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EXPLORATIONS IN THE
SOCIAL CONSTRUCTION OF TEMPORAL THOUGHT

by

PHILIP J. LEONHARD-SPARK

A dissertation submitted to the Graduate
Faculty in Sociology in partial fulfillment
of the requirements for the degree of Doctor
of Philosophy, The City University of New York

1976

This manuscript has been read and accepted for the Graduate Faculty in Sociology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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CHAPTER ONE

CONSPECTUS

Human beings have a unique relationship to the passage of time. Instead of being locked into the Here and Now of sensory perception, we reflect upon and give meaning to the temporal dimension of our existence. Instead of succumbing to the continual threat the passage of time poses for the alteration and potential destruction of the material and social conditions upon which our lives depend, we are often able to regulate and give pattern to the temporal successions and durations that constitute those conditions. Through our capacities to impose pattern and meaning upon the manifestations of the passage of time, the drama of human life is extended outward in time, place, and significance beyond what is given by our own biology and the environment in which we live.

I

Sociology and the Temporal Nature of Man

Although limited in scope and uneven in development, sociological interest in the temporal nature of man has been persistent. Since the beginnings of the discipline, sociologists have shared with philosophers, anthropologists, and psychologists a recognition of the ever-intriguing and

perplexing role played by temporal phenomena in human thought and conduct. As Cottle and Klineberg have recently stated, ". . . no student of human behavior can afford to ignore the manner in which men and women perceive the dimension of time" (1974:ix).

Time is one of the basic dimensions along which the members of society experience, think about, and orient themselves to the social world. The relationships between temporal phenomena and social interaction, social organization, and social change are problems whose investigation are what Georges Gurvitch and many other contemporary sociologists have described as "absolutely primary to sociology" (1964:11).

Evidence of this importance is found in the recent emphasis a number of social theorists have given to examining the temporal dimensions of social life. Wilbert E. Moore (1963) has investigated the role temporal phenomena play in the organization of social activities. For Moore, time in both its subjective ideational and objective material manifestations gives order to social life and places boundaries around our thoughts and actions.

In a somewhat similar vein, Jiri Kojala (1969) has demonstrated the importance of the repetitive patterns of successions and durations in the understanding of how social activities, relationships, and situations are maintained over time.

Gurvitch's own work has broadened our awareness of the fact that there are a "multiplicity of social times." Time manifests itself in social life in many ways and has important consequences ranging from the societal level down to that of role-playing in specific social milieux. He also argues for a sociology of knowledge approach to how people become aware of, symbolically express, and impose patterning upon the passage of time. With such an approach, the structure and content of thoughts about and orientations to time, the past, and the future are viewed as among the existentially conditioned mental phenomena typically shared among participants in a social milieu.

Problem and Orientation of this Inquiry

This study explores one aspect of the complex relationship that exists between the social and temporal dimensions of human experience, thought, and conduct. We approach this general problem by considering the more specific question of how participation in the social world affects the way people think about and orient themselves to the future. In particular we examine how our anticipations and expectations about the nature of things to come are related to the many and diverse realms of social experience in which we participate.

A major focus is the identification and empirical assessment of the social factors determining the structure and content of people's images of the future. We argue

that the ways people think about and orient themselves to the future are, to a previously unrecognized extent, dependent upon the manner in which their social participation provides the structure and content of their images of the future.

We view people's images of the future as a type of existentially conditioned knowledge "created" as part of the ideational process that underlies the construction of social action. In presenting and assessing this thesis, we consider the relationships among:

- (1) the nature and types of concerns people have about their future;
- (2) the nature and types of social milieux from which they derive the content of their temporal experiences; and
- (3) the ideational process by which they provide a temporal dimension to their social activities, relationships, and experiences.

Our examination of the relationships among these factors takes place on three levels. On the theoretical level, we are interested in both the general relationship between social life and temporal thought and in identifying the specific characteristics of social action, social structure, and knowledge of the future which permit us to examine their relationship. On the methodological level, we consider the problems entailed in doing empirical research on the ways people think about the future. On the

empirical level, we explore the nature of several properties of people's future concerns and the manner in which they reflect the existential social milieux in which they participate.

This Conspectus provides an overview and description of the general framework around which these several types of inquiries are oriented. Here we present the basic assumptions and identify the major conceptual tools used in our study. As such, the Conspectus is a kind of map designed to assist the reader during his journey through the chapters to follow. Like many maps, it functions both as an itinerary and as a set of reference points for locating where one is during the journey. Finally, and again like a map, the Conspectus gives only a basic idea of what one can expect to encounter in the journey itself. While all the places on the map will be visited, only major points of interest will be toured in depth.

II

Overview of the Conceptual Framework

Conceptual Development

A basic and, as yet, unanswered question facing any sociological inquiry into the social factors affecting how people think about and orient themselves to the future is that of the nature of the "futures" to be explained. Just what are future concerns? What are their basic properties? In what form are they found? In what ways are they related

to thought and action? How do they develop? What consequences do they have for the structure and process of the social milieux in which we participate?

Finding answers to these questions requires the development of an adequate conceptualization of the nature and types of concerns people have about the future. However, as will be evident at many points in this study, there exists a state of conceptual anarchy in the study of subjective temporal experience. Most researchers have failed to explicate and specify even the most basic concepts they use.*

Even more disconcerting is that despite an extensive review of the psychological, anthropological, and sociological literature on subjective temporal thought and experience, we could not locate a formal discussion of the nature of the content of people's concerns about the future. Yet, it is by means of their socially derived content that future concerns take on the properties which make them such important factors in the understanding of social action, social structure, and social change. Only by understanding the content of the futures toward which people are oriented can we explain how they arise and how people think about and relate their conduct to them.

*For example, in a recent extended review and statement of the factors relevant to the development of a "sociology of the future," Bell and Mau (1971:23) contend that only minimal attention should be given to developing a formal theoretical definition of what is meant by images of the future.

In developing the statement of the nature and types of temporal concerns presented below, we have drawn upon the thought of several social theorists not usually identified with the study of subjective temporal experience. The underlying theoretical assumptions, perspectives, and orientations leading to the development of our statement derive from the discussions of the nature of social action and its relation to social knowledge found in the writings of George Herbert Mead and Alfred Schutz and from the sociology of knowledge perspectives of Stanley Taylor (1956) and Berger and Luckmann (1967).

Among modern social theorists, only Mead and Schutz have devoted significant attention to the social factors affecting subjective temporality. Further, while many contributors to the sociology of knowledge have dealt with problems related to temporal thought, these mentioned just above have been most helpful in formulating a conceptualization of future concerns as a type of existentially conditioned social knowledge, that is, as ideas with a socially derived content.

In our formulation of this explanation, we share with these five theorists three basic assumptions:

- (1) human actors are active agents in the construction of the social realities in which they participate;
- (2) the locus and source of subjective temporality can be found in the actor's construction of an action-event to deal with the problems, interests, and

perceptions (matters-at-hand) presented to him by that social reality;

- (3) the structure and content of knowledge is socially determined through the existential conditions of the actor as a participant in a social reality which is segmented in terms of experience and patterned into persistent and repetitive sequences of culturally standardized and socially structured events and experiences.

There is one further type of assumption evident in our statements at several points in the discussions and arguments presented below. Most contemporary writings taking a socio-cultural perspective on the subject of temporality take the position that time conceptions are cultural conventions. There is a considerable range and diversity of ways in which different cultural groupings give meaning and expression to the notion of time. It is therefore necessary to recognize that the characteristics given to time in Western culture (as linear, continuous, irreversible, and progressive) define only one among the several types of conceptions found cross-culturally.

While our analytical approach in this study generally takes as a given these characteristics of the Western conception of time, this represents a methodological strategy chosen for its relevance to the American college population in which we have drawn our sample. However, in both

the theoretical analyses and the assessments of our empirical findings, consideration is given to the potential impact of using this assumption. This is particularly the case in considering the generalizability of the results and the extent to which these several characteristics of the Western time conception are reflected in responses given to the several tests and measures used in this study.

Nature and Types of Future Concerns

We define the term future concerns as the contents of people's images and conceptions of the future. By future concerns, we refer to the concrete anticipations and expectations people have about the course of events leading up to some future state of affairs.

The nature and types of such future concerns constitute the major focus of this study. They are ideas people have about the nature of things to come. The knowledge we assume for the future, expressed in the form of our ideas of future concerns, has as its content the many and diverse objects, events, and experiences which have meaning and significance to people in the course of their lives.

Human concerns are typically temporally-based concerns: selective assessments and interpretations we make of the past and future as a means of dealing with our problems, interests, and perceptions in the present. Such temporal concerns find expression as the patterned content

of the ideational "pasts" and "futures" toward which we orient our conduct.

The development of a sociological explanation for the ways people come to think about and orient themselves to their future concerns rests on the identification of the more general properties of temporal concerns which share two important characteristics. First, each of the properties must be capable of being located within a sociologically-oriented theoretical framework. Second, each property must be capable of being empirically assessed as to its relationship with the social factors that influence its variations.

There are at least seven basic and variable properties of temporal concerns which share these two characteristics and therefore meet the requirements necessary for demonstrating their sociological determination.*

- (1) Temporal concerns have reference to different spans and points ahead in the future or backward into the past. As such, they can be viewed as varying along a temporal extensivity dimension ranging outward

*Providing support for this assertion will occupy our attention throughout this study. Whether these constitute an exhaustive set of properties of future concerns is not at issue here. There may be other properties of future concerns which are not open to sociological explanation. More importantly, it suffices for the purpose of our exploratory inquiry only to demonstrate that these seven are theoretically significant properties for which empirical indicators can be developed to show their relationship to social factors. That additional properties, also open to sociological explanation, may be discovered, is granted as possible.

from the present to even beyond the individual's lifespan.

- (2) Both past and future concerns are always hypothetical in nature, referring to objects, events, and experiences which are only probabilistic as to their actual occurrence. As such, they are expressed with varying degrees of clarity, certainty, and assuredness.
- (3) There is variation in the extent to which temporal concerns are shared among the participants in a social milieu. Such sharing takes the form of giving common meaning to some expected state of affairs and is a necessary condition for collective action.
- (4) Such shared temporal concerns also vary in terms of what might be referred to as their social scope: that is, the extent to which they involve the actor only, the actor and those significant to him, or some larger social collectivity with which the actor identifies.
- (5) Temporal concerns have an evaluative component which is reflected in the importance people give to them. This evaluative component has much to do with the affective response people make to some significant expected state of affairs.
- (6) A person's temporal concerns are constantly changing as the passage of time brings about new

perspectives on the future, the realization of what was once only anticipated, and an ever-increasing distance from the point of past memories and experiences.

- (7) Temporal concerns rarely find their way into human thought as isolated and independent ideas. Most are integrated into more complex ideational forms we shall refer to as temporal images and conceptions. As such, concerns can vary in the extent to which they are patterned together, or integrated, into these more complex and abstract ideational forms.

Temporal Images and Conceptions

Our temporal concerns can take several forms, ranging from the elemental and concrete to the complex and abstract. In their most basic and concrete form they are, according to our conceptual scheme, ideas. More complex forms of concerns we call images. The most complex forms are referred to as conceptions. For example, a father's expectation of the birth of his child is an idea about a future concern. However, as a consequence of an ideational process we refer to as temporal patterning, such ideas can take the form of more complex and abstract sets of inter-related future concerns relevant to one or another of a person's several realms of social participation and experience. In other words, ideationally patterned ideas become

images, and images are the less abstract components of conceptions.

We refer to the more complex sets of meaningfully integrated concerns people expect as images of the future. Our thoughts about our future family life, health, occupational aspirations, retirement, and the like, are of this type. For example, the total complex of ideas the father has about his future family life can be referred to as his image of his future family life. It would include not only the expected birth of his child, but all the plans, projects, and expectations he has with regard to the activities, relationships, and situations related to his family.

Defined as meaningfully integrated complexes of future concerns, images of the future take on the properties of the concerns out of which they are constituted. Important here is that they are socially shared notions, taking the form of partially-equivalent standards of apprehension about some expected state of affairs. In addition to this shared cognitive aspect, they are also value-based normative orientations, exercising control over present conduct with reference to the realization of the expected state of affairs.

In turn, images of the future are less complex and abstract than conceptions of the future. Such holistic conceptions of the nature of things to come only infrequently occupy our interest and attention in the course of everyday life. Yet, each of us, upon reflection, has some

more or less integrated conception of how the many different plans, projects, hopes, fears, goals, and aspirations that extend across the many aspects of our social experience coalesce to form what might be termed a conception of the future-in-general.

To summarize, we regard future concerns as ideational phenomena having seven interrelated properties open to sociological assessment. Temporally-based concerns are seen as arising out of the apperceptive process of temporal patterning. By means of this apperceptive process, temporal ideas are not only constituted, but also integrated into more abstract and complex ideational structures referred to as temporal images and conceptions.

Life Spheres as Existential Social Milieux

The structure and content of people's future concerns are shaped by their existential social milieu. At any stage, as well as throughout the course of their lives, human actors participate in a multiplicity of social milieu. Although we are primarily concerned with the experiential nature of social milieu, their objective, structural aspects are also of critical importance. First, the structural differentiation of social activities, relationships, and situations into several diverse milieu of social participation results in the segmentation of an actor's social experience at any point in time. Second, the persistent and repetitive patterns of events that

characterize a social milieu provide the participants with a temporal or diachronic arrangement of their social experience over the course of their lives.

The milieux of social participation impose a structure upon social experience. This structure can be shown to reflect the synchronic segmentation and diachronic arrangement of the social activities, relationships, and situations from which this experience is derived. We will examine the effects of the synchronic segmentation of social experience into qualitatively differentiated realms of experience in terms of what we refer to as the life spheres (e.g., the family, work, and friendship). While social milieux vary in their scope and complexity, we have found this intermediate level of life spheres most appropriate for examining the effects of existential social conditions on the ways people think about and orient themselves to their future concerns.

With regard to these three life spheres, a major point of interest will be the diachronic arrangement of social experiences within them. We will discuss this diachronic arrangement in terms of what we refer to as tracks and passages. A track is defined as a culturally standardized and socially structured sequential pattern of social activities, relationships, and situations which is persistent and repetitive within a social milieu, like a life sphere. Such sequential patterning provides for the diachronic arrangement of social experience. Passages

along such tracks by the participants in a life sphere can be regarded as more or less institutionalized, depending on the nature of that life sphere. By the institutionalization of a track we refer to the extent to which role-playing and role-taking experiences within a life sphere are scheduled, regularized, and prescribed.

In sum, two basic characteristics of life spheres as existential social milieux are relevant to the explanation of variations in the properties of people's ideas, images, and conceptions of the future. Life spheres give an actor's social experience a segmented quality and a sequential patterning. That is, they present to the actor a multiplicity of social experiences which are both diverse at any point in time and transverse over time.

The relationship between the socio-culturally derived segmentation and sequential patterning of social experience and the structure and content of images of the future is a main focus of the empirical sections of this study. However, there remains the problem of accounting for why a relationship exists between the existential social milieu in which an actor participates and the structure and content of his future concerns.

The Future-Oriented Nature of Social Action

Perhaps the most difficult problem facing any attempt to argue that images of the future find their basis in existential social conditions is that of explaining how

these two types of phenomena are related. As we shall see below, most previous efforts have started from the perspective of the individual as a unique personality with more or less stable predispositions to consider the future in a particular way. While there are both innate and learned psychological capacities which enable us to think about the future, the approach taken here represents a sharp departure from this prevailing psychologistic perspective. In contrast, we view ideas, images, and conceptions of the future as emerging out of the process of social action.

Whether considered in terms of its goal-directedness, as social role-playing and role-taking, or as conduct engaged in with others, social action has always been implicitly, if not explicitly, viewed by sociologists as entailing the actors' considerations for some future state of affairs.

An action-event is an actor's purposive conduct, constructed to bring about a future state of affairs regarded as more desirable than his present state of affairs as this is defined by the problems, interests, and perceptions which are his current matters-at-hand. Both role-playing and role-taking behavior entail the expression of culturally-defined and socially-derived expectations about events and experiences. To play or take a social role is not only to behave, but, also, to expect oneself and others to behave in a prescribed manner. Social action is frequently conjoint action. People engaging in any

common social activity must have some degree of consensus among themselves not only about what has happened and what is going on now, but, also, about what will happen next. Without at least a minimal sharing of expectations, plans, and other expressions of future concerns, any ongoing pattern of social interaction would come to an end.

Social action, as a subjective ideational phenomenon, can be thought of as taking place within a frame of apprehension by which the actor interprets and orients himself to his shared stock of knowledge-at-hand; the problems, interests, and perceptions common to his social milieu; and his anticipations, plans, and projects for the future.

We use the term frame of apprehension to refer to the total structure of the ideational content of an ongoing action-event. This frame of apprehension has a temporal aspect to it which arises as a result of the actor's capacity to engage in what we call the apperceptive process of temporal patterning. It is within the frame of apprehension of ongoing action-events that we locate the actor's temporal ideas, images, and conceptions. As such, they are viewed as the properties of actions, not personality characteristics of the actors themselves.

Temporal Patterning and the Apprehensive Frame of Social Action

We use the term temporal patterning to refer to the primary ideational processes by which a social actor "grasps" his temporal concerns and experiences (actual,

remembered, and anticipated) for social action. This apperceptive process is one of classifying, assessing, interpreting, and integrating temporal concerns into the frame of apprehension of an ongoing action-event. By means of temporal patterning, the things, people, events, and situations that are the objects of our thoughts are arranged into a more or less subjectively meaningful and coherently patterned content.

It is possible to isolate and identify three basic ways in which temporal patterning takes place. We refer to them as the actor's ways of orienting to, binding, and marking his temporal concerns in the course of the construction of an ideational frame of apprehension of an ongoing action-event. Respectively, these three provide the orientational, integrative, and indicative patterning that constitute the temporal aspect of the frame of apprehension.

By means of orienting, the frame of apprehension of an action-event comes to have a temporal period emphasis and an extensive span of concerns. The binding, or integrative, way of patterning provides an action-event with a particularistic and subjectively meaningful coherence in and over time. Marking gives action the properties of standardization and indication so necessary for creating and maintaining the complex interdependencies of collective activities.

Together, these three ways of temporal patterning provide the structure to and the "connectives" among and between the concerns which are the content of the temporal images and conceptions. The nature of temporal patterning is a topic worthy of its own extensive and separate analysis. Each way of patterning is reflected in some form on the individual, group, institutional, and socio-cultural system levels into which social life can be analytically differentiated. Further, each of the three ways can also be examined in terms of its empirical inter-relatedness with the others.

While we explore a number of these characteristics of temporal patterning, our focus is on the orientational and integrative patterning of typical personal concerns about the future in just three life spheres. With regard to orientational patterning, we will consider several matters related to the temporal period "location" and distance span of future concerns. Integrative patterning, or binding, of temporal concerns will be examined in terms of the self-perceived clarity of images and conceptions of the personal future.

In sum, we view ideas, images, and conceptions of the future as part of the frame of apprehension of ongoing action-events. It is the relation of such forms of future concerns to the apperceptive processes in social action which gives them the characteristics by which we can assess their social derivation and understand their functions both

for the actor as a self and for the processes of social organization and change in which he participates.

Recapitulation of Central Theoretical Argument

Participation in a variety of social milieux over the course of the life cycle provides people with diverse, segmented, and changing social experiences and a shared stock of knowledge-at-hand. These social milieux are characterized by their own qualitatively distinctive patterns of social activities, relationships, and situations.

Every participant has a particularistic position and perspective with regard to the ongoing pattern of a social milieu. This position can be defined as his existential position in that social milieu and it determines for him the nature and types of problems, interests, and perceptions (matters-at-hand) which he will encounter.

These matters-at-hand define a number of typical and recurring concerns about objects, events, and experiences lying out of hand in the past and in the future. Social action is conduct in reference to such matters-at-hand. Such conduct is governed by an ideational process of apperception by which the actor uses his basic psychological capacities, stock of knowledge-at-hand, and perspective on his social milieu to define those temporal concerns relevant to his matters-at-hand.

Part of this apperceptive process takes the form of the temporal patterning of those concerns into meaningful,

relevant, and coherent images and conceptions of the future states of affairs to be constituted by the actor as a resolution of his matter-at-hand. The consequence of that apperceptive process is a frame of apprehension for the action-event. This frame contains within it an image of the future which serves as a sceme of orientation and interpretation relevant to the guidance of conduct in reference to the matter-at-hand.

As such, images and conceptions of the future derive their structure and content from the temporal patterning of concerns defined by matters-at-hand encountered by social actors in the course of their particularistic participation in the ongoing activities, relationships, and situations that characterize social milieux. Put more simply, we come to think about and orient ourselves to the future in different ways because our social participation defines for us different concerns about the future and different perspectives on those concerns.

III

Data Sources for the Empirical Analyses

Our theoretical discussions are greater in scope than our empirical investigations. This imbalance is especially the case when reporting the results of an exploratory investigation. For here we present not only tentative answers to the questions prompting our inquiry, but, also, the new questions and still more speculative answers emerging along the way.

Our empirical investigations drew primarily upon a body of data collected from a sample of college students using the Temporal Inventory Questionnaire (TIQ). The development of the TIQ was an integral part of the process by which we attempted to gain a deeper understanding of the ways social factors influence temporal thought. In this section of the Conspectus, we take the opportunity to describe: (1) the pilot studies leading to the construction of the TIQ; (2) the types of data available; (3) our reasons for selecting a college student sample; and (4) the time and manner of administering the TIQ to these students.

Development of the Temporal Inventory Questionnaire

Selecting and developing test items for the TIQ was the result of two related efforts. The first was the intensive review of the methodological problems associated with previous studies of this type (reported here in Chapter Four). The second was what we learned from a series of pilot studies.

In both cases, our goal was to develop methods of empirically examining our theoretical assumptions. We sought a balance between new and, as yet, untested measures, and older, more standardized test items. This balance would permit comparisons with previous studies and provide checks on the reliability and validity of the new measures. In addition, it required an extensive pretesting of the new measures as well as an assessment of the more standardized

test items for their applicability to the matters we wanted to study.

Some of the pilot studies were pre-tests of specific question items to be included in the TIQ. These small pre-tests are discussed below in conjunction with the analysis of the particular items. Two other pilot inquiries were designed to open up new areas for inquiry. These are described here.

The first of the pilot studies was a series of semi-structured interviews with eleven college students using a schedule covering various aspects of their past experiences, present problems and interests, and their expectations for the future. In particular, we asked about the degree of continuity and discontinuity they experienced between their past and present life situation and the relationships they imagined between their present and the events and experiences they anticipated in the years ahead. In addition, we included an early version of our Time Machine Test (TMT) and questions about the use of various types of time cues as well as about the allocation of time to various activities. The interviews lasted from a half hour to an hour-and-a-half, with most going for about an hour.

These data were analyzed for the consistency among each student's response to the TMT, Semantic Differentials, and the qualitative responses to questions about life experiences and expectations. Analysis of the responses to questions about images of the personal future and ways of

planning for the realization of goals led us to formulate a number of question items focusing on images of family, friendship, and work futures, and on the students' various experiences, decisions, and expectations in these life spheres.

This early qualitative approach to studying people's future concerns opened up possibilities for more systematic quantitative research. However, we have drawn on these interviews again and again in interpreting our results and for examples. Most importantly, the results centered our attention on the nature of the apperceptive processes of orientational and integrative temporal patterning and showed us that ideational pasts and futures have a substantive content that must be considered in any investigation of how social factors affect subjective temporality.

The second major pilot study was an extensive pre-test of many of the items that went into the final questionnaire. The sample consisted of 114 undergraduate students. Apart from standard questions regarding social background, a number of questions covered various aspects of the subject's family life (parents' educational levels, presence in home, residence, knowledge of grandparents, orientation toward marriage, etc.). Also included were the TMT and three 24-scale Semantic Differentials using the concepts of Time, My Past and My Future Family Life as the substantive temporal concepts to be rated against the scales.

The purpose of this pre-test was to establish the clarity of the questions and their capacity to make the necessary distinctions among the sample population; to examine potential relationships between these items and the Semantic Differential and TMT responses so that modifications or additions could be made if necessary; and, most importantly, to pre-test and assess each item in the battery of Semantic Differential scales.

As a result of this pre-test, a number of modifications were made in the phrasing and format of individual question items. Preliminary analysis of the results suggested that additional question items be developed. In addition, coding procedures and categories for the TMT responses were established and computer programs selected.

Types of Data Available from the Temporal Inventory Questionnaire

The culmination of these several efforts was the Temporal Inventory Questionnaire. The data available from this instrument can be placed into five basic categories:

1. Social background data on such standard items as age, sex, birthplace, religion, ethnicity, political orientation, parental education, family composition, present marital status, and class in college.

2. Several measures of experiential orientation toward family and informal social relationships and three items designed to assess patterns of continuity and discontinuity from past to present to future in these life spheres.

3. Three major sets of question items dealing with temporal ideas, images, and conceptions: (a) the Time Machine Test, briefly described above; (b) a set of twelve Clarity of Future Life scale items developed by us to measure self-perceived clarity of the future in three life spheres (family, work, and friendships) and for the future-in-general over three overlapping temporal distance spans (2-3, 10, and 25 years); (c) nine sets of from eighteen to twenty Semantic Differential scales used to rate various temporal concepts.

4. Various question items asking for information about the students' experiences, decisions, and expectations for family, educational, community, and pre-occupational matters.

5. A number of attitudinal and behavioral indices of the agree-disagree type covering a wide range of topics. These include a number of question items appearing in previous studies of anomia and individualism, as well as new items on such topics as keeping a diary, belief in astrology, and believing that one can determine the course of one's own life.

Despite the obvious wealth of data obtained from the TIQ (176 separate items were coded for each respondent), only a portion of what is available is reported in the analyses presented below. Subsequent reports will present our findings for other specific topics not fully explored in this initial series of analyses. Some of these topics

are considered in the discussion of matters for future inquiry in the final chapter.*

Sample Selection and Questionnaire Administration

To explore the several relationships put forth in the theoretical sections below, the Temporal Inventory Questionnaire was administered during the late summer and early fall of 1972 to students attending two different colleges. Of the 349 questionnaires administered, 313 were selected for use in the analyses reported below.** Of those questionnaires used, 200 were from a large metropolitan, publicly supported university college and 113 from a small liberal arts college located in a small town near several medium size cities.

Data collection at the metropolitan college was done in eight lower level social science classes in the summer, 1972. At the other college, data were collected in the early fall of the same year in five social science

*TIQ question items are referenced for their location as follows: Beyond the cover sheet there are nine double format pages in the TIQ (cf. Appendix I). If we designate the left half of each double format page as the "A" side and the right half as the "B" side, any question item can be quickly located by giving the page number and side. For example, TIQ-2A gives the location of a question designed to assess the students' experience of continuity in the transition from high school to college.

**The sample was restricted to undergraduate students under the age of thirty. Of the 36 questionnaires which were eliminated, 28 were from students over the age of 30, one from a graduate student, and 7 in which more than five responses were left incomplete on the background items.

classes. Because of the class scheduling, it is highly unlikely any duplication of responses occurred.

Questionnaires were administered by either the investigator or the instructor of the class. Participation was anonymous and voluntary. Completion times ranged from 25 to 40 minutes, with a typical length of 30-35 minutes. Assistance in filling out the lengthy protocols was given when requested.

Students at the two colleges differed in the educational background of their parents, religious affiliation, ethnic background, and in the college program the student was following. However, on many other variables there was very little or no difference between the two groups of students. Both are about the same in strength of religious beliefs, political orientation, number of residences, number of siblings, and in the distribution of the students by college class.

In sum, the total sample is more heterogeneous in background than would be the case of taking a larger sample from only one college. Though this purposive sampling approach is less adequate than taking a large stratified random sample of American college students, it would appear to be sufficient for the purpose of this investigation. This is especially the case here. We are not attempting to come to any general conclusions about the images of the future held by American college students.

This is not to imply that a sample of college students is in itself a problem. Given the limited resources available, students have the advantage of being both a readily accessible group and of having a number of theoretically and empirically important characteristics. For one, by using a college aged sample our own work becomes more comparable to that of several previous studies. Even more importantly, college students are typically going through a series of transitions in their lives, giving them a number of theoretically interesting characteristics. For many, if not most of these students, the college years are ones of major significance in the development and change of images of the past and future in the life spheres of the family, work, and friendships. Many are making their first residential moves away from their family. New patterns of friendship are emerging which are carried on in addition to, or in place of, the more residentially-based ones of childhood and adolescence. Significant decisions, with long-term consequences, are being made during this college period that will lead to future role-taking in the realms of work and the family.

A college population is therefore one going through a series of major and more or less simultaneous transitions in several different realms of social experiences. It is this changing which makes a college population such an appropriate sample with which to examine our theoretical

assumptions about the effects of life spheres and tracks on orientations to the future.

IV

Overview of the Scope and Contents of these Inquiries

As noted above, there are three inter-related aspects to our explorations: theoretical, methodological, and empirical. Discussions of the results of our inquiries on each of these three levels of analysis provide the general format for the presentation of the contents of this report. The discussions included in each of three major parts of the study can be summarized as follows:

Theoretical Explorations

In the two chapters to follow we examine the problems, orientations and assumptions which led us to develop the conceptual framework described above. In Chapter Two, we first examine several inadequacies of the traditional sociology of knowledge approach to the relationship between social life and temporal thought. Here we define and explore the perplexing problem of the nature of time in social life and the sociologistic nature of previous explanations of the nexus between subjective and objective aspects of the duality of social time. Later sections deal first with the sources of temporal experiences and development of the capacity to express them to oneself and others. In the last section we discuss the requirements of social

life which make the sharing of temporal thought necessary and the related matter of the social scope of temporal concerns.

Chapter Three begins with a critical analysis of what we call psychologistic explanations of the ways different social groupings are claimed to think about and orient themselves to the future. The chapter concludes with an extensive presentation of our own alternative approach. This theoretical framework serves as a guide for the methodological and empirical explorations to follow. In the course of the theoretical discussions in both these chapters, special attention is given to the seven properties of temporal concerns identified above and their importance to sociological inquiry into the nature of social action, organization, and change.

Methodological Explorations

A number of methodological matters are considered throughout the study. Each of the measures developed for our empirical analyses is extensively described and assessed before presenting the findings obtained from its use. However, it is in Chapter Four that we review and critically assess current methodological strategies. There we discuss the most frequently-used measures in terms of their reliability and validity, the sample populations to which these measures are administered, the assumptions used in data analysis, and the replicability of the findings. We are

concerned not only with these matters in their own right. Our special concern is how they reflect the theoretical assumptions guiding the research which precedes our own. Important to the development of our own measures is the finding that the construction of many of the most frequently-used tests restricted the extent to which the respondent was able to express his own temporal concerns. Further, even when such responses were available, researchers generally neglected their substantive content in the data analysis.

Empirical Explorations

Remaining chapters apply the results of these theoretical and methodological inquiries to the analysis of the findings we obtained from a portion of the vast data available from the Temporal Inventory Questionnaire. Chapters Five through Seven present and extensively discuss findings from the Time Machine Test (TMT), a projective test we developed to provide data about the empirical expressions of orientational temporal patterning and its relation to the contents of people's temporal concerns. Chapter Five describes the TMT, the types of data it provides, and our methods of classifying responses. Some initial findings about the relationship between the temporal period location and temporal distance span of the responses are then presented. Later sections describe the problem of classifying the content of temporal concerns and the unexpected

appearance of a significant and interesting relationship between the temporal and spatial aspects of human concerns.

Chapter Six focuses primarily on the relationship between two of the seven properties of temporal concerns described above: the range of social scope and temporal extensivity, or distance span. Data on both properties are provided by the TMT. Empirical analysis of this relationship provides encouraging support for our leading theoretical assumption: that the ideational patterning of temporal concerns reflects their socially derived content.

Chapter Seven explores a number of matters related to what analysis of the TMT responses suggests are the "uses" of the images of the past and future people construct to deal with their matters-at-hand in the present. Here the TMT responses are related to earlier empirical work of this type and to discussions of subjective temporality found in the writings of Mead and Schutz. The chapter concludes with an extended discussion of the relationship between life spheres, social tracking, and the contents of images of the future.

This last matter is explored more fully in the chapter that follows. Here we present an extensive set of empirical analyses and interpretative discussions focused on the relationship between life spheres and perceived clarity about the future over increasingly longer temporal distance spans. The clarity of images of family, work, and friendship futures are related to the life spheres on which

each is based. Chapter Eight describes the Clarity of Future Life (CFL) scale developed to examine these relationships. The CFL is used to empirically assess the relative influence of life spheres and temporal distance span in determining variations in CFL scores. Using factor analytic techniques we establish and then go on to interpret the basic finding that the life spheres are the more significant source of variation. This provides a crucial test of the viability of our alternative to the prevailing psychological approach discussed in Chapter Three. Major characteristics of each of the three life spheres are then related to the results obtained from our sample of college students. Of particular interest is the nature and degree of tracking of the three spheres.

A final chapter reviews the major results of our several types of explorations and indicates several directions future investigations might take in elaborating and critically assessing our own conclusions.

