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ALIENATION AND TEMPORAL EXPERIENCE.

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1973

ALIENATION AND TEMPORAL EXPERIENCE

by

ROSE OLIVER

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Abstract

ALIENATION AND TEMPORAL EXPERIENCE

by

ROSE OLIVER

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The purpose of this research was to investigate the relationship between alienation and some aspects of temporal experience. The major hypotheses center around the concept that alienation is a variable relevant to an individual's personal experience of past, present and future.

The research sample consisted of 104 students in the Psychology courses at the City College of the City University of New York.

Temporal experiences investigated were: Directionality, or time zone preference, as measured by the Past, Present and Future Daydreaming scales of the Singer & Antrobus Imaginal Processes Inventory, and by the Total Time zone projections, Past, Present and Future, of the Time Reference Inventory, Roos & Albers; Temporal location of affectively toned experiences, pleasant and unpleasant, as well as past and future extension were determined by the Time Reference Inventory; Subjective Speed of Time was measured by the Knapp & Garbutt Time Metaphors Test; Modes of experiencing and organizing time were determined by the Time Anxiety and Time Submissiveness scales of the

Calabresi & Cohen Time Experience Inventory.

Significant correlations in the expected direction were found between directionality of ideation, as determined by the Daydreaming scales, and some of the time zone preferences indicated by the selections on the Time Reference Inventory. Time Anxiety was significantly correlated with Past Daydreaming, while the Time Metaphors Test and the Time Submissiveness scales were independent of the other temporal measures.

Alienation was assessed by the Keniston Alienation scale, and the Rotter Scale for Interpersonal Trust. Social Conformity was determined by the Marlowe-Crowne Social Desirability Scale; Rigidity was measured by the Gough-Sanford Rigidity Scale. The Total Alienation score of the Keniston Alienation Scale, showing significant negative correlations with Interpersonal Trust and Social Desirability, was used as the operational definition of alienation throughout this research.

Four major hypotheses were generated:

- A. Directionality: With increased alienation, there is
 1. decreased future orientation.
 2. increased interest in the present.
 3. increased investment in the past.
- B. Directionality for affective states: As alienation increases, the present is experienced as more stressful, and the past as more positive.
- C. Extension: As alienation increases, future extension

becomes more constricted, and past extension increases.

D. Time Anxiety: As alienation increases, Time Anxiety increases.

Hypotheses relating to decreased investment in the future, and increased concern with the past were supported. However, there was no evidence that the alienated were more present oriented than their non-alienated peers.

Presumptive, but not significant, evidence was found in support of the "Lost Eden" hypothesis: that the alienated experience the present as unpleasant, and the past as the more rewarding time of life.

Hypotheses relating to decreased future extension and increased past extension as a function of alienation, were not supported. Past extension covaried with age.

Time Anxiety was positively correlated with alienation, indicating a fear of the future and a frustrated longing for the past.

Factor analysis resulted in the extraction of two significant factors: Factor 1, an Alienation factor. High loadings for Total Alienation and the Alienation sub-scales were associated with diminished Interpersonal Trust, social non-conformity, anxiety about time, lessened future and increased past ideation.

Factor 2, a Rigid Conformity factor. High loading for Rigidity was associated with Time Submissiveness (indicating a need for order and control) as well as with religious and social conformity, career commitment, and future directedness.

Suggestions for future research include exploration of present attitudes, such as the belief in the Protestant ethic, as well as cognitive controls which might differentiate among alienated life styles and related temporal experiences. It is also suggested that religious identification and strength of religious faith offer areas for future study, as possible independent aspects of alienation and temporal organization.

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To my husband, Juan Oliver, I dedicate this dissertation.

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CHAPTER I

INTRODUCTION: STATEMENT OF THE PROBLEM

In an act of rebellion against the artifices of his day, Jean-Jacques Rousseau threw away his watch. A romantic return to Nature implied a timeless entity, like the Garden of Eden, and Freud's Unconscious. Recently, two commune-dwelling members of the "hippie" subculture, disenchanted with the achieving, technological world, told the present investigator: "We are really free now! We used to live inside a clock, and were programmed to its tick-tock. Now we have no clocks; we're in touch with our own true selves." In these two instances, two centuries apart, alienation from society was accompanied by rejection of socially organized time as a regulator of behavior, as if personal "authenticity" could be achieved outside a temporal framework.

The calendar and the clock are synchronizers of society. Human beings are committed to specialized functions within a temporal order, often at odds with their personal needs and desires. While the calendar and the clock are tools by which the passage of time is measured, the experience of time is subjective, and independent of the units which describe and demarcate it.

Subjective experience of time may be defined within a micro-structure as the experience or estimate of duration; or within a macrostructure as the experience of the past, the present, and the future. Temporal perspective, as a molar attribute of personality, is the variable of interest in this research.

Temporal perspective is one aspect of an individual's perceptual and cognitive armamentarium. It refers to the experience of the past, the present, and the future; the relation between memory, immediate experience, and expectation. It is central to an individual's frame of reference, his "life space" (Lewin, 1936); his motives or "intentionality" (Allport, 1964).

Each individual integrates his own past into his present. He projects his own future from the vantage point of his present experience, colored by his past, and by his estimate of the future into which he is moving. Temporal perspective undoubtedly involves adaptations which serve the individual's mode of coping with his personal and social reality.

Today, as in no previous epoch, technological and social changes are creating a future whose only certainty is that it will be unlike the past. National boundaries dissolve on the television screen; the ecology of the planet is threatened; the continued existence of the human race is called into question. At the same time, a multiplicity of choices, opportunities -- and frustrations -- confront the

individual. A genuine disjunction of culture (Mead, 1970) has taken place, such that youth has emerged to face a brave new world without guidelines or precedent. A search for new values, new forms of experience, is taking place, along with a questioning of the conventional wisdom.

Twentieth century society is technological, achievement oriented, swiftly moving into the post-technological world of "Future Shock" (Toffler, 1970). It has traditionally been optimistic, pragmatic, equating the new with the better. Acceptance of the dominant values of this society implies an acceptance of the dominance of the future in the present-day concerns of the individual. The future is the time zone of the unknown, of hope, of change, of achievement. Alienation from the dominant values of this society may be concomitant with alterations in temporal orientation, especially a lessened investment in the future.

A person's idiosyncratic temporal integration is, at once a profound psychological question, and a social question, which may indeed become a paramount one as society increases in complexity, and with it, the possibilities for increased alienation.

It is the purpose of this research to examine some aspects of the relationship between alienation and temporal experience. The major hypothesis centers around the concept that alienation is a variable relevant to an individual's personal experience of past, present and future.

CHAPTER II

GENERAL CONSIDERATIONS

TEMPORAL EXPERIENCE

DEFINITION

Time as a concept defies simple definition. It is a process, inherently bound to change, becoming, emerging, decaying and renewing, yet simultaneously defining order and stability. It is subjectively experienced in relation to one's life span, and cognitively understood in relation to historical events outside of one's personal experience. It refers to a sequential ordering of events, sometimes described as an objective aspect of reality, and otherwise experienced as a relationship between memory, immediate experience and expectation. It can be subjectively projected forward into the future, and backward into the past, while objectively experienced as unidirectional, always moving ahead, whether in a circular, a spiral or a linear pattern.

Human beings have the capacity to be aware of time, and to distance themselves from past and future events, re-experiencing them in the present, while retaining their sense of their "pastness" and their "futureness". They can experience the past, the present, and the future as

continuous, as discrete, as consecutive, or as overlapping, or congruent.

The term "time perspective" was first used by Frank (1939), as a molar, rather than molecular approach, to what he considered to be a learned, sequential pattern of past, or anticipated future events. "Time perspective" may refer to a personal sense of past, present and future, or to impersonal, historic or cognitive time. Kurt Lewin (1951) defined "time perspective" as the "totality of the individual's views of his psychological future and his psychological past, existing at a given time." Involved in psychological future is the integration of past experiences, and their utilization in defining present motives and future goals.

Problems arise in defining psychological future and psychological past. How near in the future is the future? How near in the past is the past? What are the past and future boundaries of the present? St. Augustine wrote:

For if there are times past and future, I wish to know where they are. But if I have not yet succeeded in this, I still know that wherever they are, they are not there as future or past, but as present. For if they are there as future, they are there as "not yet", if they are there as past, they are there as "no longer." Wherever they are, they exist therefore only as present. (Outler, 1955)

Minkowski (1933) defined the zones of experienced time as: remote past, mediate past, immediate past, present, immediate future, mediate future, remote future. This delineation of temporal focus is subjective,

independent of chronological time, and according to Minkowski, varies with the mental state and the life situation of the individual.

"Time orientation," "time perspective," "temporal experience" are terms often used interchangeably to denote a range of phenomena not easily differentiated. Wallace (1956) states that time perspective "involves the total personality, memory for past events, and hopes, aspirations, and anticipation of future events." He categorizes time perspective in terms of extension, or the length of time span conceptualized; coherence, or the degree of organization of events within the time span; and orientation, or directionality of time zone preference. To these dimensions, Kastenbaum (1961) has added the concept of density, which he regarded as the " 'stuffings' contained within the framework that is limited by extension, organized by coherence, and set in motion at the pace dictated by directionality." In proposing this four-dimensional model, Kastenbaum specifically disclaims any implication of interrelations between these variables.

HISTORICAL BACKGROUND OF THE CONCEPT OF TIME

Discussion of the concept of time appears in early Greek literature, in relation to permanence and change, as aspects of reality. To Plato (cited in Benjamin, 1966), time was one of the two realms into which the world was divided: forms which never change, and sensible objects which exist in time and therefore become transformed.

Aristotle (cited in Benjamin, 1966), defined time as "the number of motion in respect of 'before' and 'after'"; it is measurable, directional, and is related to the perceiving mind which numbers events.

While to the Greeks, time was perceived as cyclical, with events recurring either in detailed repetition (Orme, 1969), or in approximation, Christianity firmly implanted the notion of time as a forward motion from the birth of Christ to the Day of Judgement. In more recent times, Darwinian theory gave scientific justification to the idea of time as a forward progression, embodying concepts of progress and perfectibility.

Philosophic discussion of time are to be found in the works of Newton, who postulated absolute time; the British Empiricists, who viewed time as a relationship between the succession of ideas; and Kant, who believed that time was a form of intuition and not an inherent property of things (cited in Benjamin, 1966). To Ernst Mach (1959), time was an orderly sequential patterning of events, which, unlike spatial arrangements, cannot be reversed without losing its structure.

With Bergson, interest in time shifted from questions concerning the independent reality of time, or its structure, to a focus upon psychological time, or experienced time. Bergson (cited in Benajmin, 1966) conceptualized time as duration, the "form which the succession of our conscious states assumes when our ego...refrains from

separating its present from its former state." In consciousness, succession is a mutual penetration, an interconnection and organization of elements, such that the present simultaneously contains elements of the past and the future.

The twentieth century has witnessed a burgeoning interest in the subject of psychological time, and its relevance to modes of being, experiencing and behaving. With the advent of Freud, and the interest in psychoanalysis, psychological exploration centered upon the past, especially the early years, as the determinant of future personality. However, the teleological view propounded by later writers (Jung, 1954; Lewin, 1951; Allport, 1955) that goals, aims and levels of aspiration motivate present behavior, drew attention to purposiveness and future directedness in the dynamics of personal growth. "Striving, it is apparent, always has future reference. As a matter of fact, a great many states of mind are actually described only in terms of futurity." Allport, 1955.

Existential literature (Heidegger, 1962; Minkowski, 1923; May, 1958; Ellenberger, 1958) has been permeated with the idea that time is at the very core of psychological being. The dynamic relationship between the modes of experiencing the past, the present, and the future, are determined by an individual's self-awareness, his capacity to self-actualize, his experience of his own being. Time, to the Existentialist, is not in the realm of objective

measurement, but at the center of ontology.

Today, psychological investigation seeks the complexities of temporal experience, having accepted the psychological reality of the time zones. Friederich Kummel (1966) suggests that it is of vital importance to ascertain whether the future within a concrete situation is "open as a possibility, or closed, whether the past represents only a burden to the present moment or has been assimilated and become easy to bear; whether, finally, the present itself is full of content or only an empty thing."

DEVELOPMENT OF TEMPORAL CONCEPTS AND TEMPORAL FOCUS

Psychoanalytic literature, developmental studies and empirical research have tended to verify the developmental nature of the capacity to experience time (Wallace & Rabin, 1960).

According to Melanie Klein (cited in Orme, 1969), the concept of time is rooted in the change from intra-uterine to extra-uterine existence. (An interesting subject for conjecture might be the effect, if any, of the maternal heartbeat on the developing fetus. Might not this rhythmic pattern be the first temporal experience of the organism, possibly sensitizing it to rhythmicity in post-natal existence?) Freud (1950) related the development of temporal responses to the periodic frustration and anticipation of gratification in the earliest oral period. With the interrupted cathexis of external objects, as the reality principle

gradually supercedes the primary process, the basis for temporal experience is formed. Arieti (1947) placed the recognition of temporal relations in the anal stage, with the imposition of the demands of toilet training. A study by Gorman & Katz (1971) indicating a relationship between time attitudes and anal expulsive character traits, tends to support the view that some adult temporal characteristics may have their origin in the anal stage.

Ames (cited in Orme, 1969) reports that the development of the time sense is reflected in time-related vocabulary, starting at about the age of two, with the concept "now", and "I am going to." At the age of three, the past, present and future-related words are well established, but their references are not precise. Language itself serves as a mediating mechanism in the development of temporal concepts.

To Piaget (1960) the origin of the time sense was in the sensorimotor stage, and was related to the expectation of gratification of basic needs. Subsequently, the sense of temporal relationships, particularly of duration, depended upon the development of the perception of relationship between velocity and distance. He placed this development within the conceptual framework of conservation which took place in stages over a period of years, until at about the age of ten or eleven, the concept of measurability is attained. The concept of past, present and future develops gradually from about the age of two, but it is not until the end of the period of egocentricity, at about the age

of seven that the child begins to conceptualize the time zones in relation to the external world. A sense of continuity of the time zones is finally achieved at about the age of fourteen. Extensive studies by Gesell & Ilg (1956), also indicated that the time zones begin to develop at about two years of age, but do not reach adult clarity until about 13 to 14 years.

A number of studies (Kastenbaum, 1964, 1965, 1966; Freeman, 1964; Sacon, 1970) indicate that adolescents, at about 15 conceptualize time in rather narrow terms; that is, they are not especially concerned with their own pasts, and project their future in immediate, rather than long-range terms. It is at this age that the overriding concern is with ego-identity (Erikson, 1963) which is a present-oriented task.

It has generally been assumed on theoretic grounds that maturation involves an increase in the time span, particularly future extension, which is integrated into present functioning. However, empirical studies have not supported this assumption. Lessing (1968) found little evidence to support a developmental frame of reference for length of future time perspective, FTP, in a large study of 5th, 8th and 11th grade students. Cottle (1968), using an Experiential Inventory to locate ten salient experiences on five temporal microzones, found that in 18-year old subjects, the near past was propotent over the near and distant future. A study by Gorman, Wessman, et. al. (1973), based

upon projective linear estimates of past and future time, indicates that, in a sample whose median age was 21.5 years, the near future and near past predominate over the distant future and distant past. However, they found greater variability in representations of the future than the past, indicating possible greater uncertainty with respect to future time.

Since the future is the time of possibilities, as well as of decay and of death, it has been assumed that time zone dominance would shift with increasing age, from the future, in youth, to the past in old age. However, Eson & Greenfield (1962), using a technique based on recall of recent events talked or thought about, and their ranking on a scale of temporal microzones, reported that five age groups from 9 1/2 years to 69 years, emphasized near categories (two days preceding or succeeding an event), more than distant ones; all groups emphasized near future more than any other category. While the content items shifted with age, the time zones did not. Geriatric groups (Kastenbaum, 1963) are well able to manage cognitive futurity, but are more constricted with respect to personal futurity.

Roos & Albers (1965a; 1965b) using a questionnaire relating to non-specific, affectively-toned personal experiences, demonstrated a correlation between age and past extension, in samples with mean ages of 47.3 and 18.8 years respectively; correlations between age and future extension were not significant. The authors believe that this

substantiates the clinical impression that with age there is an increased tendency to focus on the distant past. While this study may appear to contradict the findings of Eson and Greenfeld that the temporal focus does not change with age, actually the nature of the instruments may well account for the discrepant findings.

