. 289) will remain unattainable.

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APPENDIX A

Letters to Subjects

1. Letter to Clergy

2. Letter to Social Workers

3. Letter to Psychologists

FACULTY OF EDUCATION   THE UNIVERSITY OF ALBERTA
Department of Educational   Edmonton, Canada
Psychology

Letter sent to subjects in the clergy group.

        Thanks for agreeing to participate in this research pro-
ject which deals with problems of concern to both of us. It
is completely anonymous, but if you wish to write a note or
letter or to phone me to make comments or to discuss your
ideas or suggestions, please do -- I'd be very glad to hear
from you or to meet you.

        May I make certain points clear since you may wonder
about some of them as you complete the Inventory:

1. The booklet (BABI) is not designed for specially educated
    groups (e.g., clergy, church leaders) and so the voca-
    bulary and concepts are not what you would normally use.
    However, would you respond according to the instructions
    despite your possible feelings of futility?

2. The study is related to the Nunnally work (Popular Con-
    ceptions of Mental Health, 1961) and this part of the
    study is specifically related to instrument construction.

3. Please mark your responses on the answer sheet only and
    return both the answer sheet and the booklet.

4. No names are required. This is an anonymous random
    sample.

5. It would be a real help if you could reply within the next
    day or two.

Thanks ever so much.

                                          Yours truly,

                                          Blair Shaw.

FACULTY OF EDUCATION
Department of Educational
Psychology

THE UNIVERSITY OF ALBERTA
Edmonton, Canada

Member of the Alberta Association of Social Workers,
Northern Branch.

Dear Sir/Madam:

Your name has been drawn in a random sample of the names
on the mailing list of your professional association which the
Association has kindly provided for us. Could you take about
7 minutes to help us in our current research project which
deals with human problems and mental health? The task we are
asking you to perform is to respond to the enclosed BABI
Booklet according to the instructions on the cover.

May I make certain points clear since you may wonder about
some of them as you complete this inventory:

1. The booklet (BABI) is not designed for specially educated
   groups (e.g., social workers) and so the vocabulary and
   concepts are not what you would normally use. However,
   would you respond according to the instructions despite
   your possible feelings of futility?

2. The study is related to the Nunnally work (Popular Concep-
   tions of Mental Health, 1961) and this part of the study
   is specifically related to instrument construction. We
   are obtaining responses from many groups to the present
   form of the BABI which is enclosed and on the basis of
   our analysis of these responses a new, useful instrument
   will be designed. Obviously, we must include an important
   sample of social workers.

3. Please mark your responses on the answer sheet only and
   return both the answer sheet and the booklet.

4. No names are required.

5. It would be a real help if you could reply within the next
   day or two. If you are not able to complete the answer
   sheet, could you send us the BABI Booklet?

Thanks ever so much. We appreciate your participation. Please
be assured that, although we do not have an abstract of the
research problems and methodology available for you at this
time, your participation is in a very thorough and detailed study.

Yours truly,

Blair Shaw.

FACULTY OF EDUCATION
Department of Educational
Psychology

THE UNIVERSITY OF ALBERTA
Edmonton, Canada

For purposes of our present study, a random sample has been drawn from the directory of our Canadian Psychological Association. Could you take about 7 minutes to respond to the items in the enclosed booklet and send it back to me in the stamped envelope provided?

If you would (and it will be a big help to me) may I make clear certain points about which you may wonder:

1. The instrument (BABI) is not designed for psychologists and so vocabulary and concepts are not what we in the field use. However, would you respond according to the instructions despite your possible feelings of futility?

2. The study is related to the Nunnally work (Popular Conceptions of Mental Health, 1961) and this part of the study is specifically related to instrument construction.

3. Please mark your responses on the answer sheet only and return both the answer sheet and the test booklet.

4. Please answer the question attached to the answer sheet. (Again, you may have feelings of futility because of the inadequacy of the question - but please give some answer, O.K.?)

5. No names are required.

Thanks ever so much.

Yours truly,

Blair Shaw.

BS/am
Encl.

APPENDIX B

Instruments

1. Beliefs-About-Behavior Inventory

2. Form B (Data Sheet)

3. Form AR - Agreement Response

4. Form C - Conscience

5. PHN-C Philosophy of Human Nature: Complexity

6. Form Dev - Devoutness

7. Individual-Topical Inventory

8. Form E - Dogmatism

9. Form RO - Religious Orientation

BABI   Rev. 4/68

Instructions

Read each of the forty (40) items in this inventory.
For each item decide which of the three alternatives you
most agree with or prefer, the alternative you take as a
second choice and the alternative you least agree with.