CHAPTER TWO

PROBLEMS AND PERSPECTIVES IN THE SOCIOLOGICAL STUDY OF TEMPORAL THOUGHT

In this first of two primarily theoretical chapters, we focus on the approaches, perspectives, and assumptions most typical of sociological efforts to explain the relationships between existential social conditions and the ways in which people think about time, the past, and the future. What follows is perhaps best described as a review of the range of problems that any sociologically-oriented investigator would encounter in studying the social basis of temporal thought and its expressions in social life.

This review of problems takes as its starting point traditional sociology of knowledge approaches to the more general topic of the relationship between social life and temporal thought. We then gradually shift our focus to the social factors which affect the sharing of thoughts about and orientations to the ideational future. Since this is not a formal review of the literature, but an exposition of theoretical problems, the discussion often takes the form of a detailed explication of a particular type of problem as it appears in the writings of only one or, at most, a few of those who have conducted investigations in the area.

In the first section we examine the one of the two dominant theoretical approaches taken by sociologists in explaining the relationship between social and temporal phenomena. This approach is termed sociologistic for its neglect of the role of ideational factors in the study of our topic. Its best representatives are those taking a traditional sociology of knowledge perspective.

The second approach is most dominant in contemporary sociological thought and is termed psychologistic. Its basic assumption is that variations in ways people think about and orient themselves to the passage of time are a function of psychological traits common to the members of a particular social grouping. This approach is examined in the next chapter, especially with regard to its prevalence in contemporary sociological writings and to the degree of empirical support that exists for assuming that people's orientations to their future concerns are psychological phenomena finding their source of variation in a number of different personality traits. In our discussion of both these approaches, the primary emphasis is on the explanations they provide for the sharing of temporal thought among the members of society.

I

The Sociologistic Approach to the
Study of Temporal Thought

The major theoretical positions in contemporary sociology have generally neglected the ideational level of temporality. Structural-functional theory has shown practically no interest in the topic. Likewise, Marxist social theorists, symbolic interactionists, and ethnomethodologists have given only lip service to the role of temporal phenomena in social life. What few contemporary efforts there are to explain the problems of time can be traced almost directly to the early and limited inquiries made by the forerunners of these positions. For example, Marx wrote on the commodity value of time in industrial work. In doing so, he laid the groundwork for the examination of modern man's tendency to regard time as having the properties of a material object, a thing to be treated as a scarce resource capable of being allocated among the members of a society. Likewise, Alfred Schutz and G. H. Mead wrote on the temporal aspects of social action. Their contributions are presented at many points in the pages to follow.

However, the major contributions to whatever understanding we now have of the role of the ideational level of temporality in social life comes from the early sociological efforts to explain the general role of ideational phenomena in social life. Among these efforts are those of Durkheim and others associated with the classical French school of

sociology. Also important are Sorokin's massive studies of the nature and types of "systems of truth" which have characterized different societies and represent the basic factors determining how they change and the works of Mannheim on the social determination of ideological belief systems.*

A major concern in the writings of each of these theorists is the question of how a particular set of social conditions is related to the pattern and content of the ideational thought (or mental structures) common to and typical of those experiencing these social conditions. In the course of investigating this question, each of these men came to recognize that social conditions are often both the determinants and the consequences of people's thoughts and the knowledge they share of the world around them.

When this recognition was brought to bear on the matter of the shared pattern and meaning that people give to the passage of time, each theorist in his own way came to the realization that the temporal dimension to social life has both a subjective and an objective aspect. There exists a dual nature to time, manifested in both the thought and the conduct of the members of society.

*The Durkheimians' work is reviewed below. Sorokin's efforts span from descriptive analyses of the relation of temporal conceptions to "systems of truth" (1937) to more methodological statements (1943). Mannheim's contribution appears in the context of his discussions of "the stylistic structure" as expressed in the collective temporal conceptions of social movements (1936). Cf., also, my review essay (1968) on the early sociology of knowledge treatments of temporality.

The Dual Nature of Time in Social Life

In taking a sociology of knowledge approach to the relationship between time and social life, it is necessary to recognize the dual nature of time. The objective and subjective aspects of time are both important to our understanding of its relationship to the experience, thought, and conduct of the members of a society.

The objective aspects of the dual nature of time are the observable manifestations of the durations and sequences of ongoing social activities, relationships, and situations. Every social milieu presents to those who participate in it a more or less persistent and repetitive set of experiences derived from their perception of such durations and sequences. Every member of society, over the course of his life, experiences a multiplicity of such temporal manifestations of social life. It is important to recognize that this experience is, in large part, derived from our own conduct and from that of others in the several social milieux in which we participate. Objective time, as manifested in the temporal durations and sequences of the social world, not only structures our experience. It also provides the memories and shared stock of knowledge that enable us to give pattern and meaning to the passage of time.

The subjective ideational aspects of time are the way in which people become aware of and reconstruct their

experiencing of the passage of objective time into meaningful and coherent patterns, thus enabling participation in ongoing social life.

The objective and subjective dimensions of social life, together, are a reification arising out of the human ability to arrange memories, knowledge, perceptions, and anticipations into an apprehensive frame which permits us to determine the "times" of our social experience in both thought and deed, that is, in both subjective and objective terms.

The objective manifestations of social time provide the content of our temporal experience. In turn, our capacities for memory, fantasy, imagination, anticipation, and projection give that experience a structure or patterning that permits us to ideationally reconstruct and behaviorally regulate the durations and sequences of social life. In doing so, we can either alter or maintain the sequences and durations of objective time which will provide the experiential content for some subsequent ideational reconstruction. In this manner, our experiencing, ideationally reconstructing, acting, and then experiencing once again make time in its objective and subjective dimensions an effective reification* with important consequences for social life.

*We use the term effective reification here to stress that the term is not used in its most frequently encountered critical sense. The nature of the reification process is dealt with most fully in the next chapter. The value of taking such an approach in our own work was recognized in the most general discussions of this process found in the writings of Taylor (1956) and Berger and Luckmann (1967).

The Durkheimian Tradition:
Time as a Socially Determined
Collective Representation

The sociological study of temporal phenomena can be traced back to the early work of Emile Durkheim and his associates. The publication of Durkheim and Mauss' study of primitive systems of classification inspired a seminal series of theoretical and empirical inquiries into the relationships between social life and temporal thought.*

The major impetus for these studies was what Aristotle defined and later philosophers discussed for centuries as the problem of the derivation of the Categories of Thought. At one point or another in their writings, most of the major contributors to the development of Western philosophy have taken up the question of how man is able to think about such abstract conceptions as time, space, number, class, and causality. This question was of major significance since the Categories were assumed to be the ideational mechanisms by which man structured the content of his thought and experience. Durkheim shared with these philosophers the basic assumption that these abstract

*The first of these studies was published in two parts in 1901 and 1902. It appears in English translation under the title Primitive Classification (1963). Later works in this series included Durkheim's own study of The Elementary Forms of Religious Life (1965), and later works by Maurice Halbwachs (1925) on the collective frameworks of personal memory, Levy-Bruhl (1925) on the conceptual structure of primitive thought, Hubert and Mauss (1909) contrasting sacred and secular notions of time, and Marcel Granet (1934) on ancient China. Several of these studies are still unavailable to English readers.

concepts were what enabled people to perceive, experience, and give meaningful coherence to a world too complex and fluid for the human mind to grasp in its totality. Where Durkheim and his associates differed with the philosophers was in the explanation given to the derivation of the Categories.

Durkheim states his position by first making a distinction between how an individual locates himself in time by means of sensations and images unique to himself and the shared symbolic category, or conception, of time common to a collectivity. The conception of time in a society is not an a priori or an idea derived from experiencing the world, but a collective representation derived from the rhythm of social life.

Time and the other collective representations "are like the solid frame which enclosed all thought" (1965:22).

. . . the notion or category of time . . . does not consist merely in a commemoration . . . of our past life. It is an abstract and impersonal frame which surrounds, not only our individual existence, but that of all humanity. . . . [I]t is time in general, such as it is objectively thought of by everybody in a single civilization. (1965:23)

Our conceptions of duration and moment (i.e., the names by which we divide time) correspond to the regular recurrence of collective ceremonial rites and feasts. These rites "serve to remake individuals and groups morally" (1965:414). The divisions of time in a society, whether into eras, days, seasons, or years, insure the recurrence of these feasts and rites. The system of time-indication becomes formalized

into a calendar which, being based on these ceremonial activities, both expresses them and insures their regular observance by members of the society.

An example of Durkheim's thinking in this area is found in his interpretation of the latent function of a cycle of ceremonies among the Warramunga of Australia.

They celebrate . . . because their ancestors did, because they are attached to it as a highly respected tradition and because they leave . . . with a feeling of moral wellbeing. . . .

So we have here a noble group of ceremonies whose sole purpose is to awaken certain ideas and sentiments, to attach the present to the past or the individual to the group. (*italics added*, 1965:423)

Time, as a collective representation and as a basic category of thought, has several basic social functions. First, the collective representation of time derived from the rhythm of collective life, also expresses and insures the recurrence of this rhythm. For example, the periodic celebration of ceremonies, feasts, and rituals is guided by the calendar and has a moral regeneration function. Secondly, collective representations tie man to man in a pattern of activities, coordinate these activities, and provide symbolic representations of the whole social order which insure the survival and success of the collectivity.

Collective representations are the results of an immense co-operation, which stretches out not only into space, but into time as well; to make them, a multitude of minds have associated, united and combined their ideas and sentiments; for them, long generations have accumulated their experience and their knowledge. (1965:29)

Durkheim's initial investigations were made through the examination of primitive religion. In a later essay, Hubert and Mauss (1909) distinguished between the representation or conception of time as it occurs in the everyday life of primitive people and the modifications this notion of time has undergone in relation to notions of the sacred. Religious and magical acts and concepts change the notions of space and time from what they usually are in a society. Since these rites take place in space and time, it is necessary for primitive men to relate their notions of space and time in ordinary discourse with the infiniteness and immutability of the sacred. "These anomalies, which disclose the contradiction between the respective characteristics of normal time and the sacred, are of such a nature as to put us on the track of the notion of religious time" (1929:190). This search for the religious notion of time took the form of the study of the development of calendars.

The primitive religious calendar exists not to measure duration of days, weeks, or months. Rather, it distinguishes between those sacred periods in which certain ceremonial rites are to be performed by the group and those periods of activity which are best termed secular or more ordinary in type. Orientation in time is to certain periods and types of events important to the group. Periods of time which appear unequal when measured quantitatively are therefore equal here. Equalities and identities of duration are

qualitative distinctions made in terms of their religious value and efficacy.

Religious calendars, and for that matter even secular ones, express conceptions and divisions of time as social conventions. Calendars are an objectification of subjective and collective activities, rather than an expression of some objective external reality like the lunar month or the solar year.

Assessment of Durkheim's Sociologistic Approach

The Durkheimian approach to the explanation of the social determinants of temporal thought is instructive for both its problems and its prospects. Foremost among the prospects is the recognition and importance which this work gives to examining how patterns and processes of social organization determine, and in turn are reflected in, the ways people experience, think about, and orient themselves to the passage of time. However, along with this insight come several problems which make it difficult for contemporary sociologists to use this traditional sociology of knowledge perspective.

For one, the early Durkheimian approach, as well as other similar approaches presented by later contributors to the sociology of knowledge, takes as its starting point a philosophical rather than a sociological problem. Consider, for example, Durkheim's attempt to use the study of temporal thought as a vehicle for criticizing the philosophical

assumptions of Locke, Leibniz, and Kant; or Sorokin's emphasis on temporal conceptions as parts of socio-cultural systems of truth; or, Gurvitch's commitment to a phenomenological epistemology. All constrain these theorists to approach questions of temporality more philosophically than sociologically. While all three of these proponents of a sociology of knowledge approach to the study of temporality stress the importance of this investigation for our understanding of social organization and the dynamics of social change, all three have their attention diverted from this basic problem by the admittedly enigmatic problem of the nature of time itself.

The choice is not between a sociological or a philosophical explanation of the nature of man's place in time. The sociologist's problem is that of discovering the relative importance of social factors among the many determinants of which modern behavior science is now aware. Biological, psychological, and cultural factors, as well as those which are primarily social, have also been shown to be important. The understanding of temporal thought is not a problem of the nature of time, but of the nature of man and the forces molding the human condition.

Secondly, the Durkheimian approach limits its focus to: (a) time as a collective representation shared by the members of a society; and (b) the calendar as the primary form in which time is given subjective expression. This limited focus on time and the calendar makes it difficult,

if not impossible, to establish the nature of the linkage between the subjective and objective aspects of the temporal dimension in social life. Even if time were simply a collective representation, its empirical investigations through the calendar of rituals, feasts, and ceremonies deals not with its ideational expression, but with the objectification of the group's subjective apprehension of time.

Studying the calendrical system of American society would tell us too little about the variety of ways in which Americans give expression to their subjective temporal experience, or about how they orient themselves to the passage of time. Durkheim's work took as its basic data the conceptions of time that Western intellectuals were discovering in reports about the cultural systems or primitive and traditional societies. They discovered conceptions of time quite different from our own, expressed in systems of time-reckoning that emphasized the qualitative as well as the quantitative dimensions of temporal experience. While studying the calendar might aid in distinguishing our conception of time from that which Durkheim describes for the Warramunga, it would tell us little about the considerable variation in temporal ideas, images, and conceptions given expression in the everyday life of either cultural group. Likewise, when Granet (1934) describes traditional Chinese conceptions of time as emblematic, he limits his scope to the writings of the School of Naturalists and the

early Confucians. If we were to describe Western conceptions of time by examining only the contributions of Bergson and Einstein, we would undoubtedly be just as far away from the notions of temporality that are given expression in the everyday life of Western man.

Studying temporal thought as a reflection of a culture's collective representation or conception of time is like trying to understand the form of a container without knowing the contents it was designed to hold. Whether referred to as a "category of thought," a "collective representation," or a "temporal conception," a people's shared notion of time itself is abstract, while the ongoing activities, relationships, and situations of everyday life are concrete; it is static, while everyday life is never quite the same, nor even expected to be; it is universal, while everyday life is particularistic to the participants in a social world segmented into qualitatively different realms of experience.

In sum, the cultural conception of time may, like a container, constrain the form taken by our temporal thought. However, it tells us little about how we ideationally pattern our temporal experience, how we give significance and meaning to the substantive content of our memories, perceptions, and expectations, or how we orient ourselves toward this ideationally patterned content in constructing our conduct with others participating in our social milieux.

Requirements of an Adequate Sociological Perspective

The sociologistic and philosophically-laden traditional approaches to the study of time as a form of socially determined knowledge suffer less from what critics like Merton (1957) have referred to as their "dubious epistemology" than to their own inherent limitations. They tell us too little about the varieties of temporal thought that have direct implications for the ongoing life of a society. Their limited focus on cultural conceptions of time has, perhaps more than their empirical and theoretical flaws, contributed to the sporadic and often tentative interest of modern sociologists in the problem of the relationships between temporal thought and social life.

To advocate a renewed emphasis on a sociology of knowledge approach to the study of temporal thought requires finding answers to questions posed either inadequately or not at all by earlier investigators. Further, it requires both an elaboration of the range of subjective temporal phenomena being considered and a sensitivity to the fact that sociological factors can only provide part of the answer to the complex question of how man gives pattern and meaning to the passage of time.

In order to develop a theoretical framework for guiding the empirical investigation of temporal thought from a sociology of knowledge perspective, four basic types of questions need to be answered:

- (1) What are the particular existential social conditions assumed to be determinants of the ways the participants of a social milieu experience, think about, and orient themselves to the passage of time?
- (2) What are the types and properties of temporal thought assumed to be determined by these social factors? How are such types of temporal thought given expression? What is the range of variation in each of the properties identified?
- (3) What is the manner in which these social factors determine the types and properties of temporal thought? That is, what are the subjective ideational capacities and/or objective material factors which create the "linkage" between the social and temporal dimensions of human thought, experience, and conduct? To what extent, if any, is this "linkage" directly or indirectly open to empirical assessment?
- (4) What are the sociologically relevant consequences of the socially determined ways the participants in a social milieu think about and orient themselves to time, the past, and the future? In particular, what are the functions of the ideational reconstruction of temporal experience for social action and interaction, social structure, and social change?

Of these four sets of questions, traditional sociology of knowledge perspectives are at their best in providing an adequate basis for answering the first and fourth. With regard to the first question, Georges Gurvitch (1964) has done much to make us aware of the multiplicity of existential social conditions affecting people's temporal thought. However, even he gives limited attention to other sources of the temporal experiences that nevertheless come to be shared among the members of society in the form of temporal images and conceptions. We will discuss these biological and environmental conditions below.

With regard to the fourth question, the early work of Sorokin as well as statements by a number of contemporary writers have made increasingly evident the consequences of shared temporal thought for various aspects and levels of social reality. In fact, one might even conclude from the discussion of the functions of ideational temporality given below that the shared temporal thought of the participants in a given social milieu provides for some of what social theorists have often termed the functional prerequisites of social life (cf. Aberle, et al., 1950, and Parsons, 1951:26-36 et passim).

The traditional sociology of knowledge perspectives are least adequate in their identification of the variety of ways in which the members of any society give expression to their temporal thought, and in their ability to specify

the nature of the mechanism linking the social and temporal aspects of human thought. In the next chapter we will elaborate on these problems and present our own answers to the questions which the traditional perspectives have found difficult to answer.

II

The Sources of Temporal Knowledge and Experience

Temporal thought consists of the ways temporal experience is ideationally reconstructed and symbolically expressed by the members of society. To understand how people are able to grasp, become aware of, and give meaningful coherence to their temporal experience, we must first recognize the complex manner in which they acquire a stock of knowledge about the objective manifestations of the passage of time in the world sensory perception.

By the term stock of knowledge we refer to the total information an individual has acquired as a result of participating in a particular socio-cultural milieu. Among the contents of a person's stock of knowledge at any point in his life is what might be called his knowledge of time. More specifically, this temporal knowledge consists of:

- (1) the person's knowledge of and ability to use the tense logics of his culture's linguistic system;
- (2) his personal recollections of objects, events, and experiences encountered alone or in the company of others;

- (3) his shared memories in the form of histories and chronologies of significant past events having collective relevance;
- (4) the shared symbolic expressions by which the meaning of temporal experience is indicated to oneself and others; and
- (5) the shared images and conceptions of time, the past, and the future which provide one with schemes of interpretation and orientation to objects, events, and experiences lying out of hand in time.

This stock of knowledge of time is acquired in the course of social participation. In its most general sense it represents what we come to know about the world around us in terms of its qualities of continuity and discontinuity, the repetitive patterning of objects, events, and experiences, and the often persistent effects that such matters have on our own lives and on the lives of others. In this section of the chapter we are concerned with describing the more general and basic sources of the stock of knowledge of time. In particular, these are the sources of our temporal experiences from which we derive the structure and content of our temporal thought, the ways in which we give symbolic expression to such experience, and the developmental sequence by which one acquires the ability to reconstruct ideationally and express symbolically the contents of our stock of knowledge of time.

The Basic Sources of Temporal Experience

There are three basic and primary sources of temporal experience. The first of these derives from an awareness of the rhythms and cycles inherent in human physiology. A growing body of research shows that the internal dynamics of human physiology have significant effects on how we perceive and estimate the passage of time. Such factors as brain damage, glandular malfunctions, temperature changes, the loss of the use of sensory cues to mark the passage of time, induced drug states, and hypnosis have all pointed to the existence of internal "biological clocks."*

The second major source of temporal experience is found in our perceptions of the durations and sequences of events which occur in the physical environment. The facts of life and death, the passage of the seasons and their concurrent changes in flora and fauna, and even the movements of the cosmos itself provide us with a varied and diverse wealth of experience with the passage of time. Anthropologists, in particular, have frequently observed that the ecological and astronomical events perceived by the members of a society serve as formal reference points for their culturally shared systems of time-indication and

*Hudson Hoagland (1966) reviews much of the recent evidence for the existence of such biochemically-based clocks. Further documentation and critical assessment of this work can also be found in Leonard W. Doob's comprehensive study of the many facets of man's capacity for the Patterning of Time (1971).

time-reckoning. A growing body of cross-cultural evidence provides us with an increased awareness of the myriad ways in which the material environment affects the manner in which people first experience, and then come to symbolize, indicate, reckon, and measure the sequences and durations of the world around them.*

Third, and for us the most important, are the temporal manifestations of our conduct with others who participate in our social milieu. These socially derived sources of temporal experience are manifested in the tempos, fluctuations, rhythms, and periodicities arising from ongoing social activities, relationships, and situations. Every social milieu presents to those who participate in it a more or less persistent and repetitive set of socially patterned sequences and durations in the form of political, economic, religious, and familial activities, relationships, and situations. Each of these spheres of social life exhibits its own temporal sequences and durations which provide the members of a society with a major source of temporal experience.

The temporal manifestations of social life are too numerous to list in detail. However, of these sources of

*A classic and still eminent study of the ecological bases of temporal experience and thought is Nilsson's (1920) study of the temporal referents, systems of time-indication, and time-reckoning among primitive peoples. More recent contributions include those of Beidelman (1963), Bohannon (1953), Panoff (1969), Pocock (1964) on a number of different cultural groups, and the more theoretically-oriented discussions of Hallowell (1967) and Maltz (1968).

temporal experience there are some so important and universal that mention of them is necessary. These are: the social structuring of the individual life cycle, the passage of generations, the changes that the passage of time bring to family relationships and friendships, the tempo and rhythm of work activities, and the often cyclical round of political and religious ceremonies.

While the patterning of duration and succession in each of these aspects of social life varies from one society to another, what is most important to recognize is that there are several universal ways in which social life is patterned in time. The activities, relationships, and events that constitute the ongoing round of social life are important sources of temporal experience and knowledge. Social experience is one of the three major sources of temporal experience and a major source of the content of our temporal thought.

In a very real sense, social experience is temporal experience. The ongoing patterns of social life have temporal manifestations which determine what we think about when we think about time, the past, and the future. For this reason it is important to examine more closely the general character of the culturally standardized and socially structured sequences of activities, relationships, and situations from which we derive the contents of our stock of knowledge of time.

The Diachronic Arrangement
of Social Experience

To live in society is to experience change. These changes, in the form of transitions and discontinuities in social role-playing, relationships, activities, and situations, are not haphazard. Where social structure may represent the persistent and stable elements of social life, social participation is a process with repetitive as well as persistent dimensions, change as well as stability.

We often think of the family, work, and friendships as among the most persistent structural arrangements found in any society. Yet the activities, relationships, and situations in which we find ourselves in each of these realms of social life do change and, in most cases, are expected to change. Few people in our society hold the same job all their lives. Few carry the friendships of childhood through until old age. Given the organization of our family system, our expectations for family ties must be of inevitable and prescribed changes in relationships. We become husbands or wives, mothers or fathers, and grandparents in what seems a natural order of events.

New jobs, family roles, and friendship affiliations are both the expectation and the actuality in the lives of most Americans. Transitions and discontinuities are expected because we have learned to expect them, experienced them, and observed them occurring in the world around us. Yet, as we stated above, such change is not haphazard. There is an ordering or regulation of this change.

The changes we experience in many aspects of our lives are institutionalized. The patterned and repetitive durations and sequences of social life are scheduled, standardized, and prescribed. That is, they are:

. . . governed by fairly clear rules concerning when the change of status should be made, by whom and by what agency. There are also prescribed sequences of steps the person must go through to have completed the passage and regularized actions that must be carried out by various relevant participants in order that the passage actually be accomplished. (Glaser and Strauss, 1971:3)

The consequence of this scheduling, standardization, and prescription is what we refer to as a track, that is, a continuous set of sequentially ordered steps by which a person, aggregate, or collectivity "moves" from one part of a sequence of experiences to another. This type of arrangement of social experience into institutionalized sequences has been previously discussed by many social theorists in terms of "status sequences" and most recently as "time tracks" (Lyman and Scott, 1970) and "status passages" (Glaser and Strauss, 1971).

The concept of social track points to an important aspect of the social processes underlying social participation. Tracks are what make social life an ongoing phenomena. More importantly for us, they are the major social sources of temporal experience and, therefore, provide a significant portion of the ever-changing contents of our stock of knowledge of time. Only recently has this relationship between social tracks, temporal experience,

and the knowledge people use to construct their temporal images and conceptions been recognized.

To the extent that a track is institutionalized, it provides people with an awareness of the temporal durations and successions of social life out of which they can construct images and conceptions of the past and future. This statement and its implications will be explored throughout the discussions to follow. However, at this point a few examples will serve to illustrate the importance of examining the relationship between social tracks and temporal images and conceptions.

Tracks vary in their degree of institutionalization and, consequently, in the extent to which people have an awareness of the activities, relationships, experiences, and situations that may be encountered in the course of a passage along them. Some tracks are clearly specified to the people entering onto them and they proceed along them with a high degree of certainty about what to expect at each stage along the way. Some occupational tracks, such as going through medical school, have this high degree of clarity about the course of one's passage built into them. One can observe and know not only one's own situation and stage in passage along the track, but also know what to expect in the months and years ahead by observing and communicating with others who are further along the track. That is, you can see your own future around you through the

knowledge you obtain of others ahead of you in the passage along the track.

In fact, in some situations, those around you may make a deliberate effort to pass along this knowledge so that the structure of your expectations may be in accordance with their own. In some instances, this takes the form of providing those making the passage along the track with various formal schedules and timetables. Cottrell's (1939) study of railroad workers and the effects of timetables on the structuring of their work life expectations is a classic example of this process. More recent studies of the temporal perceptions and orientations of the institutionalized and chronically ill have shown how situational factors and deliberate efforts by staff have resulted in patients taking on images of their personal future which ostensibly assist their adjustment to their own change in status and alter their expectations to those more in conformity with those of the professional staff (cf., Davis, 1956; Glaser and Strauss, 1968; and Calkins, 1970).

Tracks vary in the length of time it actually takes to make a passage. Longer passages, such as those found in the course of work and family life, may be made up of a number of different, but interconnected, tracks marked by rites de passage as people move from one stage to the next. At the other extreme are short-term tracks often having specialized and particularistic functions: a hospital stay in preparation for surgery, getting a divorce, or taking an

adult education course on how to make minor repairs on one's car. However, the length of time spent in passage along a track is not necessarily equivalent to the span of time over which one projects expectations related to that track. A short hospital stay and the expectations it engenders may produce a profound change in my conception of the course of the rest of my life.

It should be noted that not every long-term passage of events is a track. A criminal may spend a long time in prison, but if that span of time is not marked by a series of changes in experiences and expectations, no tracking is involved. If, on the other hand, the prison stay consists of a sequenced set of transitions from the status of inmate to free man, there is a track. For example, a transition from prisoner to trustee or from being ineligible for parole to being eligible provides a tracking to the prison passage; there will occur a length of passage marked by qualitative changes in experience, knowledge, and expectations. Often it is only in retrospect that the stages and transitions that mark one's passage along a track come to be expressed in the quantitative divisions of clock and calendar time. These quantitative scales of measurement should not be confused with the qualitative changes in people's temporal images and conceptions that occur in the course of a passage along a track.

In sum, social tracks represent both an important dimensions of the diachronic arrangement of social life and

a basic source of temporal experience. From the knowledge gained of what to expect in entering upon new tracks or at later stages of a current one, people are provided by their social milieu with a major portion of the contents of their temporal images and conceptions. To the extent that the tracks are socially structured, the expectations people have of passages along them are also given structure. What and when events and experiences will take place is diachronically arranged in thought as it is prescribed, scheduled, and regulated in action.

Social tracking, and its relation to the various life spheres among which social participation takes place and experiences are segmented, is examined more closely in Chapter Seven. At that point, our intervening discussions will have made even more evident their importance to the understanding of the images and conceptions people construct for orienting themselves to the passage of time. Tracking is important also for understanding the shared nature of temporal thought. This aspect is discussed in the pages to follow, beginning first with a consideration of the many ways in which people give symbolic expression to their temporal experience and how they develop the capacities for making these expressions meaningful and coherent to themselves and others.

The Expressions of Temporal Thought

Human beings have a unique and intriguing capacity to express to themselves and others the substance of their temporal experience. Not only do they intuit a temporal dimension to their experience, they also give expression to the meaning, significance, and coherence they impose upon their experiencing of the temporal manifestations of the world around them.

The ideational reconstruction of temporal experience has its most noticeable expression in the proliferation of temporal symbols and referents found in every human society. The number of ways in which different social and cultural groupings have conceptualized, indicated, measured, and reckoned the passage of time is enormous. Ranging from the simple distinctions of before and after all the way up to complex conceptions of the nature of time, the past, and the future--different peoples have thought about and given expression to the "times" of their lives in a multitude of ways.

Where one society conceives of time within a framework of binary oppositions (cf., Ohnuki-Tierney, 1969 on the Ainu) between two underlying dimensions of reality, others have conceived of it as cyclical, as repeating itself in units ranging from years on up to the complex systems of cycles within cycles of the ancient Hindus and Mayans. The modern Western conception of time as linear,

continuous, irreversible, and materialistic is only one among many.*

Perhaps the most interesting of the ways man gives expression to the ideational reconstruction of temporal experience is through his ability to "stand out from and even go against" the passage of time. This ability is a function of our capacities for memory, fantasy, imagination, anticipation, and projection.

Using these capacities man has been able to achieve extensions of self both within and even beyond the biologically-based temporal limitations of his own birth and death. Oral and written histories, pictorial images, and physical monuments enable the recreation of the past in the present and insure that the present will extend into the future. Using only recently acquired knowledge of events that took place before the dawn of historical collective experience, some men have created images and conceptions of "futures" that will come to exist in the millenia ahead.

This capacity for the ideational reconstruction of temporal experience also enables man to take the continuous passage of time and break it down into qualitatively

*There are a number of works which have dealt with the emergence of modern man's conceptions of time. Wyndham Lewis' Time and Western Man (1957) presents a speculative overview of the development of Western thought about time by examining changes in philosophy, science, and literature. More recently, Sebastian de Grazia, in his Of Time, Work, and Leisure (1962), has dealt with modern temporal thought as it relates to the impact of industrialization.

distinct and discontinuous periods. While the passage of time is irreversible, man has used his technological skills to recreate the past in the present and thereby reverse the effects of the passage of time. Defying the passage of time, some civilizations of the past have even postulated the existence of Eternity, in which time itself is only a fleeting moment.

Given these ways of reconstructing and expressing temporal experience, the most obvious implication is that temporal thought represents a powerful ideational transformation of our perceptions of the passage of time. Temporal thought is much more than a simple awareness of the successes and durations of the objects and events we perceive in the world around us. Even though it is often assumed that the regularly paced ticks of clocks and units into which we divide the years express the "times" of our lives, such quantitatively defined intervals are often both experienced and expressed in ways quite different:

Moments of time are experienced as qualitatively uneven. Some are critical; others routine. Some are short and pleasurable; others long and filled with pain and anxiety. Some are full with a concretely identifiable plentitude; others are stretches of empty duration. Some are the stuff of the active life, goal-oriented, and instrumental in the obtaining of an objective or expressive of mood or feeling; others are devoid of activity or feeling, a mere filling between eventful moments. (Lyman and Scott, 1970:212)

The "times" of perception and experience, as transformed into our temporal thought, take on a qualitative dimension-- a dimension of meaning whose source is social and cultural.

The meanings given to time, the past, and the future are expressed in symbols. These symbols have two properties which make their socio-cultural determinants and consequences evident. The temporal thought of the participants in any socio-cultural milieu is the result of a learned capacity to reconstruct and express their temporal experience in ways which are shared. We shall examine below each of these two basic properties of temporal thought.

The Development of the Capacity for Temporal Thought

People are born with basic though limited capacities for thinking about temporal phenomena. Most of the ways in which we think about time are learned. Piaget (1971) and others* have shown that all children develop the capacity to use conventional temporal referents and concepts in much the same sequence. This developmental sequence closely parallels that of cognitive development in general (with major changes occurring between the ages of five and seven) and the child's increasing command over the use of tense-logics of his culture's linguistic system.

This sequence begins with an early capacity for indefinite and concrete indications of brief intervals and durations. By the onset of puberty, the use of more

*Cf. the earlier reviews and assessments of these studies found in Wallace and Rabin (1960), Doob (1971), and the more recent discussions by Cottle and Klineberg (1974: 70-101).

definite ways of indicating temporal events and experiences is evident, with the child also able to refer to spans of longer duration. At that point, the ability to use the more abstract temporal concepts found in one's culture begins to appear, becoming more flexible in expression through adulthood. Wallace and Rabin have summarized these developments at each stage as follows:

. . . an individual's concept of time emerges early in childhood and develops gradually. By the time a child is two or three years old, he has acquired a notion, . . . of a past, a present, and a future time. . . . The time concept, with ever widening past and future references, continues to develop through the thirteenth or fourteenth year when the adult concept first emerges. At that time the notion of continuity of time and its relatively accurate estimation are reached. (1960:217)

Attempts to account for this development start from several contrasting theoretical assumptions. For some like Piaget, the process is part of the unfolding of the structure of mind and therefore universal in nature. For others with more psychoanalytic orientations, the development of capacities for temporal thought is tied to that of psychosexual development, especially through mechanisms of gratification and frustration tolerance.*

*For example, David Zern's studies (1970) of means of time-reckoning in 58 non-Western societies and among American children suggest an interesting relationship between the extent of mothers' indulgence of their infants and the extent to which temporal interval referents are specified in the culture. Those cultures in which children are not indulged during the first year of life tend to use the greater number of specific referents.