TIME PERSPECTIVE AND PERSONALITY: EMPIRICAL DATA

It is the intent of this research to focus upon temporal correlates of alienation. The term "alienation," as it has been understood historically, and as it has been defined operationally, will be discussed in a subsequent section of this report. However, it is important to note that any term as broad as "alienation" must, of necessity, impinge upon areas of personality which may be considered pathologic, since the term implies some degree of deviance from a social norm. While specifically disclaiming characterization of the alienated as pathological, it was felt that an examination of the literature of temporal perspective and personality would best serve the purpose of this research by including those personality variables, from the frankly pathological to the normal, which may be relevant to an understanding of the unique manner in which the alienated person organizes his temporal experiences.

In general, the time zone of greatest emphasis in the literature has been the future, since that is the zone of greatest dominance in Western society.

Psychopathology

Mindowski (1923) states that a distorted attitude toward the future is basic to the pathologic process. The future is blocked when mental life dims. Binswager (1958) noted that the dissolution of time characterizes the schizophrenic, while the supremacy of the past, and the inability to open the future were fundamental to the psychic life of the depressive.

Empirical studies of schizophrenia have resulted in contradictory findings: Israeli, in a pioneer work, using the method of future biography (1936), reported that limited time perspective characterized pathological populations such as schizophrenics and depressives. Wallace (1956) found significant foreshortening of future extension and decreased temporal coherence in hospitalized schizophrenics compared with non-psychotic hospitalized controls, on tests based on story roots and events inventories. More recent studies, however, (Zwisslern, 1967; Bohm, 1968) could not confirm any statistically significant differentiation between psychiatric patients and normal controls on dimensions of coherence, extension or preference.

Using a Q-sort technique, Braley & Freed (1971) found that a normal population reflected a greater future orientation than did psychiatric outpatients. However, self-satisfaction appeared to correlate with a moderate future span, rather than a long-term one in normal controls, indicating a possible optimal future which can be handled

realistically. Institutionalized alcoholics (Roos & Albers, 1965) showed a constricted future time span and perceived the past as more pleasant and the present as more unpleasant than did normal controls.

Yaker (1968) using a verb-tense frequency analysis of spontaneous monologues for matched schizophrenics and normals, found that the former, unlike the latter, have difficulty relating to the present. It is possible that emphasis on future time perspective, in studies of pathology, has obscured the importance of the present as a focus of temporal and personality organization. In an interesting series of studies using hypnotized subjects, Aaronson (1971) found that when the "present" is eliminated by suggestion, the subject responds with a catatonic state, a state of unbeing, as of death. To a suggestion of "no future," the subject responds with a euphoric, semi-mystical state, in which he "savored the present." These studies have challenging implications for psychopathology, as well as for alienation, with the search for mystical experience and hedonic satisfactions among some segments of the younger generation.

Impulse Control

LeShan (1952), using a story technique, demonstrated that lower class children had a shorter FTP than middle class children. He concluded that differential, class-related socialization resulted in decreased ability to delay gratification, and, therefore, increased impulsivity.

Since delinquency is presumably associated with lessened impulse control, investigations of temporal orientation among delinquents followed. A number of studies demonstrating shorter time span and more present-oriented responses in delinquents (Barndt & Johnson, 1955; Siegman, 1961; Davids, Kidder & Reich, 1962) appear to substantiate the relationship between impulsivity and restricted future time perspective. Furthermore, Ricks, et. al. (1964) demonstrated by means of TAT stories, increase in temporal span in delinquents following successful psychotherapy.

Howenstene (1969), however, contrary to expectations, found a somewhat longer FTP in institutionalized delinquent adolescents, on a 10-events test and a story completion task, than normals. Davids & Parenti (1958), also found no significant temporal distinctions between normal children, and institutionalized neurotic, psychotic and disturbed children on a story completion task.

Institutionalization

It must be noted that institutionalization itself may be a variable affecting temporal perspective, independently of the nature of the psychopathologic process. Fink (1953) demonstrated that institutionalized aged individuals told TAT stories which demonstrated greater concern with past events than did non-institutionalized controls. The problem is compounded by the fact that the differences between both groups may be due to severity of symptomatology necessitating commitment, rather than the fact of institutionalization

alone. However, Calhoun (1969) in a study of the relationship between age, institutionalization, mental illness and time perspective, found that for all categories the non-institutionalized, and those in milieu treatment, had more active future expectations than those in custodial care.

One problem which has not been mentioned in studies using hospitalized subjects, or clinic outpatients, is drug therapy. Drugs (analgesics as well as psychotropic drugs) are widely used as adjuncts to treatment, and may well differentially affect modes of temporal response.

Anxiety; Dogmatism; Personality Integration

Krauss & Ruiz (1967) found an inverse relationship between anxiety and future tense usage, and a positive relationship between anxiety and past tense usage on an Incomplete Sentences Test. Epley & Ricks (1963) using TAT stories also found high anxiety related to restricted future time span. However, Rokeach & Bonier (in Rokeach, 1960) reported that persons high in dogmatism used future tense with greater frequency in response to TAT cards, than the past or the present tense. Since Rokeach considers dogmatism to be permeated by anxiety, he believes that the negation of the present and the projection into the future are anxiety-reducing mechanisms. He suggests that a distinction be made between "closed," anxiety-related future orientation, and the future orientation of "open," flexibly creative persons.

A strong focus upon the future, in anticipation of a

repetition of unpleasant past experiences, is characteristic of what Meerloo (1950) described as the "anticipation neurosis." This category undoubtedly includes those highly anxious individuals (Lipman, 1957) who have a strongly future-dominated orientation, as well as the catastrophizers and the prophets of doom and gloom.

Cottle (1969; 1971) found complex relationships between anxiety, dogmatism and sex of subject. Apprehension about the future, and a decreased sense of temporal relatedness were associated with high anxiety, as were increased temporal fantasies about past recovery. Dogmatic, "closed" people are poorly adapted to time, anxious about it and de-emphasize the concept "future." Differential patterns of response concerning life space, egocentric present, and both personal and historic temporal extension, emerge as a function of dogmatism, sex and anxiety. Perhaps anxiety interacts with other, as yet unspecified moderator variables to produce both kinds of response: a need to reduce anxiety by carefully planning for maximum control of time, or an avoidance of the future as a source of threat.

Wessman (1973), using a Temporal Experience Questionnaire (Ricks, Epley & Wessman), derived four bipolar factors delineating subjective experiences of time, and related them to personality dimensions. For example, the factor designated Continuity and Steady Purpose vs. Discontinuity and Lack of Direction, loaded, at the positive pole, items which indicated a commitment to future goals, and a confidence in

their realization, together with a sense of temporal continuity. The negative pole loaded items expressing a sense of emptiness, temporal fragmentation and futility. The positive factor correlated with generally positive self-concepts, happy experiences in the past and present, and with strong personality integration. Subjects at the negative pole are characterized by greater identity diffusion and poorer socialization.

An in-depth study of college men (Wessman & Ricks, 1966) showed that unhappy men tended to speculate, or fantasize less about the future than did happy men. The latter experience time as harmonious, future-directed and planned, while the former keep the future open and uncommitted, "ready for anything, prepared for nothing...they feel themselves backing into the future with their eyes on the past." (p. 119)

Achievement

Planning function is an expression of the individual's ability to utilize past experience to move constructively into the future. It presupposes a firm integration of past experiences, such that the past can become a guide, not a stumbling block, to achievement. Present behaviors must be organized in a goal-directed manner with the ability to project into an unknown future which can be conceptualized and realized. Theoretically, a relationship between achievement motivation and future orientation should be demonstrable.

Studies by McClelland (1961) indicated that people high in achievement motivation were concerned about the passage of time, experience it as moving swiftly, and use more future tenses in TAT stories. They were better able to delay gratification than those low in nAch. High academic achievers in the 7th and 8th grades were reported (Teahan, 1957) to be more future oriented, and more optimistic than non-achievers.

Epley & Ricks (1963) found that in a sample of intellectually gifted students, prospective time span was as good an indicator of scholastic achievement after the Freshman year as the Scholastic Aptitude Test. Students with long future time spans, as rated by judges on TAT stories, were more empathic, less anxious and more goal directed, than those with shorter time spans.

Cottle (1969) found a complex relationship between Achievement Value, manifest anxiety, sex of subject, temporal relatedness, present duration and future potency. High vAch women tended to expand the borders of the present in both directions; high vAch men tend to project longer and more potent futures. (Does this imply a restraint on the part of high vAch women against moving out of the present into the future, as an expression of resistance to assertiveness?)

Knapp & Garbutt (1958) found that persons high in nAch preferred swifter images of time, as demonstrated by their selections on the Time Metaphors Test (TMT). This test

presumably measures temporal directedness, or subjective speed of time.

Achievement motivation presupposes a sense of continuity between a past which is manageable, and a future to which one can be realistically committed. Narrow, or moderate, rather than long past recall characterize subjects who actively organize to realize goals in an efficient manner (Goldrich, 1967); subjects who are achievement oriented tend to ascribe past events (Green & Knapp, 1959) to a more recent period than their actual occurrence.

Locus of Control: Internality-Externality

There is a large body of research investigating the dimension of locus of control and related personality constructs. A review article by Lefcourt (1966), and a monograph by Rotter (1966) amply cover the theoretical and empirical work, to that date, in this field. It has been shown that where an individual experiences himself as the controlling agent in his life (internal ascription), achievement motivation is higher than when he ascribes personal outcomes to external or chance occurrences (Rotter & Mulry, 1965). Melvin Seeman considers powerlessness, or externality, as measured by the I-E scale (Rotter, 1966), to be the defining characteristic of alienation, and used this scale in an extensive series of studies of the alienated. This will be discussed more fully in a later section of this report. However, in view of the possible relationship between externality, low achievement motivation and

alienation, temporal experience in relation to locus of control seems especially relevant to the present research.

Platt & Eisemann (1966), using five tests of time perspective (personal future extension, impersonal future extension, impersonal past extension, density and directionality, as defined by the TMT), found that internals and externals were significantly differentiated on some temporal measures. The internals conceptualized a longer personal future, and impersonal past extension, than did the externals. Density and directionality were in the predicted direction, although not significant.

MEASUREMENT OF TEMPORAL EXPERIENCE

Studies of temporal experience have utilized a wide variety of instruments. It cannot be assumed that all scales measure the same dimension. Indeed, it is much more likely that they do not, making cross comparisons of studies difficult. Scales themselves may elicit responses which are stimulated by their demand characteristics; or they may tap different and independent aspects of the total spectrum of temporal experience.

In general, instruments used to measure temporal characteristics fall into several categories:

Fantasy Production

This includes TAT stories (Fink, 1953; Epley & Ricks, 1963), and story roots (LeShan, 1952; Wallace, 1956).

Scoring is based on an analysis of the tense of the verb

used in response, or of the stated or judged duration or direction of the story.

It is possible that these methods are contaminated by verbal fluency, as well as by the ability to produce spontaneous fantasy. While they are undoubtedly useful for the relatively homogeneous, predominantly middle and upper middle class youth who comprise the college populations of some institutions, such methods must be examined in the light of a changing population, particularly in large urban centers. The ability to handle language skillfully and responsively may reflect social class, ethnic background and prior training in verbal skills, and may, therefore, confound a judgement of temporal orientation based on verbal production.

Unstructured Questionnaires

This type of questionnaire elicits events which the individual considers important, and the age at which they may have occurred, or will occur (Sattler, 1964). Cottle (1968) asked subjects to list 10 important events of their lives, and to locate them on one of five temporal micro-zones, from distant past to distant future. Kastenbaum (1961) measured density by means of a questionnaire which does not restrict the number of projected events, and coherence, by the consistency of their temporal ordering. Eson (1951) asked subjects to recall 25 items talked about in the previous two weeks, and to state whether they refer to the past, the present, or the future. There is the

possibility that the last method may be influenced by selective recall at the time of testing.

Structured Questionnaires

Responses to structured questionnaires require no verbal production, merely a projected age or number denoting sequence for the items presented. Wallace's 15 events (1956) is an example of this type of test. It has the advantage of simplicity of response, and of scoring. However, by limiting the choice of experiences to those proposed by the investigator, it allows no room for the expression of salient experiences which may be specific to the individual subject.

The Roos & Albers Time Reference Inventory, TRI (1965), is structured with respect to form, but not content. It is composed of thirty questions, in groups of ten each, concerning ambiguously worded references to positive, negative or neutral experiences, and asks the subject to assign them to the appropriate period of his life.

Lines Tests

A variety of simple lines has been used as projective tests to determine temporal references (Cohen, 1966; Cottle, 1971; Goldberg, 1966; Rokeach & Bonier, 1960). These tests permit a non-verbal approach to questions such as boundaries of the present, personal past, historic past, personal and historic future, total life space. Cottle (1971), for example, rated a series of circles on the basis of size, for temporal zone dominance; and their contiguity

was interpreted in terms of atomicity, continuity and integration of time zones.

Gorman, Wessman, Schmeidler, et. al. (1973), using two 254 X 17 mm rectangles to represent the individual's life span from the present to birth, and the present to death, found that projected estimates of past and future time could be represented by a power function following Stevens' law. Greater linear estimates represented temporal intervals closer to the present for both past and future.

Time Metaphors

The Time Metaphors Test, TMT, (Knapp & Garbutt, 1958), the most widely researched test of its kind, offers the subject a series of images of an allegorical or literary nature, and asks him to rank order them in terms of their applicability to his own view of time. The images range from swift to static. It is considered to be an expression of directionality, or subjective speed -- a preference for swift images denoting a forward-looking, future-directed temporal dominance, correlated with achievement motivation.

Experiential Time Inventories

These are Likert-type inventories which elicit general attitudes toward time (Calabresi & Cohen, 1968; Ricks, Epley & Wessman, in Wessman, 1973; Cottle, 1969). Factor analysis of these scales has produced subscales which have differentiated modes of experiencing and utilizing time.

CORRELATIONS BETWEEN TIME TESTS

The above is a sampling of the many inventories, and tests, structured and unstructured, projective and direct, which have been devised to assess temporal experience. One of the problems inherent in studies of time is determining the generality of results based on particular instruments.

Sattler (1964) reported little correlation between a story completion technique, and a ten-events test as a measure of future orientation. Rokeach & Bonier (1960) found no correlation between future tense usage as a measure of future orientation, and a "lines" test, for their dogmatic subjects.

While future conceptualizations predominated for all types of story roots presented, Kastenbaum (1965) found that affectively toned roots tended to produce more past oriented stories than did neutral roots; pleasant roots tended to result in more past conceptualizations than did unpleasant ones.

Roots which are temporally anchored elicit stories which are highly correlated. These are stems which mention a time of day, such as: "At three o'clock one bright sunny afternoon in May, two men were walking near the edge of town." Temporally unstructured roots also elicit stories which yield a high correlation coefficient. An example of the latter is: "Joe is having a cup of coffee in a restaurant. He's thinking of the time to come when." However, stories in response to the two types of stems are independent

(Kastenbaum, 1961). The demand characteristics of the story roots are apparently powerful determinants of the directionality of the story, and of the length of time conceptualized. Slavin (1966) noted that roots which mention a time of day produce a set to utilize a day as the temporal unit, while an Events test given to the same subject will produce an FTP of years.

While measures of density, coherence, and extension loaded on a factor which Kastenbaum (1961) called "general concern for future events," the Time Metaphors Test as a measure of directionality appeared to be independent. Siegman (1962), however, found that subjects who showed longer future extensions on a 10-events test, also preferred swift images.

Temporal perspective is undoubtedly complex and multi-dimensional. There is no reason to assume that a construct such as temporal experience is stable across situations, and is independent of the type of test used to define it. A number of investigators (Zwissler, 1967; Ruiz, Rewich & Krauss, 1967; Lessing, 1968; Platt, Eisenman, et. al., 1971) have found little equivalence between clusters of tests, and raise questions concerning the explanatory constructs.

The discrepant findings relating to the communality between measures raise questions concerning the generality of findings across populations and temporal measures, and no doubt, in part, account for the contradictory results

found in relation to other variables of interest. For example, Lessing (1968), and Platt, et. al. (1971) have found that different measures of FTP do not relate to personality variables in a consistent manner. Cottle, in fact, suggests (1971) that the richness of temporal experience can best be explored by seeking the inconsistencies, which, he feels, are inherent in time perception.

CULTURE AND TIME

Western society has been conditioned by the Judeo-Christian tradition to experience time as a forward motion from a finite past (the Creation), to a finite future (Redemption). History had a moral purpose; science secularized it; technology imparted a presumption of mastery.