Record your choices on the answer sheet only. Use
the following code for answering:

                    Most agree: 3

                    Second choice: 2

                    Least agree: 1

For each item, the three alternatives must be ranked.

Example:

Answer Sheet

    A   B   C
1. (2) (3) (1)   This indicates that the person who
    answered most agrees with or likes alternative (B) to
    which he has given the rank of three. He takes
    alternative (A) as a second choice and he least prefers
    alternative (C).

1. A person who has persistent feelings of guilt needs

    A. treatment
    B. the help of God
    C. a kind of re-education

2. People who are very suspicious might find that they are

   most in need of:

    A. the church or other religious organizations
    B. the services of a clinic
    C. a kind of institution for re-education in ways of
       living - if one were available

3. Very frequent indecisiveness is caused by:

    A. weak will
    B. a very minor sort of mental illness
    C. the person's background of learning

4 People who are very <u>over</u>-confident are best regarded as:

    A. using ineffective behavior
    B. people who have gone astray; weak willed
    C. being, in a way, sick

5. The best help for sexually promiscuous people would be

   the advice and services of

    A. clergyman
    B. special kind of re-educator
    C. a clinic

6. People who excessively use alcoholic beverages can best

   be helped by:

    A. an understanding clergyman
    B. a kind of re-education specialist
    C. a clinic

7. The best way to help people who are very frequently

   indecisive is to obtain the advice of a:

   A. specialist in how people learn
   B. clergyman
   C. doctor

8. Being very aggressive and domineering

   A. is a result of one's life experiences
   B. is caused by a lack of harmony with God's will;
      sinfulness
   C. is caused by what could be the beginning of a
      degree of mental illness

9. Being overly critical of others of the outcomes of:

   A. the experiences some people have had
   B. a certain degree of mental illness or disorder
   C. moral weakness, lack of harmony with God

10. Frequent sexual behavior before or outside marriage is:

    A. the result of a lack of proper use of one's will
       power
    B. a way of behaving which was learned
    C. caused by what is really a kind of disorder thinking;
       social illness

11. People who have very strong unfounded fears are best

    regarded as:

    A. people who are using ineffective ways of reacting
       to things or other people
    B. sick, at least to some degree
    C. fellow humans who need the help of God

12. A person who has very strong <u>unfounded</u> fears needs:

    A. treatment
    B. more faith and trust in God
    C. to learn new ways of doing things, a kind of
       re-education

13. The best way to help people who very often have guilt

feelings is to obtain the help of a:

A. clergyman of the person's faith
B. person who specializes in how people learn
C. doctor

14. People who are very suspicious are best regarded as

A. using ineffective behavior
B. somewhat sick
C. having a bad, even sinful, habit

15. A person who is very over-critical of others needs

A. treatment
B. prayer and the help of God
C. to learn new ways of seeing things

16. Being very over-critical is

A. a more extreme case of the most of us are
B. a bad way to behave, even sinful
C. quite clearly related to a kind of mental illness

17. A person who has a real lack of hope probably requires

A. treatment
B. more faith and trust in God
C. re-education

18. The best way to help a person who has strong unfounded

fears is to get the help and advice of a

A. clergyman of the person's faith
B. doctor
C. person who really knows how people learn things

19. Excessive and unfounded self-confidence

A. is a result of the person's past experiences; of
his learning
B. is a result of a lack of harmony with God
C. is a result of mental illness of at least some
minor degree

20. A person who is very <u>over</u>-confident really needs

   A. spiritual guidance
   B. a kind of re-education
   C. treatment

21. People who excessively use alcoholic beverages need

   A. treatment
   B. a kind or re-education
   C. spiritual guidance and God's help

22. Feelings of despondency and lack of hope are caused by

   A. a lack of harmony with the peace which God offers his people
   B. what we have learned
   C. the beginnings of what could be mental illness

23. People who are very aggressive are best regarded as

   A. fellow humans who have gone astray
   B. people using ineffective behavior
   C. showing signs of possible mental disorder

24. When we see people who have strong feelings of despondency and lack of hope, it is best to regard them as

   A. sick, although not always physically
   B. people who are not using effective behavior
   C. fellow humans who need a stronger faith