Despite these different theoretical approaches, most of the research findings suggest that the development of temporal thought goes hand in hand with the child's increasing scope of exposure to and experience with his material and socio-cultural milieu. Western children therefore develop the ability to use temporal symbols and referents and think about time, the past, and the future in ways common to Western society. For example, they learn to think of time as linear, not as cyclical or binary in nature, as is the case for children in many other societies.

For these reasons it is most appropriate to recognize that people learn how to think about their temporal experience. They also acquire the culturally standardized temporal symbols and referents by which they express those thoughts to themselves and others. This learned capacity for reconstructing and expressing temporal experience rests, of course, on the existence of basic human capacities to remember, anticipate, and discriminate among the various and diverse objects of perception.* However, as A. I.

*It is interesting to note that what are often identified as the basic psychological capacities for temporal thought are very similar to what Anthony F. C. Wallace has argued to be the psychological pre-requisites for culture. These six are: "(1) perception; (2) memory (including fantasy, here conceived as reorganized memory data); (3) discrimination between perceptual and remembered stimuli; (4) continuous selective attention to sets of perceptual and/or remembered stimuli; (5) discrimination among sets of perceptual and/or remembered stimuli with respect to their 'meaning' (including their value on some affective dimension); (6) a capacity for matching meanings of perceptual and/or remembered stimuli to overt responses." (1966:134)

Hallowell has argued, in order fully to understand the development of complex temporal thought, what people learn at different stages is more important than the innate capacities by which they become aware of and experience the passage of time.

It is impossible to assume that man is born with any innate "temporal sense." His temporal concepts are always culturally constituted. . . . And because it is customary to "time" so many human activities and events with precision, a high level of conscious temporal orientation is inescapable. . . . Time extends beyond the range of our personal observation and experience, or that of the life span of any one generation of human beings. . . . Not only the past, the future is likewise part of the same temporal continuum. This structuralization of future time permits the exercise of foresight by individuals, or even nations, in planning and coordinating all kinds of future activities in detail. . . . (1967:216, 217)

Much of what is learned about the nature of time is also shared. Not only do people learn about how to think of time as participants in a particular social milieu, they also learn to give shared significance and meaning to the contents of their thoughts about the past and the future. They develop and share a common stock of knowledge about the objective manifestations of the passage of time. This stock of knowledge is, in turn, the source of the substantive content of their shared images of the future.

III

Sociocultural Aspects of the
Sharing of Temporal Thought

There are two basic, empirically inseparable aspects to the ways common meaning and significance are given to temporal thought. First, shared ways of experiencing, thinking about, and orienting oneself to the passage of time are a function of cultural factors: temporal symbols and referents, value orientations, and the tense-logics of language.

The second of these basic aspects is social in nature. While cultural factors can be seen as important determinants of the ways in which we structure and express our temporal experience, social factors are of major importance in explaining why the contents of our temporal thoughts are shared. What people think about when they think of time is derived from social experience and provides the basis for their ability to engage in the complex patterns of social interaction which make social life possible, persistent, and repetitive.

While we can discuss each of these two aspects separately, this is possible only under certain conditions: In the observation and explanation of the sharing of temporal thought, the social and cultural aspects must be considered in conjunction with one another. Only when dealing with variations among the members of a single society can we examine the impact of the social factors against the background of a common cultural system.

Since our primary emphasis is upon these social factors and their impact on images of the future, we will give priority to the cultural factors only in the pages to follow. The rest of our inquiry will focus on the various types of social factors and their roles in the determination of people's thoughts about and orientations toward the future.

Cultural Factors Relevant to Explaining Shared Temporal Thought

The sharing of temporal ideas, images, and conceptions is perhaps most evident in the various cultural symbols and artifacts used to express and objectify the temporal dimensions of social life. Calendars, watches, time schedules, and idiomatic expressions are among the most obvious ways we can recognize the extent to which our society is dependent on its members' giving common meaning and significance to the temporal aspects of social life.

Yet these ways of marking the passage of time, of indicating it to ourselves and others, and of reckoning its durations in our ongoing activities are the least of the ways in which we should be aware of the shared nature of temporal thought. Listing the temporal symbols and referents of a people tells about only part of the range of their temporal thought. For one, it neglects the ways temporality is "built into" a system of communication through the tense-logic of a language. Cross-cultural linguistic studies like those of Whorf (1956) on the Hopi

have pointed to how the tense-logic of a language puts limitations on the capacity to express thoughts about the temporal period locations and durations of personally and collectively significant concerns.

Cultural values also contribute to the ways the members of a society think about time and, especially, how they orient themselves to its passage from past to present to future. Cultural values define for the members of a society the relative desirability and significance given to the objects, events, and experiences they encounter in the course of their lives. Of particular interest in this respect is the manner in which orientations to the future are structured by these values.

Images of the future have a value dimension. They vary in the extent to which they are considered significant and desirable, people orient themselves toward the realization of future goals in ways structured by these values and because that realization is expected to be rewarding.

Cultural values play a three-fold function in determining shared orientations to images of the future. First, values play an important role in determining the relative emphasis the participants in a social milieu place on the past, present, and future as the temporal locations of those concerns most relevant to their interests. Second, the relative value emphasis placed on concerns expected at different points ahead in the future often provides a sequential patterning for those concerns as they

are located outward from the present up to the point some shared and desired goal is realized. Third, to the extent that values define the relative desirability of the various and alternative futures, they structure images and conceptions of the future and affect the assessments of the various plans and projects being considered.

In these ways the cultural value placed on future concerns affects the relative desirability and rewards expected from acting toward a shared and particular image of the future. The functions of cultural values for the patterning of temporally-based concerns have been considered from several different theoretical perspectives. For some, like the psychoanalytically-oriented Edmund Leach and others, the relative value placed on past, present, and future concerns is determined by the way we learn to handle certain universal human experiences like frustration, the perception of change in the world around us, and our awareness of death. Other theorists point to the general value orientations of a sociocultural system as it affects the concerns that people come to value and to act upon.

For example, Edmund Leach (1961:125-6) has argued that all of the ways in which people think about time are derived from two basic and universal human experiences--the perception of the repetition of natural phenomena, and the awareness of the impossibility of reversing life changes. While both types of experiences are found in the memory of all people, Leach contends that in different cultures, one

or the other type may be emphasized. Since modern man is held to emphasize the second, we come to view the future as basically novel, different, and the locus of potentially rewarding and desirable experiences.

For Leach, recognizing the irreversibility of changes occurring in living things inevitably leads the individual to a recognition of his own temporal limits. The awareness of death as one type of dividing line between the personal and historical future presents members of a social milieu with a basic problem of coming to some sort of consensus about the extent they are going to value collective concerns located at points beyond their own death. Many collective plans and projects require the development of motivations to work toward concerns and goals that lie past the personal future.

Walter Firey has attempted to explain why people become committed to concerns and goals whose realization lies in the remote future. Firey holds that the realization of long-term and culturally valued concerns such as conservation, economic development, and physical health rests on:

. . . an articulation of those values with social relationships in such a way that individuals find it socially expedient and psychologically satisfying to conform to them. . . . [There must be] a conviction on the part of those individuals, not only that those values have a moral character, but also, that they, as individuals, will probably have to conform anyway, and, further, that the well-being of the in-group will thereby be furthered. (1963:152, 153)

Significant to Firey's argument is the recognition that the implementation of people's plans and projects toward collective concerns beyond the individual life span rests on: (1) the member's present values; (2) the articulation of their expectations with ongoing social relationships; and (3) the rewards and sentiments they attach to these relationships. The sharing of values and expectations of future rewards in the present works to structure shared images of long-term future concerns, especially ones whose realization will not be experienced by the individuals currently sharing them.

Values and Temporal Period Orientation

The relative emphasis placed on the past, present, or future as temporal periods containing valued concerns toward which action is oriented has been viewed by Florence Kluckhohn and Fred Strodbeck (1961) as a basic problematic of social life. They argue that different cultures place different degrees of value emphasis on the past, present, or future as the sources of orientation for conduct.

Every culture faces the problem of defining what is to be the dominant temporal period orientation for its collective concerns. Such differences in temporal period orientation are discoverable by observing child rearing practices, people's expectations about change, and their ease in accepting innovations.

Kluckhohn and Strodbeck regard the value placed on concerns in each of the three main temporal periods as a matter of degree. There are variant as well as culturally dominant modes of temporal period orientation within any society. Different subgroups in the population and different types of activities may entail the use of alternative and more particularistic modes of emphasis on the past, present, and future as focal periods of relevant concerns. For example, while Americans are predominantly oriented to future concerns, these researchers contend that we are also characterized by a sentimentality in our orientations to the past. Further, they argue that the value placed on concerns in different temporal periods is related to other types of value orientations found in the same culture.

Based on their research they have concluded that past orientation tends to be linked with an emphasis on conformity to traditional authority, while future orientation is more frequently found in cultures like our own which tend toward more individualistic and situationally specific modes of conformity. This is, of course, similar to the theoretical discussions presented by Max Weber and others about the relative emphasis on tradition and reason as ways in which members of a society orient themselves toward concerns relevant to their current interests. Where traditional sources of knowledge are valued, action is often backward-looking in orientation. But, where rationality is valued, action is more forward-looking, as means

are weighed by the person in terms of the relative effectiveness in producing a desired outcome. In a similar way, Kluckhohn and Strodbeck relate temporal period emphasis to "being" and "doing" orientations dominant in different societies.

Perhaps most important to the sociologist's understanding of the role of values in structuring temporal period orientation is the finding that within the five cultures that they studied, Kluckhohn and Strodbeck observed that variations in temporal period emphases were related to sex, ethnic and social class positions, and to what they called the "behavioral sphere." They maintain that in every society, family, work, religious, and recreational spheres of social experience are ranked in terms of their relative value, desirability, or significance. This concept refers to what we have defined above as the life spheres of experience found in all societies.

For Kluckhohn and Strodbeck, the high value placed on activity in the work sphere in the United States is consistent with our general emphasis on future concerns. Work activity is characterized by (1) task-oriented behavior toward future goals; and (2) the expectation, for many, of occupational status advancement through the successful performance of that work activity. By contrast, other life spheres are characterized by a greater emphasis on concerns in the past or present. It is also important to note that the several life spheres which are found in

any society are themselves given different degrees of value emphasis.

This evaluative ranking of life spheres corresponds to the ranking of important interests for the members of a society: work over leisure, family over friendship, etc. In turn, as each life sphere is characterized by its own mode of temporal period emphasis, people can be expected to shift their temporal period emphasis to that most consistent with effective behavior in the life sphere currently relevant to them.

Social Factors Relevant to the Sharing of Temporal Thought

Even though the previous discussion was directed mainly at the role of values in the sharing of temporal thought, the importance of social factors begins to emerge. Temporal images and conceptions are shared not only because we share common cultural value orientations. They are shared primarily because we are beings whose very lives depend on the patterns of social interaction that are made possible by that sharing. Man is bonded to man and collective activities are made possible only when the now and the "pasts" and "futures" surrounding these times are given common meaning as well as significance.

In short, creating and maintaining the fabric of social life rests upon the human ability to share thoughts about and orientations toward the future in the form of what Alfred Schutz has called "communities of time."

Sharing a community of time--and this means not only outer (chronological) time, but of inner time--implies that each partner participates in the on-rolling life of the other, can grasp in a vivid present the other's thoughts as they are built up step by step. They may thus share one another's anticipations of the future as plans, or hopes or anxieties. (1963:316)

Every person participates in many different communities of time. At each level of social life, ranging from the dyadic to the societal, people are involved in ever more expansive communities of time. The same may be said for the various life spheres. For all of us, each of the many realms of social experience in which we participate defines a community of time. Each social situation, relationship, and activity providing a context for either role-playing or role-taking can be regarded as a community of time.

In any collective activity, some degree of overall synchronic coordination and unification of the temporally sequential activities of the participants must take place. The future, as succession and duration, must be given common meaning and patterning in order that complex and differentiated patterns of social activity can take place. Consensus about the content of the nature of things to come is therefore both related to and as important as the sharing of tense logics and temporal value orientations among the members of a society.

We therefore share our temporal thoughts because it is often necessary for us to articulate our own conduct

with that of others. In particular, our sharing of images of the future and of the orientations we take toward their contents are necessary for establishing and maintaining the social relationships upon which social organization depends. As Harvey Farberman observes, ". . . the assumptions which underlie the consensus that allows for social organization are the assumptions of other people's incipient or future actions." (1970:11) In this sense, just as people engaging in some common social activity have some degree of consensus about what has happened and what is going on now, they also depend upon a consensus about what will happen next. For this reason, intersubjectively meaningful images and conceptions of the future have a determining effect on how we interact with others in the present and on the way we maintain those patterns of interaction into the future.

The sharing of images of the future places them among the intersubjectively meaningful interpretations and orientations social scientists have contended are necessary to the process of social interaction.* Temporal images and conceptions are examples of the many types of ideational phenomena providing the participants in any social milieu with intersubjectively meaningful interpretations of and

*Such images take on a theoretical definition similar to that of other sociological concepts used to indicate the ideational level of social reality: "presentational norms" (Lavine, 1942), "shared cognitive orientations" (Aberle, et al., 1950), "ideas in the social consciousness" (Ossowski, 1960), and "mutual expectancies" (A.F.C. Wallace, 1961).

orientations to their social experience. Considered in this way, such mental products take on the characteristics of what Thelma Z. Lavine has termed "presentational norms." These shared cognitive standards have the "initial function of rendering determinate and meaningful some segment of experience." They provide for the "apprehension as a meaningful structure of what is experienced" (1942:348-9).

Further, these images and conceptions are properties of individuals as members of collectivities. While the contents of and orientations to people's images of the future may be shared in general, they are never exactly the same. However, what they expect and when they expect it are to some degree partially-equivalent (cf., A. F. C. Wallace, 1961:15ff.). Participants in the same social milieu are often confronted with similar matters-at-hand and often draw upon the same stock of knowledge. As a result they tend to define similar temporal concerns and construct similar images of the future. In a sense, participants in the same social milieu come to share a community of concerns out of which they derive the contents of the temporal images and conceptions by which they may develop a community of time.

Societal Consequences of
Shared Temporal Thought:
Continuity and Change

The sharing of temporal thought can now be seen as having normative as well as cognitive aspects. It is these

aspects taken together which make possible the temporal unification and coordination of collective endeavors. And it is through these collective endeavors that people are able to impose the patterning on social life. In turn, these patterns will be among their sources of temporal experience.

By orienting their thoughts and conduct toward shared images of the future, people are able to regulate the passage of time in the world around them. They are able to insure the repetition and to modify the sequences and durations of our social world in this manner. Pitirim Sorokin has summarized three major consequences of the shared nature of temporal thought for social organization as follows:

- (1) Synchronization and co-ordination of sequential timing of one sociocultural phenomenon with the others.
- (2) Organization of the time system for realization of the sociocultural continuity and for orientation in the infinite flow of time.
- (3) Reflection of the pulsation of sociocultural systems and, at the same time, facilitation of such pulsations or rhythms as are necessary for the life and functioning of any sociocultural system. (1943:172-3)

Shared images of the future, as types of temporal thought, represent one of the important means by which modern man has been able to schedule, co-ordinate, standardize, and, even, segregate the activities of men and machines into a tightly knit form of social organization.

Likewise, these ideational phenomena have been recognized as having an important role in the process of social change. For example, Fred L. Polak (1961) investigated the historical changes that have taken place in Western images of the future. His results show that shared expectations characteristic of successive periods had a major impact on the actions people took to translate those images into actualities.

The role of subjective temporal phenomena in the process of social change has been investigated by a number of writers. Heirich (1964) and Resohazy (1965), examining the general nature of the relationship of temporal factors to social change, have attempted to identify the important factors to study. For Heirich, temporal symbols and their shared social meaning, and time itself as a scarce resource, are of prime importance. Resohazy identifies a wide range of subjective and objective temporal phenomena significant to the complex processes of social development and change in traditional societies. However, most attention has been paid to people's time consciousness, or temporal awareness, and to the relative emphasis they give to concerns lying ahead in the future. A number of investigators have argued that modernization, in the form of technological and social development, is a process involving changes in people's expectations for the future and in their scope of temporal

awareness.* The relationship between subjective temporality and social change is, for Alex Inkeles, one of the major dimensions along which traditional societies are transformed. Among a set of seven personal qualities presented as characteristic of modern man is that he likes "people to be on time and show an interest in carefully planning their affairs in advance" (1969:210).

Most significant here is how this statement sums up so much of what we have discussed so far. Inkeles' description emphasizes how modern man expects other people to behave, not his own patterns of thought and conduct. They should be on time and carefully plan ahead. Their degree of temporal awareness and emphasis on the future as a valued source of experience is important. A clearer indication of the importance of sharing orientations to the passage of time with others is difficult to find.

There is another aspect of the sharing of temporal thought implicit here and in much of what was presented below. Temporal thought, if shared with others, must often involve the construction of images of the future which include those others. While temporal thought may be shared

*For some, like Chris Apostle (1966), the degree of time consciousness manifested by the members of a society is an indicator of its potential for social change. Empirical studies by Lipset (1960), Doob (1960), Slotkin (1960), and McClelland (1961) all suggest that changes in temporal awareness and an increased emphasis on the future are part of the mechanisms "triggering" modernization. More recent case studies by Brandt (1969) and Resohazy (1970) lend further support to these suggestions, but also report that the factors involved are complex and mutually interacting.

only in the sense of different people having partially-equivalent outlooks on the future, it is also shared because others are important to the fulfillment of our own expectations. Getting them involved with us has as its complement, our getting with them. For both these types of sharing, it is important to consider the effects that consideration of others has on the ways people orient themselves to the passage of time. To this matter we can now turn.

The Social Scope of Temporal Concerns

Our concerns vary in the degree to which they involve the consideration of others. This social scope or extensivity of a concern can range from the uniquely personal outward to encompass others on up to the point of including the whole of humanity.

Concerns involve the consideration of others both directly and indirectly. In the case of those with whom we share a community of time, involvement is direct--for they are the ones for whom our own behavior will have consequences and whose conduct will alter our own experience. Even when other people are not directly involved in our action, they may still be a part of our thoughts about what has come before and what will come to be. In this sense, the social scope of a concern is a property of its content related to, but yet distinct from, the sharing of that concern.

The concept of social scope focuses attention on the fact that there is a range to the extent other people are objects of our concerns for the past, present, and future; the degree to which our thoughts encompass other people whose activities, relationships, and experiences are influential for our own conduct and the way in which we reflect on that conduct as it is remembered and anticipated.

At one pole of the continuum are those concerns in which others are either completely absent or merely tangential to our thoughts. Such concerns have as a defining characteristic the fact that their content is ideationally assessed for its efficacy for our own personal matters-at-hand. What has happened, is happening, and will happen to one's self is most relevant. Concerns focused on personal grooming, health, and occupational achievement can be assessed for their effects without further consideration of how others might be directly or indirectly involved. For example, how one feels mentally and physically now and in the past or future may often be more important than how others feel about their own health, or even your health.

Still other concerns occupying our attention have as their objects the activities, relationships, and experiences with one or more others whose existence has been, is, or will be influential on our own conduct.

G. H. Mead has given careful consideration to how others influence our conduct and the images we have of ourselves

at any point in our lives. His notion of "taking the attitude of the other" toward oneself in the course of one's conduct points, as does Schutz's notion of a "community of time," to the functions of our awareness of how those around us affect and are affected by our conduct. What is important to recognize is that we also take others into consideration in the selective attention we give to the past and in our anticipations for the future.

Such significant others are most typically family members, lovers, friends, members of some peer group in which we are active, and associates in the educational, occupational, and residential communities in which we participate. Most often they are persons with whom we engage in predominantly expressive activities. However, even persons with whom we have instrumental relationships can be the focus of concerns finding temporal location in all three time periods (e.g., teachers).

Toward the other pole of the continuum of social scope are those concerns which involve us in consideration of what Mead referred to as generalized others. Throughout their lives most people hold concerns which reflect their identification with some larger social collectivity, e.g., a social class, ethnic, or religious group, a political party, or some utopian social movement.

Identification with some generalized others often provides the broadest and most abstract reasons for our conduct. Nevertheless, they are the basis for many

important life concerns of the past and future. Such temporal projections are often situationally transcendent in their ideational content, pointing to collective, national, and even globally relevant states of affairs which may not even have any direct impact on the conduct or experience of those who share such concerns.

In Chapter Six below we examine the relationships between the temporal location and the social scope of concerns. This provides a means of assessing our general assumption that social factors influencing the content of people's concerns have a determinative effect for how concerns are given orientational temporal patterning within the temporal frame. Basically we will explore the extent to which the increasing social scope of concerns affects their temporal period location and distance span outward from the present. We expect that as the social scope of concerns widens from the uniquely personal through those involving significant others right up to collectivity-oriented concerns which encompass humanity in general, the length of the temporal distance span will increase. Why?

There are two basic reasons for expecting this. For one, with increasing social scope, there is a greater likelihood that the concerns will achieve a greater temporal distance spread by virtue of the valued effects that our ongoing identifications and involvements with others have on us. Such relationships may even achieve a greater effective depth because of their qualities of

stability and permanence. We have concerns about our work, our friends, and our families all through life. Similarly, the collectivities with which we identify are often the very same ones whose activities have had, and will have, important consequences for our own lives and for others significant to us. Such relationships and identifications have a property of what Heidegger called "having been" and "being held onto in the future." They are characterized by a persistence of affect extending backward and forward in time over spans encompassing the total life cycle and even beyond.

The second reason for expecting that the social scope of concerns determines their temporal location derives from several observations made by earlier researchers. First of all, there are important differences between how people orient themselves to concerns involving themselves and others close to them, as opposed to concerns relevant to most or all participants of some social collectivity with which they identify. For example, the now classic cross-national study of Hadley Cantril on people's expectations and aspirations for themselves and for the nation in which they lived showed that not only did "personal" and "national" concerns differ in content, they also reflected empirically distant patterns of temporal location (1965:25-39). Given such variations between people's expectations for family, personal finances, and health and their national level concerns about peace, the

standard of living, and employment, we can note that while both types of concerns may be significant to people in terms of their direct and indirect effects on their lives, people's aspirations and expectations regarding these types are being thought about differently.

Independently, though perhaps with an awareness of the work of Cantril and others,* George Gurvitch (1964) has argued that each level of social organization and each realm of social relationship, activity, and experience is characterized by its own type of subjective and objective social time. This position is well documented by the many studies reporting differences in future concerns for different social movements, social classes, and groups, as well as in the political, religious, educational, familial, economic-occupational areas of social activity.

Studies of social movements going back to the seminal work of Karl Mannheim (1936) on ideological and utopian mentalities have recognized the role that temporal images and ideas play in structuring the actions of these collectivities:

*In this category would be the early Gillespie and Allport (1955) study of expectations about the future among college students in ten countries. A newer study of Images of the World in the Year 2000 (Ornauer, et al., forthcoming) compares people aged fifteen through forty-five in ten nations on their outlook for the long-range course of human events. Other studies of this type have had a more limited focus on one country, like that of Danziger (1963) on South African students and that of James A. Mau (1968) and J. Nehnevajsa (cf. Huber and Bell, 1971:292) on elites.

The form in which events are ordered and the unconscious emphatic rhythm, which the individual and his spontaneous observation of events imposes upon them flux of time, appears in the utopia as an immediately perceptible picture. . . . The innermost structure of mentality of a group can never be as clearly grasped as when we attempt to understand its conception of time in the light of its hopes, yearnings, and purposes. (1936:209)

This shared cognitive orientation provides order to the past and the future, lays bare one's personal destiny, and provides a meaningful totality or Gestalt through which people understand their relation to the course of history.

Coser and Coser (1963) extend this early work of Mannheim by pointing to other functions of subjective temporality for both social integration and social conflict. This paper, along with comparative and historical case studies by Cohn (1957), Worsley (1957), and Hobsbawn (1959), indicates the ameliorative and adaptive functions which expectations about the future have for the participants of social movements. S. M. Lipset (1960:150-2), for example, has pointed to the short range span of future concerns of the marginal middle classes in Germany as a factor in their early recruitment to the Nazi movement. Kurt Lewin (1948) observed that German Jews with a strong Zionist orientation were more aware of the many incidents of opposition that Jews had experienced throughout their history. They used this hindsight as a basis for constructing an image of the future that suggested the possibility of a repetition of such incidents with the new Nazi regime. They were also

among the earliest of the German Jews to take action to insure their survival.

In manners such as these, the participants in a social movement are recruited or act on the basis of their emphasis on past and future concerns as well as the "pasts" and "futures" with which they are concerned.

V

Concluding Remarks

The discussions and presentations in this chapter provide much of the background for the theoretical critiques and developments presented in the next. They also set the stage for the empirical analyses which are the focus of Chapters Five through Eight.

In the next chapter we consider the problem of explaining the nexus between the objective and subjective aspects of time in social life. There we draw heavily upon the groundwork laid above on the sharing of temporal thought and its consequences for maintaining the tempos and rhythms of the collective activities from which so much of our temporal experience is derived.

In the chapters reporting on our empirical explorations, we make use of the considerations presented below in the formulation of questions for empirical examination and in the interpretation of results. Chapter Six develops the empirical side of the discussions about the social scope of temporal concerns. Chapter Seven elaborates upon the notion

of tracking as it affects images of the future in various life spheres.

While the considerable number of specific points made above deserve some form of systematic summary, we postpone this statement to the concluding section of the next chapter. There we present together a formal summary of the several leading assumptions proposed from the results of our theoretical explorations.

CHAPTER THREE

TEMPORAL PATTERNING AND THE CONSTRUCTION OF IMAGES OF THE FUTURE

Our discussion so far leads to a very important and complex question--if the members of society must share the ways they think about and orient themselves to the passage of time, how does this sharing come about? We have seen that the traditional sociology of knowledge approach does not provide a viable explanation of this sharing. Further, we have argued that there is an intrinsical relationship between the sharing of temporal images and conceptions and the nature of the nexus between the subjective and objective aspects of time in social life. It is the sharing which makes possible the effective reification of these two aspects of time. Unless we share our ideational pasts and futures, the complex patterns of social interaction that provide the social basis of temporal experience cannot develop or continue. Therefore, to explain the sharing, we must account for the nature of the nexus. In order to do this, an exploration is needed into the nature of the ideational processes by which the members of a social grouping come to think about and orient themselves to the passage of time.

At present, two possible alternatives exist to the sociologistic approach of the traditional sociology of knowledge. The first is found in the approach taken by many contemporary sociologists in their attempts to account for the different ways in which different social groupings appear to think about and orient themselves to the future. Most of these more recent attempts make reference to personality traits assumed to be shared among members of the social grouping.

The second approach can hardly be said to exist. A number of social theorists who deal with the nature of social action suggest the basis for developing an alternative approach. At the starting point of this new approach is the assumption that temporal images and conceptions are best considered as properties of human actions rather than of human actors. Specifically, we think about and orient ourselves to the passage of time in the ways we do, not because of who we are, but because of what we are doing and why we are doing it.

Obviously, these two alternative approaches represent quite different logical and conceptual positions. Each has its own conceptual focus and scheme, and each can be assessed on the basis of its adequacy in providing a theoretical framework for understanding the nature of time in social life. This chapter contains the presentation and critical assessment of the psychologically-oriented approach, including demonstration of its inadequacies. We

conclude by presenting a formal statement of the second approach as we have developed it thus far.

I

The Psychologicistic Approach to the Explanation of the Determinants of Temporal Images and Conceptions

Much of the recent work on the nature of temporal thought relies on psychologically-oriented assumptions and methods. Since images of the future are complex ideational phenomena, it would be foolish to disregard the potential importance of psychological factors in their understanding. It is our contention that sociologists have, in the past, relied too heavily on an uncritical use of personality variables to explain what we contend can be more adequately explained by social and cultural factors.

Time out of Hand: Explaining Variations in "Time Perspectives" and "Temporal Orientations"

Psychologically-oriented investigators have studied the nature and types of variations in people's emphasis on the future relative to the past and present. Researchers have also examined the extent to which people project their thoughts varying distances into the past and future. These studies typically start with the assumption that different people are characterized by different "temporal orientations" and "time perspectives" common to them, whatever the situation or activity in which they are involved. Each of us is assumed persistently to emphasize the past,

present, or future in our thoughts (our orientation) and to project our thoughts ahead or backward over longer or shorter time spans (our perspective).

One result of these studies is that social scientists frequently write with apparent confidence that within our society there are people who are "present-oriented," have shortened "temporal horizons," or who view the future with a constricted "time perspective." Such people are contrasted with those who are "future-minded," possessing the capacity for longer time perspectives which take into consideration long-run as well as short-term consequences of what they do in the present.

A number of contemporary sociologists take for granted that men are more future-oriented than women, and that older generations tend to live in the past, while the young are "tuned in" to the future. The affluent are seen as having longer-range time perspectives than the poor, and many minority ethnics are said to live more for today than do their counterparts in the dominant white majority. Even Third World peoples in the process of modernization are often seen as lacking the ability to view the future from a long-range perspective.

A particularly long-held (and demonstrably mistaken) assumption is that the poor lack a long-range outlook on their futures due to their inability to defer gratification, or to postpone present rewards as a means of accumulating resources for the achievement of even more rewards in the

future. Their inability to plan ahead, to put aside for tomorrow, to engage in the long-term efforts which might bring success, are held to reflect basic and shared personality traits. The lower class person is typically regarded as viewing the future as unpredictable and uncontrollable, not likely to be a source of valued social experiences, and consequently, less important than the present as a focal point for action.

W. Lloyd Warner's research on social class in the 1940's provided one of the first major characterizations of these status differentials in orientation toward the future. Since then, social scientists have explained many socially-based variations in behavior as a function of differences in "time perspective" and "temporal orientation." The result is, thus, a large body of empirical and interpretative literature assuming that the poor, the unemployed, migrant workers, the members of our Black, Puerto Rican, and Mexican-American minority groups, school drop-outs, and those institutionalized for various types of deviance all share the same common characteristic.

The basis of this shared personality trait is held to be found in the manner the person has learned to handle the sequences of reward and frustration presented to him by his environment, especially through the attentions of his parents during infancy. Certain child-rearing practices and childhood experiences are said to affect patterns of impulse control and frustration tolerance. These patterns

then determine, along with his present emotional state, the extent to which the person is willing or able to postpone gratification later in life. The final consequence is a temporal orientation to the present and a shortened range of future time perspective.*

In addition to the studies focusing on impulse control and the ability to defer gratification, other researchers report similar relationships between a constricted outlook on the future and such personality traits as low achievement needs, high levels of anxiety, dogmatism, and even nostalgia. Common to these studies is the assumption that during personality development, each person comes to have a psychologically based predisposition to orient himself to the future in a more or less stable manner.

Such predispositions are held to be factors mediating between people's social positions and their temporal orientations and time perspectives. That is, they are being posited as the nexus between subjective and objective aspects of time in social life. Further, these personality traits are assumed to be shared among the members of a particular social grouping because they were socialized in much the same way and exposed to many of the same types of

*The basic theoretical formulation underlying this interpretation is psychoanalytic, even though specific researchers may not acknowledge this source. Examples are too numerous to cite. However, review discussions on the social class literature in Cottle and Klineberg (1974:183-96) and on the deferred gratification pattern as a situationally conditioned phenomenon by Miller, Reissman, and Seagul (1968).

experiences. For example, studies by Rainwater (1960) and Kar (1971) on the lack of use of contraceptives by lower class women trace this behavior to personality traits believed to be shared among the poor. However, explanations given in both studies contrast sharply with those of Reuben Hill (1966), who cites evidence that such behavior is due to a complex of social variables which reflect patterns of communication and authority common to the marital relationships of poor people.

What we have referred to as the psychologistic approach to the explanation of temporal patterning and the sharing of temporal images and conceptions has as its basic assumptions the types of notions just stated. It is one thing for personality psychologists to investigate how people think about and orient themselves to the future. It is quite another thing for sociologists to assume uncritically that time perspectives and temporal orientations are personality traits, that they vary with other personality traits, are shared among members of a particular social grouping, and can be used to explain variations in behavior between and among such social groupings. When held by sociologists, these assumptions result in psychologistic explanations of social phenomena. This is particularly the case as these assumptions are demonstrably inadequate on the theoretical level and empirically unsupported. Using them results not just in bad sociology. Most importantly,

they preclude from consideration the possibility of developing sociological explanations.

For example, in pulling together numerous statements made by sociologists about which groups are likely to be future-oriented and which not, we were struck by several things. For one, many of the groupings taken to be the least future-oriented are also those holding subordinate positions within American society. Surprisingly, this common condition of subordination is hardly ever recognized. Why is this?