American society has been dominated by optimism, and a sense of personal fulfillment through achievement. It is future-oriented, time-bound, and Doing. "The Doing Orientation is so characteristically the one dominantly stressed in American society that there is little need for an extensive definition. Its most distinguishing feature is its demand for action in the sense of accomplishment, and in accord with standards which are conceived as being external to the acting individual." (Kluckhohn, 1955).

Differences in time perspective have been considered a major value orientation which distinguishes the dominant American culture from the variant sub-cultures which exist within the United States. The Spanish-Americans of the

Southwest were described by Kluckhohn (1955) as living in a timeless present, whereas the Mormons were found to be more directed to the past, and the Anglo-Americans of Texas more future oriented.

Studies of developmental patterns of Anglo-American, Indian and Mexican-American children (Bonger, 1972) indicated similar temporal differences: The Anglo-American children were more future-oriented than the other two. Roberts & Greene (1971), however, reject the simple ethnic stereotype which assigns a value dominance to a particular temporal zone, and present data which, while indicating ethnic differences, suggest complex effects of religion and language structure on temporal responses.

Cross-cultural studies comparing Hindu college students (Meade, 1971) with American students, indicated that future orientation was higher in the latter, and was related to a higher level of aspiration and a greater sense of personal responsibility for achievement.

McArthur (1955) demonstrated that college students who had attended public schools (and were upwardly mobile) told TAT stories which reflected achievement-motivated future orientation, while those who had attended private schools told stories which were present oriented and sentient, rather than striving. Strodbeck & Kluckhohn (1961) observed that upper classes in old and declining communities adhere to past, rather than to present or future time.

Oriental mysticism has traditionally fostered an

attitude of passivity, of reduced striving, of unity with a distant past, and an open unplanned future:

Every man feels that he is both son and father among thousands and tens of thousands and is aware of being held fast by the people around him and the dead below him, and the people to come, like a brick in a brick wall...

Our politics, therefore, must be infinite, reaching to both ends of time and leading a thousand million men from their fathers to their sons, in lines neither broken nor tangled...

And now remember that your great inventions had their origins with us. Do you understand now why we did not develop them further? To have singled them out for development would have spoiled the slow grandeur of our existence by disturbing the simple regularity of its course. (The Yalu, Paul Valery, History and Politics, No. 10.)

Here eloquently stated, is the fundamental juxtaposition between contemplative man, embedded in a matrix of time, and achieving man, "in love with intelligence," developing great inventions and challenging the passage of time.

Future orientation should be related to an acceptance of the dominant values of our society, with its strong emphasis on achievement, and the rewards which come with achievement. Doubt, either of the intrinsic value of achievement, or of the value of the extrinsic (material) rewards of achievement, or doubt concerning one's own ability or society's ability to fulfill its promise to deliver rewards, should tend to constrict a person's future orientation, and to impel him to seek satisfaction in a hedonic present, or nostalgia for a Utopian past.

ALIENATION

Inherent in acceptance of the basic values of society is trust in its promise. The past decade, the 1960's, has been one of great social upheaval, of unrest among precisely those segments of American youth who have had the greatest opportunity to participate in the achieving society. There has been widespread disaffection, which has generated an examination of basic values, and a distrust of society's motives.

Julian Rotter (1970) reported that interpersonal trust, as measured by a questionnaire which he developed, diminished in a college freshman population in each succeeding year, from a mean of 72.4 in 1964 to a mean of 66.6 in 1968. The drop in students' trust was most appreciable in the area of "trust in politicians, peace keeping, and the communications media" -- in other words, in the area relating to the guardians of society, their ability to deliver on the overriding issue of peace, and of their credibility. Such distrust may be part of a pattern of powerlessness, a feeling of inability to control one's future. It may be a component of the sense of estrangement which we call alienation.

The term "alienation" found its way into the modern vocabulary via the writings of Karl Marx (1844), who used it to describe a complex state of personal and social disaffection arising out of modern industrial relations. It is now the coin of everyday social, sociological and psychological commerce. It is considered by some, to be, to

modern society, what sex was to the Victorians: a pervasive problem underlying much of modern man's anxiety. It is at once considered a cause, a symptom and a diagnosis of a general malaise.

Any broad definition of alienation encompasses all strata of society, all levels of maladjustment, all personal and social disorder, from the loss of sense of self, "the sickness unto death" (Kierkegaard, 1954), to a sense of powerlessness, meaningless, rootlessness, isolation, pessimism, and despair. While in its extreme form, it can refer to the psychotic, the delinquent, the social outcast, it is, according to Fromm (1955), so pervasive in modern society, as to be "almost total: it pervades the relationship of man to his work, to the things he consumes, to his fellows, to himself." In fact, Fromm believed that society is itself so irrational that adaptation to it is irrational and therefore destructive of deepest human needs and values. He speaks of the "pathology of normalcy." There is an implication of alienation in Maslow's description (1962) of the authentic, self-actualizing person, as one who resists enculturation and transcends society.

Kierkegaard saw the state of modern man in technological society as one in which man must confront "nothingness"; to Nietzsche, "God is Dead" meant the loss of old beliefs and values -- the loss of a homeland. To Durkheim (1951) "anomie" represented a breakdown of the rules of conduct, resulting in a state of normlessness: "Society becomes a

disorganized dust of individuals." To Freud (1959), demands, inherent in modern social organization conflict with the instinctual tendencies of man -- aggressive, hedonic, sexual -- to produce irreconcilable conflict.

Karen Horney (cited in Eric and Mary Josephson, 1968) defined alienation as "the loss of the feeling of being an active, determining force in his own life. It is the loss of feeling himself an organic whole." Schachtel (1966) considers a reified identity, cut off from the experiencing, living person, in time, as the chief source of alienation. Paper identities, license numbers, social security numbers, become the substitutes for one's sense of personal experience, until one feels like an imposter with a false passport.

The subject of alienation has received much attention in the sociological literature. The focus and the criteria of definition vary. Schacht (1970) observes: "If one were to go by various general contexts in which the term is used in recent sociological literature, it might seem that four different basic uses of the term, or types of alienation emerge: interpersonal alienation, work alienation, politico-economic alienation and socio-cultural alienation. However, even these terms do not define and delineate the specific phenomena."

Schacht observes that, in order to be alienated, a person must be aware, even if not always on a fully conscious level, of some lack which he experiences as reprehensible, unjust, morally wrong, or unfair. For example,

a recognition of powerlessness with respect to the political process may be fully acceptable to the person who is willing to leave "politics to the politicians." On the other hand, a sense of political normlessness, meaninglessness or powerlessness has been shown by Levin (1959) to result in political alienation which may find expression in political activism, identification with a charismatic leader, or in political apathy.

A person who accepts the desirability of material possessions, but who lacks the means of acquisition, may develop deviant, or alienated ways of acquiring them, or of adapting to their lack; a person who possesses the social tools of achievement and acquisition, but renounces their use, because he rejects their value, is alienated from the larger values of society. Alienation is complex, multidimensional, and cannot be considered apart from the criteria used to define it.

Leo Srole (1966) derived an "anomia" scale, based on Durkheim's concept of anomie, tapping feelings of normlessness and unpredictability. He found that social malintegration (anomie) was associated with a rejective orientation toward the outgroup, especially a minority group. Nettler (1957) constructed a scale which implies a normative behavior in taste, religion, family attitudes and leisure activities. He found a low-order curvilinear correlation between the alienated, as measured by his scale, and a 5-item social distance measure, the alienated being less prejudiced.

If prejudice is normative in our society, then this finding is not unexpected. Clark (1959) defined alienation as the discrepancy between the power which a person believes he has, and the power which he believes he should have. His measure of alienation utilized a discrepancy score applied to a small agricultural collective, or "mini" system. He concluded that the more powerless one feels in an organization, the less satisfied one is in it.

Seeman (1959) examined various concepts of alienation from the point of view of social learning theory: expectancy of reinforcement and value of reinforcement; he subsumes alienation under the following headings: Powerlessness with respect to the expectation that one's own behavior can determine events; Meaninglessness, or an inability to make predictions about outcomes; Normlessness, derived from Durkheim's "anomie," or the loss of commonly held standards; Cultural estrangement, or a rejection of social standards (here he includes those who reject reigning goals and standards, and those who would seek to change social structures); Self estrangement, which he equates with the inability to find self-rewarding activities. Seeman's major focus has been on Powerlessness, as measured by a short form of the I-E scale. In a series of studies (reviewed in 1971), conducted in Sweden, France and the United States, he found that Powerlessness was the salient determinant of alienation, whether in work, in student activism or in expectation of achieving goals. He challenged the concept of an alienation

syndrome, encompassing a sense of alienation in work, powerlessness in politics, dislocation from common values and generalized distrust. He found that neither cultural estrangement, nor social isolation accounted for student activism; on the contrary, he found considerable cultural consensus and little sense of social isolation among 400 workers and students in Los Angeles and Berkeley. High within-group identity apparently mitigates generalized loneliness and cultural estrangement.

Anthony Davids (1955), however, found evidence for an alienation syndrome in terms of five interrelated dispositions which showed a high degree of correlation between subscales and total score: egocentricity, distrust, pessimism, anxiety and resentment. On clinical evaluation, those who were highly alienated, tended to be weak on ego structure.

Keniston (1965) operationally defined the alienation syndrome in terms of eleven highly interrelated scales: Distrust, Pessimism, Avowed Hostility, Interpersonal Alienation, Social Alienation, Cultural Alienation, Self-contempt, Vacillation, Subspecion, Outsider, Unstructured Universe. This scale was used as the basis of selection for an intensive study of alienated young people during the decade of the 1960's.

Keniston (1971) found that the underlying roots of alienation lie deep within the structure of technological society; its primary expression was distrust. The distrust

which he found was pervasive: it extended to human nature, American culture, personal intimacy, morality, long-range idealism. Mead (1970) believes that the calling into question of old values and beliefs is a necessary process of social adjustment during a period of intense dislocation brought about by technological change.

Alienation and Time

Rollo May, who considers the sense of emptiness the chief problem of people in the present era, notes that "the question of time...is the focus for the most pressing anxiety of many modern persons" (1953). Human beings are distinguished from other creatures in their awareness of time, their knowledge of death, their "time-binding" capacity. According to May, the sense of Being is repressed and replaced by the economic or social function as the dominant attribute of a person. The most crucial fact about human existence is "emergence," "becoming," development in time. "The significant tense for human beings is thus the future -- that is to say, the critical question is what I am pointing toward, becoming, what I will be in the immediate future." It must be noted here, that the important aspect of the future, in May's definition, is not "what I will do," which involves planning for achievement, and therefore long-range goals, but rather the immediate goal of personal change, the experience of one's own existence. "Indeed the most significant events in a person's psychological existence are likely to be precisely the ones which are 'immediate,' breaking

through the usual steady progression of time."

Insofar as the achievement oriented, future-directed ethic comes into conflict with a search for sentience, immediate experience and "self-consciousness," those individuals who pursue the latter goals can be characterized as alienated -- that is, rejecting a dominant value of American society. Keniston found, among the alienated youth whom he studied, (1965), along with a rejection of the traditional values of success and achievement, a collapse of time perspective. This was characterized by increased concern over time, a collapse of future orientation, an experience of the present as gray and featureless, and lack of temporal continuity. Yankelovich (1972) also found that with a concern for the irrational, and a quest for a new naturalism, "time itself loses its ordered sequence, becoming a patternless series of quantum leaps from one sensory immersion to another."

Hanna (1971) studied the temporal experiences of alienated students. She defined alienation operationally by a scale which she derived from a cluster analysis of a group of scales (Dean, 1961; Srole, 1956; Rotter, 1962). Her findings indicated that while all students had restricted, present-oriented time perspective, as determined by TAT responses, the alienated are unhappy, feel uncertain of their ability to achieve their goals and fear the future.

While the cult of the present is the conscious aim of the NOW generation of alienated youth, who portray the past

as dismal, and the future as unpredictable, Keniston (1965) notes that they "manifest an unconscious desire to recapture the qualities of experience that they vaguely recall characterized their early lives... They are inwardly and unconsciously preoccupied with their lost pasts."

CHAPTER III

PILOT STUDY

A pilot study was undertaken to test the hypothesis that an individual's temporal experience of personal past, present and future, was related to his degree of alienation, as defined by a set of tests. It was hypothesized that the greater the degree of alienation, the more constricted would be his future orientation, and the greater would be his present or past orientation.

The scales used to test this hypothesis will be described in the following section.

INSTRUMENTS

Time Tests

1. Three scales from the Imaginal Processes Inventory (Singer & Antrobus, 1970):

Present oriented daydreaming
Past oriented daydreaming
Future oriented daydreaming

Each scale consists of a 12-item Likert response format, containing positively and negatively keyed items. The three scales were intermingled and scored separately.

Singer & Antrobus (1970) report that the Past Daydreaming scale has item to total correlations, not less than .42, and nine of the twelve items are above .50. It

correlates positively with Maudsley Neuroticism, and negatively with California Self-Control, Tolerance and Responsibility.

The items to total correlations of the Future Daydreaming scales vary from .40 to .67. The scale correlated with Achievement Oriented Daydreaming, and loads .48 on a factor of Controlled Thoughtfulness. It appears to related to positive inner experiences.

The Present Oriented Daydreaming scale has a lower internal consistency, half the items correlating with the total score less than .46 and none above .54. It correlates negatively with Boredom, and Maudsley Neuroticism.

It was assumed that time zone preference can emerge from the simultaneous presentation of the three scales.

2. Roos & Albers Time Reference Inventory, TRI (1965).

This consists of thirty questions, subdivided into sets of ten each, relating to unspecified pleasant, unpleasant or neutral experiences. The subject is asked, for each condition, whether it relates to his past, his present or his future, and to state at what age it has occurred, or probably will occur. This scale can give the following information: total number of past, present, or future responses; number of past, present or future responses for pleasant, unpleasant or neutral experiences; extension for past and future.

In this study, only total past, and total present responses were scored, and included in the factor analysis.

Since the data are ipsative, one zone had to be eliminated (Baggely, 1964). It was assumed that the past and the present responses would more accurately reflect the person's experiences, since they are known to him, while the future would become the "catch-all" for the remainder.

Roos & Albers (1965) using this instrument, differentiated significantly between alcoholics and normals. Alcoholics had a shorter future extension than normals, and perceived the past as more rewarding than the present.

3. Time Experience Inventory, Calabresi & Cohen (1968).

This is a Likert-type inventory which taps personal attitudes towards time. Factor analysis yields the following factors: Time Anxiety, Time Flexibility, Time Possessiveness and Time Submissiveness.

Time Anxiety significantly differentiated a clinic outpatient and a student population from a hospitalized psychiatric population. It correlates with a factor of "restless dysphoria," and is related to "uncomfortable feelings that go with thoughts of the future, and in a frustrated longing for the past" (Calabresi & Cohen, 1968). Rigidity in planning, and a fear of commitment are expressions of the need to control time. It was hypothesized that Time Anxiety would covary with alienation.

Time Flexibility reflects an accepting attitude toward time: an experience of relaxation with respect to it, and a lack of a need to control it. However, it does not discriminate between patients and student populations. This

variable was included but no specific hypothesis was made with respect to it.

4. Time Metaphors Test (TMT), Knapp & Garbutt (1958).

This is a list of 25 metaphors, ranging from swift images to static ones. Subjects are asked to rank them in groups of five according to how each expresses his own experience of time. Scoring was done by multiplying the subject's rating with the order of factor loadings, from 1 for the swiftest images, to 5 for the most static. The possible range of scores, 175 to 275, was reduced by subtracting 175, giving a final range from 0 to 100. The swiftest images score at the highest end of the scale, and the most static at the lowest end (Wallach & Green, 1961; Hallenbeck, 1966).

A preference for swift images has been shown to correlate positively with Achievement motivation (Knapp & Garbutt, 1958); with an experience of time as passing very rapidly (Grossman & Hallenbeck, 1965), and with increased future orientation (Siegman, 1962).

The alienated, it was hypothesized, would experience time as moving slowly.

Personality scales

1. Alienation scale, short form (Keniston, 1965).

This is a 50-item Likert-type scale, containing positively and negatively keyed items constituting an operational definition of the "alienation syndrome." It contains

eleven subscales: Distrust, Self-contempt, Outsider, Unstructured Universe, Pessimism, Avowed Hostility, Sub-spection, Vacillation, Interpersonal Alienation, Social Alienation, Cultural Alienation. The mean scale-to-scale correlation is .47, and the mean correlation of Distrust with the other alienation scales is .58.

The Alienation scales were intermingled and separately scored. Total Alienation is the mean of the eleven subscales. Total Alienation will be used as the operational definition of alienation.