25. A person who is very frequently indecisive probably requires

   A. treatment
   B. more faith in God and attention to His way
   C. re-education

26. The best way to help a person who is very over-confident

    is to obtain the advice of a

    A. clergyman of the person's faith
    B. doctor
    C. person who really understands how people learn

27. The best way to help people who are very aggressive is

    to obtain the services or advice of

    A. a doctor
    B. a person who specializes in how people learn
    C. a clergyman or other person with a strong faith in God

28. People who are very over-critical of others would best

    be helped in a

    A. church fellowship or spiritual retreat
    B. clinic
    C. kind of institution for re-education in ways of
       doing things

29. People who are sexually promiscuous are best regarded as

    A. sinful, but still humans like us
    B. using inappropriate behavior
    C. showing signs of what could be considered potential
       mental illness of some degree

30. A person who is very suspicious requires

    A. the help of God
    B. a kind of re-education
    C. treatment

31. People who are sexually promiscuous need

    A. prayer, spiritual guidance and the help of God
    B. a kind of re-education
    C. treatment, at least to some degree

32. Being very suspicious is one of the outcomes of

    A. the various experiences the person has had
    B. a lack of harmony with God's will
    C. a certain degree of mental disorder or illness

33. The best way to help people who have a lack of hope

    is to obtain the advice of a

    A. priest or minister
    B. specialist in how people learn
    C. doctor

34. People who very often feel guilty are best regarded as

    A. somewhat sick, maybe showing signs of what could
       be mental illness
    B. people who are unable to use more effective and
       successful ways of behaving
    C. people who have lost the peace of God

35. People who are very frequently indecisive are best

    regarded as

    A. sick, (mentally), at least to some degree
    B. using ineffective behavior
    C. fellow human beings who need a stronger faith

36. Very strong unfounded fears are caused by

    A. a lack of harmony with God's will
    B. the ways we have learned to feel about things
    C. what could be an illness

37. Persistent feelings of guilt are

    A. the result of immoral behavior
    B. caused by some degree of mental illness
    C. caused by what the person has learned through life

38. Over-aggressiveness and domineering behavior is best

    changed by

    A. treatment
    B. prayer
    C. re-education

39. Excessive use of alcoholic beverages is the result of

    A. a kind of illness
    B. weak will power
    C. what the person has learned to do

40. Excessive use of alcoholic beverages

    A. is an illness like any other illness
    B. is sinful, but we can still be kind
    C. is a way some people learn to live

"FORM B"

Name: _____

Age _____ Sex _____ Marital Status _____

Number of children in your family _____
    (including yourself)

Your position in the family
        First born _____
        Second born _____
        Last born _____
        Only child _____
        Other _____

Father's occupation (please be specific)

_____

Church membership (please be specific)

_____

Education:
        Number of years of high school completed _____
        Number of years of university completed _____
        Presently enrolled in the College of _____
        Program of studies being followed _____
        _____

Size of home city, town, village, rural area:

1)   Please circle one of the above, and
2)   Give the approximate population _____

Number of years of teaching experience _____

Type of teaching experience or proposed teaching (choose
only one)

Division I _____ II _____ III _____ IV _____

Elementary _____ Junior High _____ High School _____

NAME: _____   <u>FORM AR</u>

Please record your choice for each item by
making an "X" in the appropriate place.

	STRONLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NO ANSWER	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
1. Let us eat, drink, and be merry, for tomorrow we die							
2. I tend to make decisions on the spur of moment							
3. There are few things more satisfying than really to splurge on something - books, clothes, furniture, etc.							
4. Here today, gone tomorrow - that's my motto!							
5. Novelty has a great appeal to me							
6. My feelings about others fluctuate a good deal							
7. Conscience is another name for fear							
8. Movement, travel, change, excitement - that's the life for me							
9. I'm apt to really blow up, but it doesn't last long							
10. It's great fun just to mess around							
11. There's nothing so satisfying as really to tell someone off							
12. I really enjoy plenty of excitement							
13. One should not give free reign to the passions, but rather control and weight them before expressing them							
14. I seldom, if ever lose my temper							
15. Uncontrolled impulsiveness is not part of my makeup							
16. It's hard to get me upset							
17. My speech is quite slow and deliberate							
18. I feel uncomfortable when people get too emotional							
19. I almost never respond impulsively to people or events							

FORM C

Name: _____

     Please place an "X" in the appropriate space.
     Give only one answer for each of these five items.