Were one to recognize that the people assumed to be the least future-oriented are members of subordinate social groupings, the relationship might be readily explained. For example, one might profitably explore the hypothesis that this is an adaptation they make to being blocked from access to those social tracks (such as education) which lead to the more desirable "futures" open to the members of dominant groups. However, without the initial recognition of a possible relationship between subordination and the apparent inability to plan for the future, developing an explanation on the sociological level may not ever be considered. For this reason, uncritical and naive adherence to the psychologistic approach by the sociologist functions to retard the development of explanations for important variations in social phenomena.

Problems with the Psychologistic Approach

Given these criticisms and the implications they have for sociology, we must specify the particular problems we have said are associated with the psychologically-oriented studies upon which the psychologistic approach is grounded. An examination of these studies brings to light three basic flaws.*

First of all, few of the psychologically-oriented studies take into account the contents of the temporal images and conceptions being assessed for length of time perspective or degree of future-orientedness. The observation that the contents of people's images of the future were often overlooked in these studies led us to ask the following question: Are people's orientations to their futures related to what they expect the contents of these futures to be?

In the course of a person's life there are many different "futures" toward which he may be oriented and for which he may have a time perspective. Is he to be regarded as always being past or future-oriented, or as taking a short or long-range perspective at all points in his life and in every realm of social experience in which he participates? If a person is labeled as being "present-oriented"

*These flaws are in addition to the more particular methodological problems described below in Chapter Four, although at some points this discussion anticipates a number of matters considered there.

as a result of poor impulse control with regard to spending available income, is he also necessarily "present-oriented" on matters of family life, politics, religion, and friendship?

While it is true that many personality traits developed in childhood may change as a result of maturation and psychic crisis, using such traits to explain either individual or group variations in temporal thought must inevitably run up against the facts that: (1) social experience is segmented in many different realms; and (2) over the course of everyone's life new and different social activities, relationships, and situations are encountered. As the content of our lives changes, do we maintain the patterns of temporal thought laid down in childhood? Surely they do, just as we are always oriented to the future.

Every human being thinks about the future. In fact, the capacity to anticipate future events and experiences is one of our distinguishing mental characteristics. To act is to consider the future, if only in the form of the immediately anticipated outcomes of present conduct. These outcomes are events and experiences having meaning and significance for our conduct in the present.

The second major flaw encountered in the psychologically-oriented studies is that, among their several methodological defects, there is a failure to support the interpretation of a causal relationship between specific

personality traits and outlooks on the future. While many studies examine this relationship, few go beyond simple demonstrations of statistically significant association or use more sophisticated forms of analysis which might provide an indication of the direction of the relationship. A simple demonstration of association has never been an adequate basis for assertions of causality.

Could these personality traits be a consequence rather than the determinant of the ways people orient themselves to their "futures"? For example, could a "future" viewed as unchangingly oppressive and lacking in opportunity for betterment be a basis for inclinations to take advantage of whatever limited rewards the present has to offer? Could a "future" which appears to be full of uncertainties, or seems to carry in it the potential for unpleasant outcomes, be a source of personal anxiety? Could a "future" viewed as likely to bring about substantial and undesirable changes in one's life situation provide reason for being closed-minded about the efforts of others to bring about such changes?

Alternatively, could "futures" which people imagine as containing the promise of desirable outcomes, of a clearly graded sequence of steps leading to some cherished goal, of conditions different from, yet better than, the present result in a person measuring low on dogmatism and anxiety or as being willing to postpone present rewards? Could they also lead a person to take a greater interest in

bringing about such a future? Could they make him more attentive to the long-range course of events and experiences leading up to and even beyond the desired outcomes of his acts?

Perhaps what are called temporal orientations and future time perspectives are not the result of psychological traits and predispositions, but a reflection of stock of knowledge of time, the matters we are dealing with over the course of our lives, and the existential positions we hold in the various social milieux in which we participate. In short, perhaps people appear to be differentially oriented toward the future because they are oriented to different futures.

If this is the case, then our degree of future-orientedness and the breadth of our future time perspective may have little at all to do with psychological states and personality traits. There is the possibility that what we call the "future" is a type of knowledge we have in the present about the more or less certain outcomes of the events that occur in the lives of people like ourselves. Perhaps our "futures" are anticipations and expectations based on the persistence and repetition of what we know to be taking place in the world around us. Perhaps the future is the world around us, as we have learned to experience and know it. In fact, how could the future be anything else?

These questions lead us to consider the final flaw in the works taking a psychologistic approach. A number of psychologists have claimed that the way people think about and orient themselves toward the future is itself a personality trait. Particularly, they contend that time perspective is a property of personality (cf. Wallace and Rabin, 1960:232). Although at first glance this may appear as the least sociologically relevant assumption underlying the psychologistic approach, it is actually the most crucial to our own position. It is possible that the contents of images of the future may be determined by socio-cultural factors while our breadth of perspective on these contents is itself a personality trait. Further, even though there is little in the current research literature to support the argument that variations in time perspectives and temporal orientations are determined by personality traits, they may still be personality traits themselves, subject either to non-psychological sources of variation or to personality traits not yet considered.

For these reasons, it is of major importance for us to critically assess the claim that time perspective is a property of personality. This is difficult since it must be based on an examination of the construct validity of the theoretical concept of time perspective. In particular, this examination entails the demonstration that the concept can be reliably operationalized and that it is unidimensional as an empirical phenomenon. Measures of this concept

are among those examined in the next chapter. Even though there is little evidence to support a claim that current measures are reliable, this would not preclude the possibility that such measures might be developed in the future. For our purposes, it is more important to examine here the second criterion for construct validity, that of unidimensionality. On this more important criterion, claims for construct validity are not supported.

The first problem one encounters in trying to assess the unidimensionality of time perspective as a personality variable is finding an adequate definition. Focusing only on the research literature, one finds that whatever the names given to the temporal concepts being studied, definitions are either non-existent or so vague as to constitute a state of conceptual anarchy. A number of years ago, Melvin Wallace was concerned enough about this problem to make the following comment on the state of conceptual confusion that still exists among psychological studies of "time perspective": "Concepts such as time sense, time orientation, time perspective, and time perception are employed interchangeably, often in the same investigation, or are utilized in such a manner that no clear idea of the intended meaning is given, either in conceptual or operational terms" (1956:240, *italics in original*). With the intention of alleviating this problem, Wallace went on to propose the use of the term "future time perspective" to refer to the "timing and ordering of personalized future events" (1956:240). Two

properties of future time perspective were then identified: extension (the length of the time span) and coherence (the organization of the future events). Robert Kastenbaum (1961) later proposed two more properties or dimensions of future time perspective: density (the number of events which fill the personal future) and directionality (the pace at which the future is conceived of as unfolding).

Despite this attempt to create a model of the properties of future time perspectives, few of the more recent contributors have made use of them. Instead, a series of factor analytic studies of the measures used to operationalize these properties came increasingly to support the notion that there may be no general phenomenon of future time perspective to begin with, whatever its defined properties might be. We review the findings of these here because they bear most directly on the matter of construct validity.

In the earliest of three such factor analytic studies, Kastenbaum (1961) found in his first factor some evidence for what he interpreted as a "general concern for future events" from the loadings of several of the more frequently used tests of future time perspective.* On this first factor, these tests were associated with a measure of personal rigidity. Other factors that appeared showed that: (a) "preference for directional, dynamic time imagery" was

*As noted above, at this point the results of these studies, rather than the specific measures used, are of primary importance. The tests themselves are considered in Chapter Four.

associated with measures of intelligence, preference for spontaneous behavior, flexibility, and creativity; (b) a measure of the "number of events, roles, and experiences an individual expects to populate his future" defined what he interpreted as a density factor; and (c) the degree of structuring of the future (its coherence) was a dimension distinct from the other three and was related to a measure of intelligence.

In contrast with these findings, two more recent factor analytic studies of the relationship between various measures of time perspective demonstrate that they are not measuring the same thing. In their study of five of the more frequently used measures of temporal thought, Ruiz and his associates (1967) report that the tests showed very little in common with one another. They interpret their results as showing that there may be many dimensions underlying what previous researchers have referred to as time perspective and temporal orientation. As a consequence, they state that further consideration should be given to the development of measures with more clearly defined conceptual bases.

Platt and his associates (1971) demonstrate, in the most recent of the factor analytic studies, that measures of time perspective are associated with a variety of personality variables, but very little with each other. They come to the following conclusions about the unidimensionality of time perspective and its relationship to personality:

The present study suggests that measures of temporal perspectives have little in common. There does not seem to be a unitary dimension. Instead, temporal perspective is factorially complex, with various measures loading differentially with several personality variables. The results of the factor analysis showed no general temporal perspective factor to be present. (Platt, et al., 1971:108)

On the basis of the results of these three studies, the findings of others they cite, and our own examination of the available data, it would be fair to conclude that there is no empirical support for the existence of a unidimensional personality trait definable as time perspective. Instead, we would argue, all three studies show that we must recognize temporal thought, especially about the future, as a complex ideational phenomenon requiring not just a search for more adequate measures, but the development of a different conceptual approach. Further, they imply that such a conceptual approach would most profitably take as its starting point a level of analysis other than that of psychological traits, conditions, and predispositions, however appealing this has appeared to previous investigators.

Sociology and the Psychologistic Approach

The results of these studies are undoubtedly disturbing to the many psychologists with research commitments in this area. Some, like Leonard Doob, after careful reviews of the methods and findings of these psychologically-oriented studies, have come to the conclusion that attempting

to establish a relationship between personality traits and temporal thought "is like attempting to harness two wild animals from different species to the chariot of truth" (1971:223).

These conclusions have important, but as yet unrecognized, consequences for sociological inquiries as well. As we noted, sociologists have turned to personality traits to explain the relationship between social factors and people's outlooks on the future. This relationship is interpreted by referring to what is assumed to be a firm theoretical and empirical foundation in psychology. However, what sociologists take as almost axiomatic, psychologists are increasingly regarding as problematic.

For this reason, many sociological statements about images of the future are psychologistic in their orientation. This has had its most profound effect in the resultant neglect of the role of social factors in the determination of temporal images and conceptions. In particular, it has led to a neglect of the contents of such images and conceptions. When temporal patterning is regarded as a property of personality, consideration of the content of the "pasts" and "futures" toward which people are oriented can be and has been excluded as unimportant. If a person is viewed as having a personality-based predisposition toward, for example, "future-orientedness," then the "future" toward which he is "oriented" need not be a matter of concern to the investigator. Further, if such personality traits are

assumed to be common to the members of a particular social grouping, then the relationship between their existential social milieu and the ways they think about and orient themselves to the future need not be taken into account. In other words, the psychologistic approach has blinded many sociologists to a consideration of what they are most adequately equipped to study--the role of social factors in the determination of temporal ideas, images, and conceptions common to and shared among the members of a society.

Finding an Alternative to the Psychologistic Approach

Sociologists are interpreting the nexus between social factors and temporal thought in psychological terms. The results are as inadequate as those obtained by using the sociologistic perspective derived from the traditional sociology of knowledge. However, lacking an adequate theoretical explanation for the nature of the nexus between the objective and subjective aspects of time, we are both unable to re-assess the work of the past and restricted to a predominantly empirical approach in the future.

Only by placing the whole matter within the domain of contemporary sociological theory can progress be made. This requires explicating the nature of the nexus between social factors and temporal thought.

Two important questions arise at this point. First, how shall we proceed to develop such an explication of the

nexus? Second, from what body of existing sociological theory shall we begin to build our explanations?

In answer to the first question, we argue that the ways people think about and orient themselves to the past and future are emergent properties of human actions. That is, they are best regarded within the context of the ongoing action in which people engage in order to realize some desired future state of affairs. Establishing this argument will be our main concern in the rest of this chapter.

Answering the second question, about where to begin, was for us more difficult. The points discussed in the Conspectus about the future-oriented nature of social action are accepted by most contemporary social theorists. For example, in one of the most ambitious recent efforts at developing a general theory of action, Talcott Parsons and his associates argued that all human actions entail the consideration of things to come.

Action involves not merely discrimination and selection between immediately present objects, and the directly ensuing striving, acceptance, or rejection, but it involves also an orientation to future events with respect to their significance for gratification or deprivation. A discrimination between an immediately available and future gratifications and the assessment of their relative values is an essential aspect of action. (Parsons, et al., 1962:11)

However, despite this recognition of the importance of people's expectations in the actions they take, these writers give little further consideration to the matter. In contrast, Alfred Schutz and George Herbert Mead, in the course of their extensive theoretical explorations into the

nature of human action, provide many potential points of departure for the development of the type of explanatory scheme we are seeking. Unfortunately, neither of these writers explores the matter in sufficient depth to meet our needs. However, taken together, they provide a foundation upon which to build.

There are several important reasons for taking the approach suggested in the works of Schutz and Mead.

1. Human action is predominantly social action. It arises out of the actor's participation in an existential social milieu and is directed toward initiating and/or maintaining the activities, relationships, and situations common to that social milieu. As a consequence, temporal images and conceptions derive their contents and much of their structure from the various existential social milieux in which actors participate throughout the course of their lives.

2. Among the most essential characteristics of human actions and interactions is their ideational dimension, which consists of the considerations a person gives to his memories and shared knowledge of the past and his projects, plans, participations, and aspirations for the future.

3. By examining temporal experience and thought as they are related to social action, we are able to explicate the nature of the ideational mechanisms by which a reification of the subjective and objective aspects of time in social life comes about.

In sum, by viewing temporal ideas, images, and conceptions as properties not of actors, but of ongoing action-events, we provide a viable alternative to the psychological approach discussed above. Further, while able to examine temporal thought from a sociology of knowledge perspective, we avoid many of the logical, epistemological, and empirical pitfalls of both the psychological and the sociological approaches taken by earlier investigators.

The remaining pages of this chapter present what we have tentatively developed as the theoretical framework and set of leading assumptions that should provide a viable and more adequate approach to the problem.

II

The Temporal Dimensions of Human Action

An action-event is a process taking place over time. It begins at point X when the actor defines for himself a matter-at-hand in the form of a problem, interest, or perception arising out of his participation in an existential social milieu. An action-event ends at point Y when the actor has realized some state of affairs which he defines as a resolution of his matter-at-hand. The actual time span of an action-event is filled with the thoughts and conduct with which the actor gets from X to Y. These thoughts and conduct constitute, respectively, the subjective and objective aspects of the action-event.

Of these two aspects, our primary concern here is with the actor's thoughts, that is, with the subjective

ideational rather than the objective behavioral aspect. In particular, we are concerned with the temporal dimensions of this ideational aspect, that is, with the sources of the contents and structure of temporal images and conceptions of the future. In this respect our emphasis reflects the general tendency of social theorists to characterize human action as conduct oriented toward the realization of some future state of affairs, that is, as purposive conduct. This characterization holds even when the conduct may be explained by reference to factors preceding or coincident with the conduct itself.

Social Participation and the Derivation of Temporal Concerns

Temporal concerns are ideas considered in terms of their variations in temporal location. They are the memories, anticipations, and expectations people have about objects, events, and experiences outside the field of immediate sensory perception. They are the consequence of an ideational process by which a person brings what we have termed his stock of knowledge of time to bear upon his problems, interests, and perceptions in the course of an ongoing action-event.

Participation in a number of different social milieux occurs during every stage of life. The most important of these milieux of social participation are what we have termed life spheres. For most people the family, education, work, religion, politics, and informal community

relationships represent the most important realms of role-playing and role-taking behavior and are the domains into which our social experience is inevitably segmented.

Social participation in these life spheres has two major outcomes important to the understanding of the derivation of temporal concerns. For one, it provides the stock of knowledge by which common meaning and significance is given to the objects, events, and experiences that are encountered. Second, social participation in a life sphere inevitably leads to encountering and defining as relevant certain problems, interests, and perceptions referred to here as matters-at-hand. These matters-at-hand are the factors which motivate a person to engage in the ideational and behavioral processes by which an action-event is initiated and carried out.

In sum, social participation is the source of both the matters-at-hand which motivate the initiation of an action-event, and the knowledge available for constructing a line of conduct toward the realization of some future state of affairs which, with varying degrees of certainty, will constitute a resolution of the matters-at-hand.

Temporal concerns arise in the course of social participation. They are the contents of a person's stock of knowledge as these are defined as significant and meaningful to the resolution of his matter-at-hand. Since temporal concerns are human concerns, they are part of what is assumed can be reliably recollected and anticipated on the

basis of what is believed about the world. In this sense, they are no different from any of the many and diverse types of concerns we define for ourselves about the world around us.

However, for our purposes we are stressing the fact that such human concerns are temporally-based concerns. They provide the contents of temporal images and conceptions. They are ideas about objects, events, and experiences relevant to the carrying out of an action-event which are ideationally located in the past, present, or future; integrated into more or less coherent images of the past and future; and marked in such a way as to enable a person to indicate them to himself and express them to others.

Human action involves a reconstruction of temporal experience which has as an emergent feature a temporal aspect of the frame of apprehension by which we grasp and impose meaningful coherence upon present perceptions, personal recollections, shared knowledge of the past, and anticipations for the future. This temporal aspect is what enables drawing upon past experience to do something about matters-at-hand in the present, and to define the temporal locations of the tasks and goals that lie ahead.

Mead views this emergence of a temporal aspect to the frame of apprehension as a "time system" arising as part of the apperceptive process by which a person directs his conduct toward the state of affairs he expects or intends to bring about. This process takes place as follows:

"The living being acts to reach a certain result in the future, the realization of the act. In this action it may be said to select its own time system and the space that this involves. It thus determines the world within which it lives. Its determination, however, is a selection, and a creation only in the sense of a reconstruction" (1964:108, emphasis added). What Mead terms the creative "reconstruction" of knowledge and experience into a "time system" is, for us, a consequence of the apperceptive processes of temporal patterning by which there emerges a frame of apprehension containing temporal ideas, images, and conceptions. The three ways of temporal patterning, discussed in the Conspectus and elaborated on below, provide a temporal aspect to the contents of the frame of apprehension of an ongoing action-event. By means of the temporal patterning of our concerns, these contents of our various images and conceptions of the past and future are arranged into a meaningful and coherent structure.

As an ideational process, temporal patterning must be studied through its outcomes, the properties it gives to people's temporal images and conceptions. These outcomes are expressed both directly and indirectly to the outside observer. Their most direct expression is through what people say about their expectations, plans, and hopes for the future and, also, the ways their diverse knowledge and experiences are arranged into a sense of personal pasthood and into collective histories. In addition, these outcomes

are expressed less directly, but still overtly, in people's conduct toward the realization of their goals on the basis of their patterned expectations. Finally, the temporally patterned contents of our temporal images and conceptions are indirectly expressed in the more or less conscious degrees of certainty people have about the outcomes of their expectations; the clarity with which they apperceive the course of activities, events, and experiences leading up to some desired goal; and, also, the sense of assuredness they have about the community of their life-in-general as they conceive of it from the past to the present and outward into the future, perhaps even to points beyond their own death.

We discuss many of these matters in the remaining sections of this chapter and explore them empirically in several of the chapters to follow. Important to note here is that in our theoretical approach to explaining the nexus between the subjective and objective aspects of time we:

- (1) view the ways of temporal patterning as the primary ideational mechanisms by which the nexus is developed and maintained;
- (2) identify what Mead has termed as the "time system" and what we refer to here as the temporal aspect of the frame of apprehension with the nexus in its subjective aspect; and
- (3) therefore, maintain that temporal images and conceptions are among the ideationally patterned contents of the frame of apprehension of an ongoing action-event.

The most direct implication of these theoretical arguments is that we consider images of the future as part of the frame of apprehension. Such images are the more or less meaningfully and coherently patterned concerns people have about the activities, events, and experiences lying ahead of them in time. Images of the future are therefore not only the particular goals or future state of affairs toward which people are orienting their conduct. Such images also contain: (1) the ideas people have about the steps they will be likely to take in realizing their goals; (2) the outcomes they anticipate for their conduct alone or with others; and (3) the expectations they have about what might occur in addition to, or even despite, their individual or collective conduct. Viewed in this way, images of the future are the patterned contents of the temporal concerns people define as part of the creative reconstruction of their knowledge to deal with a matter-at-hand that has arisen in the course of social participation.

In sum, people create their futures. In doing so, they also develop, maintain, and modify the nexus between the objective and subjective aspects of the passage of time. Explicating the nature of the ideational mechanisms by which this creative reconstruction of temporal experience takes place requires the consideration of four interrelated, but analytically distinct, matters:

- (1) the nature of the apperceptive process of temporal patterning by means of the orienting to, binding, and

marking of temporal concerns;

(2) the relationships between these three ways of temporal patterning and: (a) the problem of maintaining a sense of continuity of selfhood over the course of one's life; and (b) the segmentation and diachronic arrangement of social experience into the qualitatively differentiated realms we call life spheres and social tracks;

(3) the changing nature of the structure and contents of temporal images and conceptions and its relation to the reification process by which the nexus is developed, maintained, and modified; and

(4) the relationships between these matters and the clarity people feel they can assume about the structure and contents of their temporal images and conceptions.

It is to the first of these four matters that we now turn.

III

Temporal Patterning and the Apprehensive Frame

The concerns which are the contents of our thoughts can be located anywhere along the temporal continua underlying our actions, our lives, and the milieux in which we participate. However, if these concerns are to become part of our temporal images or conceptions, they need to be arranged into meaningfully coherent structures. This arranging of the "stuff" of human experience has as its emergent outcome a frame of apprehension with a temporally patterned content.

The temporal aspect of this process of arrangement of memories, perceptions, and anticipations into a frame of apprehension is referred to here as temporal patterning. Such patterning is apperceptive in nature, consisting of classification, evaluative assessment, meaningful interpretation, and integration of temporal experience into an apprehensive framework for an ongoing action-event. It is thus the means of "grasping" remembered, present, or anticipated temporal experiences. In the discussions that follow, we refer to outcomes of the process of temporal patterning as the temporal frame of an action-event. This term is simply a shorthand way of specifying the temporal aspect of the frame of apprehension as discussed above.

The ways in which people impose a structure or pattern upon temporal experience is a matter of great importance for the understanding of human temporality. Only by understanding the means by which the temporal frame of an action-event is constructed can we go on to answer the questions we have raised about the relationship between social factors and the various properties which such patterning gives to thought and conduct.

Our interest in identifying ways of temporal patterning is made necessary by our need to develop a conceptual framework through which social factors can be theoretically related to images of the future. Temporal patterning gives the temporal frame of an action-event certain properties which can then be related to the social factors in which we

are interested. Our discussion of the temporal patterning also provides a consistent terminology that can be used in relating earlier theoretical and empirical efforts to our own.

It was to these earlier efforts that we first turned in our search for a means of classifying and conceptualizing the ideational activities which result in the construction of a temporal frame.* In examining each of these efforts we asked the same set of questions:

- (1) To what extent does the proposed classification take into account the limitations on temporal patterning imposed by basic human psychological capacities?
- (2) To what extent does it take into consideration the person's requirements in creating and maintaining a continuity of selfhood over the course of the life cycle and the requirements of his participation in a community of time?
- (3) To what extent does it consider the relationship of cultural values and knowledge to the way in which

*There have been a number of different types of classifications and typologies of temporal patterning offered in the previous literature. Psychologically-oriented schemes emphasizing the relation of temporal patterning to individual perception, behavior, and learning have been provided by Paul Fraisse (1957), Wallace and Rabin (1960), and Leonard W. Doob (1971). In addition, Mann, Siegler, and Osmond (1972) have attempted to relate eight types of spatio-temporal perceptual sets to an equal number of personality types derived from Jungian psychoanalytic theory. However, of the more psychologically-oriented schemes, that of Cottle and Kleinberg (1974) comes closest to our own in its emphasis on both temporal orientation and temporal integration.

different types of temporally-based concerns are patterned?

- (4) Most importantly, does the conceptual focus of the scheme relate temporal patterning to social factors?

The Ways of Temporal Patterning: An Overview

There are three basic, inter-related ways in which the apperceptive process of temporal patterning takes place. They are the ways a person orients, binds, and marks his concerns in the course of constructing the temporal frame of an ongoing action-event. Respectively, these three ways provide the locational, integrative, and indicative dimensions of the temporal frame. Together, they are the means by which there develops the "connectives" between and among the concerns which make up the temporal frame. They constitute the nexus between the subjective and objective aspects of human temporal experience. However, they are not themselves the nexus.

While each of these ways of patterning is discussed in turn below and elaborated upon at various points throughout the study, perhaps we can best explicate their separate but inter-related nature by giving an example of how each would enter into the construction of the temporal frame of a typical action-event. For the purpose of presenting this example, assume that I have a current interest or problem which defines for me certain concerns about my daughter. Of all these concerns, some are "located" by me in the past, as

they arise from my memories of my child on similar occasions and under similar circumstances. Other concerns find their loci in the future, as the anticipations, hopes, and expectations which comprise my image of my child's future. Further, these past and future concerns are more or less integrated into a whole and are given a degree of sequential and durational ordering over time. The wholeness corresponds to my integrating of all of these temporally-based concerns relating to my current interest or problem about my daughter. The durational and sequential ordering reflects my learned and shared ability to indicate the way in which these concerns are demarcated and differentiated over the passage of time. All of the above constitute the temporal frame of whatever action I am taking in relation to my interest or problem with my child. Since part of that temporal frame is an image of my child's future, the image itself is similarly constituted as a structured set of future concerns.

In the example, a number of different concerns are defined by my matter-at-hand and by my stock of knowledge-at-hand. Constructing and carrying out an action-event in terms of my matter-at-hand entails the "locating" of these concerns about my child in memory, perceptions of her in the present, and anticipations about her in the future. Orienting to one's temporal concerns is the solution that we have for the problem of "sorting out" or temporally differentiating the contents of our knowledge-at-hand into those significant temporally-based concerns extending along the

subjective temporal continuum from the past to the present and forward into the future. Orientational patterning is this apperceptive process by which pattern is imposed upon concerns in such a manner as to "locate" them in one or another temporal period and to arrange them within these temporal periods according to their relative sequences and durations over the total temporal distance span of the concerns.

The binding of temporal concerns is the solution which people have for the problem of maintaining a continuous temporal frame under the condition of a simultaneity of "pasts" and "futures." In any ongoing action-event there is also the need to reconstruct the boundaries of the present under the condition of a succession of Nows which typically bring us closer to the outcomes of our conduct. Time-binding is therefore an integrative apperceptive process which meets the need to maintain a sense of continuity and coherence of the temporal frame over the course of an action-event and to maintain a sense of continuity and coherence of selfhood during the course of a life cycle in which one will engage in many such action-events. These characteristics make time-binding of temporal concerns the most complex of the three ways of temporal patterning. Yet, without such integrative patterning, a person would not know what he is doing from one moment to the next, much less be able to engage in conduct oriented toward future goals.

The marking of concerns demarcates and differentiates them from one another in terms of their relative sequence and duration within the span of a temporal period. In marking his temporal concerns, one is able to indicate to himself and others their relative temporal location along some underlying continuum in terms of some meaningful metric. Some further discussion at this point is necessary on the nature of marking.

We are most aware of the marking of our concerns when we consider the individually and culturally diverse referents by which people reckon and indicate to themselves and others the passage of events. This marking functions to pattern or arrange temporal concerns in relation to one another according to some type of qualitative or quantitative metric which may be uniquely personal, but is most typically culturally standardized in nature. The marking of time therefore demarcates and differentiates concerns, patterning them into the intervals, sequences, and durations which form the schedules and timetables of individual action and collective life.

The simplest, and perhaps only universal way of marking time is found in the notions of "before" and "after." By means of this deceptively simple distinction, and its more subtle and complex variations, we are able to initially pattern sets of two or more objects, events, and experiences when at least one of them lies out of hand in time.

Most marking is more complex. Modern societies exhibit a great proliferation and complexity of temporal referents ranging from the nanoseconds of the computer engineer to the light years of the astronomer. These referents, and the linguistic conventions which underlie them, provide us with shared and standardized ways of marking our temporal concerns for the purpose of indicating where relevant concerns are located along the temporal continuum underlying an individual or collective action-event.

Orientalional Temporal Patterning: Locational Modes

The way in which people orient themselves to their temporal concerns is perhaps the most basic and certainly the most frequently studied of the three types of temporal patterning. People's concerns can be examined in terms of where they are located along the temporal continuum extending from the past through the present and into the future. Discussions of the way people orient themselves to the temporal locations of their concerns typically take as their point of reference perceptions, thoughts, and conduct in the ever-changing present of human experience.

Orientalional patterning is a selective ideational activity. Only part of what we perceive, know, remember, and expect at any given point in our lives is relevant to the actions in which we are engaged. Which of our temporally-based concerns are to be located where along the temporal continuum is therefore a function of the objects,

events, and experiences defined as relevant to the requirements of our actions.

In this discussion of orientational patterning, we focus on orientations people have to the concerns relevant to their more or less persistent and recurring matters-at-hand. Many types of temporally-based concerns extend throughout the life cycle because they are derived from the persistent and recurring experiences we encounter in the life spheres. For example, concerns about family life, friendships, economic and occupational activities, leisure pursuits, political goals, and religious matters involve an often continuous consideration of objects, events, and experiences lying at many different points in the past and future. Orientation to these concerns entails a mental projection of self outward from the present into those past and future spans which "bracket" or contain the concerns.

This periodization of the various concerns arising out of one's matters-at-hand is an aspect of the selective attention provided by ideation. By locating concerns in different temporal periods, a patterning is imposed upon them which reflects an interpretation and assessment of their efficacy for the realization of the state of affairs toward which conduct is directed. In arranging the relevant memories and anticipations necessary for a given action according to their temporal location, the action itself becomes an identifiable event with the property of

ideational extension outward from the present into the past and the future.

However, orientational temporal patterning entails not only the periodization of concerns. It also entails the temporal distance span of concerns in each temporal period as these are located outward from the present. This distance span of temporal concerns is delimited by the furthest past concern and the expected outcome of the action itself. Within each temporal period it can be considered as having its point of origin in the present.

Of particular interest to us are the processes of orienting to future concerns, as these are parts of images of the future, arising from social actions in different life spheres. Much of the empirical analysis is devoted to examining the assumption that the span of the future concerns which constitute images of the future is determined by the person's position in relation to institutionalized processes of continuity and discontinuity anticipated in different life spheres. That is, the patterning of future concerns along the temporal distance span of an image of the future is often pre-structured. This is made possible by the shared knowledge of the typical sequential patterns concerns take over time. Especially important in this respect is the knowledge shared among participants in a particular social milieu about the social tracks along which they will travel in the course of their lives.

The Emergence of the Ideational
Past, Present, and Future

It is often assumed that the past, present, and future "exist" as temporal locations external to human thought and experience or as mental pictures with more or less stable contents that people carry along with them throughout the course of their lives. In contrast to these two naive but nevertheless popular assumptions, the position taken here is that the ideational past, present, and future emerge as temporal locations in the course of the actions people take toward dealing with the matters-at-hand confronting them in the course of their participation in an existential social milieu, e.g., a life sphere.

For G. H. Mead, the primary reference point from which to explore the emergence of temporal images and conceptions is the ideational present of an ongoing action-event. The present in human thought is not an instantaneous point, but a temporal period intrinsically linked to the ideational processes of an ongoing action-event. Rather than face a continuous succession of Nows, a person is able to create an ideational present bounded on the one hand by what has just happened and, on the other, by what will happen next, bounded by what phenomenologists have termed pretensions and protensions. The future ends and merges with the present when experiential contact is made with it. The past begins and separates from the present when recent perceptions and experiences have taken on that quality of

"remoteness" which permits their reconstruction through selective interpretation for the same or another action-event.

The ideational present of an action-event is a temporal location with which a person can identify. The identification of a person with the action-event in which he is engaged serves to isolate it in time. In doing so, the ideational present comes to have the more or less definite, though changing, boundaries which delimit it as a temporal location.

According to Mead, this ideational present of an ongoing action-event creates its own past and future boundaries and the concerns which lie beyond them. This is because human action "involves adjustment looking toward a past, and a selective sensitivity looking toward a future." The ideational present is therefore the result of an apperceptive process which "marks out and in a sense selects what has made its peculiarity possible. It creates with its uniqueness a past and a future." The pasts and futures toward which people are oriented in thought and conduct are temporal locations which exist "pre-eminently in the field of ideation and find their locus in what is called mind. . . our pasts are always mental in the same manner in which the futures which lie in our imaginations ahead of us are mental" (1964:333, 332, 336).

Ideation extends the temporal limits of human action and the experiences derived from it. The capacity to give

pattern and meaning to temporal experience gains its importance from the fact that this mental activity extends the scope of people's awareness of the sequences and durations by which time is manifested in the world.

This ideational present, with its boundaries and as a locus of temporally-based concerns, is also a functional present. Its functions are two-fold. First, it is the reality-based perspective from which the images of past and future are constructed for a given action-event. Despite whatever other phenomenological differences* they might have, the ideational past and future of an action-event are selectively constructed interpretations. As such, our pasts and futures are both hypothetical and determining of the actual line of conduct to be taken.