2. Interpersonal Trust (Rotter).

This is a 40-item Likert-type scale, containing 15 filler questions, relating to interpersonal trust, and trust in the truthfulness of communications, and in political leadership. The scale has an internal consistency of .76, and retest reliabilities for five weeks, three months and seven months of .69, .68 and .56 respectively. It is considered by Rotter (1970) to be a measure of alienation.

3. Locus of Control, Internality-Externality (I-E) scale (Rotter, 1966)

This is a forced choice test, scored in the direction of externality. Rotter (1970) and Seeman (1972) consider this to be a measure of alienation since it reflects an individual's belief in his ability to control his own destiny, as opposed to the operation of external events such as chance, fate or others, as major determinants of the outcomes of his life.

4. Maudsley Neuroticism Scale, short form (Eysenck, 1958).

This consists of twelve forced choice questions, differentiating neuroticism from extroversion. The neuroticism score is the sum of "yes" responses for the six-item neuroticism scale.

5. Breskin Rigidity Test, BRT (Breskin, 1968).

This is a 15-item, non-verbal test of rigidity, requiring the S to indicate a preference for one of each of a pair of common geometric patterns. The number of selections of the "good Gestalt" in each pair constitutes the rigidity score.

6. Marlowe-Crowne Social Desirability Scale, MCSD (Crowne & Marlowe, 1964).

While high scores on this scale may constitute a response set reflecting a need for approval, it is considered, by Crowne & Marlowe (1964), to be indicative of a conforming, cautious personality which is expressed in normatively anchored behavior.

7. Personal data inventory: sex, age, religious identification, ethnic origin and strength of religious faith. Strength of religious faith was scored: 1 for "very strong," to 5 for "not at all." A high score, therefore, indicates a lack of faith.

METHOD

The Sample

Ss were students taught by the author in two classes of

Summer Session at Queensborough Community College of the City University of New York. One was a daytime class in Introductory Psychology, the other was an evening class in Personality.

Protocols of students who did not complete the series, or who failed to follow instructions were eliminated. The final sample of 42 Ss, had a mean age of 19.4, and a range of 17-24. Additional data to describe the sample are: 17 males, 25 females; 4 blacks, 38 whites; 6 Protestants, 12 Jews, 18 Catholics and 6 "Others" (Atheists, agnostics, no religion).

Procedure

Students were randomly assigned a number; they were also given the option of taking an assumed name. A general statement of instructions was read to the class.

The testing was conducted during class time, in two sessions. In the first session, each student took all of the time tests; in the second session, each student took all of the personality tests, and answered the personal data inventory.

Statistical Analysis

A matrix of product-moment correlations among the following variables was computed:

1. Time Metaphors Test
2. Imaginal Processes Scale: Present Daydreaming
3. Imaginal Processes Scale: Future Daydreaming

4. Imaginal Processes Scale: Past Daydreaming
5. Time Flexibility
6. Time Anxiety
7. Time Reference Inventory: Total Present Responses
8. Time Reference Inventory: Total Past Responses
9. Keniston Total Alienation
10. Rotter Scale for Interpersonal Trust
11. Locus of Control (I.-E.)
12. Breskin Rigidity Test
13. Marlowe-Crowne Social Desirability
14. Maudsley Neuroticism
15. Lack of Religious Faith

A principal axis factor analysis of the fifteen variables was performed. Four factors with eigenvalues greater than one were extracted, accounting for 45% of the total variance. A Varimax rotation was performed.

RESULTS AND DISCUSSION

The matrix of product-moment correlations among the fifteen measures is presented in Appendix J.

Table 1 presents the correlations among the measures of time.

TABLE 1
CORRELATIONS AMONG TEMPORAL MEASURES

	Time meta- phors	Pres. day dream	Fut. day dream	Past day dream	Time Flex.	Time Anx.	Pres. Total TRI	Past Total TRI
Time Metaphors	-							
Present Daydreaming	-02	-						
Future Daydreaming	29	-33*	-					
Past Daydreaming	-26	04	-36*	-				
Time Flexibility	-03	13	-02	14	-			
Time Anxiety	14	23	-34*	20	60**	-		
Present-Total Time Reference	-11	03	-19	08	07	27	-	
Past-Total Time Reference	31*	18	-15	-06	21	35*	-07	-

Decimals omitted

*p < .05; **p < .01

Table 2 presents the correlations among the measures of personality.

TABLE 2
CORRELATIONS AMONG PERSONALITY MEASURES

	Neurot- icism	Alien- ation	Rigid- ity	Trust	I-E	Social Desir.
Neuroticism	-					
Alienation	31*	-				
Breskin Rigidity	01	29	-			
Trust	02	-42**	-29	-		
Rotter I-E	16	12	03	-14	-	
Social Desirability	-32*	-16	-19	27	-39**	-

Decimals omitted

*p < .05; **p < .01

Table 3 presents the correlations between Total Alienation and the temporal measures.

TABLE 3
CORRELATIONS BETWEEN TOTAL ALIENATION AND TIME TESTS

	Total Alienation
Time Anxiety	44**
Past Daydreaming	33*
Total Past, Time Reference	32*
Future Daydreaming	-29
Time Flexibility	28
Present Daydreaming	18
Total Present, Time Reference	13
Time Metaphors	-03

Decimals omitted

*p < .05; **p < .01

The significant correlates of the Time Anxiety Scale (Future Daydreaming, $-.34$; Past-Total, Time Reference, $.35$) (as well as low correlations in the expected direction: Present Daydreaming, $.23$; Past Daydreaming, $.20$) corroborate the findings of Calabresi & Cohen (1968) that those high in Time Anxiety find it difficult to deal with the future, and experience a longing for the past.

The preference for swift images, as determined by the Time Metaphors Test, correlated significantly with Past-Total ($.31$), and just short of significance with Future Daydreaming ($.29$). This test apparently taps a complex set of time values, resulting in contradictory findings. Those who fantasize more about the future, prefer swift images of time; and those who are concerned with their pasts also prefer swift images. Data from prior research indicate similar complexities, for the scores have been shown to correlate with Achievement motivation (Knapp & Garbutt, 1958), and with future orientation (Siegman, 1962); but it has also been shown that elderly people, whose time zone preference is the past, prefer swift images (Wallach & Green, 1961). This probably reflects the feeling that "time is running out on them."

With the exception of the Time Metaphors Test, the temporal measures all correlated with Total Alienation in the expected direction. Three of the measures were significant (Time Anxiety, $.44$; Past Daydreaming, $.33$; Total Past References, $.32$), while Future Daydreaming was just short of significance, ($-.29$).

Table 4 presents the rotated factor matrix.

TABLE 4
ROTATED FACTOR MATRIX

VARIABLE	1	2	3	4
Total Alienation	-27		30	57
Trust				-61
Rotter I-E	-56	-33		
Breskin Rigidity			-27	55
Social Desirability	63			
Neuroticism	-50			
Lack of Religious Faith		70	25	
Time Metaphors		54	-32	
Present Daydreaming			45	
Future Daydreaming			-70	-26
Past Daydreaming		-28	31	55
Time Anxiety	-53	39	46	25
Time Flexibility	-72			
Total Present Time Reference			40	
Total Past Time Reference		61		29

Decimals omitted; Loadings under 25, omitted

Interpretation of Factors

The four factors which emerged from the data analysis are described below:

Factor 1 accounted for 17% of the variance. The highest loadings were for Time Flexibility (-72), Time Anxiety (-53), Externality (-56), Neuroticism (-50) and Social Desirability (63). This appears to be a neuroticism factor, describing the non-conforming, powerless individual who is anxious about time and needs to control it.

Factor 2 accounted for 11% of the variance. This factor has highest loadings on lack of religious faith (70), Time Reference Inventory, Total Past (60), Time Metaphors (54), Time Anxiety (39) and Externality (-33). In view of the past orientation, it is unlikely that the preference for swift images, or the internal ascription can be interpreted as related to a healthy sense of personal control which finds expression in Achievement motivation. It is more likely that this factor describes a self-punitive internal individual who, having no anchor in religious belief, cathects the past, and like the aged (Wallach & Green, 1961) prefers swift images. It is probably a depressive factor.

Factor 3 is a temporal factor loading time measures which indicate a present or past focus. Future Daydreaming (-70), Present Daydreaming (45), Total Present, Time Reference (40), together with Time Anxiety (46) suggest negative attitudes towards the future and a strong investment in the present, and past (Past Daydreaming, 31). These loadings,

together with the preference for slow images (Time Metaphors, -31), Total Alienation (30), and with lack of religious faith (25) may be indicative of the non-striving "NOW" individual.

Factor 4 is an Alienation factor. Loadings for Total Alienation (57), Trust (-61) suggest the alienated individual who dwells in the past (Past Daydreaming, 54; Total Past, Time Reference, 29) and whose preference for the "good Gestalt" (Breskin Rigidity Test, 55) probably reflects a need for certainty in a world which appears ambiguous.

The factor analysis yields findings consistent with the general hypothesis that alienation is a variable related to a constricted investment in the future, and an increased focus upon the present or past as the time zone of preference.

Implications for Further Research

The Pilot Study provides justification for continued investigation of the relationship between alienation, as defined by the Keniston scale, and temporal orientation.

The Alienation scale and the Trust scale correlated significantly (-42) in the expected direction, and can be considered descriptive of the "alienation syndrome."

The Rotter Locus of Control (I-E) is dependent of Alienation and of the temporal measures, and presents some problems of interpretation. For example, Gurin, et. al. (1969) have shown that external ascription may be a realistic estimate of noxious social forces, rather than an expression of personal lack of control. This interpretation

is especially relevant to blacks and other minority groups, as well as those from a lower socio-economic class. In addition, internality may reflect a healthy and mature personality, or a guilty, over-punitive super-ego. In view of these interpretations, it was decided not to include this scale in the subsequent study -- particularly since there was a high probability of substantial numbers of minority group students and those of lower social class in the sample to be studied.

The pilot study confirmed the feasibility of utilizing the Daydreaming Scales of the Imaginal Processes Inventory (Singer & Antrobus, 1970), the Time Reference Inventory (Roos & Albers, 1965), the Time Anxiety Scale (Calabresi & Cohen, 1968) and the Time Metaphors Test (Knapp & Garbutt, 1958) as measures of directionality and temporal organization in relation to a set of personality measures defining alienation. The complexity of the Time Metaphors Test will preclude the formulation of any specific hypothesis concerning the scores.

While speculation abounds in the descriptive literature concerning the relationship between alienation and temporal experience, there has been little empirical evidence to support the view that alienation and time orientation are inter-related. The data of the Pilot study offer evidence that the alienated block the future, are anxious about time, dwell in the present or the past. Factor 4, with the highest loading for Alienation, confirms the hypothesis that

the past is the time zone of preference for the alienated.

Keniston (1965) makes the statement that the alienated "inwardly and unconsciously preoccupied with their lost pasts, outwardly and consciously they live in the present." A further analysis of the Time Reference Inventory responses for extension and affective experiences in relation to time zones may cast some light on the nature of the "lost past" which preoccupies them. If the past is the lost Eden, then the alienated, like the alcoholic (Roos & Albers, 1965) will perceive the past as the time of greatest satisfaction, and the present as the most unpleasant.

CHAPTER IV

THE STUDY

Based on the theoretical considerations discussed in the Introduction, and upon empirical data, four major hypotheses were formulated.

STATEMENT OF HYPOTHESES

A. Directionality

1. As Total Alienation increases, future orientation decreases.
 - a. Total Alienation scores will have a negative correlation with scores for Future Daydreaming.
 - b. Total Alienation scores will correlate negatively with Total Future scores on the Time Reference Inventory.
2. As Total Alienation increases, there is an increase in orientation toward the present.
 - a. Total Alienation scores will have a significant positive correlation with scores for Present Daydreaming.
 - b. Total Alienation scores will correlate significantly with total present scores on the Time Reference Inventory.

3. As total Alienation increases there is an increase in orientation toward the past.
 - a. Total Alienation will have a significant correlation with scores for Past Daydreaming.
 - b. Total Alienation will correlate significantly with Total Past scores on the Time Reference Inventory.

B. Directionality for Affective States

1. As Total Alienation increases, more positive events will appear to have occurred in the past.

Total Alienation scores will correlate significantly with scores for past positive items selected on the Time Reference Inventory.

2. As Total Alienation increases, more negative events appear to occur in the present.

Total Alienation scores will correlate significantly with scores for unpleasant present items selected on the Time Reference Inventory.

C. Extension

1. As Total Alienation increases, future extension becomes more constricted.

Total Alienation scores will correlate negatively with scores for future extension on the Time Reference Inventory.

2. As Total Alienation increases, past extension increases.

Total Alienation scores will correlate

positively with scores for past extension on the Time Reference Inventory.

D. Time Anxiety

1. As Total Alienation increases, there will be increased anxiety about time.

Scores on Total Alienation will correlate positively with scores on the Time Anxiety Scale.

METHOD

The Sample

Ss were 104 students enrolled in three classes of the Psychology Department of City College of the City University of New York: one class in Abnormal Psychology, one class in Personality, and one in Creativity.

The sample consisted of 64 males, 40 females, with a mean age of 21.3, SD 2.6, Range, 18-34. The mean Socio-Economic Status, calculated from the Hollingshead (1959) 2-Factor formula, was 3.3, SD .96: 6.6% of the sample represented Class I (the highest level of academic and professional or executive attainment for the head of the family), and 4.8% represented Class V (uneducated and unskilled).

Seventy four percent of the students were psychology majors; 16.3% were majoring in other areas of the humanities, while 2.9% were concentrating in mathematics or other sciences. The remainder were undecided. Fifty percent of the subjects indicated that they had made a career decision.

Juniors and seniors comprised 82.7% of the sample.

The ethnic composition of the sample was as follows: whites, 88.4%; blacks, Asians and Puerto Ricans, 11.6%.

The distribution of the subjects by religion was: Protestants, 6.7%; Catholic, 19.2%; Other (Atheists, Agnostics, No Religion), 23.2% and Jews 50.9%. Strength of religious faith was indicated on a scale from (1) Very Strong, to (5) Not at All. Lack of religious faith (5) was selected by 40.3%; Very Mild Interest (4) was indicated by 27.8%, while the other three levels of religious faith represented 10.8% each.

Procedure

Students were tested during class time, in three sessions. Those Ss who missed a session were given the protocols to fill out individually. Incomplete series were discarded.

Ss were randomly assigned a number, and were given the option of taking an assumed name. A brief introductory statement was read (Appendix A). On each of the testing days, Ss, were given a package containing the following instruments, in the order listed:

Instruments

Session 1.

1. Interpersonal Trust Scale (Rotter, 1970).
(Appendix B)

2. Time Reference Inventory (Roos & Albers, 1965).

(Appendix C)

The Inventory was scored for: Total Present, Total Past, Total Future, Present Pleasant, Present Unpleasant, Past Pleasant, Past Unpleasant, Future Pleasant, Future Unpleasant. Total Past Extension was calculated as the mean difference between present age and ages for total past experiences; Future Extension was calculated as the mean difference between present age and ages for total future experiences.

3. Time Metaphors Test, TMT, (Knapp & Garbutt, 1958).

(Appendix D)

This was scored, as in the pilot study, on a scale from 0 - 100, the higher value representing swifter images.

Session 2.

4. Alienation Scale (Keniston, 1965).

(Appendix E)

The eleven subscales were intermingled and scored separately. Total Alienation was the mean of the eleven subscale scores.

5. Imaginal Processes Scales (Singer & Antrobus, 1970).

(Appendix F)

Past, Present and Future Daydreaming Scales were intermingled and scored separately.

6. Time Attitudes Inventory (Calabresi & Cohen, 1968).
(Appendix G)

The Time Anxiety Scale and the Time Submissiveness Scale were intermingled and scored separately.

The Time Submissiveness Scale is an eight-item scale which reflects a dutiful and conforming attitude toward time, in order to impose order and efficiency.

Session 3.

7. Marlowe-Crowne Social Desirability Scale.
8. Gough-Sanford Rigidity Scale (in Rokeach, 1960).

The two scales were intermingled and scored separately.

(Appendix H)

Since one question, "I am always careful about my dress" appears on both the scales, it was eliminated from the scoring of the Rigidity Scale.