1.   How often would you say that you feel guilty?

    (a) _____ once a day or more
    (b) _____ once a week
    (c) _____ once a month
    (d) _____ every few months
    (e) _____ once a year or less

2.   How easy is it for something to make you feel guilty?

    (a) _____ very easy
    (b) _____ easy
    (c) _____ difficult
    (d) _____ very difficult

3.   When was the last time you can remember feeling guilty?

    (a) _____ within the past day
    (b) _____ a few days ago
    (c) _____ more than a week ago
    (d) _____ more than a month ago
    (e) _____ more than a year ago

4.   How easy is it for something to make you feel ashamed?

    (a) _____ very easy
    (b) _____ easy
    (c) _____ difficult
    (d) _____ very difficult

5.   How often would you say that you feel ashamed?

    (a) _____ once a day or more
    (b) _____ once a week
    (c) _____ once a month
    (d) _____ every few months
    (e) _____ once a year or less

NAME: _____   PHN-C

<div align="center">

If you strongly disagree - circle -3
If you somewhat disagree - circle -2
If you slightly disagree - circle -1
If you agree slightly   - circle +1
If you agree somewhat   - circle +2
If you agree strongly   - circle +3

</div>

Please answer every statement. If the numbers to be
used in answering do not adequately indicate your own
opinion, just use the one which is closest to the way
you feel.

1. I find that my first impression of a
   person is usually correct.   -3 -2 -1 +1 +2 +3

2. People can be described accurately by
   one term, such as "introverted", or
   "moral", or "sociable".   -3 -2 -1 +1 +2 +3

3. It's not hard to understand what really
   is important to a person.   -3 -2 -1 +1 +2 +3

4. I think I get a good idea of a person's
   basic nature after a brief conversation
   with him.   -3 -2 -1 +1 +2 +3

5. If I could ask a person three questions
   about himself (and assuming he would
   answer them honestly), I would know a
   great deal about him.   -3 -2 -1 +1 +2 +3

6. When I meet a person, I look for one
   basic characteristic through which I
   try to understand him.   -3 -2 -1 +1 +2 +3

7. Give me a few facts about a person and
   I'll have a good idea of whether I'll
   like him or not.   -3 -2 -1 +1 +2 +3

8. I find that my first impression of
   people are frequently wrong.   -3 -2 -1 +1 +2 +3

9. Some people are too complicated for me
   to figure out.   -3 -2 -1 +1 +2 +3

10. I think you can never really understand
    the feelings of other people.   -3 -2 -1 +1 +2 +3

11. You can't accurately describe a person
    in just a few words.   -3 -2 -1 +1 +2 +3

12. You can't classify everyone as good or
    bad.   -3 -2 -1 +1 +2 +3

13. People are too complex to ever be under-
    stood fully.   -3 -2 -1 +1 +2 +3

14. People are so complex, it is hard to
    know what "makes them tick".   -3 -2 -1 +1 +2 +3

FORM DEV

Name: _____

      Please answer these five questions by circling the most correct response from the following five choices:

      1. every day if possible
      2. every two or three days
      3. once a week
      4. once a month
      5. once a year or less

		Circle Answer Here
1.	I go to church _____	1 2 3 4 5
2.	My mother goes to church _____	1 2 3 4 5
3.	My father goes to church _____	1 2 3 4 5
4.	Our family says prayers together at home __	1 2 3 4 5
5.	I say prayers alone _____	1 2 3 4 5

INDIVIDUAL - TOPICAL INVENTORY

Instructions

On the pages that follow there are 36 pairs of responses. There are six pairs to each page. Please select one response from each pair, the one that more accurately shows your opinion or feeling and record your choice on the answer sheet.

Be frank and indicate, in each case, your true feeling or opinion or the reaction which you would actually make in the situation. Do not indicate how you should feel or act; rather indicate how you do feel and act.

Make sure that you are aware of the situation or topic that each pair of responses refers to. You will find the situation or topic appearing at the top of that page. Each page has a different situation or topic at the top.

1. Note the situation or topic at the top of each page

2. Answer that page by selecting one response from each of the six pairs on that page.

3. Record your choices by making X's in the appropriate spaces on the answer sheet.

4. Go to the next page and note the situation or topic at the top of that page. Answer this page as you did the first. Continue in this way to the end of the 36 pairs.

Work at your own rate of speed but work straight through the inventory without stopping. Once you have completed a page do not return to it.