The second function of the ideational present is a result of its being the locus of both the knowledge and contact experiences which confirm or deny the hypothetical pasts and futures imagined for the action-event. The present is a succession which often entails an actual encounter with the future of a previously defined present. We often come to live in the futures we plan, project, and act toward in the present.

*This notion of the present as the reality-based perspective from which people interpret and orient themselves to the passage of time is shared by psychoanalytically as well as phenomenologically oriented theorists. For example, Oberndorf (1941) has argued that the present always possesses a greater sense of reality than the past or future. Even though we may be uncertain in the present, such uncertainty is actual, rather than potential as is the case when we regard our expectations about and goals for the future.

Time-binding: The Synchronic
and Diachronic Integration of
Concerns into Temporal
Images and Conceptions

The most complex of the three ways of temporal patterning is time-binding. On the one hand, we are faced with the problem of maintaining a continuous temporal frame under conditions of a simultaneity of "pasts" and "futures." On the other hand, in any ongoing action, there is also the need to reconstruct the boundaries of the present because it is essentially a succession of Nows. Time-binding meets these needs to maintain a sense of continuity and coherence of temporal frame over the course of an action-event.

The objects, events, and experiences of the life world* are presented not only in their succession, but also in their simultaneity. The life world possesses both a diversity at any point in time and a transversity over time. To act, it is necessary to deal with these two basic aspects of the life world. Ideational mechanisms must be established and maintained both for the synchronic coordination of concerns and for their diachronic unification.

The solution to this temporal problem is found in the manner in which people learn to bind together the elements of the life world both diachronically and synchronically. Diachronic time-binding refers to how past and

*This term appears frequently in phenomenologically-oriented writings. It refers to a person's total scope of experiences, all the objects, activities, and events of which he has awareness in the course of his everyday life.

future concerns are coordinated and unified with regard to a particular matter-at-hand. Synchronic time-binding indicates the patterning of multiple and diverse pasts and futures into coherent wholes in the form of images and conceptions of time, the past, and the future.

While synchronic coordination is often regarded as an aspect of spatial patterning, it is not only this. Time-binding is also synchronic as well as diachronic in nature. There are various means available for establishing coherence between the past and future and the present. Yet, this is not a simple matter of the ways in which memories and anticipations are related to the requirements of present conduct.

Each person has multiple and diverse "pasts" and is oriented toward similarly complex "futures." Time-binding involves the modes of coordination and unifying of past and future concerns with specific present actions and of multiple and diverse pasts and futures into coherent wholes for both individuals and collectivities.

There are simultaneous pasts and futures as well as present perceptions. Past and future concerns are both contingent and convergent upon one another. Time-binding involves this patterning of multiple pasts and futures, just as it involves relating specific temporally-based concerns to present conduct. Simultaneity is therefore a temporal as well as a spatial problem for the creation and maintenance of a pattern of social action.

In sum, there are two basic modes of time-binding: synchronic and diachronic. Synchronic time-binding involves the patterning of different "pasts" and "futures" into coherent wholes from the perspective of the person and his ongoing actions in the present. Such coherent wholes are what we have termed temporal conceptions. Diachronic time-binding relates specific past and future concerns to ongoing actions in the present. This gives rise to temporal images having a patterned content.

Each of these modes of time-binding rests on two even more basic principles by which objects, events, and experiences are ideationally arranged in and over time. The first principle is that of the attribution of persistence of effect to the remembered or anticipated object, event, or experience. The second principle is the assumption made that objects, events, and experiences of certain types have a probability of repetition. When any phenomenon is characterized by both repetition and persistence of effect, we can refer to it as having a patterned continuity. Time-binding finds its ideational source and objective expression in such continuous patterns or processes of objects, events, and experiences. These patterns were identified above as the social tracks about which the members of every society have knowledge.

We can recognize the existence of time-binding in the various ways people "pull" the past and future into the present. They provide the action-events that Cottle and

Klineberg call "temporal integration."

. . . it is primarily in a person's efforts to comprehend his present experiences that his conceptions of both past and future are shaped. If, in his recollections, he can find a sense of continuity and of orderly, predictable change which accounts for his current circumstances, he is likely to project into the future a sense of new possibilities that derives from these interpretations of past and present experiences. Images of the future are thus created in the process of "temporal integration," in the connections that people themselves impose on their experience of time. . . . The future is primarily created out of the implications of past experience, of the sense of continuity and of orderly predictable change that it may provide. Conversely, when altered circumstances in the present create new conceptions of the future, reconstructions of the past are likely to change accordingly. (1974:12-13, 34)

The last two sentences in this lengthy quotation draw our attention to the fact that time-binding is an ongoing ideational process having important consequences not only for the manner in which people impose meaningful and coherent patterning upon their temporal concerns. It also has more general consequences for the problem each person has of maintaining a sense of self-continuity in the face of both the changes brought about by the passage of time and the segmentation of experiences brought about by participation in several different life spheres at any point in time.

IV

Temporal Patterning, Continuity of Selfhood,
and the Segmentation of Social Experience

In the course of a person's social participation in social interaction one develops a sense of selfhood. The self is a dynamic unity of what is learned, remembered, and planned by the person for each of the many and diverse aspects of his experience: his biological make-up, the other people significant to him, and his knowledge of the physical as well as social dimensions of the life world in which he lives. The self is the person as he or she perceives, interprets, and responds to biographically and collectively defined matters-at-hand arising from these aspects of experience.

Maintaining a
Continuity of Selfhood

Each person must be able first to establish and, then, maintain a sense of continuity of selfhood over the course of his life. Remembrances of past events, current perceptions and conduct, future expectations, plans, and projects need to be given some common thread--some type of unitary and overarching chain of being for man to be an effective social participant.

Likewise, a person's conceptions of the life world must be based on the assumption that it has pattern and continuity over time: that that which is has been and will persist in a more or less typical and predictable manner.

As Schutz has observed, we anticipate and expect our future concerns by means of "schemes of typification" which we share with others in our social milieu. These typifications provide standardized, "ready made" orientations to what we anticipate about the nature of things to come. Further, Schutz points out: "In commonsense thinking these anticipations and expectations follow basically the typical structures which have held good so far for our past experiences and are incorporated in our stock of knowledge at hand" (1970:137). Continuity of selfhood rests on such contents of the stock of knowledge and is therefore, in part, a consequence of participation in the social world.

However, it is also a consequence of the capacity to give coherence to memories and anticipations as these relate to the ever-changing requirements for conduct in a social milieu. The multiplicity of diverse experiences and actions over the course of a lifetime present a problem: a continual threat of fragmentation of the sense of selfhood. The many different social roles one is called on to play and to take on over the course of a lifetime present a constant potential for change in self-identity.

What has been variously termed the "life plan" (Schutz, 1970), "life space" (Lewin, 1936), "mazeway" (A. F. C. Wallace, 1961a), and "rate of attainment of ideals" (Gioscia, 1967) rests not only on the capacity to construct a temporal frame at any single point in time, but also on the ability to establish a coherence of many such temporal

frames over the course of a lifetime for each of the many life spheres in which role-playing and role-taking are engaged.

For this reason, even though one can and does change images of the future over the course of a lifetime, one must still retain a more or less stable patterning of future concerns in an intersubjectively meaningful manner. Maintaining such continuity in temporal patterning in the face of changes in the content of images of the future is a part of what is meant by the continuity of selfhood.

Such maintenance of continuity in temporal patterning is a function of the fact that we live in the "futures" which were once part of our various anticipations, expectations, plans, and projects at an earlier point in time. It is also a function of our shared stock of knowledge about the life spheres into which our social experience is segmented. Finally, it is a function of the ideational capacity to integrate the "times" of social experience into coherent wholes. These coherent wholes transcend the temporal differentiation of that experience by means of periodization and the segmentation of conceptions of the future-in-general into more particularistic images of the future for the various life spheres.

Temporal Patterning and the
Segmentation of Experience into
Life Spheres: The Construction
of Temporal Conceptions

Social experience is differentiated experience.

Every person participates in many qualitatively different types of activities, relationships, and situations. Each of these provides for experiences which are multifarious, particularistic, and changing. For example, most people recognize their family experiences as more or less distinct from those of work. We are aware of these contrasts along several dimensions. The experiences mean different things to us. We engage in relationships with different people. The activities differ in purpose. Finally, there are differences in the situations in which these relationships and activities take place. Likewise, family and work experiences are both recognized as different from those common to and typical of religious, political, ethnic, and informal community experiences.

In this sense, social experience is segmented into life spheres characterized by qualitatively different types of activities, relationships, and situations. The segmentation of social experience into life spheres is socially patterned, culturally defined, and intersubjectively meaningful. Life spheres are collectively shared realms of meaning, interests, concerns, and actions common to and typical of the social organization of complex societies. They are, for the members of such societies, the major

existential milieux of social participation as well as the major determinants of the types of experiences that the participants will encounter over the course of their lives.

The relationship between temporal patterning and the segmentation of social experience owes its existence to the fact that the person possesses a self. The self must be able to cope with the segmentation of experience at each stage as well as over the course of life. Memories and expectations arise from the many different types of matters-at-hand that are encountered in each of the various life spheres participated in at any stage in the life cycle. As such, these temporal concerns are oriented toward one or another of the life spheres of social participation, as well as toward one or another of the temporal periods into which the concerns themselves are ideationally located. Much of the basis for this differentiation of temporal concerns by life sphere is due to the fact that conduct in any one sphere does not usually change our recollections and expectations related to some other life sphere. We stress the "usually" for segmentation is not to be interpreted as partition or segregation of experiences. The many pasts must be arranged into a sense of a unitary or holistic pasthood and the futures patterned into some more generalized sense of what is to be expected. There must develop a sense of "my past" and "my future" out of the qualitatively differentiated pasts and futures arising within each of the several life spheres. Only in overarching and ideationally

unifying these segmented pasts and futures can a person constitute himself as a unitary whole possessing a sense of continuity of selfhood.

There is a second aspect to the problem of maintaining a sense of continuity of selfhood as that relates to the segmentation of social experience. Within each life sphere, experience changes over time. Over the course of their lives people engage in many different action-events in each of the life spheres. As a result, the people, places, and things that are the objects of memories and anticipations change as well as persist. The way in which people think about these concerns and arrange them into a frame of apprehension must therefore also change. Likewise, orientations to temporal concerns must change.

Temporal images and conceptions exist only over a given span of time. For this reason, only an action can be regarded as oriented toward the past or the future. People are temporally oriented to their temporal concerns within the context of an action-event. It is within that context of such action-events that concerns are arranged into temporal period locations.

For example, at one point in a person's life, graduating from high school may represent an anticipated event that is part of an image of future school life. At some later point, after high school is finished, the same event, having since taken place, is no longer a part of an image of the future. It may now be part of an image of the past or

simply among the contents of memory. It takes on a different temporal period location within the frame of apprehension and, typically, a new temporal distance location in relation to the person and his matters-at-hand in the present.

Long term action-events, such as being educated for a particular profession, engaging in a career, or being a parent to one's children, typically entail having different orientations to the same concerns. A person's relation to his existential milieu changes through the acquisition of new roles, new relationships, and more knowledge about the life sphere in which he is acting. As a result, what is thought about when he thinks about the past and future will also change.

Temporal images in each of the life spheres of social participation are therefore constantly undergoing varying degrees of change. Just as the pasts and futures which are constructed for each of the life spheres must be integrated into more unitary and meaningfully coherent conceptions of the past and the future, the temporal concerns within each life sphere must be given a coherent continuity in time. The totality of one's perceptions, memories, and expectations need to be integrated with one another despite their segmentation into qualitatively different realms of experience. For example, past, present, and future family activities, relationships, and situations need to be recognized as having some degree of commonality despite their

distribution over time. There is a sense of family life which transcends its temporal differentiation in distance span and periodization, just as there is a sense of pasthood which transcends the many realms of experience within which life is conducted.

Berger and Luckmann have recognized these problems of maintaining a sense of a unity of selfhood in the face of the segmentation of social experience as follows: "The segmentation of the institutional order and the concomitant distribution of knowledge will lead to the problem of providing integrative meanings that will encompass the society and provide an overall context of objective sense for the individual's fragmented social experience and knowledge" (1967: 84). These integrative meanings take the form of what we have termed temporal conceptions. Conceptions of the past and the future function in somewhat the manner that Durkheim ascribed to collective representations. Such conceptions provide an ideational representation of oneself in time and may be shared by and include others significant to you. Abstract and often global in nature, such conceptions provide synchronic unification and coordination of the many different images of the past and future each of us has at a given stage in his lifetime.

V

Sources of the Changing Structure and
Contents of Images of the Future

Images of the future change within the course of an ongoing action-event for two basic reasons. First, while some action-events may be of only fleeting duration, others take place over extended spans of time. Therefore, in the course of any action-event with extended duration, it is almost inevitable that the contents of the stock of knowledge will change. In particular, it will have come to include our recollections of the experiences acquired in the course of engaging in that particular action-event. This form of feedback is an important aspect of the reification process referred to above. Feedback is a constant occurring dimension of any action-event and often has as its consequence the modification of the image of the future for that action-event.

This feedback-reification process takes place as follows. We have previously stated that an actor's image of the future provides him with a scheme of orientation for his conduct. The results of this conduct are among the actor's experiences. In other words, what was once expected is now encountered. And once encountered, it is experienced and remembered, thereby forming an addition to the contents of the stock of knowledge-at-hand. On the basis of these contact experiences, the knowledge-at-hand can be re-assessed in the light of the now current relevance of its contents

for the construction of conduct which will bring about a resolution of the initiating matter-at-hand.

This re-assessment is again an apperceptive process which can have as its consequence a modification of the structure and contents of an image of the future. Mead has pointed out that as we move through time, we come into contact with the objects, events, and experiences heretofore only anticipated. This contact is a reality-testing process by which we confirm or deny the inherently hypothetical imaginings which are the contents of the image.

In the light of these confirmations and denials, we may find ourselves compelled to re-assess our images of the future; our clarity about how the future will unfold may be decreased and the certainty with which we expect particular concerns to manifest themselves may be reduced. In sum, the adequacy of the course of conduct and the outcomes it was intended to produce may no longer appear to constitute a resolution of the matter-at-hand. Images of things yet to come may therefore undergo a process of ideational modification by bringing new knowledge to bear and re-arranged together with previously defined concerns into a new image taken to be a more adequate scheme of orientation.

There is a second factor which makes it inevitable that our images of the future will undergo modification in the course of an action-event. An image of the future is a structured set of concerns projected ahead over a more or less fixed span of time. It has an end. That end is the

point in time when we expect to realize the state of affairs intended as the resolution of the matter-at-hand which initially motivated the construction of the action-event.

In other words, as we move ever closer to that future state of affairs by which we intend to resolve our matter-at-hand, we are shortening the temporal distance span between the Here and Now of the sensory present and the point ahead at which we expect to consummate the act. Any image of the future, if it is not subjected to major modifications in the course of the action-event, will inevitably be foreshortened in its temporal distance span. Its content will also change as anticipated concerns are first experienced and then fixed into memory. Finally, it may increase in the degree of clarity with which its previously held anticipations are apperceived as having an integrated diachronic structure. As previously held anticipations are given confirmation through contact, those concerns yet to come may increase in their certainty of occurrence and outcome.

The second of the two factors bearing on the changing nature of temporally-based concerns is of great importance here. As the existential social position of the actor changes over time, as he becomes involved in new and different activities, relationships, and situations in his several life spheres, his temporally-based concerns often change.

We all have a number of different social positions. Together they involve us in role-playing in several different

life spheres. Separately, each provides for the matters-at-hand giving rise to qualitatively different types of concerns about what has gone on and what will come to pass.

Further, our social positions change over time. We are involved in processes of role-taking as well as role-playing. The most basic and universal of these changes are related to the life cycle. Every socio-cultural milieu defines the type of behavior appropriate to participants at different stages in their life cycles. In addition to these major transitions in existential position, there are also changes in role-playing which are socially tracked. The passages we make along these tracks are basic to the maintenance of every society and are part of our knowledge and expected experiences. We move toward our images of the future in the present and away from those of the past as we make the passages along the various social tracks found in our society. By means of them we come to exist in the futures we project ahead of us.

VI

The Clarity of Temporal Images and Conceptions

The assuredness people have about the pattern and contents of their temporal concerns is among the most important aspects of temporal thought. This final section presents the several theoretical and practical considerations which make questions about the certainty and clarity people assume about their futures so important to this investigation.

In doing so, we relate these questions to our previous theoretical discussions and lay the groundwork for the empirical analyses of the relationships between life spheres and the clarity of images of the future reported in Chapter Eight.

In the pages to follow, note that several terms are given theoretical definitions and that some basic assumptions and relationships to previous matters are to be kept in mind along the way. First, key concepts like certainty and clarity are formally defined here. For example, certainty is always used in reference to a temporal concern, while clarity refers to a property of temporal images and conceptions. The notion of assuredness is used more generally in reference to all three levels of temporal thought (concerns or ideas, images, and conceptions). Next, while the primary emphasis here is upon the clarity of images of the future, we do maintain the assumption that certainty and clarity are properties of temporal thoughts ideationally located in the past as well as the future. The objects, events, and experiences which are the contents of our temporal thought are rarely, if ever, remembered as they were initially encountered or anticipated as they will actually occur. Further, questions about the clarity of temporal images and conceptions are about the structure or pattern of these aspects of the temporal frame as well as about the contents. Clarity about images of the future, in particular, is a matter related to the outcome of the process of integrative temporal patterning in the form of the more or less

coherent structure people are able to impose upon their future concerns. Finally, as is implicit in the three points just made, matters pertaining to people's assuredness about their temporal concerns relate directly to earlier discussions of: (1) the nature of people's stock of knowledge and its varying degrees of adequacy in providing a resolution to their matters-at-hand; (2) the two modes of time-binding by which a meaningful coherence is imposed upon the temporal concerns which are defined; and (3) the corresponding problem of maintaining a sense of unity and continuity of selfhood in the face of the changing nature of particular temporal images and conceptions and the passage of time in general.

The Problem of Clarity and the Reasons for Its Study

There are three reasons underlying our own initial interest in studying the clarity of temporal images and conceptions. First, while there exists little in the way of previous empirical research directly relevant to this topic, a number of theoretical analyses are available to assist in formulating questions that might be asked in an empirical inquiry and to provide a framework for interpreting the answers obtained. These analyses are considered extensively below. The two other reasons for our interest are more practical in their source.

Analysis of the results obtained from the depth interviews and data from the pre-tests of the Time Machine

Test suggest that people's clarity about the future over various distances ahead and for different life spheres might be topics with important implications for development of a sociological explanation of the determinants of temporal thought. In particular, we recognized that these were matters whose empirical investigation might provide a basis for demonstrating the adequacy, if not the superiority, of a sociology of knowledge approach over the prevailing psychologically-oriented explanations of variations in the ways people think about and orient themselves to their future concerns.

There has also been an increasing interest by sociologists and the public alike in "futuristics"* and the related phenomenon of "future shock." As popularly interpreted by writers like Alvin Toffler, "future shock" is a chronic condition in a modern technological society. People become disoriented by confrontation with a seemingly endless barrage of changes in their lives. These continuous changes result in the feeling that the past can no longer serve either as a blueprint for the future or as a set of recipes for acting in the present. This creates a profound sense of

*The sociological contributions of the implications of "futuristics" have been given general consideration in review papers by Henry Winthrop (1968) and by Bettina Huber and Wendell Bell (1971). The predictive emphasis of these works differentiates their purpose from that of the present study. However, this study has several direct and indirect implications for the future understanding of how people come to predict the futures they are either anticipating or hope to avoid.

frustration and bewilderment in planning for the future. Not that the past and future have themselves been lost. Instead, they are confronted in new and alien ways. For those who share Toffler's awareness, there has come into the world

. . . a stream of change so accelerated that it influences our sense of time, revolutionizes the tempo of daily life, and affects the very way we "feel" the world around us. We no longer "feel" life as men did in the past. And this is the ultimate difference, the distinction that separates truly contemporary man from all others. For this acceleration lies behind the impermanence . . . that penetrates . . . our consciousness, radically affecting the way we relate to other people, to things, to the entire universe of ideas, art and values. (1971:17)

If such an all-encompassing alteration has occurred in the sources of temporal experience, one would expect people to express their state of "future shock" in terms of a low degree of assuredness about their life-in-general and the life spheres in which they participate. It would be desirable, but difficult, to construct a baseline for gauging the extent to which people's clarity about the future has changed. However, it is reasonable to infer that if descriptive statements like Toffler's are accurate, many, if not most, people would report very little or no clarity about the future course of their lives.

The Ideational Reconstruction of the Past

What is learned and experienced in the past inevitably diminishes in clarity and distinctness. As we move further away from some point in the past, what was once

regarded with certainty is reconstructed. Our current matters-at-hand lead us to select, interpret, and assess the contents of the past for their efficacy in the construction of conduct toward the future and their "fit" with our current self-images. In doing so, memory becomes a past for the present--not the past of the present.

Ideational pasts are a reconstruction of what was once directly experienced or learned from others (cf. Mead, 1964:328-41). This ideationally reconstructed past differs from the "real" past not only because of the frailties of human memory, the inadequacies of records, or the availability of previously unknown evidence. Images of the past derive their content and structure not from what is retained of contact experiences with the "real" past. They arise from the requirements of action in the present.

Our ideational pasts often help us in projecting what we might expect in the future and deciding how we should act in order to realize some desired state of affairs. The ideational past is the "real" past as it is given pattern and meaning in the present for conduct toward the future. It is a past varying in clarity as its contents vary in their temporal distance from and significance to matters-at-hand in the present.

Researchers interested in subjective temporality have generally neglected questions about the clarity with which we regard the past. For one, it is often taken for granted that people are generally certain about the contents

of their own past and, to some degree, are knowledgeable about events outside the social, spatial, and temporal scope of their own experience. Further, there are built-in problems in investigating the clarity of images of the past. In many instances, only the person himself can claim valid knowledge of what he did and how he felt, and he may not regard the clarity of his memory as problematic.

The Hypothetical Nature of Temporal Concerns for the Future

According to Mead, the concerns which provide the patterned content of images of the future have an inherently "hypothetical structure." They also display what Schutz terms a "horizon of indeterminacy." Anticipated objects, events, and experiences always vary in their degree of certainty. Future concerns are rarely distinct in their temporal sequence and location outward from the present. Nor are they certain in their outcomes either as intermediate steps in the realization of some goal or as the experiential content of some desired state of affairs.

Both alone and in common with others, we typically lack a sense of assuredness in the face of the oncoming future. We assume a lack of precision in our predictions and display varying degrees of uncertainty about whether we will come to realize the future states of affairs toward which our conduct is directed.

In sum, images and conceptions of the future are often lacking in clarity about many of their most important

aspects--about how, when, and where our future concerns will manifest themselves.

Explaining Variations in the Clarity of Images of the Future

The clarity with which people view the structure and content of the future is a consequence of two complex sets of factors. The first set has much to do with our earlier discussion of the temporal distance location of future concerns and the temporal distance span covered by the concerns that form the content of images and conceptions of the future. The second set of factors is focused around the amount and adequacy of the knowledge-at-hand the person has available when constructing an image of the future. In the discussions to follow and in the empirical analyses reported in Chapter Eight, the primary focus is on the clarity people assume about their own futures. Further, as the two sets of factors are interrelated, the present discussion and the empirical inquiries that follow will often consider both at the same time.

Kenneth Boulding perhaps comes closest to our own assumptions about the relationship that exists between people's knowledge-at-hand at any point in their lives, the temporal distance spans over which they project their images, and the certainty they assume about how, when, and where their expectations will manifest themselves. Using the term "messages" to refer to the structured experiences providing the informational content of knowledge, Boulding explains

that "images of the future must be held with a degree of uncertainty, and as time passes and as the images become closer to the present, the messages we receive inevitably modify them, both as to content and as to certainty" (1961: 11). This statement raises the following question which is used in guiding the direction of our empirical inquiries: How, and to what extent, does the segmentation and sequential patterning of social experience into life spheres and tracking affect the degree of clarity people assume for their many expectations about the future courses of their lives?

In asking this, we do not take for granted several of the assumptions implicit in Boulding's statement, without first assessing their theoretical and empirical support. First is the assumption that the degree of clarity a person assumes about his expectations for the future will vary in a linear and inverse manner over increasingly longer distances ahead. This linearity assumption is stated this way for two important reasons: (1) the particular expectations contained in an image of the future are always hypothetical and therefore always vary in their certainty of outcome; and (2) there may be a number of taken-for-granted reasons for hypothesizing that the further ahead people are motivated to think, the more hypothetical and probabilistic their anticipations and expectations will be, and the lower their overall clarity. However, this may represent only a general tendency and not an invariable relationship. It is always

possible that as people come closer to the point of imminent or actual contact with what they have been expecting, certainty may decrease rather than increase. In fact, there is no empirical basis for assuming either an incremental or unidirectional relationship between the clarity with which people view the contents of their ideational futures and the span of time over which those contents are temporally patterned. For example, what is expected for tomorrow may be less clear than what is anticipated ten years from now.

If these arguments can be empirically supported, their acceptance would have a number of important implications. Boulding's statement suggests that not only will images of the future vary in clarity as people approach the events and experiences they expect, but the contents of their images will also change. This proposition makes a great deal of sense if it is not assumed that the objects, events, and experiences which constitute the contents of people's images of the future are in some way out there ahead of them, just waiting until they catch up before they manifest themselves and validate their anticipations. As people approach the "times" of their expectations, the contents of those expectations often undergo modification in both substantive meaning and significance.

In large part, the changes that occur in the contents of a particular image of the future have much to do with the changes that take place in the stock of knowledge-at-hand. As people come closer to the point of reaching the

desired state of affairs toward which their actions are directed, their knowledge about and orientation to that state of affairs changes.

If the images of the future we create on the basis of what we know and what we want to accomplish undergo change, it is not because the temporal gap between the present and the expected future has shortened. They change because we are continuously testing the validity and efficacy of our expectations against our changing stock of knowledge, the requirements of our conduct, and feedback we get from previous contact experiences with expectations held in the past. For example, clarity about the course of our future work life over the next ten years might be drastically altered in the course of a single day, if that day provides new knowledge about the factors assumed to affect occupational activities, relationships, and situations.

VII

General Summary and Statement of Results from the Theoretical Explorations

This chapter, and the one preceding, present the results of our theoretical explorations in search of a conceptual framework and set of leading assumptions for guiding our inquiries. We have argued that neither the traditional sociology of knowledge perspective nor the prevailing psychologically-oriented approach provide an adequate basis for explaining the nature and types of temporal thought common to the participants in an existential social milieu.

Summary of Problems Associated with Previous Approaches

The traditional sociology of knowledge, as evidenced by the assumptions guiding the Durkheimian school, with its emphasis on "categories," "stylistic structures," and "systems of truth" locates the sources of the patterns and contents of temporal thought outside the actor and in the society itself. As such, it represents a sociologicistic approach which neglects the continuing nature of the reification process between the subjective and objective aspects of time in social life.

On the other hand, the use of personality variables to explain the nexus between the dual aspects of time, and its expression in the form of varying outlooks on the future, is psychologistic. The sources of temporal thought are located within the actor, as properties of his predispositions to behave. As such, the psychologically-oriented approach, used by both psychologists and sociologists for explaining group variations in "time perspectives" and "temporal orientations," neglects the fact that people's orientations to the passage of time reflect the content of their temporal concerns, the actions in which they engage, and their experiencing of the consequences of these actions.

Summary of the Approach Taken Here

In contrast to both these perspectives, we locate the nexus between the dual aspects of time in the

interactions among self, social milieu, and action. It is through action that the self is developed (cf. Mead, 1964) and the ongoing patterns of life typical of a social milieu are maintained (Parsons, 1951; Schutz, 1970). What people do, in order to deal with the matters-at-hand confronting them in the course of social participation and for maintaining a sense of continuity of selfhood over the course of that participation, also provides the basis for the nexus between the dual aspects of time in social life.

People ideationally construct their actions, and in doing so define the temporal concerns and create the temporal images and conceptions which provide schemes of orientation for their conduct. As reflected in their typical conduct, and as given symbolic expression in language, temporal images and conceptions are often shared by those with common matters-at-hand and stocks of knowledge. As a result, they also often act in ways which are patterned and repetitive, in ways which are culturally standardized and socially-structured. They produce, in turn, through this conduct the durations and sequences of social objects, events, and experiences by means of which each together is confronted with the passage of time in its objective manifestations. These manifestations, as experienced, remembered, and shared through language and lore, provide, in final turn, the matters-at-hand and stocks of knowledge by initiating the next round of actions and the recurrent bases for defining new temporal concerns and for creating new temporal images and conceptions.

The concepts and assumptions used to trace through this reification process between the dual aspects of time in social life were brought together in Section II of the Conspectus. The reader is referred again to it now, and recommended to review it in the course of the discussions to follow. At each reading of this section of the Conspectus, the reader's understanding of our overall theoretical approach, conceptual framework, and leading assumptions should be deepened, as our discussions continue to expand and elaborate upon the matters it contains. As stated, the Conspectus is like a road map or itinerary, to be consulted as needed in reviewing the course of the theoretical explorations reported above, as well as preparing for the methodological and empirical inquiries presented below.

Creating a theoretical framework is little more than an exercise in typology construction without a methodology for assessing the leading assumptions that underlie its development and are implied by its contents. Further, such a framework is useless unless these leading assumptions are empirically assessed in their implications and the framework continually revised on the basis of the findings. Such efforts on our part are reported in the chapters to follow.

CHAPTER FOUR

METHODOLOGICAL ASSESSMENT OF CURRENT MEASURES OF SUBJECTIVE TEMPORALITY

Our efforts up to now have focused almost exclusively on theoretical problems of conceptualization and the validity of assumptions. Now that we have identified the theoretical questions to be considered and the framework within which we might best seek their answers, problems of methods and measures arise. Here we are faced with an interesting dilemma. On the one hand, we want to empirically assess the plausibility of our leading assumptions. On the other, we have moved far away from the possibility of using currently available empirical methods. New conceptual distinctions are not readily operationalized by older measures. Further, given the problems identified with establishing the construct validity of concepts associated with the psychologistic approach, the use of methods and measures employed in many of the previous empirical studies becomes difficult.

As a result of this dilemma, we engaged in a series of methodological explorations focused on the currently available measures of concepts similar to those we developed above. The general purpose of these explorations was the

development of new tests designed to operationalize our own concepts and the use of these measures to assess our leading assumptions. This chapter reports what was learned about the problems associated with doing empirical research on subjective temporal thought. By identifying these problems, we were better able to develop the new tests used in the empirical analyses reported below.

I

Focus of the Methodological Explorations

Over the years a considerable body of empirical research has developed on the factors associated with people's orientations to the past, present, and future and on the temporal distance they project their thoughts back or ahead. Reviewing and critically assessing this research might begin by examining major studies done on a specific relationship, for example, between juvenile delinquency and how far ahead one thinks about the future.

Alternatively, one might review the studies done on a particular aspect of temporal thought, for example, findings about the factors associated with varying degrees of emphasis people put on the future relative to the past and present. However, to do this would assume that we already know just what it was about subjective temporality that was being measured.

Neither alternative fulfills our present purpose. Our interest is in the general nature of the relationship

between social factors and subjective temporality. Studies which report differences in the way various social groupings think about the past, present, and future can only tell us that social factors are important. Knowing that previous researchers have found age, sex, class, ethnic, and religious differences in how people orient themselves to the future does not answer questions about how such relationships are possible. Further, the findings of these studies are by no means consistent with one another. Some studies find differences while others do not. Still others find differences going in the opposite direction or discover that a particular relationship holds only under certain conditions.

While we present examples of such inconsistencies, contradictions, and qualifications below, to know about them is to ask more basic questions about: (1) the types of methodological problems encountered in doing such research; (2) the degree of support existing for the assumption that personality factors are the major determinant of variations in temporal thought; and (3) the problems that might be encountered in developing measures for testing the contrary assertion that sociocultural factors are the most important.

Types of Current Methods Used for Data Collection

Our point of departure is the techniques by which previous researchers have measured various properties of temporal thought. We have restricted our focus to tests

used for operationalizing concepts referring the relative emphasis people put on the past, present, and future (measures of temporal period orientation) and the temporal distance span of thought outward from the present (time perspective) into the past and future.*

Measures of the temporal period orientation and temporal distance span or perspective are primarily projective in nature. Most tests are of two basic types: storytelling and personal event. Descriptions of each of these types of tests are given in the pages below. However, our primary interest is the problems researchers face in using such tests to operationalize theoretical concepts and test hypotheses about their determination.

Personal Events Tests are most often used to operationalize what we have referred to as the temporal period orientation and the distance span of various types of personal events located in different points over the course of the life cycle.

There are also a number of different types of Story-Telling tests. Using either a set of story-roots or some pictorial stimulus, their purpose is to elicit a lengthy series of statements from the subject which is then scored for the temporal period location of the concerns expressed.

*We will adhere to the use of these terms in identifying the concept a measure is intended to operationalize to avoid the problem of researchers who give different names to what the same test measures or the same name to a concept operationalized by radically different tests.