9. Personal Data Inventory.
(Appendix I)

Statistical Analysis

A matrix of product moment correlations was performed among the following 42 variables:

1. Social Desirability Scale, Marlowe-Crowne
2. Rigidity Scale, Gough-Sanford
- 3-13. The following sub-scales of the Keniston Alienation Scale:
 3. Distrust

4. Pessimism
5. Unstructured Universe
6. Subspection
7. Interpersonal alienation
8. Social alienation
9. Vacillation
10. Cultural alienation
11. Outsider
12. Avowed hostility
13. Self-contempt
14. Total Alienation, Keniston
15. Interpersonal Trust, Rotter
16. Time Metaphors, Knapp & Garbutt
17. Time Anxiety, Calabresi & Cohen
18. Time Submissiveness, Calabresi & Cohen
19. Present Daydreaming, Singer & Antrobus
20. Future Daydreaming, Singer & Antrobus
21. Past Daydreaming, Singer & Antrobus
- 22-32. The following scales derived from the Time Reference Inventory, Roos & Albers:
 22. Past Pleasant
 23. Past Unpleasant
 24. Past Total
 25. Past Extension
 26. Present Pleasant
 27. Present Unpleasant
 28. Present Total

29. Future Pleasant
30. Future Unpleasant
31. Future Total
32. Future Extension
33. Sex: 0 = F; 1 = M
34. Age
35. Catholic
36. Protestant
37. Jewish
38. Religious Faith: 1 = very strong; 5 = not at all.
39. Birth Order: 1 = first or only; 0 = others
40. Socio-economic status: 1 = highest; 5 = lowest
41. Career: Career commitment = 1; Uncommitted = 0.
42. Other religion (atheist, agnostic or no religion)

RESULTS

The matrix of product moment correlations of the above 42 variables appears in Appendix K.

Table 5 presents the significant correlations between the Daydreaming scales and the other temporal measures in the battery. All significant correlations are in the expected direction. The Daydreaming scales, the Time Reference Inventory and the Time Anxiety scale define time zone preference, affective temporal experience, and temporal attitudes.

The Time Metaphors Test and the Time Submissiveness Scale are independent of the other temporal measures.

TABLE 5
SIGNIFICANT CORRELATIONS OF DAYDREAMING
SCALES WITH OTHER TIME SCALES

	Present Daydreaming	Past Daydreaming	Future Daydreaming
<u>TIME REFERENCE INVENTORY</u>			
<u>Present</u>			
Total Present	22*		
Present pleasant	22*		-21*
Present unpleasant			
<u>Past</u>			
Total Past			-25**
Past pleasant	19*		-27**
Past unpleasant			
Past extension			
<u>Future</u>			
Total Future	-38**		36**
Future pleasant	-35**		40**
Future unpleasant			
Future extension			
<u>TIME ANXIETY</u>		27**	

Decimals omitted; *p < .05; **p < .01

Table 6 presents the matrix of significant correlations among the personality variables. The significant correlations are in the expected direction: Alienation covaries negatively with Interpersonal Trust and Social Conformity.

TABLE 6
SIGNIFICANT CORRELATIONS AMONG PERSONALITY
VARIABLES

	Total Alienation	Social Desirability
Total Alienation	-	
Social Desirability	-35**	-
Trust	-44**	35**
Rigidity		39**

Decimals omitted

*p < .05; **p < .01

TABLE 7

CORRELATIONS OF ALIENATION SUBSCALES WITH TOTAL
ALIENATION AND INTERPERSONAL TRUST

Subscale	Total Alienation	Interpersonal Trust
Distrust	69**	-39**
Pessimism	64**	-21*
Unstructured Universe	56**	-27**
Subspection	57**	-25**
Interpersonal Alienation	69**	-29**
Social Alienation	42**	-11
Vacillation	45**	-09
Cultural Alienation	44**	-40**
Outsider	55**	-25**
Avowed Hostility	67**	-30**
Self Contempt	63**	-24*

Decimals omitted

*p < .05; **p < .01

TESTS OF HYPOTHESES

A. Directionality

1. As alienation increases, future orientation decreases.

- a. Total Alienation scores will be negatively correlated with scores for Future Daydreaming.

Result: The correlation between Total Alienation and Future Daydreaming is $-.22$, $p < .05$.

- b. Total Alienation scores will be negatively correlated with Total Future scores on the Time Reference Inventory.

Result: The correlation between Total Alienation and Total Future, Time Reference Inventory, is $-.19$, $p < .05$.

The hypothesis that with increased alienation there is a decrease in future orientation is confirmed.

2. As alienation increases, there is an increase in orientation to the present.

- a. Total Alienation scores will have a significant positive correlation with scores for Present Daydreaming.

Result: The correlation between Total Alienation and Present Daydreaming, $r = .02$ is not significant.

- b. Total Alienation scores will have a significant positive correlation with Total Present, Time Reference Inventory.

Result: The correlation between Total Alienation scores and Total Present scores on the Time Reference Inventory, is .10 and not significant. The hypothesis that with increased alienation there is an increased investment in the present is not confirmed.

3. As alienation increases, there is an increase in orientation to the past.

a. Total Alienation will correlate significantly with scores for Past Daydreaming.

Result: The correlation between Total Alienation and Past Daydreaming is .24, $p < .05$.

b. Total Alienation scores will correlate significantly with Past Total, Time Reference Inventory.

Result: The correlation between Total Alienation and Total Past, Time Reference Inventory is .10 and not significant.

While daydreaming indicates an increased concern with the past, the total number of events ascribed to the past does not increase significantly with alienation. The hypothesis is, therefore, accepted as partially supported.

B. Directionality for Affective States

1. As alienation increases, more positive events will appear to have occurred in the past.

Total Alienation scores will correlate

significantly with scores for past positive items on the Time Reference Inventory.

Result: The correlation, $r = .12$, is not significant, although in the predicted direction.

2. As alienation increases, more negative events appear to occur in the present.

Total Alienation scores will correlate significantly with scores for present unpleasant items on the Time Reference Inventory.

Result: The correlation, $r = .17$, $p < .10$, is short of significance, although in the predicted direction. Hypotheses B1 and B2 are not confirmed. However, the correlations, while not significant, are in the direction of the "Lost Eden" hypothesis, that the past is perceived as the more positive period, and the present as the more negative.

C. Extension

1. As alienation increases, future extension becomes more constricted.

Total Alienation scores will correlate negatively with future extension scores on the Time Reference Inventory.

Result: The correlation between Total Alienation scores and Future Extension was $-.07$, and not significant.

2. As alienation increases, past extension increases.

Total Alienation scores will correlate positively with past extension scores on the Time Reference Inventory.

Result: The correlation between Total Alienation score and past extension was .01, and not significant.

Hypotheses C1 and C2 were not confirmed.

D. Time Anxiety

As alienation increases, there will be increased anxiety about time.

Scores for Total Alienation will be positively correlated with scores on the Time Anxiety Scale.

Result: The correlation of Total Alienation with Time Anxiety was .31, $p. < .01$.

The hypothesis that Time Anxiety increases with alienation was accepted.

Table 8 presents the temporal correlates of Total Alienation as they pertain to the above hypotheses.

TABLE 8

TEMPORAL CORRELATES OF TOTAL ALIENATION:
TESTS OF HYPOTHESES

	r	p
<u>PAST ORIENTATION</u>		
Past Daydreaming	24	< .05
Total Past References	10	n.s.
Past Pleasant References	12	n.s.
Past extension	-01	n.s.
<u>PRESENT ORIENTATION</u>		
Present Daydreaming	02	n.s.
Total Present References	10	n.s.
Present Unpleasant References	17	< .10
<u>FUTURE ORIENTATION</u>		
Future Daydreaming	-22	< .05
Total Future References	-19	< .05
Future Extension	-07	n.s.
<u>TIME ANXIETY</u>	31	< .01

Decimals omitted

Of the eleven hypothesized correlations, four are significant (Past Daydreaming, Future Daydreaming, Total Future, Time Anxiety); four are in the predicted direction, although not significant (Total Past, Past Pleasant, Total Present, Present Unpleasant); the remaining three are uncorrelated (Past extension, Future extension and Present Daydreaming).

DISCUSSION

Time Tests, Future Dominance and Alienation

The chief advantage of the Imaginal Processes scales as criteria of temporal orientation, is that they preclude the public ordering of events along a time continuum. While events have the quality of being fixed in time, thoughts can explore freely backwards and forwards over the entire span which can be conceptualized, and are free of the value judgments and ordering of priorities that may be elicited when specific events are asked for. The direction of a person's daydreams can never be unitary. Time zones are not discrete, nor bounded, nor mutually exclusive.

The Time Reference Inventory also makes it possible to examine all three time zones simultaneously, without reference to specific events, while at the same time determining the affective states for different periods of one's life, as well as past and future extension.

In analyzing time zone dominance, it is important to recognize that the zones are not independent constructs, and exist simultaneously at all times. However, an examination

of the mean responses for Daydreaming, indicates that the major thrust for ideation for the entire sample is the future. In this respect, it is similar to the criterion sample (Singer & Antrobus, 1970):

TABLE 9
DAYDREAMING SCORES FOR STUDY SAMPLE
COMPARED WITH NORMATIVE SAMPLE

	PRESENT		PAST		FUTURE	
	Mean	SD	Mean	SD	Mean	SD
Study Sample	38.3	6.3	36.9	8.4	43.3	7.3
Criterion Sample	37	5.6	36	8.8	43	7.6

Similarly, future extension, as measured by the Time Reference Inventory, for the entire sample, was greater than past extension. The mean for future extension was 10.3, SD, 5.7; past extension had a mean of 7.6, SD 3.6. Using the same instrument, Roos & Albers (1965b) found a future extension of 18.1 and past extension of 8.4 years, in a normal sample whose mean age was 18.8 years.

These data merely confirm what is widely held to be a basic attribute of our society; future directionality is deeply embedded in our culture. The assumption may be made that where departures from this value exist, important disruptions of a personal or social nature (or both) exist.

Alienation and Time

The data presented support the general hypothesis that the alienated individual experiences and integrates time in a distinctive manner whose salient features are a reduction of future orientation and a longing for a lost past. Time Anxiety is the most significant of the time scales used, indicating a marked tendency on the part of the alienated to restrict movement into a future which is uncertain, ambiguous and probably threatening. Contrary to much descriptive literature on the subject of alienated youth, there is little evidence for an increased interest in the present, as the time zone of preference. There is some indication, short of statistical significance, of a feeling that the past was a time of greater rewards than the present.

Alienation, Past Extension and Age

Hanna (1971), in a study of alienation in a college sample, found that, while some time attitudes, such as fear of the future, differentiated the alienated from the non-alienated, all had a constricted temporal range, as measured by TAT stories. Her SS had a mean age of 18.6, SD 2.3. While the present study supports her finding that alienation is not a variable of interest in relation to length of time span conceptualized, there is evidence that age is significant in relation to past extension.

Past extension correlated with age in the present study ($r = .45, p < .01$), confirming similar findings of Roos & Albers (1965a; 1965b) for alcoholics, retardates, and normal

controls, with mean ages of 48.2, 47.3, 17.6 and 18.8 respectively. This lends support to the theory that the tendency to evoke earlier memories increases with age. Extension, per se, may simply reflect the arithmetic fact that references to early experiences extend more years into the past for older than for younger people. However, Total Past references also correlated with age ($r = .26, p < .01$), indicating that past orientation for age is not artifactual.

Future Extension

Roos & Albers found that decreased future extension significantly differentiated an alcoholic group from matched normal controls. Although future extension has generally been associated with better personality integration and long-range planning, alienation was not associated with a decrease in future time span.

Lessing (1968) notes that length of future time perspective is not stable across measures, and that sheer length of future extension may be of limited psychological importance. It is important only in conjunction with other aspects of the individual's attitudes towards the future. Braley & Freed, (1971) for example, found that a moderate future extension, rather than an extreme one characterized individuals with greater self-satisfaction.

In the present study, Future extension correlated positively with Time Reference Future Unpleasant ($r = .25, p < .01$) and negatively with career commitment ($r = -.20, p < .05$). A long future extension relating to unpleasant

projections may well reflect ruminations about death and the catastrophes of old age, while career commitment involves immediate planning ahead, such as for graduate education and jobs.

Interpersonal Trust, Age and Sex

While neither sex nor age correlated with alienation, both showed significant correlations with Interpersonal Trust: Male, $r = .21$, $p < .05$; Age, $r = .26$, $p < .01$. Apparently college women are less trusting than college men; and distrust decreases with age -- understandably.

Time Metaphors Test and Socio-economic Status

The TMT, in this sample, and unlike in the pilot study, did not correlate with any time scale or personality variable. Kastenbaum (1961) found that TMT was independent of measures of density, coherence and orientation, as well as personality variables relating to Rigidity and Need for Freedom. It correlated only with I.Q.

In the present study, the TMT correlated with Birth Order ($r = .21$, $p < .05$), and with Socio-economic Status ($r = .19$, $p < .05$). This may be significant of the fact that in a college population composed predominantly of psychology majors, the first born (or only), and those of lower SES are more striving, and, therefore, experience a greater sense of subjective speed of time. This would be consonant with the finding of McArthur (1955) that the upward bound college students from public schools told TAT stories which

indicated greater future orientation than those from private schools (higher SES).

FURTHER STATISTICAL ANALYSIS

Factor Analysis

A factor analysis of the following eleven variables was performed: Social Desirability, Rigidity, Total Alienation, Trust, Time Anxiety, Time Submissiveness, Present Daydreaming, Future Daydreaming, Past daydreaming, Past Total - Time Reference Inventory, Present Total - Time Reference Inventory.

The Alienation subscales, the Future Total, and the Affective Subscales of the Time Reference Inventory were omitted from the factor analysis in order to prevent dependencies from contaminating the factors (Baggaley, 1964).

The Princeton Statistical Package, PStat, Version 52.5, (Buhler, 1971) was used for data analysis. Three significant factors with latent roots greater than one were extracted. However, only the first two factors, accounting for 36.5% and 25.8% of the common variance respectively, were meaningful in terms of the general concern of this research. The personality measures showed substantial loadings on these two factors only. Therefore, only Factors 1 and 2 were considered in the subsequent analysis.

Both a Varimax and a Promax rotation were performed, and the Varimax rotation was selected because it was more

useful in explaining the factors obtained.

Loadings on the two factors for the remaining 31 variables were determined by an extension analysis (Dwyer, 1937). By this method, the original 11-variable factor structure was retained. Least squares estimates of factor loadings for the remaining variables, on these already determined statistically secure factors, were obtained.

The matrix of factor loadings for the eleven variables is presented in Table 10.

Estimated loadings of the additional variables on the two factors are presented in Table 11.

TABLE 10
 MATRIX OF FACTOR LOADINGS FOR THE ELEVEN VARIABLES
 VARIMAX ROTATION

Variable	Factor 1	Factor 2
Total Alienation	67	
Interpersonal Trust	-60	
Social Desirability	-57	20
Time Anxiety	49	
Past Daydreaming	34	
Rigidity	-23	87
Time Submissiveness	24	57
Future Daydreaming	-23	24
Present Daydreaming		
Past Total, Time Reference		
Present Total, Time Reference		

Decimals omitted

TABLE 11

ESTIMATED LOADINGS OF ADDITIONAL
VARIABLES ON FACTORS

Variable	Factor 1	Factor 2
Avowed Hostility	68	
Self Contempt	60	20
Distrust	60	20
Pessimism	66	
Unstructured Universe	51	
Interpersonal Alienation	60	
Subspection	47	
Cultural Alienation	48	
Outsider	43	
Vacillation	39	
Social Alienation	20	
Lack of Religious Faith		-27
Present Pleasant, Time Reference	-19	-23
Future Pleasant, Time Reference		20
Future Total, Time Reference		21
Career Commitment		21

Decimals omitted

Interpretation of Factors

Factor 1: This is an Alienation factor, with loadings of 64 for Total Alienation, -60 for Interpersonal Trust, and -57 for Social Desirability. The temporal loadings indicate uneasiness about the future (Time Anxiety, 49; Future Daydreaming, -23), dissatisfaction with the present, (Present Pleasant, -19) and a longing for the past (Past Daydreaming, 34). While negative loadings for Rigidity (-23) might indicate a flexible personality, the alienated student, nonetheless, reacts to the demands of the college situation by exercising rigid and submissive control over time (Time Submissiveness, 24).

All of the eleven Alienation subscales loaded on this factor.

Factor 2: This is a Rigid Conventionality factor. The highest loadings on this factor are Rigidity (87) and Time Submissiveness (54). Time Submissiveness is related to a dependent need for control, order and authority (Calabresi & Cohen, 1968), which, in this sample is exercised by a rigid and probably defensive projection into the future (Future Daydreaming, 24; Future Total, 21).