1. Imagine that someone has criticized you. Choose the reponse from each pair that comes closest to your feelings about such criticism.

When I am criticized ....

Pair No.

(1)

A	B
I try to take the criticism, think about it, and value it for what is is worth. Unjustified criticism is as helpful as justified criticism in discovering what other people's standards are.	I try to accept the criticism but often find that it is not justified. People are too quick to criticize something because it doesn't fit their standards

(2)

A	B
I try to determine whether I was right or wrong. I examine my behavior to see if it was abnormal. Criticism usually indicates that I have acted badly and tends to make me aware of my own bad points.	It could be possibly that there is some misunderstanding about something I did or said. After we both explain our viewpoints, we can probably reach some sort of compromise.

(3)

A	B
I listen to what the person says and try to accept it. At any rate, I will compare it to my own way of thinking and try to understand what it means.	I feel that either I'm not right, or the person who is criticizing me is not right. I have a talk with the person to see what's right or wrong.

(4)

A	B
I usually do not take it with good humor. Although, at times, constructive criticism is very good, I don't always think that the criticizer knows what he is talking about.	At first I feel that it is unfair and that I know what I am doing, but later I realize that the person criticizing me was right and I am thankful for his advice. I realize that he is just trying to better my actions.

TURN THE PAGE OVER

(5)

A	B
I try to ask myself what advantages this viewpoint has over mine. Sometimes both views have their advantages and it is better to combine them. Criticism usually helps me to learn better ways of dealing with others.	I am very thankful. Often I can't see my own errors because I am too engrossed in my own work at the time. An outsider can judge and help me correct the errors. Criticism in everyday life usually hurts my feelings, but I know it is for my own good.

(6)

A	B
It often has little or no effect on me. I don't mind constructive criticism too much, but I dislike destructive criticism. Destructive criticism should be ignored.	I try to accept and consider the criticism. Sometimes it has caused me to change myself; at other times I have felt that the criticism didn't really make much sense.

When I am in doubt ....

Pair No.

(7)

A	B
I become uncomfortable. Doubt can cause confusion and make one do a poor job. When one is in doubt he should ask and be sure of himself.	I find myself wanting to remove the doubt, but this often takes time. I may ask for help or advice if I feel that my questions won't bother the other person.

(8)

A	B
I don't get too upset about it. I don't like to ask someone else unless I have to. It's better to discover the correct answer on your own.	I usually go to someone who knows the correct answer to my question. Sometimes I go to a book which will set me straight by removing the doubt.

(9)

A	B
I first try to reason things out and chekc over the facts. Often I approach others to get ideas that will provide a solution.	I think things over, ask questions, and see what I can come up with. Often several answers are reasonable and it may be difficult to settle on one.

(10)

A	B
I realize that I'll have to decide on the correct answer on my own. Others try to be helpful, but often do not give me the right advice. I like to judge for myself.	I usually try to find out what others think, especially my friends. They may not know the answer, but they often give me some good ideas.

(11)

A	B
I look over the problem and try to see why there is a doubt. I try to figure things out. Sometimes I just have to wait awhile for an answer to come to me.	I try to get some definite information as soon as possible. Doubt can be bad if it lasts too long. It's better to be sure of yourself.

(12)

A	B
I consider what is best in the given situation. Although one should not rush himself when in doubt, he should certainly try to discover the right answer.	I act according to the situation. Sometimes doubt can be more serious than at other times and many of our serious doubts must go unanswered.

TURN THE PAGE OVER

When a friend acts differently toward me ....

Pair No.

(13)

A	B
I am not terribly surprised because people can act in many different ways. We are different people and I can't expect to understand all his reasons for acting in different ways.	I am usually somewhat surprised but it doesn't bother me very much. I usually act the way I feel towards others. People worry too much about others' actions and reactions.

(14)

A	B
I find out why. If I have done something wrong I will try to straighten out the situation. If I think he's wrong, I expect him to clear things up.	I feel that I may have caused him to act in a different way. Of course, he may have other reasons for acting differently which would come out in time.

(15)

A	B
I first wonder what the trouble is. I try to look at it from his viewpoint and see if I might be doing something to make him act differently toward me.	It is probably because he has had a bad day, which would explain this different behavior; in other cases he may just be a changeable kind of person.