Both of these two methods of data collection are examined below in several ways. First, we focus on the types of concept they were designed to operationalize. Second, their general validity and reliability is considered in terms of matters like response acquiescence and the extent to which the test permits the subject to express his own temporal concerns. Third, there is the extent to which the findings from studies using these types of methods are able to replicate one another.

While we may refer to the results of various studies to demonstrate problems associated with these types of tests, we should stress here that the specific results are not our main interest. For one, this chapter is a report of our methodological explorations. The focus is on how to do research on subjective temporality, not the results of specific studies dealing with particular relationships. Further, we are hesitant to report findings obtained from tests which we have come to regard as inadequate measures of the variables they were designed to operationalize.

II

Methodological Assessment of Story-Telling Methods for Data Collection

The first major method of data collection involves the use of semi-structured cues as stimuli to elicit a story from the subject. When such cues are verbal, they are called story-roots. Cues may also be pictorial, like the Thematic Apperception Test. In either case, a subject is

asked to tell a story which is then scored for references to temporal period and/or distance span.

The use of stories as a data source for research of this type was initiated by Lawrence LeShan (1952). He compared the mean of the length of time covered in the plots of stories told by lower and middle class children. LeShan's findings are often cited as evidence of social class differences in orientations toward the future. At the end of this section, we examine his work to demonstrate how methodological problems associated with story-telling tests have contributed a morass of conflicting evidence on the nature and types of class differences in outlook on the future.

Story-Root Techniques

In the story-root techniques, subjects are presented from one to four introductions (story-roots) and asked to complete the stories in their own words. The story is then scored for references to the past, present, and future, and/or the length of time (or action-span) the story covers. Often the subject is asked to estimate the action-span after completing the story. Among the most frequently used story-roots are:

Story 1

I want to see what kind of a story you can tell. I'll start one for you and then let you finish it any way you wish. "At three o'clock one bright sunny afternoon in May, two men were walking near the edge of town . . ." Now you start there and finish the story for me.

Story 2

That was fine. Now I'll begin another story which, as before, you may finish any way you want to. Here it is: "Ten o'clock one morning Al met his friend Jerry near the center of town . . ." Now you start there and finish it for me.

Story 3

That was pretty good. Now here is the start of another story which you may again finish in any way you wish. "Joe is having a cup of coffee in a restaurant. He's thinking of the time to come when . . ." Now you finish it for me.

Story 4

Here is the last story that I'll give you. I want you to finish it any way you wish, just like you did on the other stories. Here it is: "After awakening, Bill began to think about his future. In general he expected to . . ." Now you start there and finish it for me. (W. Wallace, 1956:241)

Problems Associated with Story-Root Methods

Several problems exist with the use of such story-root type measures. First, while these four story-roots all give explicit temporal cues of some kind, only the first two are claimed to make such reference. However, the second two refer to a specific time of day or month and all four define the future as the period of temporal reference. This emphasis on the future undoubtedly restricts the stories to events in that time period only. Ruiz, et al. (1967) report that subjects who give many future period references in their stories are also likely to give few past period references. The reverse is also the case. By using only the future period references for scores, responses for the past are systematically excluded.

Second, by using temporal cues referring to the time of day, or in one case, the month of May, the subjects are restricted to short-term time scales in their response set. Most certainly, it would not encourage any responses for time spans beyond the lives of the characters mentioned in the story-roots. The median length of the four stories used by Walter Wallace (1956) for his normal subjects was only two hours for the stories he claimed made explicit time references. For the supposedly unstructured cues, the median lengths were 1.5 weeks and 4 years. Platt and Taylor (1967) report a range for the four cues from one second to 60 years. Brandt and Johnson (1955) and Davids, et al. (1962) all report a tendency for most scores on the first story to be for less than one week. In sum, most of the story-roots elicit responses that refer to events in the short-term future.

Third, comparison of findings between studies is complicated by the tendency of researchers to use different methods of scoring the stories, analyzing the results, and reporting their findings. Some, like Kastenbaum (1961) report no data on the range or central tendency of the scores. He scored all his stories in minutes and then converted them to log values, but used the same roots as Wallace who employed different time units for each story.

As might be expected, few of the studies using story-telling methods replicate each other. While Brandt and Johnson (1955) reported that delinquent boys tell

shorter time span stories than do non-delinquent controls, Davids and Parenti (1962) found the same differences for boys, but not girls.

Lessing (1968) reports reaching similar conclusions to our own. From her own use of the story-roots technique and review of earlier methodological assessments she argues that: (1) the first two story-roots presented above most often elicit stories with spans of less than one day; (2) scores obtained from different researchers exhibit a wide range of variation; (3) within the same sample, subjects scored as having long future time perspectives on Personal Events Tests also score as having short perspectives in a story-root test; (4) test-retest reliability reports from different researchers are extremely varied; (5) the age of the sample population may affect how they respond to the various items. As these tests have been used most frequently in studies of young children, this last point is particularly significant.

Most recent research has attempted to avoid some of these pitfalls on the story-root technique. There has been an increased effort to score stories for the frequency of references to the past and present as well as the future. This suggests a shift away from using the stories as measures of temporal distance span to that of temporal period orientation. This shift may be related to a corresponding change in sample populations. Early story-root studies focused on children, delinquents, and the mentally ill, while more

recent studies by Ruiz et al. (1967) and Robert D. Meade (1971) involve older and more educated youth.

Tests Using Pictorial Cues

By using less structured stimuli to elicit the stories, the more recent studies attempt to improve upon the methods of their predecessors. Many researchers are now using semi-structured pictorial cues rather than story-roots. TAT cards and specially constructed pictorial stimuli are becoming the most frequently reported techniques. For example, Barabasz (1970) used a fixed sequence of three TAT test cards. The stories elicited were then scored in units of days, each subject receiving a total score reflecting the median plot length of the three stories. Again, scoring of the stories elicited from these pictorial stimuli focuses on the time span covered, the frequency of references to the past, present, and future, and, in some cases, an attitudinal component such as optimism.

However, there is often a lack of comparability among these studies due to differences in the pictures presented and in methods of scoring. For example, while some like Teahan (1958) and Klineberg (1968) score only the future distance span of the stories, others focus on temporal period orientation. Roberts and Greene (1971), using two pictures with a religious and a social content, recorded when the story began, rather than the number of references to the past, present, and future to measure period orientation.

More recent studies using the pictorial cues often deal with sample populations different from those employing story-root techniques. The Roberts and Greene study compares Anglo-American, Mexican-American, and native American respondents. College students are the focus of studies by Teahan (1958), Bews (1970), and Barabasz (1970) on academic achievement.

However, none of these studies attempting to examine the relation between academic achievement and temporality uses the same TAT-type stimuli or score the results in the same way. While the first three claim to be concerned with the relation of the span of future concern to academic achievement, little replication is indicated. Teahan and Barabasz both found that low academic achievers had a shorter span of future concerns than high achievers. But, Bews (1970) in a study of Black adolescents came to a somewhat different finding. Analyzing his data for both age and sex differences, he found that the relationship between the span of future concern and academic achievement held only for the older females, but not for the younger females or any of the males. Such differences in findings suggest that relationships reported between psychological variables and subjective temporality may be as much an artifact of method as they are of failing to take social factors into account in analyzing the data (cf. also Epley and Rucks, 1963, on other technical drawbacks of using the TAT in this type of research).

Research on Social Class Differences
in Length of Future Time Perspective:
A case study of problems of replication

There have been many studies of social class differences in length of future time perspective as this relates to the capacity to defer gratifications. Perhaps the most influential is that of Lawrence LeShan. His often cited paper presents an extensive argument that class differences in child-rearing practices result in the lower class having less frustration tolerance than the middle class. As a consequence, he contends, the lower class person comes to experience the passage of time as a succession of objects and events producing ". . . quick sequences of tension and relief. One does not frustrate oneself for long periods or plan actions with goals far ahead in the future. The future is generally in an indefinite, vague diffuse region and its rewards and punishments are too uncertain to have much motivating value" (1952:589). In contrast, the upper-lower, middle, and lower-upper classes have a more expansive outlook on the future and experience the passage of time in ". . . much longer tension-relief sequences. As the individual grows older, he plans further and further into the future and acts on the plans" (ibid.). LeShan's arguments and descriptions draw heavily on the earlier work of Lloyd Warner as well as his own findings. This new data is derived from comparisons of the length of time covered in the action-span of stories elicited from lower and middle class children of eight to ten years old. He found that

the lower class children told stories with the shorter action-span.

Taking this often cited study as a starting point, let us examine how it stands up in the light of later research. There are two matters to consider: first, whether there are any class differences in the extent to which people plan ahead in the future; second, whether these differences are a consequence of variations in the ability to postpone gratifications.

There have been at least four direct attempts to replicate LeShan's finding. Judson and Tuttle (1966) were not able to replicate, but did discover class differences using another of the many measures of length of future time perspective that have been developed. Greene and Roberts (1961) argued that LeShan improperly used the chi-square test to demonstrate differences. However, in the course of another study Ellis, et al. (1955) applied this test of significance to a reconstruction of LeShan's original data and report that there is a significant difference. A later study by Lessing (1968), with a much larger sample, using the same story-telling technique, compares working and middle class children at three grade levels also replicated LeShan. Finally, as if to put even more icing on the cake, Kendall and Sibley (1970) report that they replicated the results.

Despite all this evidence of replication, it is highly probable that LeShan's finding is spurious. Lessing

reports that other techniques for measuring temporal patterning used by herself and others failed to show any class differences and that other studies which did report such differences may have spurious results. Most had failed to control for class differences in IQ test performance, a factor which correlated highly with the tests they used. Further, even though Kendall and Sibley were able to replicate LeShan's finding, they reported that while the middle class children had a longer average action-span to their stories, they also tended to tell longer stories. As a result, they argue that their findings may well be an artifact of the measurement technique used, since a longer story would allow for a longer action-span.

Given this possibility, the Ellis et al. study noted above gains importance. They studied 45 upper middle class children aged seven to nine using both the story-telling technique and ratings of each child's frustration tolerance. The resulting distribution of scores for the story action-spans are quite similar to those found by LeShan for his middle class children. However, there was no direct relation between frustration tolerance ratings and the action-span of the stories. Since this would constitute a control for class differences in length of story told, the lack of an association here strikes directly at LeShan's contention that the differences between his two groups of children were a function of frustration tolerance.

In sum, the Story-Telling techniques are basically projective in nature and suffer accordingly. As indirect and semi-structured measures, they show little consistency in the results they elicit. For the most part little attention is paid to the content of the stories or to standardizing methods of eliciting and scoring the stories. Although applicable to a wide range of populations, basic questions arise of just what is being measured by them.

III

Methodological Assessment of Personal Events Test Methods for Data Collection

We examined 23 studies using methods designed to get the subject to recall or predict the temporal locations of personal events. These tests were used to operationalize many different conceptual definitions of orientational patterning. However, the most basic factor differentiating one test from another is its degree of structure, or open-mindedness, in the form it is presented to the subject.

Unstructured Personal Events Tests

The least structured tests use open-ended interviews. Using such a technique, Farber (1944) and Cohen and Taylor (1970) studied the ways in which prisoners conceived, related to, and evaluated the passage of time. Rychlak (1972) used an open-ended free fantasy approach to study college students with high and low anxiety levels. Responses were scored for the number of present versus past referring

time statements as a means of testing the hypothesis that high anxiety results in people becoming more preoccupied with the present and immediate past and being less expectant and foresightful with regard to the future.

These unstructured tests are often used either to operationalize Kastenbaum's (1961) concept of temporal density or as indicators of temporal period orientation. The subject is asked to recall or predict as many past and future personal events as possible. The events elicited for each time period are then counted and used as a measure of either period orientation or the density of the subject's future relative to others in the sample. As measures of future period density, unstructured personal events tests have been used by Platt, et al. (1969), Wolk (1970), Brooks (1970), and Platt, et al. (1971) for samples of high school and college students. Postema (1971) also used this type of open-ended technique to study the quantity of reminiscing done by aged males who were either institutionalized or self-sufficient.

Structured Personal Events Tests

A more structured personal events test was initially developed by Eson (1951) and used with modifications and elaborations by a number of other researchers. In this type of test subjects are asked to specify the temporal period location of a fixed number of personal events and experiences. In the original Eson, and the later Teahan (1958)

and Klineberg (1968) studies, children were asked to list 25 "topics" they had thought about or discussed in the previous two weeks. For each topic, the child is asked whether it refers to the past, present, or future. The frequency of references to each temporal period is then scored. Fink (1957) modified this technique in a study of the aged. Using 40 topics, he recorded the subject's age at the time of the event as a measure of temporal distance span.

Still more structured tests use only a fixed number of future events provided by the researcher. As a consequence, the dimension of temporal period orientation and density gives way to an interest in the distance span of future concerns and what is often termed as the coherence of the concerns located in a particular temporal period. Walter Wallace (1956) was the first of many to employ a measure constructed of questions about the future temporal location of a fixed number of personal events. In the early Wallace study, ten events were used, referring to such matters as the age at which the subject expected he would die, lose interest in sex, be too old to be physically active, see his son achieve success in life, parents die, and "can say that you have most of the things you want" (1956:241-2). Most of the events refer to significant points in the life cycle or family.

A list of 14 events used by Klineberg (1968) repeated some items used by Wallace, but included others perhaps more relevant to French boys aged 10 to 12 that he

studied. Among these events were the child's age at getting married, taking a big trip, retiring, buying a first car or house, beginning a career, etc. For scoring these tests, the subject is asked his expected age at each event. When used as a measure of temporal coherence, he is further asked to order all of the events in their expected chronological sequence of occurrence. Coherence is operationalized as the ordering reproducibility between the chronological ordering of the events and the expected ages at the time of each event.

However, the most frequent application of this forced-choice type of personal events test is as a measure of the subject's future time perspective. This variable is operationalized as the median, or mean, of the various ages the subject expects for the total set of events. When this is the primary use of the test, modifications are often made, as in the Future Events Test introduced by Stein and Craik (1965). In this modified form, again the subject is presented a long list of possible future life events. However, here subjects are allowed to select from among the total set of events on the list, stating how old they expect to be when the event occurs.

There are four basic methodological problems associated with the several forms of personal events test just described:

- (1) A profound shift occurs in what is being measured as one moves from the least to the most structured of

these tests, thereby affecting their operational validity.

- (2) Even among tests structured to the same degree, there can be major problems of replicability from one version of the test to the next due to differences in content and in methods of scoring.
- (3) Evidence exists that many of the tests lead to a high degree of subject-test interaction affecting their reliability.
- (4) The substantive meaning of the various types of events listed are given little formal consideration in the analysis.

Problems of Operational Validity

As the Personal Events Tests become more structured, the variables operationalized change from temporal period orientation and/or density to variables like temporal perspective or the coherence of future concerns. While the same data can often be used for different purposes, with these tests there is a major change in the type of data being gathered as the tests become more structured. This change takes the form of a sharp decrease in the extent to which the events can be regarded as "personalized" in any meaningful way. As the tests become more structured, subjects are allowed less and less opportunity to respond in terms of events of their own choosing, events which they expect as part of their own past or future. Instead, only

those events the researchers assume to be of common concern are presented as test items.

This is a particularly significant problem in the fixed-choice tests containing only future events. Some of these tests are so restrictive in their imposition of events upon the subject that one wonders whether the subject's concerns or the investigator's are of greatest importance in determining the content of the test items. The most structured tests specify not only the temporal period, but can even go so far as to define the specific type of event. For example, in the Platt, et al. (1968) study of children, only expected salaries are presented as the content upon which their scores will be based. With Kendall and Sibley (1970), their test was used to measure what children would do with money they might win today versus in the future as a measure of their future period orientation relative to only the present, as if there were no past orientation that needed to be considered.

A further problem arising with increased structuring of the tests is that some subjects have their most significant life events lying in the past and present, rather than the future. A study by Thomas Cottle (1968), using a relatively unstructured personal events test he calls the Experiential Inventory, produced some interesting findings. His results suggest that tests which focus only on future events may be misleading in their results and in the implications researchers claim for them.

Instead of using the typical approach, in which the investigator asks about topics or events thought about recently, Cottle asked for the "ten most important experiences in your life" regardless of whether they had occurred, were occurring, or were expected to occur. Each experience listed was then placed by the subject into one of five time zones provided: distant past, near present, present, near future, distant future. Each time zone was given a rating from one (distant past) to five (distant future). The subject's score was then computed by taking the mean rating of all ten experiences.

Cottle uses this score as a measure of relative temporal period orientation or the "degree to which a person chooses to reflect upon or anticipate experience" (1968: 136). In addition, the sample scores are analyzed and the actual number of significant experiences located in each of the five zones. Cottle found that of his young high school graduates, over 68% had only one or no experiences placed in the two future zones, with 55% placing none in the distant future.

Cottle's findings are particularly significant given the frequent case of a researcher using separate measures of temporal period orientation and perspective. Only in their combination and unitary content, do measures of these two modes of temporal patterning produce the type of results that most of these researchers claim for their partial approaches.

Problems of Replication

A second problem with personal events measures pertains primarily to the more structured tests. This is their replicability. We found at least one occasion where the same test was being used to measure two differently defined variables. Wallace (1956) used his set of ten events as a measure of coherence. In a later study, Platt and Taylor (1967) used the same ten events as a measure of the span of future concern by averaging the ten ages which the subject gave. By recalling that Wallace probably chose the events he included for the adults who comprised the two groups he compared, their use in a study of homesick college students is quite inappropriate. Most of Wallace's events focus on the end of the life cycle. In using these as part of a test of the span of future concern among a younger group, scores become artificially inflated upward.

Several other problems of replication arise from the Personal Events Tests discussed above. Often so many modifications occur in the number and type of events used that results are seldom directly comparable. Selection of items for the tests is often based on the investigator's assumptions about what types of personal events would be most significant to his sample group. As a result, the standardization required for replication simply does not exist.

Next, methods of scoring the tests differ from one study to the next. The tests allowing the subject to provide his own events operationalize future time perspective

as the distance from the subject's present age to that at the most distant event. In contrast, the more structured tests often use a measure of central tendency. In the latter case, some researchers use the median age, while others compute the mean as the subject's score. Still other sources of non-replicability come from researchers using different statistics to analyze the scores so variously obtained and computed.

Reliability Problems from Subject-Test Interactions

The third problem with the personal events tests relates to subject-test interaction set. For the relatively unstructured tests, there is evidence that the number of events a subject may give depends on his willingness to participate in such an endeavor. The open-ended format of tests measuring temporal period orientation makes it important that the subject be motivated to communicate. More talking means more events to score, with the possibility that an unmotivated subject might start with one time period and not continue to mention his concerns in the others-- simply because he has had enough of this particular test.

For a number of the groups used in these studies, there may well be sample-specific factors at work other than those being measured which affect the motivation or capacity of the subject to give the type of responses they are asked for. For example, does the quantity of reminiscing among the elderly relate to their social situation or to the

relative isolation of the elderly from social settings in which they can have contact with others? How do people who do not plan to marry, have children, or whose parents have already died respond to questions asking their expected age at each of these future events? Further, Platt and Taylor (1967) conclude that homesick college students are less "future oriented" than non-homesick college students when it just may be that they were less willing because of their homesickness to keep on giving more and more personal events than the other students. In still other samples, drawn from high anxiety, mentally ill, and very young populations, the willingness of the subject to mention concerns in any time period may be determined by their respective capacity to be communicative at all, rather than their common ways of orienting to one or another temporal period or span.

Another problem of subject-test interaction that affects the Personal Events Tests is noted in Wolk's (1970) study. This is a problem of interviewer bias. She found that scores varied according to the race of the examiner when she tested for differences in white and Black school children. White examiners elicited more future oriented responses from both groups than did the Black examiner.

Other forms of interactions between the subject and the test were discovered by Platt, et al. (1971). They found an inverse correlation between response acquiescence and the density of the span of future concerns for males, and a positive correlation for creativity with span and for

response acquiescence with density for females. For males, the more response acquiescence, the fewer the number of responses they gave to open-ended questions about "who they will be" in the future. For females, the opposite was the case. Male yea-sayers had less "dense" futures, while female yea-sayers had more "dense" ones.

In sum, there is evidence to suggest that there exists a considerable problem with the Personal Events Tests arising from the tendency for different types of people to give different types of response to the tests depending on how they relate to the demands of this type of testing or to the administrator. These response sets are shown to be independent of the content of the test and its method of scoring.

Problems Related to the Substantive Control of the Personal Events Measured

The fourth, and final, of the problems we discovered with the Personal Events Tests relates to the types of personal events measured by the more structured tests, and more generally, to the extent to which the events themselves are subject to analysis. As noted above, the events used as test items are often quite specific in content. Further, the events specified by the researchers tend to be of the non-recurrent type, referring to life experiences that cannot be repeated. Death, birth, and transitions from one stage in the life cycle to another are the "stuff" out of which the personal events tests' futures are constructed.

An even more striking observation emerges from our examination of these studies. Practically none of the earlier researchers seem at all interested in the events themselves. Almost no one cared to see if different events were any more or less significant in determining the subject's overall score.

Finally, no one seemed to care about the possibility that some events might be more significant or meaningful to the subject(s) than others. The number of events, their distance from the present, and their ordering are meticulously recorded and analyzed; but their meaning and significance to the subject is neglected. Out of some 10, 20, or even 40 events that a subject is asked to provide the investigator, or select from a list, some must be viewed as more important than others, involve different types of experience, or be more collectively shared than others.

History and Assessment of the Future Events Test

A good illustration of the many problems involved in the use of Personal Events Tests can be provided by examining the history of the Future Events Test (FET) developed by Stein and Craik (1965). They used the FET to test the hypothesis that significant differences exist in the future time perspective between persons whose thought is oriented toward ideational activities and those oriented predominantly to motoric (physical) activities. The sample (N=59) was

drawn from among neurotic and schizophrenic outpatients at a mental hygiene clinic.

The FET is itself a modification of Eson's earlier Personal Events Test (described above). However, instead of asking the subjects to select their own personal events, a list of 25 "personal events that might occur in the future" was prepared and each "subject was required to choose ten of these and record a time when each event might occur in his future" (1965:462). Scores were calculated as the mean temporal distance from the present of the ten events chosen. When the ideational and motoric oriented patients were compared, the former had significantly higher mean scores (3.5 vs. 1.9 years).

More important than this successful test of their hypothesis is how they reported their findings. For one, there is no presentation of results obtained for the 25 individual test items. The grand means given above are from an unknown combination of test items. The only other information given is the distribution of the chosen items across three future time spans. There we note that 38% of the events were expected within the next year, 51% in the next one to six years, with the fewest events (11%) expected in what the investigators refer to as the distant future (six or more years ahead).

Given an average age of "close to thirty-eight years" (1965:461) for these patients, one must wonder about their reactions to such event items as: "getting married,"

"having a first child," and others typically occurring in early adulthood. If such items were inappropriate for some subjects, then their scores must be based upon a more limited set of potential choices than the others. Even with this bias, the temporal distances given for most of the events on the test are quite limited in span. This is intriguing when contrasted with Wallace's (1956) findings. Both studies report scores for schizophrenics. Wallace, using an unstructured approach asking for ten written expected events, reports the median time span at 12 years. Stein and Craik using the more structured test report a mean of 2.6 years (S.D. = 1.9), with only 11% of the schizophrenics giving responses for over six years. The contrast is too great to attribute to sample variations. Variations in the structure of the two types of personal event tests must be operating as well. Examination of several later studies tells us what the nature of these differences might be.

The second published use of the FET (Stein, Sarbin, and Kulik, 1968) is a study of matched samples of delinquent and non-delinquent boys (N = 200) testing the hypothesis that the socialization experiences of the delinquent boys result in their having a significantly shorter future time perspective. In this study, the FET was modified to include 36 events selected by the researchers from "a tabulation of future events given freely by a large group of delinquent and non-delinquent boys in another research project" (1968:

259-60). The boys were instructed to give their expected age at each event they thought would actually occur. Tests were scored for the mean of all the future ages each boy gave. The hypothesis was confirmed. The grand mean for the delinquent boys was significantly lower.

In this version of the FET an effort was made to provide a list of events that might typically be expected by teenaged males. However, while this may have made their list of events more meaningful, it has some intriguing effects on the potential replicability of their results. For one, most of their 36 events directly or indirectly overlap the original 25 used by Stein and Craik. Both lists contain items about owning a car, getting married, going on a long vacation, winning a lot of money, buying a home, having a first child, when your first child gets married, move to another city or town, etc. This high degree of matching is somewhat at odds with their statement that the 36 events were chosen from among the most frequent events given "freely" by a large group of boys. Despite this overlap, there is still no possibility of comparing results between the studies for the same events. Only the latter study reports the mean expected age and the proportion of boys choosing each of the 36 event items.

Even if both studies reported an item analysis, scoring differences would still make comparisons difficult. The delinquent boys' ages range from 14 to 18. However, scores are calculated without regard to the fact that, for

example, an event expected to occur at age 20 is four years further ahead for a 14-year-old than for an 18-year-old. Since the grand means for all choices was under age 30 for both groups, this age variation must have some effect, since the oldest are probably closer in time.

Some support for this suspicion comes from a report from Lessing (1968:193) on the relation of actual age to the mean age scores given on a Wallace-type events test. Her results showed that children at different grade levels had a high degree of agreement about the age at which they expected many common life events to occur. As a result, since the older children were closer to these expected ages than the younger, their mean age scores were lower. This produced an inverse relationship between students' actual ages and the mean of the ages given for the ten expected events.

In addition, we can note that out of the 36 items used in the delinquency study, 20 were chosen by more than half of the non-delinquents and only ten were chosen by more than three-quarters. The most frequently chosen events fell into four areas: (1) meeting educational goals (finishing high school and college); (2) events in the family life cycle (getting married, having a first child, buying a home, becoming a grandfather); (3) events typical of occupational career patterns (getting a job you really want, retiring), and (4) major consumer purchases (a new car, long vacation,

buying a home). These content areas become important when viewed in comparison to a later use of the FET.

In a study by Tolor, et al. (1970), the FET with the same items and method of scoring was used. Their sample consisted of 205 male and 128 female college students with average ages under 20. They report sex differences in FET scores and a relationship between the degree of "psychological closeness" with one's father and sister and the length of future time perspective. However, again scores are not directly comparable to previous uses of the FET because of variations in reporting findings and differences in sample population. From the item analysis, it appears that their college students were more likely to expect their own life would include events of the four types listed above. They also had about the same expected age scores for the specific events. For example, having a first child was expected by 77% of the non-delinquent males, with a mean expected age of 26.1 years. This event was expected by 93% of the college males for whom scores are reported (N = 82), with a mean expected age of 26.8.

In both these studies, discussion of the results often refers to variations in the frequency with which particular events are chosen from among the 36 that are listed. Such variations are evident for certain items across the total sample and for sub-groups within the sample.

Stein, Sarbin and Kulik assume that the non-delinquent boys are more adequately socialized and that this

is reflected in their tendency to choose events related to academic achievements, family life, and others "which have societal time specificity, that is, social scheduling having normative implications" (1968:263). In contrast, the delinquent boys exhibit a greater degree of variation in expected ages for specific items, especially for events related to economic consumption. Tolor and associates are also sensitive to score variations for events with different substantive content. However, they interpret these variations in terms of personality factors such as personal rigidity, the use of defense mechanisms like denial, and degree of internal-external expectancy (cf. 1970:292-3).

Most significantly, we find in both studies the beginnings of a recognition that variations in outlook on the future between different social groupings may be related to the substantive content of the personal events used in the tests. Further, both groups of researchers end their articles with a call for the development of new measurement techniques that permit finer discriminations among subjects and contain event items more generally relevant to the sample groupings being compared.*

*For example, when you expect to go to jail might be a relevant event in a delinquency study, but this item is rejected as a possible future life event by an overwhelming majority of both the non-delinquent boys and the college students, and by over one-quarter of delinquent boys. Similarly, the age one expects to fly an airplane, own a boat, have a "flashy" apartment, or be involved in an auto accident may represent events too specific and too limited in potential likelihood for most people. The net effect is that out of the total set of events listed, most of the

In a fourth study using the FET, Toban (1970) modified the test so much and gave so few details about her findings that comparisons with the other studies are again impossible. She selected only 10 of the 36 items and asked the 47 primarily female Black and Puerto Rican hospital assistant trainees who were her subjects to select just five. The mean of the times recorded was used as the score. Only two of the ten items are identified. Nor does she report the grand mean of the ages obtained for the ten items. In this study, deletion of items referring to events likely to occur early in one's adult years could be understandable. Unfortunately, we are not told why items were selected or rejected. However, the mean age of her subjects was 34.6 years, making many items inappropriate. Again, the same test is used in an unstandardized manner producing results generalizable to only a specific sample population.

This lack of comparability and absence of standardization in the four applications of the FET comes only in part from variations in methods of scoring and faults in presenting the results obtained. Much of the problem lies with the construction of the test itself. The FET is not a test capable of being used with samples at different stages in the life cycle. Too many items are drawn from events that typically occur only once and, then, during the early years of adulthood: marriage, becoming a parent, setting up

score variation is restricted to expected ages given for a smaller pool of items.

a home, acquiring consumer possessions. Other items were noted as referring to events not likely to occur in most people's lifetimes.

Yet, by recognizing the faults of the FET we can ascertain a great deal. For one, even when given a variety of possible future concerns, most subjects select from a more limited pool of events related to family, educational, vocational, and consumer matters. This implies that such concerns are shared (many people choose them) and that thoughts about the future tend to be focused on matters reflecting ongoing patterns of social life, rather than uniquely personal concerns.

Lessing's efforts to understand her unexpected finding of an inverse relationship between age and future time perspective can help us generalize these comments. Even when events are spontaneously given, there exists a tendency for children to select those which are part of what Lessing calls a "stereotyped social-development frame of reference" which she contends severely limits the extent to which events tests are a valid technique for "assessing the subject's distinctive personal FTP [Future Time Perspective]" (1968:193). In other words, when one uses a structured or unstructured personal events test, people do not respond with just individualistic and unique concerns. They respond with commonly shared concerns derived from what they anticipate will occur as a result of their participation in various social milieux, like the family, work, and school.

For Lessing, this is an undesirable characteristic of Personal Events Tests, for her purpose is to assess the way psychological factors affect future time perspectives. For us, however, there are the lessons that people's future concerns often have a socially derived content and that how far ahead one expects to encounter these concerns is a function of present existential position. For Lessing's sample that condition was age. For the delinquents it is perhaps the fact that they are already publicly certified deviants who may quite realistically believe that if they are to achieve the same goals the non-delinquents expected, it will take them longer.

IV

Implications of the Methodological Assessments

The several points made above have a number of important implications for any research effort on the matter of subjective temporal thought. However, before we deal with these specific implications for future test development, there are a few related matters requiring consideration.

Other Tests Not Examined Here

The types of data collection strategies examined above fall far short of exhausting the total range of tests found in the current research literature. We focused on just two of the several current measurement strategies (Story-Telling and Personal Events Tests) not only because of their frequent use, but also for what lessons we could

draw from the many problems associated with both types of tests.

If our purpose were a more formal review of available tests, we would necessarily expand our scope to include the several new and innovative tests for measuring subjective temporal experience developed by Thomas Cottle and his associates. References to studies reporting on most of these tests are included in the bibliography, since at several points below we contrast our own findings with Cottle's. Further, a more formal review would encompass the several studies which report findings derived from using the Semantic Differential technique. This technique is well-established as a method for measuring the affective meaning of a variety of substantive phenomena (cf. Osgood, et al., 1957). However, our own experience with results obtained from the TIQ semantic differential items suggests that, in its more standardized form, this technique may not be directly applicable as a measure of abstract temporal thought. However, further efforts on our part are needed to establish this claim and assess its significance.

Methodological Strategies and the Testing of Theory

These initial points relate directly to the next. While our major criticism has been directed at the neglect given to the substantive content of temporal concerns, there are some recent indications of a shift occurring toward the position we maintain. For one, the few researchers using

unstructured Personal Events Tests (e.g., Ezekiel, 1968) or pictorial stimuli with a distinct substantive content (e.g., Meade, 1972) have attempted to analyze at least the relative importance the subjects give to their expectations in different aspects of their lives. Likewise, Cottle's extensive studies have included a consideration of the content of the life experiences reported in his Experiential Inventory (cf. Cottle, et al., 1968) by using methods of content analysis to categorize the responses elicited from the test. One of the four categories covers the "person orientation" of the experience within a social frame of reference.

While such tentative and limited efforts at considering the substantive content of temporal concerns are, to us, a step in the right direction, they fall short for one primary reason. Analyses and interpretations of the results are made from a psychologically- rather than a sociologically-oriented perspective. Just as Lessing decried the fact that the socially-derived contents of Personal Events Tests were interfering with her study of the psychological correlates of future time perspectives, the psychologistic orientation of those who consider this content interferes with what we regard as the more productive approach of focusing on the content from a sociology of knowledge perspective. The same issue is confronted here as was the case in our theoretical explorations. The study of subjective temporal thought requires the use of a theoretical framework which takes into account the fact that such thought is in large part socially

derived in its contents and socially significant in its consequences.