The extended loadings on this factor are low, but are coherent and useful in further describing the subjects defined by this factor. The present is not viewed as a rewarding time (Present Pleasant, -23), while future gratifications are anticipated (Future Pleasant, 20). Religious faith (Lack of Religious Faith, -27) and career goal

orientation (Career commitment, 21) are probably expressions, in this sample, of the conventional life style of the rigidly armored personality (Social Conformity, 20; Self Contempt, 20; Distrust, 20).

SUMMARY

Subjective temporal experience as a dimension of the alienated personality has been examined in this research.

It has been found, as hypothesized, that expressions of directionality, such as daydreaming, and the projection of affectively toned and neutral references, indicate a constriction of future orientation, as a function of alienation. Increased anxiety about time also confirmed the hypothesis that the alienated experience difficulty with respect to future commitments, and seek to control time in a rigid manner.

Contrary to the popular view of hedonic, present-oriented alienated youth, the present, as indicated by the direction of Daydreaming, appears to be a period of no greater interest to the alienated than to the conventional.

One difficulty which may obscure a meaningful difference -- if such a difference exists -- with respect to the present, is the problem of definition. Does the present mean the fleeting moment, the immediate task, or some broader reference? In the absence of specific criteria, such as "today," "this week," "this year," individual interpretation may operate across the entire sample in such

a manner as to affect present responses, more than past or future. Category width, as a cognitive style, may be an important determinant of the boundaries of the present, on an ambiguous task.

There is, however, some indication, although not significant, that the ascription of unpleasant experiences to the present increases with alienation, and that the past may be viewed as the more rewarding period of life. Although the data are only suggestive of the "Lost Eden" hypothesis, the increased past ideation found, as predicted, among the alienated, and the increase in time anxiety, indicate a frustrated longing for the past. The past emerges as the salient temporal focus of the alienated.

Contrary to expectation, past and future extension are not variables of interest with respect to alienation. Although the alienated block subjective movement into the future, the length of time span conceptualized does not vary with alienation. This may reflect the fact that the subjects of this research were all functioning, and presumably non-pathological, personalities, unlike the institutionalized alcoholic subjects of Roos & Albers (1965) who indicated, on the same instrument, diminished future time perspective. Also, in spite of increased investment in the past, as reflected in increased past ideation, past extension covaried only with age. Proactive and retroactive time span in these college students are apparently stable temporal dimensions across personality character-

istics such as alienation, interpersonal trust and rigidity.

Factor analysis resulted in the extraction of two orthogonal factors: an Alienation factor, which loaded items indicating a constriction of the future, and an investment in the past; and a Rigid Conventionality factor, which loaded items indicating a submissive and conforming movement into the future. Negative loading for Present Pleasant appear on both the alienation and the Rigid Conformism factor. However, the alienated direct their focus from an unrewarding present to the past, while the conventional turn from a unrewarding present to the future.

A fuller interpretation of these findings will be undertaken in the following chapter.

CHAPTER V

DISCUSSION

GENERAL

Alienation is a term which, broadly defined, encompasses both social and personal disaffection which may, or may not, impinge upon the pathological, but which includes interpersonal relations, self-concepts and philosophical attitudes to the social order. It was shown to be a meaningful concept, as defined by the Alienation Scale (Keniston, 1965), to utilize as a basis for the exploration of temporal experience which may deviate from the dominant future-oriented world of technological society.

While, on the one hand, technology gives rise to large enterprises with a consequent loss of individuality, it also lays the base, and makes possible, for the first time in human history, the eradication of poverty and inequality. While science on the one hand has prolonged life, it has, on the other, been the servant of a vast war machine, in the service of a war which the majority of student youth has repudiated.

While "Save Today and Spend Tomorrow" was the slogan which helped shape America, today we live in a society which trumpets the message "Buy Now, Pay Later." Deficit spending,

to satisfy an ever-expanding set of newly created needs is largely replacing the stern code of the Protestant ethic. Impulsivity is decried, but impulsivity is programmed. Instant fun beckons, along with instant war. Instant happiness is promised by the chemical industry, the travel industry, the mass media. Highly complex society demand ever longer years of study for a future which appears ambiguous and uncertain. Confusion and conflict may well beset many of today's young people who must deal, not only with a multiplicity of choices, of products, of skills, of careers, but of socially acceptable ways of making those choices.

Choices, decisions and responsibilities create anxieties, all the more so, when these decisions must be made upon the basis of future uncertainties. To confront the reality of the present (May, 1953), means to face the problems of the present so that one can move into a meaningful future. However, for the alienated, the future is threatening. The high degree of Time Anxiety manifested by the alienated in this study, as well as the preference for past ideation, indicates a need to avoid the future, and an anxiety about confronting the present.

Avoidance of present reality, with its conflicts, choices, responsibilities and opportunities, may take several forms: living in a far distant future ("just rewards in Heaven"), building present Utopias, or escape into a halcyon past (Garden of Eden). The data of the present study suggest that the alienated probably experience the

present as unrewarding, and look upon the past as the most positive time of their lives. While the results are inconclusive, future research can sharpen and clarify what appears to be a pattern suggestive of a depressive response.

Yankelovich (1972), in an extensive study of college youth in 1971, described the mood as "confused but not despairing." Confusion resulted from a decrease in belief in the credibility of government leaders, an increased sense of radicalism, coupled with discouragement concerning their own ability to bring about meaningful change.

This trend is in the same direction as that previously noted by Rotter (1970), in the responses to the Interpersonal Trust scale. To the extent that one can generalize from a sample of 104 students in a particular urban college, this trend has continued. The mean for Interpersonal Trust in the present study (1971), was down to 62.1, from 66.6 in 1968, and 72.4 in 1964.

Yankelovich reports an increased emphasis on self-expression, sexual freedom, new forms of relationships and a diminished interest in money and technological improvement. The basic and overriding change apparent is the quiet cultural, rather than the flamboyant political upheaval of the 1960's.

It is of interest to note that 65% of the students interviewed by Yankelovich did not believe that belonging to an organized religion is important in a person's life. In the present study, while 76.8% identified with one of the three

major religions, 68% of all the students selected the two lowest categories ("very little," "not at all") as expressing the extent of their religious faith. A fortuitous and challenging finding of the present study, is the relationship between traditional religion and temporal attitudes. While this research was not organized around religion or religious values, the evidence suggests that religion or religious values may be an important determinant, or concomitant, of temporal orientation. None of the religions loaded on the alienation factor; neither did the "Other" (atheists, agnostics, no religion). However, religious faith loaded with rigidity, career goal, and future orientation, indicating a pattern of conformity to accepted standards and values independently of the particular religion. This is consonant with the finding in the pilot study that lack of religious faith was associated with past dominance, and with restriction of the future.

The possibility is suggested that lack of acceptance of religious values may be an independent aspect of alienation. The investment in the lost past, may reflect a rootlessness, or alienation, stemming from a sense of a lost homeland, which Nietzsche encompassed in the phrase "God is dead."

In this era of rapid change and uncertainty, does religion represent a rigid reliance upon a set of dogmas and rituals which enable one to cope with present conflicts and future ambiguities? Or does it provide a meaningful

link with a personal and historic past which permits a sense of continuity and comprehension in a kaleidoscopic world? These questions might provide a rich source of understanding of the phenomenon of temporal relatedness. Allport (1950) considers religion to be the "region of mental life that has longest range intentions, and for this reason is capable of conferring marked integration upon personality, engendering meaning and peace in the face of tragedy and confusion of life."

The most distinguishing dichotomy between students, in the Yankelovich survey was career-minded versus what he called the Post-Affluent. This was independent of sex, race, SES or actual affluence, but was related to an acceptance or rejection of the Protestant ethic. The career minded were goal-oriented, had traditional attitudes towards sex, marriage, patriotism, religion and technology, while the Post-Affluent emphasized the search for new personal values. The former were less distrustful, less alienated and more confident of the future, while the latter explicitly reject, among other values, planning for the future. The distinction between the two groups can readily be related to the two orthogonal factors of Alienation (Factor 1), and Rigid Conventuality (Factor 2), the first being the alienated, distrustful, non-conformist, anxious about time and not future-directed, while the second was the Time Submissive, controlling, orderly, career-minded, religiously conforming and future-directed.

It would certainly be erroneous to characterize all future, striving, planning, and achieving individuals as conformist, rigid and conventional. There are the "happy men" (Wessman & Ricks, 1966), the culturally autonomous, the flexibly free, who, according to Maslow (1961) are the only ones who can really manage the future -- who see the future as a challenge to their abilities and individuality, rather than as a predetermined path which they are impelled to follow. The fact that they did not emerge in this study may be an artifact of the instruments used. Tests of creativity, sensation seeking, tolerance of ambiguity, field independence, may serve to enrich the distinction among students, and to broaden the understanding of the temporal horizons attributable to personality differences.

CONCLUSIONS

If one can speak of a time zone preference, or time zone dominance, then such dominance must be rooted in the individual's present: those relevant personality characteristics, impinging upon his present life situation which determine his present needs and his present adaptations. It is in this sense that time orientation, time perspective, time zone dominance can be viewed as one aspect of the constellation of adaptive mechanisms with which an individual deals with his world.

The constriction of the future which we find in the unadapted, or the mal-adapted, can be viewed positively as part of the coping strategies available to the individual,

in a world in transition, whose destiny appears uncertain and outside of his control. The retreat to the past may serve as an escape from the present, or it may be indicative of a search for roots from which new growth can take place.

The future-directed conventional individual has been most successful in introjecting the norms of technological society. In that sense, he may be most alienated from his "natural" self -- that self which Freud believed to be in irreconcilable conflict with the demands of civilization. The rigid projection into the future which we have found among the conventional, career-oriented may well serve the present need to control anxiety attendant upon the denial of present satisfactions for future rewards.

Tillich (quoted in May, 1958) holds that "Picasso's painting 'Guernica' gives the most gripping and revealing portrayal of the atomistic, fragmented condition of European society preceding World War II and shows what is now in the souls of many Americans as disruptiveness, existential doubt, emptiness and meaninglessness." To this description of alienation, can be added the painting by Salvadore Dali, "The Persistence of Memory," in which a desolate landscape is adorned with clocks, one covered with flies, and others hanging about in shapeless forms. Does this symbolize the decay and amorphousness of personal time, in a landscape devoid of humanity, and of life?

Perhaps Camus (The Stranger) best expressed the

relationship between alienation and time when he wrote: "A world that can be explained by reasoning, however faulty, is a familiar world. But in a universe that is suddenly deprived of light, man feels a stranger. His is an irremediable exile, because he is deprived of memories of a lost homeland as much as he lacks the hope of a promised land to come."

SUGGESTIONS FOR FUTURE RESEARCH

Some general suggestions for research have been embodied in the above discussion. However, it would be best to restate them in a more explicit form:

1. New temporal measures which explore the meaning and content of temporal experience should be developed. Perhaps scales derived from structured interviews, particularly with respect to the quality of the present, would enhance the understanding of the new moods among segments of today's youth.

If among some students, emphasis is shifting from the future, which has so long embodied the guiding spirit of American society, then perhaps it is important to know what are the choices, decisions, possibilities and experiences which sustain the present.

2. Within the categories of both the alienated and the non-alienated, personality variations undoubtedly exist which serve important distinctions with respect to temporal experience. In order to broaden the understanding of the complexities involved in these personality distinctions, it is

suggested that additional scales be included among measures of alienation. The following are some of the innumerable scales which might have relevance:

- a. The Protestant Ethic Scale, Mirels & Garrett, 1971
- b. Sensation Seeking Scale, Zuckerman, et. al., 1964
- c. Breskin Rigidity Test, Breskin, 1968
- d. Internal and External Sensation Seeking, Pearson, 1970
- e. Tests for creativity, as well as for tolerance of ambiguity, and of Field Dependence.

3. The relationship between religion, religious values, humanist values and time perspective appears to be a fruitful area of study.

It is possible that time zone preference or future time perspective may be a less meaningful rubric under which to study subjective time among alienated students than temporal continuity and discontinuity. Scales such as the Continuity vs. Discontinuity Factor of the Temporal Experience Questionnaire (Ricks, Epley & Wessman, 1973), as well as the "circles," rated for atomicity and continuity (Cottle, 1969) might be useful approaches to this question. In addition, new tests will have to be devised to examine more fully the sense of temporal disruption which may exist.

If there is indeed a disjunction of generations, as Mead (1970) suggests, then temporal uprootedness, or

discontinuity, rather than time zone dominance may have profound significance in understanding psychological time in a rapidly changing world.

APPENDIX A: INSTRUCTIONS

INSTRUCTIONS

This is a study of attitudes, opinions, and personality. It has nothing to do with the work of the class, but is part of a research project. Participation is entirely voluntary. I hope you will agree to join in this study. I think you will find it interesting.

There are no right or wrong answers. No questions of a highly personal nature will be asked of you. However, you may, if you wish pick an assumed name. You will also pick a number out of this bag. Please jot down the number, and use the same name and number for each test of the series. There will be additional series of tests.

Read the instructions for each test carefully. Be sure not to skip any pages. Answer each question quickly, and as best you can. Get quick first impressions, answer the question with no second thoughts, and go right on to the next question. Enjoy what you are doing! Remember, there are no right or wrong answers.

Leave the papers face down until I ask you to turn them over.

APPENDIX B: INTERPERSONAL TRUST, ROTTER**Scoring Key:****F = Filler****(-) = negatively keyed items. To be reversed****Score = sum of item scores**

GENERAL OPINION SURVEY

This is a questionnaire to determine the attitudes and beliefs of different people on a variety of statements. Please answer the statements by giving as true a picture of your own beliefs as possible. Be sure to read each item carefully and show your beliefs by circling the appropriate number next to each statement.

If you strongly agree with an item, circle the space numbered one. Circle the space numbered two if you mildly agree with the item. That is, circle number two if you think the item is generally more true than untrue according to your beliefs. Circle the space numbered three if you feel the item is about equally true as untrue. Circle the space numbered four if you mildly disagree with the item. That is, circle number four if you feel the item is more untrue than true. If you strongly disagree with an item, circle the space numbered five.

- | | |
|-------------------------------|--------------------|
| 1. Strongly agree | 2. Mildly agree |
| 3. Agree and disagree equally | 4. Mildly disagree |
| 5. Strongly disagree | |

1. Strongly agree 2. Mildly agree 3. Agree and disagree
equally
4. Mildly disagree 5. Strongly disagree
-

- F 1-2-3-4-5 Most people would rather live in a climate that is mild all year round than in one in which winters are cold.
- 1-2-3-4-5 Hypocrisy is on the increase in our society.
- 1-2-3-4-5 In dealing with strangers one is better off to be cautious until they have provided evidence that they are trustworthy.
- 1-2-3-4-5 This country has a dark future unless we can attract better people into politics.
- 1-2-3-4-5 Fear of social disgrace or punishment rather than conscience prevents most people from breaking the law.
- (-) 1-2-3-4-5 Parents usually can be relied upon to keep their promises.
- F 1-2-3-4-5 The advice of elders is often poor because the older person doesn't recognize how times have changed.
- 1-2-3-4-5 Using the Honor System of not having a teacher present during exams would probably result in increased cheating.
- 1-2-3-4-5 The United Nations will never be an effective force in keeping world peace.
- F 1-2-3-4-5 Parents and teachers are likely to say what they believe themselves and not just what they think is good for the child to hear.
- (-) 1-2-3-4-5 Most people can be counted on to do what they say they will do.
- F 1-2-3-4-5 As evidenced by recent books and movies morality seems on the downgrade in this country.
- (-) 1-2-3-4-5 The judiciary is a place where we can all get unbiased treatment.

(continued)

1. Strongly agree 2. Mildly agree 3. Agree and disagree
equally
4. Mildly disagree 5. Strongly disagree
-

- 1-2-3-4-5 It is safe to believe that in spite of what people say, most people are primarily interested in their own welfare.
- (-) 1-2-3-4-5 The future seems very promising.
- 1-2-3-4-5 Most people would be horrified if they knew how much news the public hears and sees is distorted.
- F 1-2-3-4-5 Seeking advice from several people is more likely to confuse than it is to help one.
- (-) 1-2-3-4-5 Most elected public officials are really sincere in their campaign promises.
- F 1-2-3-4-5 There is no simple way of deciding who is telling the truth.
- F 1-2-3-4-5 This country has progressed to the point where we can reduce the amount of competitiveness encouraged by schools and parents.
- 1-2-3-4-5 Even though we have reports in newspapers, radio and television, it is hard to get objective accounts of public events.
- F 1-2-3-4-5 It is more important that people achieve happiness than that they achieve greatness.
- (-) 1-2-3-4-5 Most experts can be relied upon to tell the truth about the limits of their knowledge.
- (-) 1-2-3-4-5 Most parents can be relied upon to carry out their threats of punishment.
- F 1-2-3-4-5 One should not attack the political beliefs of other people.
- 1-2-3-4-5 In these competitive times one has to be alert or someone is likely to take advantage of you.
- F 1-2-3-4-5 Children need to be given more guidance by teachers and parents than they now typically get.