(16)

A	B
It is probably just because something is bothering him. I might try to cheer him up or to help him out. If these things didn't work I would just wait for him to get over it.	I try to understand what his different actions mean. I can learn more about my friend if I try to figure out why he does things. Sometimes the reasons may not be very clear.

(17)

A	B
There has to be a definite reason. I try to find out this reason, and then act accordingly. If I'm right I'll let him know it. If he's wrong, he should apologize.	I usually let him go his way and I go mine. If a friend wants to act differently that's his business, but it's my business if I don't want to be around when he's that way.

(18)

A	B
I don't get excited. People change and this may cause differences. It is important to have friends, but you can't expect them to always be the same.	I like to get things back to normal as soon as possible. It isn't right for friends to have differences between them. Whoever is at fault should straighten himself out.

This I believe about people ....

Pair No.

(19)

A	B
Whatever differences may exist between persons, they can usually get along if they really want to. Although their ideas may not agree, they probably still have something in common.	People can learn from those who have different ideas. Other people usually have some information or have had some experience which is interesting and can add to one's knowledge.

(20)

A	B
People can act in all sorts of ways. No single way is always best, although at certain times a particular action might be wiser than others.	Each person should be able to decide the correct thing for himself. There are always a few choices to be made and the individual himself is in the best position to pick the right one.

TURN THE PAGE OVER

(21)

A	B
Some people think they know what's best for others and try to give advice. These people shouldn't make suggestions unless asked for help.	There are certain definite ways in which people should act. Some don't know what the standards are and therefore need to be straightened out.

(22)

A	B
I can tell if I am going to get along with a person very soon after meeting him. Most people act either one way or another and usually it is not difficult to say what they are like.	It's hard for me to say what a person is like until I've known him a long time. People are not easy to understand and often act in unpredictable ways.

(23)

A	B
People have an outside appearance that usually isn't anything like what can be found on the inside, if you search long and hard enough.	Each person is an individual. Although some people have more good or bad points than others, no one has the right to change them.

(24)

A	B
People can be put into categories on the basis of what they're really like. Knowing the way a person really is helps you to get along with him better.	People are unlike one another in many respects. You can get along with people better and better understand them if you are aware of the differences.

Leaders ....

	Pair No.	
	(25)	
A		**B**
Leaders do not always make the right decisions. In such cases, it is wise for a man to look out for his own welfare.		Leaders are necessary in all cases. If a leader cannot make the right decisions another should be found who can.
	(26)	
A		**B**
Leaders cannot provide all the answers. They are like other people -- they have to try to figure out what action is necessary and learn from their mistakes.		Leaders make decisions sometimes without being sure of themselves. We should try to understand this and think of ways to help them out.
	(27)	
A		**B**
I like a leader who is aware of how the group feels about things. Such a leader would not lead any two groups in exactly the same way.		A person should be able to put his confidence in a leader and feel that the leader can make the right decision in a different situation.
	(28)	
A		**B**
There are times when a leader shouldn't make decisions for those under him. The leader has the power to decide things, but each man has certain rights also.		A leader should give those under him some opportunity to make decisions, when possible. At times, the leader is not the best judge of a situation and should be willing to accept what others have to say.

(29)

A	B
Some leaders are good, others are quite poor. Good leaders are those who know what is right for the man under them. These leaders deserve the respect of every man.	Leaders cannot be judged easily. Many things go to make up good leadership. Most people fall short in some way or another, but that is to be expected.

(30)

A	B
Leaders are needed more at certain times than at others. Even though people can work out many of their own problems, a leader can sometimes give valuable advice.	Some people need leaders to make their decisions. I prefer to be an individual and decide for myself, when possible. Most leaders won't let you do this.

When other people find fault with me ....

Pair No.

(31)

A	B
It means that someone dislikes something I'm doing. People who find fault with others are not always correct. Each person has his own ideas about what's right.	It means that someone has noticed something and feels he must speak out. It may be that we don't agree about a certain thing. Although we both have our own ideas, we can talk about it.

(32)

A	B
I first wonder if they are serious and why they have found fault with me. I then try to consider what they've said and make changes it it will help.	If enough people point out the same fault, there must be something to it. I try to rid myself of the fault, especially if the criticizers are people "in the know".

TURN THE PAGE OVER

(33)

A	B
They have noticed something about me of which I am not aware. Although criticism may be hard to take, it is often helpful.	They are telling me something they feel is correct. Often they may have a good point which can help me in my own thinking. At least it's worthwhile to consider it.