"Insider" vs. "Outsider"
Perspectives on the
Processes and Outcomes
of Temporal Patterning

What is perhaps the oddest outcome of studies using a psychologistic framework is that they result in an "outsiders" perspective on the processes of temporal thought they are trying to assess for its intra-subjective expression, the outsider observes (measures) only the consequences of temporal patterning: that a particular subject taking their tests puts more or less emphasis on the future relative to the present or thinks further ahead than others also being studied. Temporal patterning is, of course, intra-subjective. But without considering the substantive content of the concerns being located, integrated, and marked in time, one can never get an "insiders" understanding of the processes or be able to explain their variations in outcome.

While they have not provided quantifiable data based on systematic measures, several anthropologists and a few sociologists have recognized the importance of gaining this type of "insiders" understanding. This insight is perhaps best expressed in the following quote from Elliot Liebow's study of Black "street-corner" men. It should be read in the context of the several references made above to the problem of social class differences in outlook on the future.

. . . from the inside looking out what appears to be a "present-time" orientation to the outside observer is to the [lower class] man experiencing it, as much a future orientation as that of his middle class counterpart. The difference between them lies not so much in their different orientation to time as in their different orientation to the future, or more specifically, to their future. (1967:64-5)

Each class of man is oriented to a future with a high degree of clarity to it. The middle class man can view his future as a career with a graded and predictable series of steps to it leading to the realization of some valued "success" goal. The lower class man also views his future, but not as a series of graded transitions. His future is around him in what he observes of the lives of others like him. Adrift with them in a "sea of wants," according to Liebow, what becomes certain about the future is that failure is highly likely.

Both classes of men have images of the future. Both view it with varying degrees of assuredness. However, the middle class man is likely to have an image of the future as different and better than the present, while the other is not. The other images of the future, the street corner man's, leaves him where he is now, among those who now occupy his future and those whom he will join in time. That is, he has his future around him and it is likely that it will be no different from his own present or the pasts of those who are older.

Implications for Further Test Development

There were several points made in the course of our methodological assessment which, taken together, suggest the potential problems and pitfalls that might be encountered in any effort at test development in this area. Further, these points direct our attention to a set of criteria for developing more adequate and reliable measures. These several points can be stated as follows:

1. The frame of reference a test item defines for a subject affects the process of temporal patterning and its outcome, the response to the test item. Story-roots often provide implicit temporal cues limiting the temporal period location of the concerns elicited to one temporal period and either specific calendrical or life span temporal distance locations. Pictorial tests suffer less from these effects, but are more open to problems of response-set and the number of items the researcher wants to score. Personal Events Tests often specify only future concerns that are non-recurring in type or not likely to reflect what a subject could typically expect for his own future.

2. Many tests and test items are limited in their applicability to a wide range of sample populations. Story-roots are often designed for pre-adolescent populations and personal event items often tend to cluster toward the early stages of adulthood. In consequence, replication of a finding for one sample population is impossible, since the test

is keyed to the population to which it was first administered. Different results may reflect different samples, even when the same variables are used.

3. The greater the degree of structuring of a test, the more likely the subject is to respond with temporal concerns of significance to his own personal and social situation. Fixed-choice Personal Event Test items and Story-Telling techniques which present structured and impersonal stimuli do not enable the researcher to assess the effect of the substantive content of the response on its temporal period location.

4. Reports of response bias due to methods of test administration, the format of the test, response acquiescence and the subjects' motivation and ability to take tests all argue for a simple, impersonally administered test.

In sum, what we would view as an adequate method of measuring the outcome of orientational temporal patterning would be a test simple in format, open-ended in structure, applicable to a wide range of sample populations, impersonally administered, providing data about both the temporal period and distance locations of concerns, and capable of being scored for the substantive content of the concerns elicited. Such a test is an ideal. An actual test developed to optimize these criteria is presented in the next chapter. The Time Machine Test described there is then used in several empirical analyses designed to explore some of the leading assumptions derived from our theoretical explorations.

CHAPTER FIVE

"IF YOU HAD A TIME MACHINE . . .":

EXPLORING THE WHENS AND WHERE'S

OF PEOPLE'S CONCERNS

This chapter begins our empirical exploration of the relationship between the content of temporally-based concerns and the way in which they are given orientational temporal patterning. Our task is to examine the inter-relationship between the two modalities of orientational patterning: the temporal period and distance locations of concerns. To accomplish this, we need a measure of the consequences of orientational patterning that avoids the major methodological problems associated with previous research.

The combination of theoretical and methodological considerations defines for us three important and related problems. First, how are we to measure the subjective process of orientational temporal patterning? It cannot be measured directly. Some form of projective test needed to be developed to get at the consequences of orientational patterning.

Second, to pursue our main interest in orientations to future concerns, we need to examine both the similarities and differences existing between the patterning of

past and future concerns. Given the enormous variety of people's concerns, there are an infinite number of potential combinations of temporal period and distance span locations. Ranging from those which involve only the present to others which extend backward and forward to even beyond the life span, the possible ways in which temporal period and distance span can be interrelated must be understood in terms of their actual inter-relationships among concerns drawn from a specific population.

Finally, we are interested in the contents of past and future concerns people think about. In particular, we must consider first how to categorize concerns about the past and future in order to then assess the manner in which their content affects orientational temporal patterning.

I

Methodological Considerations

We needed a projective test which was open-ended in structure, but still allowed for systematic examination of the relationship between the content of concerns and their temporal locations. Few of the previously developed measures permitted subjects to choose a temporal period or indicate their own concerns. Little explicit attention was paid to the extent which, given a choice, concerns the researcher specified were personally significant or even meaningful to the subject. Further, even when the choice of temporal period was left open, the reason why the subject made a particular choice was seldom elicited.

We felt that in any new test, the open-endedness would need to be "built in" by eliminating any restrictions as to the specific temporal period, any temporal distance range (such as to one's own lifetime), or by giving any suggestion as the types of concerns. Systematic structure was, therefore, to be imposed upon the responses in the stage of analysis, rather than built into the structure of the test itself.

Classification of the responses for the purpose of analysis would therefore result from both an examination of the patterns underlying the responses obtained and the theoretical purposes for which the data were gathered. Such a strategy would enhance the opportunities for exploration and serendipitous discovery. Such opportunity would itself be enhanced by making the data available from the test sufficiently quantifiable to permit analysis of the range of variations in types of concerns and the distribution of temporal locations.

The result of our efforts to meet these various criteria was the development of what we refer to as the Time Machine Test.

Description of the Time Machine Test (TMT)

The Time Machine Test (TMT) is a projective test designed to explore the ways in which people are thinking about the past, present, and future. The TMT's format is simple. Instructions to the students were: "If you had a

Time Machine available to you that would take you anywhere you wanted to go in the past, present, or future for up to 24 hours . . ." indicate the time and place choice, the temporal distance from the present, and the reason for the time and place choice. Responses were to be written in the space provided (cf. TIQ, 3A).

The device of the "time machine" provided a rationale for the student engaging in an act of imaginative temporal projection. It also added an element of novelty to the task itself. Since the TMT was placed at the end of a long questionnaire, this novelty was undoubtedly helpful in assuring the student's interest and attentiveness.

The specific mention of three time periods does suggest, implicitly, that "trips" taken with the "time machine" are from the perspective of a linear conception of time having three successive spans of duration: before, now, and after. This represents the only major way in which the TMT pre-structures the respondent's temporal framework. However, given the predominance of such a linear conception in Western society, the effect on the respondent's choice of a concern is probably minimal.

The only other restriction the instructions may have imposed on the respondent was a result of the caveat that the trip itself was to be for no longer than 24 hours. This was included for two reasons. For one, during pre-testing, two respondents stated that they would not use the "time machine" because they "might not be able to get back." To

avoid the recurrence of any similar anxieties, we included the 24-hour limit to suggest that they could return to the present.*

Pre-testing the Time Machine Test

The TMT was the first of the several new tests developed as part of this research. It was also the most fully pre-tested. Several TMT response choices were elicited from each of the students who participated in the depth interviews. In addition, there were two formal pre-tests of slightly variant versions. The first was conducted using a sample of 59 college students enrolled in a course

*However, the 24-hour limit for the trip was intended to avoid a problem Cottle (1968:144-5) mentions as arising from a similar type of temporal projective test. Some of the "important life experiences" each of his respondents were asked to place within one of five temporal "zones" (extending from the distant past to the distant future) were of a type which might extend across several time periods either directly or by inference, e.g., going to college, when you are now a college student. Such experiences were termed as having the quality of "diffuseness" since they can encompass more than one time period. Cottle contrasted such experiences with those which are "discrete." These exist "primarily in one unit of time" within one temporal period (cf. also Cottle, Pleck, and Kakar, 1968).

By using a 24-hour limit in the TMT instructions we hoped to discourage the respondents from taking trips which might have such a diffuse quality (e.g., using the TMT as a means to begin one's life over again). Such responses would be difficult to assess within an operational scheme designed to distinguish between the temporal locations of different types of concerns.

Our one worry in defining this limit was that it might discourage the choice of any concern having a durational reference of more than one day. We were both pleased, and given cause for further worry, upon discovering a substantial number of responses indicating that if the trip were really possible, the student would have preferred to remain in the time and place chosen.

in Marriage and the Family. Verbal instructions were given by the investigator, with the students indicating a high level of cooperation and responsiveness to this novel classroom experience. Analysis of these protocols suggested that later research should focus on the types of reasons given for the temporal choices, rather than merely examining their distribution within various social groupings (e.g., age, sex, SES, etc.). A larger pre-test, with a sample of 114 students, was used to investigate the clarity of the question wording in a written format and the coding categories to be used in classifying the responses.

The results of these preliminary analyses suggested only one change in the format of the question: specific mention was to be made of the fact that we wanted the student's reason for the time and place choice. From these analyses also came the preliminary categories for the classification of responses and an indication that there were social sources of variation for the concerns and temporal location choices expressed in the responses.*

*In particular, we were interested in such things as the length of the response; the degree to which they included data on the various factors in which we were interested; the number of responses which contained specific dates, as opposed to just the number of days, hours, weeks, months, or years the student would go away from the present; and the number of responses falling into each time period as an indication of whether past and future period responses could be adequately contrasted.

Types of Data Available

The students' responses to the Time Machine Test varied widely along a number of dimensions. The classification of the responses was accomplished by systematically ordering them along four basic dimensions. These were:

1. The temporal period location of the student's response choice, as an indicator of its temporal period emphasis.
2. The temporal distance, if any, of the choice from the present, as an indicator of the temporal distance span of the concern specified in the choice.
3. The spatial orientation of the choice as defined by the distance of the place choice from the test site location.
4. The type of reason given for the particular time and place choice, as an indicator of type of concern which prompted that choice.

Each of the four classification schemes is discussed prior to its use. This discussion is often extensive. The newness of the TMT requires us to give a clear description of its use to provide others with the basis for replication.

TMT Responses as Indicators of Orientational Patterning

The TMT provides data about the temporal period and distance locations of people's concerns. While we cannot directly observe the orientational temporal patterning, the

TMT period and distance choices given for each "trip" can be used as indicators of the consequences of such patterning.

Of particular interest to us is the relationship between the two modes of orientational patterning, as these are indicated here by the TMT temporal period and distance choices. In the analysis one focus is on identifying the ways in which the patterning of future concerns may be distinguished from that of concerns having their period location in the past and present.

Identification of such differences has several purposes. Foremost is that it sets the stage for our assessment of the relationship of orientational patterning to the content of the concerns. For example, could we consider the content of concerns along only one of the modalities of orientational patterning or must both be considered simultaneously?

Further, this analysis yields insight into the nature of the data produced by the TMT, its relevance to our own interests, and what it tells us about the effects of more structured measurement strategies.

Drawing on the results of the two pre-tests of the TMT, the analysis of the TMT protocols from the depth interviews, and a detailed examination of the responses obtained from the present sample, classification schemes were developed for each of these four dimensions. The exploratory nature of this study suggested that a "fine-grain" approach to such classification would optimize the possibility

of discovery as well as permitting us to examine the empirical support available to our theoretical arguments.

The development of classification schemes for each of the four response dimensions took place according to several basic criteria. Foremost among them was that the categories of the classification scheme be theoretically meaningful. That is, whenever possible, the scheme should permit the operationalization of a theoretical concept. Balanced against this primary emphasis was the consideration that categories established for each dimension reflect qualitative and naturally occurring distinctions found within the total set of responses. Such natural categories were viewed as ones which reflected some concrete and recurrent pattern to be found among the responses by familiarizing oneself with the data and its basic dimensions. Further, there was the all-important logical criterion that the categories of each classification scheme be mutually exclusive and exhaustive. Finally, categories should be specific enough to permit the empirical assessment of theoretical assumptions.*

*In effect, the approach used was purposive, intuitive, and logical in its orientation. The purpose is represented by our theoretical concerns, the intuition is inexplicable, and the logical considerations draw heavily from the discussions of Allen Barton (1955) on property spaces, Lazarsfeld and Barton (1955) on the development of classification schemes, and John McKinney (1967) on procedures for the construction of typologies.

II

Findings on the Temporal Location
of TMT ResponsesTemporal Period Locations
of TMT Responses

The classification of TMT responses according to their temporal period locations is most simply and directly based on whether they fall into the past, present, or future. The resulting distribution of responses from our sample is important for two reasons. First, given the tendency of previous studies to focus exclusively on the future, it is important to note that only 44% of the students studied have chosen that time period. Another 40% chose the past, with the remaining 16% giving their choices in the immediate present. Since the concerns, indicated by these choices, have their temporal locations in all three time periods, exclusive use of measures focused solely on future concerns has considerable drawbacks if one wants to understand the general nature of subjective temporality.

On more substantive grounds, this distribution of temporal period choices also argues strongly against the frequently held stereotype of the college student as a person whose eyes are fixed firmly upon where he or she is going in life. Of particular interest in this regard is the substantial minority of students who chose to remain in the present despite an imaginative opportunity to go anywhere else they could think of in the past or future. Does not moving in time necessarily mean that there is no movement in

space? As we shall discover below, reasons given for such responses suggest that just as a past or future period choice may reflect a person's orientation to the present, choosing to remain in the present can reflect a person's outlook on the past and future.*

Temporal Distance Span Locations of TMT Responses

Temporal distance location of past and future concerns is the second modality of orientational temporal patterning. For the TMT responses, this modality is operationalized as the temporal distance the respondent would project himself to the point in time that was the objective of his trip. The instructions put no constraints upon how far from the present one might choose to go. The temporal distance location of a response can and did range outward from the present over a potentially limitless range.

Of those choosing to make trips into the past or future, some would go no further than a few hours or days

*It should also be noted that throughout this analysis no claim is made that a student choosing any one of the three time periods is in some more general way "oriented" to that time period. Again, for the temporal distance choices, responses are not taken as indicators of short- or long-term temporal "perspectives."

Only one TMT response was obtained from each student--hardly a basis for a claim about general temporal orientation. Further, such a claim would run counter to our theoretical assumption that orientational patterning is a property of the ideational construction of an action-event, not a generalized personality trait. However, this does not preclude making statements about the distribution of temporal choices for the sample as a whole, for some subgroup within it, or among those expressing a particular type of concern.

away from the present. At the other extreme were choices going as far back as the "beginning of the universe" and forward to its end in time. Even with these extreme cases, few students chose the long time distances appealing so often to science fiction writers using the plot device of a "time machine" for their own imaginative excursions in time. Only 7% of the students chose distances over 1,000 years into the past or future.

Classifying the distance choices was made difficult by the considerable range of the temporal distances indicated and the frequent absence of specific dates. Against these limitations imposed by the data itself were our own interests in exploring the distribution and range of the distance choices along two dimensions. One dimension was the contrast between past and future period choices. Second, we wanted to make some type of qualitative distinction between concerns falling within the probable limits of the students' own lifetimes and those which are not open to direct personal experience.

Given these limitations and interests, the resulting classification scheme took the form of an ordered-set of eight categories: the immediate present and seven spans ranging from under one year away from the present to an open-ended span of over 1,000 years. The seven spans are unequal in duration and applied to both past and future period choices. These categories and the distribution of

responses by temporal period are given in Table 5.1.*

There were two main factors influencing the decision to use eight categories. First, pre-test results and a combined listing of the first one hundred past and future distance choices from this sample revealed certain natural breaking points in the distribution of responses. That is, there was the suggestion of several naturally occurring spans each of which contained a sufficient number of cases to warrant its use as a category.

Next, it was important to us to make some general distinction between choices falling within the students' probable lifetimes and those which would take them outside. For our purposes, this distinction embodies the notion of a generational span of 20 years outward in both directions from the present, and an "historical" span extending beyond.** By making 20 years the dividing line between the generational and historical spans, we take into consideration the fact that 20 years into the past covers the

*This table, and all others presented in this study, will be found immediately following the page on which it is first mentioned.

**The rationale for this distinction comes to us from Bertrand Russell by way of Thomas Cottle's use of the former's contrast between personal (experienced) time and historical (nonexperienced) time. Cottle (1969:121-2) takes this distinction and combines it with one for past vs. future. The result is four qualitatively differentiated temporal spans each distinguished from the others on the basis of the unique properties given it by the cross-cutting of the basic experimental and locational categories. For our own purposes, we added the present as a fifth category and use 20 years as a dividing point between the "personal" and "historical" past and future.

TABLE 5.1
DISTRIBUTION OF TIME MACHINE TEST
TEMPORAL DISTANCE LOCATION CHOICES,
BY TEMPORAL PERIOD*

<u>Temporal Distance Locations</u>	<u>Temporal Period Locations</u>			<u>All Periods, Cumulative Totals</u>
	<u>Past Only</u>	<u>Future Only</u>	<u>Present Only</u>	
Immediate present	-	-	100%	16%
Less than one	10%	15%	-	27
1 to 5	18	30	-	48
6 to 20	27	28	-	71
21 to 50	8	7	-	77
51 to 200	22	8	-	89
201 to 1,000	8	3	-	93
Over 1,000	7	9	-	100
Totals (N)	(119)	(133)	(59)	(301)

*There are 12 cases omitted from the total sample in all of the tables in this chapter. There were two types of missing cases. First were TMT responses that were ambiguous, lacked a temporal distance choice, or referred to what was regarded as a mythological or fanciful point in time (e.g., to go to a "time when the world is at peace"). Such unspecified responses were about evenly divided between the past and future. Next were responses which were either completely missing or uncodable. The number of such responses is somewhat higher than for other items in the questionnaire. Most likely the lower response rate is a result of the TMT being placed at the end of a long questionnaire. Both pre-tests provided a complete set of codable responses. With these 5 missing cases the total number omitted here equals 12, or 3.8% of the total sample.

total life span to date of the student and the span ahead in which most can anticipate significant changes in their lives.

The distributions given in Table 5.1 show that most choices fall within the generational span. Only one-third of the choices are for over 20 years, making choices reflecting concerns within their own lifetimes of greatest interest among these students. However, the differences between the distributions of past and future period choices are statistically significant ($\chi^2=15.72$, $df=6$, $p>.05$). While for both temporal periods the majority of choices are contained within the generational span, future choices are more frequent within this span. Other variations can be noted for the historical-past and historical-future, as presented below.

Generational Span Variations in Temporal Distance Choices for the Past and Future

The shortest of all the distance span categories is for under one year. It contains 11% of all the TMT choices. For the two temporal period distributions we see that there are more future choices than past (15% vs. 10%). By examining the specific choices made within this span we are able to show that, while there was an overall tendency for the choices to be concentrated more toward the present than the upper limit of a year, there are also some striking contrasts between the past and future. More past than future choices are given for over one month (50% vs. 30%). In

contrast, choices for from one day up to a week are more frequent for the future.*

The proportion of choices given for the one- to five-year span within each period again suggests that the short-term temporal horizon is more appealing for the future than the past. For the two shortest distance spans, the proportion of future choices is about half again as much as for the past. In all, 45% of the future choices fall into this first five-year span compared to 29% for the past.

By the end of the 20-year span, the majority of distance choices for both the past (56%) and the future (73%) are given. Again, it is apparent that future choices concentrate more toward the present, while those for the past extend increasingly outward. The past 20 years encompasses most, if not all, of the life experiences of these students.

However, even when all those making past choices are combined with those for the present, together they account for less than half of the total sample. In contrast, the future portion of the generational span contains within it 26% of the total distance choices. In sum, within this generational span time that has been and is being lived is less appealing than what will come to be.

*In terms of the types of temporal referents used for each period, future choices were more likely to be accompanied by an indication of a specific day. Both periods are about the same with regard to use of specific clock-times and calendar dates.

The Proximity of the Future
within the Generational Span

It is interesting to compare our results with Cottle's (1968a) attempt to measure subjective perceptions of the duration of the past, present, and future. His results indicate a tendency among some of his young adult respondents toward asymmetry in perceptions of the past and future borders of the present; the future border typically appearing longer than the past. In addition, he found that for some the near future was perceived as nearer to the present than was the near past.

In another study by Stein and Craik (1965), a comparison of "ideational" personal events test scores for the past and future showed a generally similar pattern for their samples of neurotics and schizophrenics. For the combined samples, the percentage of future scores falling within one year from the present was highest for future events, with 85% of the future scores under six years compared to 84% under 15 years for the past.

While the methods and samples used in these studies differ from our own, the results are all consistent enough to suggest that there are significant differences between orienting oneself to past and future distance spans. How does one account for this asymmetry? Is it because we are always at the edge of our future? Do we stretch the present forward in anticipation of it while pushing the past behind

us until its control on the present is broken, releasing us into the future?

Another possibility is that among our "uses" of the past are those which set our sights and actions on the future. As the late Japanese novelist Yukio Mishima has written in his Temple of the Golden Pavilion (1959:257): "The past does not only draw us back to the past. There are certain memories of the past that have strong steel springs and, when we who live in the present touch them, they are suddenly stretched taut and then they propel us into the future."

From another perspective, one might consider the observations on American culture made by Strodbeck and Kluckhohn (1961) to the effect that our values lead to a greater emphasis on the future than the past and present. It is true that we live in a society where the future is often thought of as time for personal achievement, gratification, and redemption.

However, we are also a people who try to put "slip-covers on that present," preserving the material world so that it will be fresh and clean when we uncover it in the future.

Our "future-orientedness" as a culture is therefore also a perspective on the past and present. We buy plastic flowers, use beauty aids, preserve and restore "historical" landmarks as a means of getting the material world to last just a little longer. In this manner one might speculate

that for us the ideational future is a "place" from which we try to look back and hold onto the present. If so, putting "slipcovers on the present" is one of the various means we use to stretch that present forward until the actual meets the potential, both well-preserved and without surprises.

To understand the tendency to view the future as closer to present, we need to consider not only the phenomenological and existential qualities inherent in each time period, but also the "uses" to which these qualities are put in a particular socio-cultural milieu.

Socially, and perhaps culturally, the past confronts us existentially in the form of memories. Yet, such memories give the past a quality of "settledness" and a postdictability. Having enough distance from the present to give it comprehensibility in pattern, the near past can also be assessed for its consequences on the present.

In contrast, the up and coming future lacks the "settledness" of the recent past. It is more hypothetical than comprehensible, less predictable in its consequences. While close enough to the present to be a span containing significant life concerns, the near future is still far enough away to produce uncertainty. Pre-knowledge of the future has always had a high value attached to it, but more so with regard to the near than the distant future. Gaining knowledge of the near future can make modifications possible in current conduct.

The next twenty years are also likely to be ones of considerable change in the lives of these students. For most, new family, work, and friendship relationships will be established. Even though the transitions producing such changes may begin in the very near future, each of the changes has its own long-term implications. Consequences about which the student can have uncertainty as well as expectation.

To be "future-oriented" can never mean to focus exclusively on the future. As Kastenbaum (1965:199) has pointed out: "A person who thinks exclusively of the future . . . has no time perspective at all. It is the person who manages to keep past, present, and future in mind who has the opportunity of developing a genuine perspective." The future, in terms of its consequences for the present, can be appealing only for what it contains, for its significance in the present, and the low degree of existential certainty we have about that content will manifest itself.

Comparisons of the Distribution
of Past and Future Distance
Location Choices within
the Historical Span

Temporal distance location choices taking the student into what are termed historical spans are least frequent for both temporal periods. This is particularly interesting in the case of future choices. For example, even though few students made choices falling into the next 21-50 years, current life expectancy rates would find most

of them still alive during that span. Given this low saliency for responses in the later years of life, one can wonder how previously sampled students reacted to personal event test items asking them about their expected age at retirement, loss of interest in sex, death, etc.

The proportion of past choices in the 21-50 year span is also low, even though this includes the early childhood for some students. In sum, even though the past and future 21-50 years are open to direct experience, they are not salient enough to prompt a TMT trip.

The historical distance span choices differ most between the past and future for the two spans from 50 to 1000 years. Past choices falling into the 51-200 year span represent the largest proportion of total choices for either temporal period outside of the generational span. This not-too-distant historical past has greater appeal and, perhaps, significance than any other span outside of the students' own lifetimes.

What is the mechanisms by which students become interested in this part of the historical past? Perhaps their history courses? But then, why the past 200 years instead of events from early human history? Something more than historical knowledge and awareness is involved here. For one, this is a span of the past covered by collective rather than personal memory, a span of time known through the indirect transmission of events rather than through direct personal experience. However, despite its impersonal

source, the significance of the historical past for the personal present can be high.

Maurice Halbwachs (1925) was among the earliest to point out the functions of collective memory for present conduct and for expectations about the future. While many people believe that memory is uniquely personal in nature, it is in fact strongly dependent upon the collective memory of the group. For Halbwachs, the ideational reconstruction of past takes place within a framework laid down by the collective memory of the group. This dimension of the "community of time" is learned and shared, transmitted as it is from one generation to the next through language and lore. Further, he argues that without the external and collective recollections of others, our own individual recollections would be impossible. The historical past as it persists in collective memory serves to define who we are, where we come from, and where we might be going.

What of the TMT trips into the historical future? Choices for the historical future extend somewhat further outward than those for the past, even though these are times which no one living today will even know about or experience. They are times forever closed to us. Does this mean that such TMT trips are to be regarded as the result of purely imaginative fantasy?

While we might be drawn to such a conclusion if we were unaware of the reasons given for such trips, we should not be. Again, we can point to our previous discussions of

functions of the historical future having personal significance in the present. And again, the basis of this significance lies in the shared and collective, rather than the uniquely individual.

The TIME LINE

While the eight categories for TMT temporal distance location choices offer precision in measurement, the combination of period and distance yields a total of 15 discrete categories. Such a large number of categories makes comparisons difficult and potentially unreliable in a sample of this size.

What we call the TIME LINE allows us both to compress these many categories and simultaneously consider the TMT temporal period and distance choices. With only five categories, the TIME LINE provides much of the descriptive power obtained with the 15 categories located above. Each of the five spans in the TIME LINE also has a qualitative meaning as well as quantitative points of demarcation. These qualitative distinctions are intended to permit the continuing analysis of the important differences between the generational and historical spans described above.

The generational span is divided into three distinct periods. The immediate present is combined with past and future choices of less than one year to form a proximal temporal horizon termed the extended-present. This expansion is thought to be a reasonable combination of categories

since a majority of the choices for under one year are for distances nearer the present. The one- to 20-year spans are divided into what are called the experienced-past and the expected-future. Finally, choices for over 20 years are referred to as the historical-past and the historical-future. The distribution of choices along the TIME LINE is given in Table 5.2.

As constructed, the TIME LINE reproduces the previously observed findings: The majority of choices are within the generational span, with emphasis more on the expected-future than the experienced-past. Choices made for historical time spans are, as noted before, more likely to be for the past than for the future. In sum, short-term choices are more likely to involve the future, while long-term ones focus more on the past. The replication of these results with the TIME LINE makes it a useful summarizing measure for presenting results of the analyses reported below.

III

Findings about the Spatial Distribution of TMT Responses

Students were asked to indicate where they would go in space as well as in time. These place choice responses were of two basic types: specified and nonspecified. Nonspecified place responses were either so linked to the particular reason given for the TMT trip that any one of a potentially infinite number of actual place locations was

TABLE 5.2

DISTRIBUTION OF TMT CHOICES BY
TIME LINE CATEGORIES

<u>TIME LINE Distance Spans</u>	<u>%</u>
Historical-past (20+ years)	17%
Experienced-past (1 - 20 years)	18
Extended-present (1 - 0 - 1 years)	27
Expected-future (1 - 20 years)	26
Historical-future (20+ years)	12
Total (N)	(301)

possible on cases where one's actual location was uncertain. For example, many TMT responses for the expected-future were to gain some type of knowledge about how the student's life would be some years ahead. Where they would be at that particular point in time would be a function of what they were doing then, making a place choice difficult to specify. In all, these nonspecified place choices equaled 25%, a sharp contrast with the very low percentage of unspecified temporal choices.

When a specific place was indicated, it was classified on the basis of its spatial distance from the place where the questionnaire was administered (referred to as the "test site location" below). There was one exception to this principle. When the place choice was for the student's former, present, or future "home" it was categorized as such whatever its distance from the test site location.

Relationships among Temporal and Spatial Responses

The place location categories and the distribution of responses in each are given in Table 5.3, along with the TIME LINE distribution for each category. Of the specified place choices, the most frequently indicated were for locations distant from the test site location, even as far as the moon or another planet. The more earthly choices were about evenly divided between some other part of the United States and another country, typically in Europe or the Caribbean. Since only 8% of the students would stay right

TABLE 5.3
DISTRIBUTION OF TMT PLACE CHOICES,
BY TIME LINE LOCATION*

<u>Place Choice Categories</u>	<u>TIME LINE Distance Spans</u>					<u>Total</u>
	<u>Past 20+</u>	<u>Past 1-20</u>	<u>Present 1-0-1</u>	<u>Future 1-20</u>	<u>Future 20+</u>	
Test site location	2%	11%	41%	8%	17%	17%
'My home'	4	11	10	20	-	10
Other U.S.A.	36	18	16	17	22	21
Another country	55	30	28	12	3	25
Another planet	-	-	3	-	11	2
Non-specified	4	32	5	51	47	25
Totals (N)	(53)	(54)	(81)	(77)	(36)	(301)

*No tests of significance computed because of large number of cells with few or no cases.

where they were in both place and time, the TMT is shown to be an effective stimulus for both temporal and spatial projection.

While the analysis of the relationship between spatial and temporal choices could be the basis for a short study in itself, we will restrict ourselves here to a few observations that will assist us in our present discussion. Two general tendencies are indicated by the TIME LINE distributions of the place choices. First, nonspecified choices are much more frequent for the future than for the past. While this is most pronounced for the two historical spans, the differences between the experienced-past and expected-future are most important. It would appear that where one will be at some point of future concern is less clear than for the past.

The second general tendency is found by examining the relationship between the temporal distance and specified spatial distance choices. The greater the distance moved in time, the greater the distance moved in space, with this association much stronger for the past than for the future. To some extent, this relationship may be an artifact of the relatively brief existence of our country. To go back in time over several hundred years is more likely to take one to another part of the world. Further, as indicated by the low percentage of nonspecified place choices for temporal choices in the historical past, one is likely as well to have a particular location in mind.

A few additional points are also worth making by considering the two general tendencies together. Temporal choices for both the immediate and the extended-present periods are associated with the highest percentage of place choices for remaining in one's immediate environs. Further, such temporal choices involve a very low percentage of non-specified place choices. In this respect, the present is much like the historical past--one knows the where of one's when.

Finally, the distribution of place choices for the expected-future provides an interesting contrast with that for the experienced-past. For example, one's home is a more likely place for a future than a past choice. In fact, home is the most frequently mentioned place choice for the expected-future. It would seem that while projections ahead in time are about twice as likely as those for the past to involve uncertainty about spatial location, when there is a degree of certainty it is for one's home, a place with high affective meaning.

IV

Analysis of the Reasons Behind TMT Temporal and Spatial Location Responses

The analysis of the TMT temporal period and distance location responses by itself provides some insight into the orientational patterning of temporal concerns. The results rather convincingly demonstrate that the two theoretically assumed modes of orientational patterning have an empirical

basis. Not only are there different concentrations of responses in different distance spans, but these concentrations vary for the past and future. A second, equally important, theoretical assumption is that the content of people's concerns has a determining effect on the manner in which these concerns are orientationally patterned. In this next section, we begin our examination of the empirical basis for this second assumption.

TMT Reason Responses as Indicators of Temporal Concerns

Using the reasons given for the TMT time and place choices, we can explore this relationship as it manifests itself among the college students. In doing this, two matters become of crucial importance. First, there is the basis by which TMT reasons can be justified as valid indicators of the content of temporal concerns. Particularly important in this regard is the question of what types of reasons are to be taken as indicators of what types of concerns. That is, on what basis shall the reason responses be classified into types? Next, there is the matter of demonstrating that different types of reasons exhibit different patterns of temporal period and distance responses.