(continued)

1. Strongly agree 2. Mildly agree 3. Agree and disagree
equally
4. Mildly disagree 5. Strongly disagree
-

- F 1-2-3-4-5 Most rumors usually have a strong element of truth.
- 1-2-3-4-5 Many major national sport contests are fixed in one way or another.
- F 1-2-3-4-5 A good leader molds the opinions of the group he is leading rather than merely following the wishes of the majority.
- (-) 1-2-3-4-5 Most idealists are sincere and usually practice what they preach.
- (-) 1-2-3-4-5 Most salesmen are honest in describing their products.
- F 1-2-3-4-5 Education in this country is not really preparing young men and women to deal with the problems of the future.
- (-) 1-2-3-4-5 Most students in school would not cheat even if they were sure of getting away with it.
- F 1-2-3-4-5 The hordes of students now going to college are going to find it more difficult to find good jobs when they graduate than did the college graduates of the past.
- (-) 1-2-3-4-5 Most repairmen will not overcharge even if they think you are ignorant of their specialty.
- 1-2-3-4-5 A large share of accident claims filed against insurance companies are phony.
- F 1-2-3-4-5 One should not attack the religious beliefs of other people.
- (-) 1-2-3-4-5 Most people answer public opinion polls honestly.
- 1-2-3-4-5 If we really knew what was going on in international politics, the public would have more reason to be frightened than they now seem to be.

APPENDIX C: TIME REFERENCE INVENTORY, ROOS & ALBERS

Pleasant References: Items 1-10

Unpleasant References: Items 11-20

Neutral References: Items 21-30

This is a brief inventory designed to estimate people's reactions in terms of past, present, and future. Please indicate for each statement below whether it most nearly refers to the past, present or future, by placing an X in the appropriate column. Be sure to place only one X for each statement. In the "Age" column, indicate your best guess of your age at the time to which the statement refers.

Please complete every statement below, even though you may have to make "wild guesses."

- - - - -

- | | | | | | |
|----|--|---------|--------|--|-----|
| 1. | The most important time of my life is probably in the | | | | |
| | Past | Present | Future | | Age |
| 2. | I believe the happiest time of my life is in the | | | | |
| | Past | Present | Future | | Age |
| 3. | The most productive period of my life is in the | | | | |
| | Past | Present | Future | | Age |
| 4. | The most peaceful time of my life is in the | | | | |
| | Past | Present | Future | | Age |
| 5. | I usually <u>prefer</u> talking about the | | | | |
| | Past | Present | Future | | Age |
| 6. | The most crucial period of my life is probably in the | | | | |
| | Past | Present | Future | | Age |
| 7. | The most satisfying time of my life is probably in the | | | | |
| | Past | Present | Future | | Age |
| 8. | My period of greatest accomplishment is probably in the | | | | |
| | Past | Present | Future | | Age |
| 9. | The most untroubled period of my life is probably in the | | | | |
| | Past | Present | Future | | Age |

(continued)

10. I get most enjoyment out of thinking about the
 Past Present Future Age
11. The most unhappy time of my life seems to be the
 Past Present Future Age
12. I believe the most difficult period of my life is in the
 Past Present Future Age
13. The most frightening time in my life is in the
 Past Present Future Age
14. My period of greatest worrying is probably in the
 Past Present Future Age
15. The most discouraging time of my life seems to be the
 Past Present Future Age
16. My period of greatest depression is probably in the
 Past Present Future Age
17. I feel the most frustrating time of my life is in the
 Past Present Future Age
18. The most anxious time of my life is probably in the
 Past Present Future Age
19. The most troubled period of my life is probably in the
 Past Present Future Age
20. My period of greatest discouragement is probably in the
 Past Present Future Age
21. The busiest time of my life is probably in the
 Past Present Future Age
22. The most religious time of my life is probably in the
 Past Present Future Age

(continued)

23. Most of my daydreams are about the
- | Past | Present | Future | Age |
|------|---------|--------|-----|
|------|---------|--------|-----|
24. My important decisions are usually based primarily on the
- | Past | Present | Future | Age |
|------|---------|--------|-----|
|------|---------|--------|-----|
25. I most often dream about the
- | Past | Present | Future | Age |
|------|---------|--------|-----|
|------|---------|--------|-----|
26. My most active period is probably in the
- | Past | Present | Future | Age |
|------|---------|--------|-----|
|------|---------|--------|-----|
27. My greatest concern over religious matters is probably in the
- | Past | Present | Future | Age |
|------|---------|--------|-----|
|------|---------|--------|-----|
28. Most of my fantasies are about the
- | Past | Present | Future | Age |
|------|---------|--------|-----|
|------|---------|--------|-----|
29. My plans are usually based principally on the
- | Past | Present | Future | Age |
|------|---------|--------|-----|
|------|---------|--------|-----|
30. Most of my dreams are usually about the
- | Past | Present | Future | Age |
|------|---------|--------|-----|
|------|---------|--------|-----|

APPENDIX D: TIME METAPHORS TEST, KNAPP & GARBUTT

INSTRUCTION

Time is a part of our experience and we are all familiar with it. We all have some idea of what time is like to us.

On the attached page are listed 25 phrases of colorful substitutes for the word "time," which a poet or writer might use to stand for the idea of time or his impression of time.

Read the list carefully, then pick out the 5 phrases that seem to be the best ones for describing your own idea or impression of time. Place the number 1 at the provided spaces near all the above 5 phrases. Then pick out the 5 next best phrases that describe the notion of time and place the number 2 before them.

Continue this process in groups of five, until you have placed the number 5 before the 5 phrases which in your own impression evoke the least image of time.

Be sure to evaluate all 25 phrases and do not place more than one number before each phrase.

PHRASES

_____ a large revolving wheel
_____ a fast turning pinwheel
_____ a road leading over a hill
_____ budding leaves
_____ an old man with a staff
_____ a bird in flight
_____ a fast moving shuttle
_____ a winding spool
_____ a speeding train
_____ a quiet, motionless ocean
_____ a burning candle
_____ a stairway leading upward
_____ a dashing waterfall
_____ a space ship in flight
_____ wind-driven sand
_____ an old woman spinning
_____ drifting clouds
_____ marching feet
_____ a vast expanse of sky
_____ the Rock of Gibraltar
_____ a fleeing thief
_____ a devouring monster
_____ a tedious song
_____ a string of beads
_____ a galloping horseman

APPENDIX E: ALIENATION SCALE, SHORT FORM, KENISTON

Subscale Key

D: Distrust
P: Pessimism
AH: Avowed Hostility
SP: Subspception
O: Outsider
UU: Unstructured Universe
SC: Self Contempt
V: Vacillation
IA: Interpersonal Alienation
SA: Social Alienation
CA: Cultural Alienation

Negatively keyed items are indicated by (-), and are to be reversed.

Scoring Key:

1 = SD (strongly disagree)
2 = D
3 = MD
4 = Blank or unscorable
5 = MA
6 = A
7 = SA (strongly agree)

Subscale score is the mean of the item scores for each subscale.

Total Alienation is the mean of the subscale scores.

The following is a questionnaire that asks your views on a number of questions. Please read each statement and answer it as best you can. Circle the reply that comes closest to your view of the item.

Each statement is followed by some letters. These letters represent your opinion of the item, as follows:

SD = Strongly disagree

D = Disagree

MD = Mildly disagree

MA = Mildly agree

A = Agree

SA = Strongly agree

Circle the letters that most closely represent your viewpoint.

SD = Strongly Disagree
 D = Disagree
 MD = Mildly Disagree

MA = Mildly Agree
 A = Agree
 SA = Strongly Agree

KEY

D	Very few people can be trusted.	SD	D	MD	MA	A	SA
P	There is not much chance of ever finding real happiness or success in life.	SD	D	MD	MA	A	SA
UU(-)	Man's life on earth has a real meaning and purpose.	SD	D	MD	MA	A	SA
SP	Most of what people say about themselves is just an attempt to hide their real motives.	SD	D	MD	MA	A	SA
IA	I doubt if I will ever find anyone who really understands me.	SD	D	MD	MA	A	SA
SA(-)	It is a lot more enjoyable to work with other people than to work alone.	SD	D	MD	MA	A	SA
D	The world is full of people who will take advantage of you if you give them a chance.	SD	D	MD	MA	A	SA
P(-)	In the long run, things usually work out for the best.	SD	D	MD	MA	A	SA
UU(-)	The average person can usually have a good idea of what the future will be like.	SD	D	MD	MA	A	SA

SD = Strongly Disagree
 D = Disagree
 MD = Mildly Disagree

MA = Mildly Agree
 A = Agree
 SA = Strongly Agree

KEY

V	Don't rush into things: almost everything we do has disadvantages we can't see until it is too late.	SD	D	MD	MA	A	SA
IA	I do not expect much help or praise or sympathy from other people.	SD	D	MD	MA	A	SA
CA	I don't want to have to "fit in" with American society the way it is today.	SD	D	MD	MA	A	SA
D	Nice as it may seem to have faith in other people, it doesn't pay off.	SD	D	MD	MA	A	SA
P(-)	Almost everyone has a good chance of leading a happy and useful life.	SD	D	MD	MA	A	SA
O	I don't have much in common with most of the people I meet.	SD	D	MD	MA	A	SA
V	I am not what most people would call a "decisive" person.	SD	D	MD	MA	A	SA
IA	Most friendships end up with disappointment.	SD	D	MD	MA	A	SA
CA	Most of the things you see on TV or in the papers and magazines are cheap, trashy, and commercial.	SD	D	MD	MA	A	SA
D	To avoid disappointment, a person has to expect the <u>worst</u> of others.	SD	D	MD	MA	A	SA

SD = Strongly Disagree
 D = Disagree
 MD = Mildly Disagree

MA = Mildly Agree
 A = Agree
 SA = Strongly Agree

KEY						
AH	I sometimes daydream about getting back at someone who has insulted or injured me.	SD	D	MD	MA	A SA
O	I am very different from most people, even from some of my close friends.	SD	D	MD	MA	A SA
V(-)	Once I make up my mind about something, I seldom have any doubts about it.	SD	D	MD	MA	A SA
IA	Most people are pretty alone and friendless.	SD	D	MD	MA	A SA
CA(-)	Most Americans lead happy and useful lives.	SD	D	MD	MA	A SA
D(-)	You can count on most people you meet.	SD	D	MD	MA	A SA
AH	I sometimes think how much I hate someone.	SD	D	MD	MA	A SA
O	I will either be a great success or a great failure in life--nothing in between.	SD	D	MD	MA	A SA
V(-)	It's hard for me to understand why some people are always wondering if they did the right thing.	SD	D	MD	MA	A SA
IA	A person should plan his life so that he doesn't have to count on other people; that way he won't get hurt.	SD	D	MD	MA	A SA
CA(-)	We are lucky to live in a country where there is such a high standard of good taste, education and culture.	SD	D	MD	MA	A SA

SD = Strongly Disagree
 D = Disagree
 MD = Mildly Disagree

MA = Mildly Agree
 A = Agree
 SA = Strongly Agree

KEY

D(-)	There are always plenty of people ready to lend a helping hand.	SD	D	MD	MA	A	SA
AH	Sometimes I get so mad at somebody that I could almost kill him.	SD	D	MD	MA	A	SA
O	Only through suffering can a person understand life.	SD	D	MD	MA	A	SA
SC	Sometimes I feel very worthless and inadequate.	SD	D	MD	MA	A	SA
IA	It's almost impossible to find anyone who will accept you for what you are.	SD	D	MD	MA	A	SA
D(-)	If you have faith in your friends, they will seldom disappoint you.	SD	D	MD	MA	A	SA
AH	We often really hate the people we are supposed to love.	SD	D	MD	MA	A	SA
SP	Appearances are usually deceptive; things are not as they seem.	SD	D	MD	MA	A	SA
SC	When I do something wrong, I hate myself for it afterwards.	SD	D	MD	MA	A	SA
SA	I don't care much about "taking an active part in the life of my community."	SD	D	MD	MA	A	SA
D(-)	People are basically good.	SD	D	MD	MA	A	SA
UU	Our lives don't have any real meaning or purpose.	SD	D	MD	MA	A	SA

SD = Strongly Disagree
D = Disagree
MD = Mildly Disagree

MA = Mildly Agree
A = Agree
SA = Strongly Agree

KEY

SP	We can't ever really get to know a person if we just accept him at face value.	SD	D	MD	MA	A	SA
SC(-)	It takes a lot to shake my feelings of self-confidence.	SD	D	MD	MA	A	SA
SA	Trying to work in a group brings mostly trouble: I prefer to work alone.	SD	D	MD	MA	A	SA
P	There is as much pain and misery in life as there is pleasure and enjoyment.	SD	D	MD	MA	A	SA
UU	You can't ever really predict the future; you can never tell what will happen next.	SD	D	MD	MA	A	SA
SP	You can't rely on first impressions; what lies below the surface is usually different.	SD	D	MD	MA	A	SA
SC(-)	I am very glad to be the kind of person I am.	SD	D	MD	MA	A	SA
SA(-)	Life is pretty empty unless you are an active member of some group.	SD	D	MD	MA	A	SA

APPENDIX F: IMAGINAL PROCESSES INVENTORY

SINGER & ANTROBUS

Present Oriented Daydreaming
Future Oriented Daydreaming
Past Oriented Daydreaming

Scoring Key

The three scales were intermingled in the following order: Present, Future, Past, Present Future, Past, etc.

Negatively keyed items are indicated by (-), and are to be reversed.

Score for each scale is the sum of scores for each item in the scale.

We are asking your cooperation in responding to a questionnaire about your daydreams. Everyone daydreams at some time, about events, real or imaginary, relating to his past, present or future life.

Please note that when we use words like "daydreams," we are using popular terminology for which there is no "official" definition. You may have a particular idea of what you mean by a daydream or fantasy. Try to answer these items as they seem most to apply to you. Make a distinction between thinking about an immediate task you are performing, such as working, doing schoolwork, and daydreaming which involves thoughts unrelated to a task you are working on.

DIRECTIONS

Please indicate to what extent each item in the following questionnaire applies to you or is true for you.

5 stands for "very true for me" or strongly characteristic of me."

1 stands for "definitely not true for me" or "strongly uncharacteristic of me."

The middle numbers stand for intermediate degrees between "very true" and "definitely not true."

Please circle the number which, you feel, applies most to you.

1. Definitely not true for me
- 2.
- 3.
- 4.
5. Very true for me

- 1-2-3-4-5 My daydreams always related to events current in my life.
- 1-2-3-4-5 Before going somewhere, I imagine the scene and what I will be doing.
- 1-2-3-4-5 I often daydream about events that happened more than a year ago.
- 1-2-3-4-5 My thoughts are never on things far removed from my present-day problems.
- 1-2-3-4-5 I picture myself as I will be several years from now.
- (-) 1-2-3-4-5 I never think at all about events or scenes of my early childhood.
- 1-2-3-4-5 My present-day concerns are usually reflected in my daydreams.
- 1-2-3-4-5 I am more likely to think about tomorrow than wonder about yesterday.
- 1-2-3-4-5 I daydream more about events that have already happened than about things in the future.
- 1-2-3-4-5 No matter how upsetting, I cannot help but daydream about things I'm worried about right now, rather than picturing a brighter future.
- 1-2-3-4-5 I think about how the "world of the future" will look.
- 1-2-3-4-5 I daydream about the first places in which I lived, the scenery, and the events of my youth.
- 1-2-3-4-5 I am very much concerned with the present in my daydreams.
- (-) 1-2-3-4-5 I never plan where I'll be or what I'll be doing several years from now.
- (-) 1-2-3-4-5 I rarely find myself recalling moments of my childhood.