(34)

A	B
I may accept what is said or I may not. It depends upon who is point out the fault. Sometimes it's best to stay out of sight.	I accept what is said if it is worthwhile, but sometimes I don't feel like changing anything. I usually question the person.

(35)

A	B
I like to find out what it means; since people are different from one another, it could mean almost anything. A few people just like to find fault with others but there's usually something to be learned.	There is something to be changed. Either I am doing something wrong or else they don't like what I'm doing. Whoever is at fault should be informed so that the situation can be set straight.

(36)

A	B
I don't mind if their remarks are meant to be helpful, but there are too many people who find fault just to give you a hard time.	It often means that they're trying to be disagreeable. People get this way when they've had a bad day. I try to examine their remarks in terms of what's behind them.

CHECK AND MAKE SURE THAT YOU'VE CHOSEN ONE MEMBER OF EACH PAIR

(A TOTAL OF 36 CIRCLES)

FORM "E"

NAME: _____

The following is a study of what the general public
thinks and feels about a number of important social and
personal questions. The best answer to each statement
below is your personal opinion. We have tried to cover
many different and opposing points of view; you may find
yourself agreeing strongly with some of the statements,
disagreeing just as strongly with others, and perhaps
uncertain about others according to how much you agree or
disagree with it. Mark each statement on these sheets
according to how much you agree or disagree with it. Circle
the number to indicate your choice

+1: I agree a little   -1: I disagree a little
+2: I agree on the whole   -2: I disagree on the whole
+3: I agree very much   -3: I disagree very much

-3-2-1+1+2+3   1. The United States and Russia have just
                   about nothing in common.

-3-2-1+1+2+3   2. The highest form of government is a demo-
                   cracy and the highest form of democracy
                   is a government run by those who are most
                   intelligent.

-3-2-1+1+2+3   3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

-3-2-1+1+2+3   4. It is only natural that a person would have a much better acquaintaince with ideas he believes in than with ideas he opposes.

-3-2-1+1+2+3   5. Man on his own is a helpless and miserable creature.

-3-2-1+1+2+3   6. Fundamentally, the world we live in is a pretty lonesome place.

-3-2-1+1+2+3   7. Most people just don't give a "damn" for others.

-3-2-1+1+2+3   8. I'd like it if I could find someone who would tell me how to solve my personal problems.

-3-2-1+1+2+3   9. It is only natural for a person to be rather fearful of the future.

-3-2-1+1+2+3 10. There is so much to be done and so little time to do it in.

-3-2-1+1+2+3 11. Once I get wound up in a heated discussion I just can't stop.

-3-2-1+1+2+3   12.   In a discussion I often find it necessary
to repeat myself several times to make
sure I am being understood.

-3-2-1+1+2+3   13.   In a heated discussion I generally become
so absorbed in what I am going to say
that I forget to listen to what the others
are saying.

-3-2-1+1+2+3   14.   It is better to be a dead hero than to be
a live coward.

-3-2-1+1+2+3   15.   While I don't like to admit this even to
myself, my secret ambition is to become a
great man, like Einstein, or Beethoven, or
Shakespeare.

-3-2-1+1+2+3   16.   The main thing in life is for a person to
want to do something important.

-3-2-1+1+2+3   17.   If given the chance I would do something
of great benefit to the world.

-3-2-1+1+2+3   18.   In the history of mankind there have
probably been just a handful of really
great thinkers.

-3-2-1+1+2+3   19.   There are a number of people I have come
to hate because of the things they stand
for.

-3-2-1+1+2+3 20. A man who does not believe in some great cause has not really lived.

-3-2-1+1+2+3 21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

-3-2-1+1+2+3 22. Of all the different philosophies which exist in this world there is probably only one which is correct.

-3-2-1+1+2+3 23. A person gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.

-3-2-1+1+2+3 24. To compromise with out political opponents is dangerous because it usually leads to the betrayal of our own side.

-3-2-1+1+2+3 25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.

-3-2-1+1+2+3 26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.

-3-2-1+1+2+3 27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.

-3-2-1+1+2+3 28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.

-3-2-1+1+2+3 29. A group which tolerates too much differences of opinion among its own members cannot exist for long.

-3-2-1+1+2+3 30. There are two kinds of people in this world: those who are for the truth and those who are against the truth.

-3-2-1+1+2+3 31. My blood boils whenever a person stubbornly refuses to admit he's wrong.

-3-2-1+1+2+3 32. A person who thinks primarily of his own happiness is beneath contempt.

-3-2-1+1+2+3 33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

-3-2-1+1+2+3 34. In this complicated world of ours the only way we can know what's goind on is to rely on leaders or experts who can be trusted.

-3-2-1+1+2+3 35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

-3-2-1+1+2+3   36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

-3-2-1+1+2+3   37. The present is all too often full of unhappiness. It is only the future that counts.

-3-2-1+1+2+3   38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all".

-3-2-1+1+2+3   39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.

-3-2-1+1+2+3   40. Most people just don't know what's good for them.

FORM RO

The following items deal with various types of religious ideas and social opinions. We should like to find out how common they are.

For each of the twenty items, please indicate the response you prefer. <u>Record your choice by marking in the appropriate space on the answer sheet</u>.

If none of the choices expresses exactly how you feel, then indicate the one which is closest to your own views. If no choice is possible, you may omit the item.

There are no "right" or "wrong" choices. There will be many religious people who will agree with all the possible answers.

1. A primary reason for my interest in religion is that

   my church is a congenial social activity.

   a. definitely not true of me
   b. tends not to be true
   c. tends to be true
   d. definitely true of me

2. Religion is especially important to me because it

   answers many questions about the meaning of life.

   a. definitely disagree
   b. tend to disagree
   c. tend to agree
   d. definitely agree

3. One reason for my being a church member is that such

   membership helps to establish a person in the community.

   a. definitely not true
   b. tends not to be true
   c. tends to be true
   d. definitely true

4. The prayers I say when I am alone carry as much meaning

   and personal emotion as those said by me during services.

   a. almost never
   b. sometimes
   c. usually
   d. almost always

5. Although I believe in my religion, I feel there are many

   more important things in my life.

   a. I definitely disagree
   b. I tend to disagree
   c. I tend to agree
   d. I definitely agree

6. It doesn't matter so much what I believe so long as I

   lead a moral life.

   a. I definitely disagree
   b. I tend to disagree
   c. I tend to agree
   d. I definitely agree

7. It is important to me to spend periods of time in

   private religious thought and meditation.

   a. frequently true
   b. occasionally true
   c. rarely true
   d. never true

8. What religion offers me most is comfort when sorrows

   and misfortune strike.

   a. I definitely disagree
   b. I tend to disagree
   c. I tend to agree
   d. I definitely agree

9. My religious beliefs are what really lie behind my

   whole approach to life.

   a. this is definitely not so
   b. probably not so
   c. probably so
   d. definitely so

10. The church is most important as a place to formulate

    good social relationships.

    a. I definitely disagree
    b. I tend to disagree
    c. I tend to agree
    d. I definitely agree

11. The primary purpose of prayer is to gain relief and

    protection.

    a. I definitely agree
    b. I tend to agree
    c. I tend to disagree
    d. I definitely disagree

12. If not prevented by unavoidable circumstances, I attend

    church:

    a. more than once a week
    b. about once a week
    c. two or three times a month
    d. less than once a month

13. The purpose of prayer is to secure a happy and peaceful

    life.

    a. I definitely disagree
    b. I tend to disagree
    c. I tend to agree
    d. I definitely agree

14. I real literature about my faith (or church).

    a. frequently
    b. occasionally
    c. rarely
    d. never

15. Quite often I have been keenly aware of the presence

    of God or the Divine Being.

    a. definitely not true
    b. tends not to be true
    c. tends to be true
    c. definitely true

16. Although I am a religious person I refuse to let
    religious considerations influence my everyday affairs.

    a. definitely not true of me
    b. tends not to be true
    c. tends to be true
    d. clearly true in my case

17. Occasionally I find it necessary to compromise my
    religious beliefs in order to protect my social and
    economic well-being.

    a. definitely disagree
    b. tend to disagree
    c. tend to agree
    d. definitely agree

18. If I were to join a church group I would prefer to join
    (1) a Bible Study group or (2) a social fellowship.

    a. I would prefer to join (1)
    b. I probably would prefer (1)
    c. I probably would prefer (2)
    d. I would prefer to join (2)

19. I pray chiefly because I have been taught to pray.

    a. definitely true of me
    b. tends to be true
    c. tends not to be true
    d. definitely not true of me

20. I try hard to carry my religion over into all my other
    dealings in life.

    a. I definitely disagree
    b. I tend to disagree
    c. I tend to agree
    d. I definitely agree