1. Definitely not true for me
- 2.
- 3.
- 4.
5. Very true for me

- 1-2-3-4-5 My thoughts are about daily activities, rather than tomorrow "bringing something new and exciting."
- (-) 1-2-3-4-5 I do not like to think about what the future will be like.
- 1-2-3-4-5 Events from my childhood recur to me very clearly and with details.
- 1-2-3-4-5 I imagine myself in situations far removed from my day-to-day affairs.
- 1-2-3-4-5 I day dream about what is about to happen.
- 1-2-3-4-5 In my daydreams, I am more likely to "re-live" the past than to look ahead into the future.
- (-) 1-2-3-4-5 I do not think about my day-to-day affairs.
- (-) 1-2-3-4-5 I seldom think about what I will be doing in the future.
- 1-2-3-4-5 I sometimes daydream about people and places I was familiar with when I was younger.
- 1-2-3-4-5 I think about things on a day-to-day basis, rather than thinking about the past or how the future will be.
- 1-2-3-4-5 My thoughts are of the future rather than of the past.
- (-) 1-2-3-4-5 I think more about "here-and-now" than about yesterday.
- (-) 1-2-3-4-5 I daydream more about my hopes for the far future than about my hopes for the present time.
- 1-2-3-4-5 I daydream about what I would like to see happen in the future.
- (-) 1-2-3-4-5 I do not think about scenes from my early years.

1. Definitely not true for me
- 2.
- 3.
- 4.
- 5.

1-2-3-4-5 Details from my day-to-day life are more clear and complete in my daydreams than memories of the past.

1-2-3-4-5 I find myself imagining what I will be doing a year from now.

(-) 1-2-3-4-5 I seldom find myself daydreaming about my younger days.

1-2-3-4-5 I prefer to think about what's happening now in my life and avoid daydreaming about the future.

1-2-3-4-5 I tend to daydream about the events of the coming weeks and months more than of the happenings of the past.

1-2-3-4-5 I think a lot about the past.

APPENDIX G: TIME ATTITUDES INVENTORY

CALABRESI & COHEN

A: Time anxiety

S: Time submissiveness

Below you will find a series of statements which refer to experiences. For each of the questions please state whether you agree or disagree with the statement. Use the following categories:

6. Strongly agree
5. Agree
4. Not sure but probably agree
3. Not sure but probably disagree
2. Disagree
1. Strongly Disagree

- S 1-2-3-4-5-6 I often feel like just killing time.
- A 1-2-3-4-5-6 I avoid people who make demands on my time.
- A 1-2-3-4-5-6 I envy people who can do things on the spur of the moment, without a lot of planning.
- A 1-2-3-4-5-6 It is often hard to keep track of whether something happened a week ago or a few weeks ago.
- A 1-2-3-4-5-6 When I was a child many more things seemed to happen in a year than happen in a year now.
- A 1-2-3-4-5-6 I get almost panicky when I don't have enough time.
- A 1-2-3-4-5-6 It upsets me when I have to postpone things I planned.
- A 1-2-3-4-5-6 I hate to make any sort of definite plans weeks or months in advance.
- S 1-2-3-4-5-6 I am almost never late for work or an appointment.
- A 1-2-3-4-5-6 I find waiting in line, even for a short time, very annoying.
- A 1-2-3-4-5-6 I would rather see a TV play about the olden times than a play that takes place now.
- A 1-2-3-4-5-6 When I am by myself, my thoughts often drift back to the past.
- A 1-2-3-4-5-6 I find it difficult to keep track of time when I can't keep my usual routine.
- A 1-2-3-4-5-6 It makes me a little uncomfortable to think about my future.

6. Strongly agree
5. Agree
4. Not sure but probably agree
3. Not sure but probably disagree
2. Disagree
1. Strongly Disagree

- A 1-2-3-4-5-6 Looking back at my life I don't know where all the years went.
- A 1-2-3-4-5-6 Twice a year, the change to and from daylight saving time throws me off and it takes a while for me to get used to it.
- A 1-2-3-4-5-6 The mementos I feel more like my true self are when my mind is full of thoughts of my past and future.
- S 1-2-3-4-5-6 I would be lost without a watch.
- S 1-2-3-4-5-6 If the only way I can get to an appointment is by rushing, I'd rather be late.
- A 1-2-3-4-5-6 When you are waiting, time seems to just drag on and on.
- S 1-2-3-4-5-6 I often put things off to the last minute and then rush to get them done on time.
- S 1-2-3-4-5-6 I would rather come early and wait rather than be late for an appointment.
- S 1-2-3-4-5-6 I like to have a definite schedule and stick to it.
- S 1-2-3-4-5-6 It is important to make good use of your time.

APPENDIX H: MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE, M
GOUGH-SANFORD RIGIDITY SCALE, G

Personal Reaction Inventory

Listed below are a number of statements concerning personal attitudes and traits. Read each item and state whether the statement is true or false as it pertains to you personally. If true, circle T; if false, circle F.

- M T ... F 1. I have never felt that I was punished without cause.
- M T ... F 2. I have never disliked anyone.
- G T ... F 3. I find it easy to stick to a certain schedule, once I have started it.
- M T ... F 4. On a few occasions, I have given up doing something because I thought too little of my ability.
- M T ... F 5. I am sometimes irritated by people who ask favors of me.
- G T ... F 6. I dislike to change my plans in the midst of an undertaking.
- M T ... F 7. I sometimes feel resentful when I don't get my way.
- M T ... F 8. No matter who I'm talking to, I'm always a good listener.
- M T ... F 9. On occasion I have had doubts about my ability to succeed in life.
- G T ... F 10. I believe that promptness is a very important personality characteristic.
- M T ... F 11. I always try to practice what I preach.
- M T ... F 12. I don't find it particularly difficult to get along with loudmouthed obnoxious people.
- M T ... F 13. Before voting, I thoroughly investigate the qualifications of all the candidates.
- G T ... F 14. I am often the last one to give up trying to do a thing.

- G T ... F 15. I often become so wrapped up in something I am doing that I found it difficult to turn my attention to other matters.
- G T ... F 16. I often think it is usually wise to do things in conventional ways.
- M T ... F 17. I am always careful about my manner of dress.
- M T ... F 18. I have never been irked when people expressed ideas different from my own.
- G T ... F 19. I never miss going to church (or synagogue).
- G T ... F 20. I am a methodological person in whatever I do.
- M T ... F 21. I have almost never felt the urge to tell someone off.
- M T ... F 22. I have never deliberately said something that hurt someone's feelings.
- M T ... F 23. I sometimes try to get even rather than forgive and forget.
- G T ... F 24. I usually check more than once to be sure that I have locked a door, put out the light, or something of the sort.
- M T ... F 25. I like to gossip at times.
- G T ... F 26. I try to follow a program of life based on duty.
- G T ... F 27. I am always careful about my manner of dress.
- M T ... F 28. If I could get into a movie without paying and be sure I was not seen I would do it.
- M T ... F 29. I never resent being asked to return a favor.
- M T ... F 30. There have been times when I felt like rebelling against people in authority even though I knew they were right.
- G T ... F 31. I prefer to stop and think before I act even on trifling matters.
- G T ... F 32. I have a work and study schedule which I follow carefully.

- M T ... F 33. When I don't know something, I don't at all mind admitting it.
- M T ... F 34. I'm always willing to admit when I make a mistake.
- G T ... F 35. I do not enjoy having to adapt myself to new and unusual situations.
- M T ... F 36. I would never think of letting someone else be punished for my wrongdoing.
- G T ... F 37. I always finish tasks I start, even if they are not very important.
- M T ... F 38. My table manners at home are as good as when I eat out in a restaurant.
- M T ... F 39. There have been occasions when I took advantage of someone.
- G T ... F 40. I always put on and take off my clothes in the same order.
- G T ... F 41. I prefer work that requires a great deal of attention to details.
- G T ... F 42. There is usually only one best way to solve most problems.
- M T ... F 43. I never hesitate to go out of my way to help someone in trouble.
- G T ... F 44. I often find myself thinking of the same tunes or phrases for days at a time.
- G T ... F 45. I usually find that my own way of attacking a problem is best, even though it doesn't always seem to work in the beginning.
- G T ... F 46. I have never done anything dangerous for the thrill of it.
- M T ... F 47. I sometimes feel that when people have a misfortune they only got what they deserved.
- M T ... F 48. There have been occasions when I felt like smashing things.
- M T ... F 49. There have been times when I was quite jealous of the good fortune of others.
- M T ... F 50. I can remember "playing sick" to get out of something.

- M T ... F 51. It is sometimes hard for me to go on with my work if I am not encouraged.
- M T ... F 52. At times I have really insisted on having things my own way.
- M T ... F 53. I am always courteous, even to people who are disagreeable.
- M T ... F 54. I never make a long trip without checking the safety of my car.

APPENDIX I: PERSONAL DATA INVENTORY

PERSONAL DATA INVENTORY

Assumed Name _____ Number _____ Sex _____

Date of Birth _____
month day yearMother's level of education _____
highest grade or degree completedFather's level of education _____
highest grade or degree completed

Father's occupation _____

Mother's occupation _____

Religious identification _____

How strong is your religious faith? 1.....Very strong
 2.....Moderately strong
 3.....Occasional interest
 4.....Very mild
 5.....Not at all

Number of older brothers _____ older sisters _____

Number of younger brothers _____ younger sisters _____

Ethnic origin: Check one:

Black _____

White _____

Puerto Rican _____

Other _____

College standing: Check one:

() Freshman () Sophomore () Junior () Senior

Major: _____ (if decided); or () undecided

Career choice: _____ (if decided); or () undecided

APPENDIX J: MATRIX OF PRODUCT-MOMENT CORRELATIONS AMONG
THE FOLLOWING VARIABLES:

1. Time Metaphors Test
2. Imaginal Processes Scale: Present Daydreaming
3. Imaginal Processes Scale: Future Daydreaming
4. Imaginal Processes Scale: Past Daydreaming
5. Time Flexibility
6. Time Anxiety
7. Time Reference Inventory: Total Present Responses
8. Time Reference Inventory: Total Past Responses
9. Keniston Total Alienation Trust
10. Rotter Scale for Interpersonal Trust
11. Locus of Control, Rotter
12. Breskin Rigidity Test
13. Marlowe-Crowne Social Desirability Scale
14. Maudsley Neuroticism Test
15. Lack of Religious Faith

$r = .30, p < .05; r = .39, p < .01$

CORRELATION MATRIX

1	0.47412														
2	-0.01925	0.40645													
3	0.29222	-0.33251	0.54161												
4	-0.26193	0.04413	-0.36095	0.44674											
5	-0.02595	0.12883	-0.02300	0.14079	0.69567										
6	0.14268	0.22857	-0.33874	-0.19896	0.59664	0.72885									
7	-0.10923	0.03490	-0.18974	0.08485	0.06994	0.26624	0.25103								
8	0.31469	-0.02941	-0.14577	-0.06339	0.20839	0.34900	-0.07014	0.48855							
9	-0.03087	0.18493	-0.29333	0.32569	0.28035	0.43694	0.12632	0.31912	0.51656						
10	0.03488	0.05768	0.02773	-0.23953	-0.21515	-0.02008	-0.19364	-0.20786	-0.41682	0.47					
11	-0.17345	0.24750	0.19043	0.11687	0.37498	0.10772	-0.02821	-0.15148	0.11883	-0.14					
12	0.26680	-0.24420	0.02681	0.26487	0.03678	0.19610	-0.17965	0.19126	-0.29217	-0.29					
13	0.05371	0.02079	-0.15147	0.12784	-0.31014	-0.30325	0.12493	-0.06101	-0.15946	0.27					
14	0.06740	0.03025	-0.02024	0.07130	0.37396	0.34872	0.12871	0.03342	0.30848	0.02					
15	0.21339	0.17235	-0.24556	-0.24716	-0.21531	0.28322	0.03610	0.40479	0.14216	0.20					
11	0.43897														
12	0.02819	0.43733													
13	-0.39119	-0.18351	0.54093												
14	0.16040	0.00855	-0.32028	0.39794											
15	-0.20551	-0.04087	-0.17940	0.20431	0.62657										

APPENDIX K: MATRIX OF PRODUCT MOMENT CORRELATIONS AMONG
THE FOLLOWING VARIABLES:

<u>NO.</u>	<u>LABEL</u>	
1.	MCSD:	Social Desirability Scale, Marlowe-Crowne
2.	GSRs:	Rigidity Scale, Gough-Sanford
3.	DIS:	Distrust, subscale, Keniston Alienation Scale
4.	PESS:	Pessimism, subscale, Keniston Alienation Scale
5.	UU:	Unstructured Universe, Keniston Alienation Scale
6.	SP:	Subspection, subscale, Keniston Alienation Scale
7.	IA:	Interpersonal Alienation, subscale, Keniston Alienation Scale
8.	SA:	Social Alienation, subscale, Keniston Alienation Scale
9.	VAC:	Vacillation, subscale, Keniston Alienation Scale
10.	CA:	Cultural Alienation, subscale, Keniston Alienation Scale
11.	OUT:	Outsider, subscale, Keniston Alienation Scale
12.	AH:	Avowed Hostility, subscale, Keniston Alienation Scale
13.	SC:	Self-contempt, subscale, Keniston Alienation Scale
14.	KTA:	Keniston Total Alienation Scale
15.	TR:	Interpersonal Trust, Rotter
16.	TMT:	Time Metaphors Test, Knapp & Garbutt
17.	CCTA:	Time Anxiety, Calabresi & Cohen
18.	CCTS:	Time Submissiveness, Calabresi & Cohen

19. SAPR: Present Daydreaming, Singer & Antrobus
20. SAF: Future Daydreaming, Singer & Antrobus
21. SAPA: Past Daydreaming, Singer & Antrobus
22. PAP: Past pleasant, Time Reference Inventory, Roos & Albers
23. PAU: Past unpleasant, Time Reference Inventory
24. PAT: Past Total, Time Reference Inventory
25. PATE: Past Extension, Time Reference Inventory
26. PRP: Present pleasant, Time Reference Inventory
27. PRU: Present unpleasant, Time Reference Inventory
28. PRT: Present Total, Time Reference Inventory
29. FP: Future pleasant, Time Reference Inventory
30. FU: Future unpleasant, Time Reference Inventory
31. FT: Future Total, Time Reference Inventory
32. FTE: Future Extension, Time Reference Inventory
33. Sex: 0 = F; 1 = M
34. Age:
35. CATH: Catholic
36. PROT: Protestant
37. JEW: Jewish
38. R.C.: Religious Faith; 1 = very strong; 5 = not at all
39. B.O.: Birth Order; 1 = first or only; 0 = others
40. SES: Socio-economic status; 1 = highest; 5 = lowest
41. CAREER: Career commitment = 1; Uncommitted = 0
42. OTHER: Agnostic, atheist or no religion

$r = .19, p < .05; r = .25, p < .01$

CORRELATIONS OF X		***PAGE 2 OF MATRIX R *** BLANK IF ABS VALUE LESS THAN .19																
PCSITICA		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
LABEL	SAPR	SAPA	PAU	PATE	PRU	FP	FT	SEX	CAT									
	SAF	PAP	PAT	PRP	PRT	FU	FTE	AGE										
1	PCSC		21															
2	GSRS		27															
3	CIS																	
4	PESS			29														
5	LU		-26										-20	-24				
6	SF												-31					
7	IA																	20
8	SA	19																
9	VAC																	
10	CA																	-21
11	CUT									21	20		-21					
12	AH		-24										-19	-24				
13	SC			21									-23					
14	KTA		-22	24									-25	-19				19
15	TP															21	26	
16	TP1																	
17	CC1A			27														
18	CC1S																	
19	SAPR	100	-22		19				22		22	-35		-38				
20	SAP	-22	100		-27				-25		-21		40		36			
21	SAPA			100														
22	PAF	19	-27		100		40		-29			-47		-26	-19			28
23	PAL				100	79			27	-81	-43		-38	-25			19	
24	PAT		-25		40	79	100			-62	-43	-35	-34	-43			26	
25	PATE							100			22						45	19
26	PRP	22	-21		-29				100	-22	55	-71		-61				
27	PRL					-81	-62	22	-22	100	58		-22					
28	PRT	22				-43	-43		55	58	100	-44	-22	-63				
29	FP	-35	40		-47		-35		-71		-44	100		75				-21
30	FU					-38	-34		-22	-22			100	51	25			
31	FT	-38	36		-26	-25	-43		-61		-63	75	51	100				
32	FTE				-19								25		100			
33	SEX															100		
34	AGE					19	26	45									100	
35	CAT				28			19				-21						100
36	PRCT							31									29	
37	JEB					-27	-26	-30			23		25				-32	-50
38	R.C.						23											
39	B.C.																	
40	SES					-20				24								25
41	CAREER		19										-20		-20			
42	CTHER					44	28			-33	-29	19	-22					-27

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