Justification for the use of TMT reason responses as indicators of the types of concerns which prompted the students' time and place choices has both a theoretical and methodological basis. First, in responding to the TMT questions, the student is engaged in a behavioral act. Though

simple and restricted in scope, this act has the basic properties of an action-event. This identification of TMT responses with behavioral acts allows us to consider them as empirical parallels of ideational processes constituting the relationship between temporal concerns and orientations in ongoing social action-events. Second, the projective nature of the TMT should produce responses reflecting current matters-at-hand found among these students. Their TMT responses should indicate: (1) the major types of concerns they have, if not the actual distribution of these concerns; and (2) the manner such types of concerns are given orientational patterning.*

Classification of TMT Reason Responses

Of all the responses obtained from the TMT question, the reasons given for the time and place choices were the most difficult to classify. The final classification scheme resulted from a considerable interplay between our basic

*We recognize that there are some limitations to the extent to which results obtained from using a projective test can be generalized. Permitting such a wide range of possible responses, the TMT is likely to increase the inclusion among the responses of concerns which: (1) vary in their degree of significance to the student; (2) reflect fantasy as well as the motivated projection of self into the temporal dimension; and (3) understate the full range and richness of the often complex and diverse types of people's problems, interests, and perceptions.

In defense of these limitations, we argue that the construction of the TMT permits respondents to indicate concerns which are subjectively meaningful and to relate those concerns to their temporal location in a manner possible in few, if any, of the previously developed measures. Further refinements would be both possible and desirable.

theoretical orientations and the naturally occurring categories of reasons found from a detailed analysis of the written responses.

Despite the wide range of variation in time and place choices, some early observations were made during the pre-tests as to the concrete and recurrent types of reasons being given. We initially observed that some combinations of reasons for time and place choices tended to occur more frequently than others. For example, a number of students would use the TMT to:

- (1) gain knowledge of their personal future, wherever they might be at that point in their lives;
- (2) go into the past to some better place far away from where they are now;
- (3) stay right where they are in the present;
- (4) achieve some type of knowledge or insight into the historical past in some other country;
- (5) be at home with one's family in the recent past or future.

While there were too few of these combinations to provide an adequate basis for analysis, they did provide a useful preliminary guide for developing the more elaborate scheme described below and presented for reference in Table 5.4. For instance, it appeared that certain combinations might prove resistant to general classification. The "stay right here in the present" type of response is the best example of this resistance.

TABLE 5.4
GENERAL CLASSIFICATION OF TMT REASON RESPONSES

Type of Reason Response

<u>A. Spatially-based types</u>		<u>%</u>	<u>N</u>
A-1	To some better place	57%	32
A-2	Recreational	<u>43</u>	<u>24</u>
Totals		100%	56
<u>B. Temporally-based types</u>		<u>%</u>	<u>N</u>
B-1	Ego-oriented	45%	110
B-2	Alter-oriented	25	61
B-3	Collectivity-oriented	<u>30</u>	<u>74</u>
Totals		100%	245
<u>C. Alter-oriented only</u>		<u>%</u>	<u>N</u>
B-2.1	Be with family	62%	38
B-2.2	Be with friends, lover, other	<u>38</u>	<u>23</u>
Totals		100%	61
<u>D. Major types of reason categories as a proportion of total reasons</u>		<u>%</u>	<u>N</u>
A	Spatially-based types	19%	56
B-1	Ego-oriented type	36	110
B-2	Alter-oriented type	20	61
B-3	Collectivity-oriented type	<u>26</u>	<u>74</u>
Totals		100%	301

Further, our early examination of these combinations suggested that recurring types of relationships between place and temporal choices might prove important in classifying the reason responses. For example, while some reasons were clearly linked with their accompanying temporal period and distance choices, others were more related to specific place choices.

Contrasts Between Spatially- and Temporally-Based Reason Responses

From this last of our early observations came the distinction between our primary and most general reason response categories: the spatially-based and the temporally-based. Spatially-based reason responses were those which emphasized that the temporal period and distance choice was related to the fulfillment of some particular purpose at some specific place. For the temporally-based reason responses, it was something about a particular point in time which was significant to the student. There are significant distributional, place, and temporal choice differences between these two general types of reason responses. For one, the spatially-based reasons are by far the least frequent. Only 19% of the students gave responses of this type for their time and place choices.

Place choices associated with each of these two types of reasons also differ. Almost all (98%) stating a spatially-based reason gave a specified place choice, typically one that took them to some other part of the

United States (41%) or to some other country (52%). Only 5% would remain at the test site location. In contrast, a much larger proportion of those stating temporally-based reasons gave nonspecified place choices (30%), with far fewer of the specified choices taking the students to distant locations. Instead, some 33% chose either to go to their own home or to remain at the test site location. In sum, spatial reasons are generally long on spatial distance, while temporal reasons, when specified, tend more toward the reverse.

As can be seen from the distribution of TIME LINE responses given in Table 5.5, these two types of reasons exhibit significant differences from one another along the temporal dimension too.* The spatially-based reasons are more focused around the present than is the case for the temporally-based type. Significant contrasts are observable for the longer distance choices also. The TIME LINE shows that none of the spatial reasons are given for trips into the future for distances over 20 years compared with 15% of the temporal reasons. While spatial reasons for trips into the historical past are much more frequent, even here such trips involving temporal reasons are for longer distances. In sum, temporally-based reasons are associated with temporal location choices which are more evenly distributed across the temporal spectrum. Among these students, it

*While these differences do not hold for temporal period location alone, they do hold for the temporal distance choices in both the past and future.

TABLE 5.5

DISTRIBUTION OF SPATIALLY- AND TEMPORALLY-BASED
TMT REASON RESPONSES ALONG TIME LINE

<u>TIME LINE Distance Spans</u>	<u>Type of Reason Response</u>		<u>Totals</u>
	<u>Spatial</u>	<u>Temporal</u>	
Historical-past (20+)	25%	16%	17%
Experienced-past (1-20)	14	18	18
Extended-present (1-0-1)	41	24	27
Expected-future (1-20)	20	27	26
Historical-future (20+)	-	15	12
Totals (N)	(56)	(245)	(301)

$$\chi^2 = 17.80, df = 4, p = .001$$

appears that for those giving spatially-based reasons, where one goes rather than when one gets there is much more important.

Despite these differences between the two general types of reason responses, distinguishing between them provides us with little predictive power for the distribution of the temporal location choices.* By itself, the distinction only scratches the surface of the relationship that exists between the students' concerns, as indicated by their reasons responses, and their temporal period and distance location choices.

Further classification of each of these two types of reasons will be given in order to: (1) provide for a more systematic subclassification and ordering of the various types of reasons within each of the two general categories; and (2) insure that important theoretical distinctions are reflected within the overall set of categories.

Types of Spatially-Based Reason Responses

Subclassification of the spatially-based reasons was accomplished by distinguishing between two qualitatively different types. Somewhat more than half of the spatial reasons were recreational in nature. The remainder typically

*Lambda values were calculated for the TIME LINE distributions and for the distance choices alone in both temporal periods. All were at or near zero, indicating little association between the two variables in either direction.

involved the student stating that he wanted to go to some better place than he was now located.

While both types of spatial reasons stress going to a place which has a special appeal, the purpose in going differs. Among the recreational reasons, the primary purpose was for play and pleasure, often in the form of a long desired visit to some other country or a vacation for rest and relaxation. Examples of such recreationally-oriented TMT responses include:

- The Virgin Islands ten years ago. I just love the tropical islands.
- In Europe about a year from now in June. To rest and get away from N.Y. and my family.

Among those seeking a better place, the purpose was more serious, with the student often indicating a desire for a permanent change in location. Unspoiled, natural settings were popular choices here, along with historical locations the student felt was slower in pace, less "confused," or less alienating. As such, what was regarded as a better place was likely to be found at some other point in time. Examples of such TMT responses include:

- Out West, Wyoming, Colorado in 2 to 3 years. I love the land and nature and it's beautiful country out there, especially to raise, breed, and train horses.
- 1800's to Walden Pond. To meet Thoreau and see the earth unpolluted.

While both types of spatial reasons were practically identical with regard to the distribution of place choices, they differed significantly on the distribution of temporal

choices. Table 5.6 presents the distributions of each of the two types along the TIME LINE. We noted above that none of the students giving spatial reasons would take a TMT trip into the historical-future. Here, we see that among those seeking a better place, the expected-future is also avoided. Instead, most would remain in the present or near past while going elsewhere in space. The remainder would go back into the experienced-past or up to 200 years into the historical-past.

In contrast, those giving recreationally-oriented spatial reasons tend to reject the experienced-past in favor of the extended-present and the expected-future. Of those going into the historical-past, the temporal distances traveled tend to be longer than was the case for those going to some better place.

These variations anticipate some of the differences in the "uses" to which different points in time are being put. Of interest here is the fact that for these students the future holds open possibilities for recreational pursuits, but does not appear to contain any better places than can be found in the past or the present. Likewise, while the experienced-past may have contained a better place to be, it is not a time in which to play. Play is a matter for the present, the historical past, and the expected-future.

Possibly, the more serious concerns expressed in the reasons given for a trip to some better place are likely to be associated with a conception of the future as more

TABLE 5.6

DISTRIBUTIONS OF TYPES OF SPATIALLY-BASED TMT
REASON RESPONSES ALONG TIME LINE

<u>TIME LINE Distance Spans</u>	<u>Spatially-based Reason Type</u>		
	<u>'Better Place'</u> %	<u>Recreational</u> %	<u>Total</u> %
Historical-past (20+)	25%	25%	25%
Experienced-past (1-20)	6	25	14
Extended-present (1-0-1)	34	50	41
Expected-future (1-20)	34	-	20
Historical-future (20+)	-	-	-
Totals (N)	(32)	(24)	(56)

$$\chi^2 = 12.44, df = 3, p = .007$$

uncertain and less desirable than the past and present. In play, however, we are more likely to chance the future and the distant, perhaps even obscure, past. Perhaps, their very uncertainty makes these temporal locations that much more appealing.

Further, being outside of one's actual lifetime, they may also be outside of the confines of the normative restrictions one is expected to recognize, if not obey. In comparison, when one is putting down one's roots in some more desirable location, what lies clearly over the temporal horizon, or can be documented by personal experience and recent historical record, lies also within the confines of cognitive and normative certainties which would assure that "wherever" one was leaving would not follow to despoil this more desirable place in time.

Significance of the Spatially-Based Reasons

The appearance of a substantial number of spatially-based reasons and the discovery that they differed significantly from the temporally-based type along several important dimensions was not anticipated prior to our analysis of the reason responses. On the one hand, we should have given greater recognition to the fact that both time and space represent basic ways in which people orient themselves to the world around them. Space and time go hand in hand as ideational mechanisms for the coordination of objects, events, and experiences.

On the other hand, while we encountered in the course of our literature review many comments on spatio-temporal relationships, we were still not prepared for what we found, not able to explain it in retrospect.* What we can say at this point is that: (1) human concerns obviously vary in their degree of spatial and temporal emphasis; (2) for this test and within this sample, concerns are more likely to be temporally-based; (3) attention will need to be given in this and future studies of subjective temporality to the basis of these spatio-temporal relationships. However, since our main focus here is the temporal dimension of human concerns, further exploration of the spatial dimension is limited in scope and very tentative in conclusion.

A summary of the results of the analyses presented here is postponed to the end of the next chapter. There we present our analysis and discussion of the results from the responses classified as temporally-based and categorized according to their social scope.

*Cf. Piaget (1971:2) on time as a mechanism for the coordination of successive spatial states; Granet (1934) on the "emblematic" nature of ancient Chinese thought and the concrescence of time and space in "occasions"; Zentner (1966) and Maltz (1968) on spatio-temporal associations related to ecological factors in peasant and primitive societies; and Werner Stark (1958:315), de Grazia (1962:190ff.), and Cottle (1969b) on modern man's tendency to spatialize time and its consequences for thought, language, and social activities.

CHAPTER SIX

THINKING ABOUT TIME, OURSELVES, AND OTHERS:

THE SOCIAL SCOPE AND TEMPORAL LOCATION

OF HUMAN CONCERNS

This chapter continues our analysis of the Time Machine Test data, focusing on the temporally-based reason responses. Reasons of this type accounted for 81% of the TMT time and place choices. This indicates to us that whatever new insights into the nature of subjective temporality may be developed by the further study of spatially-based concerns, those which are temporally-based clearly deserve the greatest attention.

Temporally-based reasons indicate concerns for which some particular temporal location has significance to the student. In the pages to follow, our major focus will be on the empirical relationship between the temporal distance span and the social scope of the reason responses. The social scope of a concern refers to the extent to which the content of that concern includes only the self, the self and significant others, or the self in its relations to some generalized other. As such, the social scope of the content of temporally-based concerns can extend from those which are uniquely personal and self-oriented outward

to encompass significant others and even extend to those concerns about the whole of mankind.

Examination of the relationship between these two properties of people's concerns has important implications for one of our basic theoretical arguments. The argument is that people's orientations to their temporally-based concerns are patterned by the socially derived contents of those concerns. In addition, any variations for this relationship found between past and future period concerns may further our understanding of the various "uses" of the ideational past and future discussed briefly in the last chapter.

I

Social Scope and the Temporal Location of Concerns: Empirical Expectations

As part of our theoretical discussion in Chapter Three, we suggested a number of reasons why the social scope of a concern might affect its temporal location within the apprehensive frame of an action-event. That is, the orientational patterning of temporally-based concerns will have different consequences, in terms of the temporal period and distance span, for concerns with varying levels of expansiveness in social scope. While we had not specified what these consequences would be for temporal period location, we do have some expectations for the temporal distance spans of these concerns.

In particular, we expect that concerns which are predominantly ego-oriented would be the least extensive in temporal distance. As these concerns are centered on the relation of the person to himself in time, without any consideration of others, they would at least be limited by the biological life span. Those concerns which are alter-oriented, by virtue of their inclusion of a significant other, would extend outward from the present over longer temporal distance both within and possibly even beyond the person's lifespan. Finally, concerns having as their point of reference some generalized other (collectivity-oriented concerns) would be the most temporally extensive and might well be located at points far beyond the life span.

With the TMT responses, we are now able to explore these theoretically derived expectations. Using the temporally-based reason responses we can examine the temporal period and distance distributions associated with increasingly expansive levels of social scope. We expect the following empirical relationships:

1. There will be significant differences in the temporal distance distributions associated with each of the three levels of social scope, such that the greater the expansiveness of social scope, the greater the overall span of the distance choices.
2. This relationship is expected to hold for temporal distance spans in both the past and the future.

It is quite obvious that the direction as well as the strength of association between social scope expansiveness and temporal distance is important here. Unless the direction of the empirical relationship can be shown to be from social scope to temporal distance, the theoretical assumption that social factors are among the determinants (rather than consequences) of temporal orientations will have failed its first test.

A second, and equally important, consideration is the manner in which social scope is to be operationalized. This is especially important because of the nature of the TMT responses obtained from our sample of college students. As a property of the content of temporally-based concerns, social scope is conceptually complex. Therefore, the manner in which the TMT reason responses were classified for use as indicators deserves careful and detailed explanation.

II

Methodological Considerations: Operationalizing Social Scope

Using the TMT reason responses to operationalize social scope was not without its problems, considering: (1) the brevity of many of the written explanations for the time and place choices; (2) that boundaries between social scope categories frequently lacked a clearcut theoretical basis; and (3) that some of the reason responses initially

classified as spatially-based could also be differentiated in terms of their social scope. The latter was possible since these are being treated here as separate dimensions of the reason responses.

Our goal in the development of a classification scheme was an ordered-set of categories. This would provide ordinal level measures consistent with the theoretical definition of social scope as varying along a dimension of increasing expansiveness. In addition, it would permit the application of statistical tests indicating the direction as well as the strength and significance of the relationship between the two variables.

The temporally-based reason responses were coded into three social scope categories. The basis for excluding the spatially-based reasons is that our theoretical argument referred only to the social scope of temporally-based concerns.

The other two problems noted above were partially solved by using a strict set of coding criteria for the inclusion of responses into one or another of these three categories. These criteria constitute a set of operational definitions for three social scope categories of: ego-oriented, alter-oriented, and collectivity-oriented temporally-based concerns.*

*Establishing this set of coding criteria has the additional effect of insuring that temporal location choices

Ego-oriented Reasons:
Classification Criteria

The social scope category of ego-oriented reasons includes all responses for which (1) there is no specific mention made of persons other than the student himself, even though the presence of others in the situation described might possibly be assumed or indirectly implied; and (2) the major emphasis expressed in the response was the orienting of one's self to some projected or experienced self in time.

Ego-oriented reasons account for a clear plurality (45%) of the temporally-based responses, making them the most frequently given of all types of reason responses. Examples of past and future period responses categorized into this least expansive of social scope categories are as

will not be used as a basis for coding the reason responses. Such "contamination" would, of course, result in an artificial or otherwise spurious association between these two TMT response dimensions. To prevent this from occurring, the temporal location and reason responses were each coded at different times with the criteria for coding the reasons established in advance.

The first coding decision made for the reason responses was for placement within either the spatial or temporal categories. A decision was then made for the placement of the reason response within the appropriate subcategory of each major type. This procedure made the time and place choices of little relevance in the coding of the reasons. Further, development of coding categories for the temporal distance and place choices was undertaken independently of those for the reasons. While not a deliberate strategy, this had the effect of further reducing the possibility of contamination when coding the reason responses.

In sum, while contamination might have been reduced to a minimum by having different people coding the different types of data, the procedures actually used are necessary and effective in their own right.

follows:

In the past about 1959, when I was in elementary school: I would just like to relive the feelings I had then and there.

The morning of 7/4/72 in New York, to relive that specific day over.

Back to my Senior year in high school. Not to change anything. Just for the experience when I felt very close to people and all that. To go back to a good time.

I would like to see myself in five years from now.

New York, 1982. I plan to still be living in N.Y. and I would like to see what my life would be like.

Future, in 10 years, wherever my place of residence might be: because I have absolutely no idea of what the future will be like and I'm curious to know.

In these responses, the self was typically viewed as an agent existing in time, often affected by the passage of events in the world around him. Most ego-oriented responses would take the student to the temporal location of some event or experience of special significance. This location was often one from which he might interpret, assess, and/or evaluate his present life situation. In some cases, the students indicated in such reasons that their active participation in the event was part of the purpose of the TMT trip. In other cases, a more passive, onlooker type of role was indicated. In still other cases, the emphasis was the student's participation in the present.

This latter type of reason response requires further comment. While the active and passive types of roles just described are found among the reason responses

given for all three levels of social scope, emphasis on participation in the present was most frequent among the responses classified as ego-oriented. In the previous chapter we briefly alluded to the classification problem posed by responses of the "stay right here in the present" type. Altogether, they account for 8% of the total responses. For the reasons given below, we decided to place all such responses into the ego-oriented category. They account for 10% of the temporally-oriented reasons and some 23% of the ego reasons.

The particular problems confronting us in the classification of these "stay right here" responses had nothing to do with their identification. While easy to identify, their nature was difficult to interpret. The frequent occurrence of these responses was also unexpected, given the fact that the TMT instructions permitted spatial and/or temporal projections. They initially appeared to straddle the spatial vs. temporal reason distinction, seeming to belong in both and in neither of these general types at the same time. Making matters even more difficult, few students giving such a response elaborated much beyond the simple statement that they chose to remain right where they were (even when given an imaginative opportunity to leave).

This made it necessary to engage in a detailed analysis of responses where the student did choose to elaborate. In this analysis we drew upon responses from this sample and similar responses obtained from the two

pre-tests. These elaborations were of two basic types: those indicating that the student "feared" or was wary of the future to such an extent that he would not want to chance a trip into it, and those stating that the student was quite content with his present state of affairs. We concluded that while these responses reflected a preference for the present, they also revealed a span of temporal awareness extending beyond it.

By no means could these "stay right here" responses be considered indications of "present-mindedness." Quite definitely, they expressed only that the student was placing a more positive evaluation on his current activities, relationships, and situation than on what he remembered or anticipated. A temporally-based concern can have as its orientation current objects, events, and experiences, especially when these are seen within the context of the total temporal frame and the images of the past and future that are contained within it.*

*One might even speculate that the "stay right here" type of response is the result of projecting the self into the past and/or the future: an evaluative interpretation made of one's present state of affairs on the basis of one's images and conceptions of the past and/or future. If so, then the TMT stimulus did prompt an imaginative trip through time having as its consequence the decision to remain in the present rather than to (1) attempt to ideationally recover the past, or (2) engage in some kind of motivated imaginative fantasy about the future.

Alter-oriented Reasons:
Classification Criteria

Alter-oriented reasons indicate the intermediate level of social scope. Responses classified into this category clearly emphasized, or directly implied, that the concern prompting the TMT trip involved some relationship between the student and some other(s) defined as significant to him. Significant others could take the role of influentials, participants with the student in a particular action, co-viewers of an event, or those with whom he shared some meaningful experience. Specific examples of significant others included in this category are grandparents, parents, spouses, one's children, lovers, boyfriends or girlfriends, individual friends of either sex, groups of peers from school, work, or the local community, teachers and other social staff, and supervisors at work.*

While not all of these types of relationships to significant others are represented by actual cases, reasons which mentioned any of these types were classified as alter-oriented for their social scope of concern. For example, none of the students mentioned their work associates or teachers. Examples of responses categorized as alter-oriented include:

*It should be noted that this is by no means an exhaustive listing of those who might be significant others. Who is a significant other may be situationally specific. For example, in Fred Davis' (1956) research on the restructuring of outlooks on the future among hospital patients with paralytic polio, doctors and other hospital staff members were among the significant others influencing the patient to view his recovery over a longer temporal span.

1930's, Syracuse, New York--to see what kind of life my parents had when they were growing up.

Back to my country when I was an only child, loved by mother and father. 16 years. I think this was the time when I was most happy.

I would go see my boyfriend last summer in Canada. It was the best time of my life.

Now: South Carolina--to see my family.

I would like to go 7 years ahead to when I'm 25 and see how my married life would be: I'm looking for a happy married life. Maybe this would bring my head up and I can be assured of a happy wife and kids.

Ten years in the future to my own home, to observe my own life with my own family and see if I am happy.

Initially, we had hoped that there would be enough cases of alter reasons to permit their further sub-classification according to the type of significant other.

As it turned out, only 25% of the temporally-based reasons were classified as being of this type. An examination of the cases we have shows that family members, both actual and expected, were mentioned in 63% of those responses. The rest were predominantly friends of both sexes with whom the student had been or was not romantically involved. To the extent possible, we will describe variations among the alter reasons using this general contrast between family and friends, lovers, and others.

This tendency for family members to be more frequently mentioned among the alter responses may not be a function of the relatively small number of cases. While all the students have concerns of some type about their family, only some are given expression in their TMT responses.

A further basis for this statement comes from the results obtained from a series of questions asked about the relative importance each student gave to family as against friendship relationships (cf., TIQ-3A). Family relationships were chosen as most important in their past by 69% of the students, in their present by 60%, and were expected to be the most important type of relationship for 56% of the students in the future. This decreasing importance given to the family across the three time periods is undoubtedly due to a shift in orientation away from the family they grew up in in anticipation of establishing significant relationships with members of the family they will start themselves. Nearly half (46%) of the students were not living with their family at the time the study was done. However, for some 45% of the students, this greater importance attached to the family was continuous over all three time periods.*

Collectivity-oriented Reasons:
Classification Criteria

Collectivity-oriented concerns are the broadest and most generalized in social scope. Temporally-based reasons

*This does not mean that friends are unimportant or friendships lacking. One-third to one-half of the students responded that friends they associated with at school, work, their local community, and in groups to which they belonged, were most important across all the three time periods. Further, only one-third of the students disagreed with the statement that I have what I would regard as an active social life" (cf. TIQ-4B).

indicating this type of concern were those which revealed the student's membership in, identification with, and/or interest about the goals and activities of some social collectivity. The basic assumption we made was that in each of these instances the concern being expressed was a function of the student's orientation toward the collectivity he mentioned. Further, we assumed that the collectivity was being viewed as a vehicle for the determination and expression of his own beliefs, values, and goals.

By a social collectivity we mean any large social category sharing a common social or cultural trait. Examples of such large social categories would be ethnic, class, and religious groups, political parties, social movements, nations, and mankind in general.

Obviously, there is a considerable range of expansiveness in the social scope represented by such collectivities. Again, it had been hoped that there would be a sufficient number of cases falling in this reason category to permit further subdivision along such lines. However, since only 30% of the temporally-based reason responses were of this type, development of subcategories was not advisable.*

*Even if more cases were available, the considerable number of possible groupings and the difficulties involved in establishing criteria for distinguishing the relative social scope of each would have made for many problems. For example, would one use the affective significance or the size of a group as a criterion? Most likely such an effort would require the development and independent validation of some complex system of weighted rankings among the many types of collectivities listed above.

Examples of TMT responses categorized as indicating collectivity-oriented concerns are difficult to choose because of their enormous variety and inherent interest. A modest sampling of the more typical would include:

Ancient Greece, 2,400 years ago. Would like to observe their democratic form of government.

The year 33 A.D., Judea--best known claim of existence of God (on earth). To prove it true or false.

Pre-Civil War, U.S. South, 130 years. I'd like to go there to be sure that slavery never existed, therefore never creating the racial problems we had today which have the potential of ripping our country apart.

Germany, 1936. I would try to warn my people of the holocaust awaiting them. If I failed, I would try to give my life in an attempt to assassinate Hitler.

U.S.A., 20 years in the future, to see all the progress of the Black people in America.

Future, 21st century United States, see how the world has changed.

2530, to study at a university in the States. It is very frustrating living in a time when we are on the edge of knowing many things. I would like to go to the future to study all the advances and answers.

Future, 3000. North American community, U.S.A., N.Y. In order to come back and tell what has occurred and means of stopping it, if it should be stopped, and bring all benefits back.

Overall Distribution of Responses among Social Scope Categories

We should recall that only the temporally-oriented reasons given for TMT trips were categorized by social scope. Of this total, the majority (45%) were of the

ego-oriented type which indicated the least expansive degree of social scope. Alter-oriented reason responses accounted for the next 25% of the total. The category containing the responses most expansive in social scope, those which were collectivity-oriented, provided the remaining 30% of the TMT choices analyzed in the pages to follow. It should be noted here also that no claim is being made that this particular distribution of responses reflects any more general set of orientations toward the world among these students. We assume that most, if not all, have concerns which would fall into all three categories. Only one TMT trip is recorded for each student. Given the possibility of taking other trips, results from our depth interviews suggest that different time, place, and reason responses would be chosen by most students.

III

Presentation and Discussion of Results

The statement of our empirical expectation was deliberately vague about the relationship between social scope and the distribution of the temporal period choices. We have consistently assumed that these reason responses reflected concerns which prompted the temporal period and distance choices. As such, the results presented in Table 6.1 are percentaged on the theoretical assumption that social scope is the factor influencing variations in the

distribution of temporal period choices. This assumption will hold for all the tables presented in this chapter.

Relationship of Social Scope to Temporal Period Location

The distributions in Table 6.1 disclose significant differences in the period location of the TMT temporal choices among the three social scope categories ($\chi^2 = 12.72$, $df = 4$, $p = .013$). These differences suggest that the social scope of concerns is related to their orientational patterning within the apprehensive frame of an action-event.

However, while the demonstration of this relationship has important theoretical implications, it deserves to be carefully scrutinized before we are able to understand its empirical basis. First of all, while there are statistically significant differences between the period locations of the three social scope categories, the data give little indication of a strong degree of association between these two variables. Second, it is apparent that most of the variation in temporal period location is accounted for by differences in the proportion of choices for the present, rather than the past and future. In fact, only the present period choices exhibit any semblance of a monotonic pattern from one level of social scope to the next most expansive.

Briefly, what the table shows is that the proportion of present period choices decreases with increasing expansiveness of social scope, with the major change occurring between the ego and alter categories. In addition, while

TABLE 6.1

TEMPORAL PERIOD LOCATION OF TMT TEMPORALLY-
 BASED RESPONSES, BY SOCIAL SCOPE
 ORIENTATION OF REASON

<u>Temporal Period Location</u>	<u>Social Scope Orientation</u>			<u>Total</u>
	<u>Ego</u>	<u>Alter</u>	<u>Collective</u>	
Past	31%	47%	43%	39%
Present	23	10	7	15
Future	46	43	50	46
Total (N)	(110)	(61)	(74)	(245)

the ego and collective categories show more future than past period choices, among those giving alter-oriented reasons there is a slightly greater tendency to choose the past over the future. When the alter-oriented period choices are contrasted between those which mention the family and those which include friends, lovers, and others, one discovers that these differences produce internal variations in period location choices which are disguised by their combination in the table. While both types of alter-oriented reasons have approximately the same proportion of past choices (47%), those students who mention family members in their reasons are least likely to choose to remain in the present (3% vs. 22% for those mentioning friends, lovers, and others) and the most likely to take a trip into the future (50% vs. 30%).

If we juxtapose those observations with a reminder that all of the present period choices for the ego-oriented reasons are of the "stay right here" type, what emerges is a very complex, but nevertheless statistically significant relationship between the social scope of a concern and its temporal period location. While this finding appears to provide some degree of empirical support for our theoretical assumption that the content of temporally-based concerns affect their orientational patterning, its theoretical significance is by no means as readily established as its statistical significance.

The results suggest a few implications for our attempt to explore the relationship between the socially derived content and the temporal patterning of people's concerns. First, it would appear that concerns oriented toward significant and/or generalized others are the most likely to have temporal locations outside of the immediate present. Moreover, when the consideration of others serves to draw one's thoughts away from the here and now, the results show that the students are as likely to locate these concerns in the future as in the past. Finally, of the two types of significant others mentioned most frequently, those focused on family members were distributed across the three temporal periods in much the same way as the collectivity-oriented reasons. In contrast, those reasons focused on what are essentially dyadic relationships (with friends and lovers) have a temporal period distribution more like the ego-oriented reasons.

It may be that the key factors operating here are not the number of others that are the object of the concern or the affective intensity of our relationship to them. Other people come to be defined as significant others not just by virtue of the affective intensity of our relationship with them. Almost by definition, a significant other is one with whom we have an intensely affective relationship. While such a high degree of affective intensity may well develop within the context of an informally organized and non-institutionalized social setting (like a local

neighborhood or heterosexual peer group), relationships which take place within the confines of a formal institutional setting (like the family, one's school, or a work organization) provide a better basis for assessing and interpreting the relationship against the backdrop of a structured social setting which has had, and can be expected to continue to have, predictable and persistent effects on that relationship.

Adherence to a set of ideological principles and/or identification with a social collectivity may likewise draw our thoughts away from the present. A social collectivity often imbues its members with a sense of their history and destiny. An ideology gives those who adhere to it a blueprint for constructing the future and an interpretation of how the past has determined the present. What is common to these collective concerns is that people are provided with a social context which is expected to persist in the face of the passage of time; a context with a shared means of diachronic patterning against which they can give temporal locations to the objects, events, and experiences that are the context and substance of their concerns.

Relationship of Social Scope to Temporal Distance Span

The major focus of our theoretical expectations was on the relationship between the social scope of concerns and their temporal distance spans. Table 6.2 presents the TIME LINE distributions for each of the three social scope

TABLE 6.2

DISTRIBUTIONS OF TMT TEMPORALLY-BASED REASON
RESPONSES ALONG TIME LINE, BY SOCIAL
SCOPE ORIENTATION OF REASON

<u>TIME LINE Distance Spans</u>	<u>Social Scope Orientation</u>			<u>Total</u>
	<u>Ego</u>	<u>Alter</u>	<u>Collective</u>	
Historical-past (20+)	-	13%	42%	16%
Experienced-past (1-20)	28%	23	1	18
Extended-present (1-0-1)	29	33	8	24
Expected-future (1-20)	38	31	7	27
Historical-future (20+)	5	-	42	15
Totals (N)	(110)	(61)	(74)	(245)

categories. Comparisons among the three social scope categories indicate that there are substantial variations in the temporal distance locations of concerns for each level of expansiveness. These TIME LINE distributions serve as a useful summarizing device in the discussion to follow, but as we shall see, they often conceal more variation than they reveal.

In Table 6.3 is found the distributions of the temporal distance choices for each of the three social scope categories. Here, both variables are ordinally scaled, making it possible to directly assess the relationship between social scope and the temporal distance of the concerns. For each level of social scope expansiveness there are the distributions of the temporal distance choices totaled for all three time periods combined, as well as separately for the past and the future choices alone.

Using these distributions we are able to calculate measures of the strength, statistical significance, and direction of the relationship between the two variables. The gamma statistic shows a moderately strong (.62) positive relationship between the social scope and temporal distance properties of temporally-based concerns (as these variables are measured here). Further, when this relationship is tested separately for past and future concerns, it remains as strong for the future (.62) while becoming even stronger for the past (.73). All three relationships are significant beyond the .001 level.

TABLE 6.3
RELATIONSHIPS OF TEMPORAL DISTANCE LOCATION CHOICES TO SOCIAL
SCOPE ORIENTATION OF REASON, BY TEMPORAL PERIOD

Temporal Distance Location	Social Scope Orientation of Reason								
	Ego			Alter			Collective		
	Past	Future	Total	Past	Future	Total	Past	Future	Total
Immediate present	-	-	23%	-	-	10%	-	-	7%
Less than one	9%	8%	6	24%	27%	23	-	3%	1
1 to 5	38	45	33	21	38	26	3%	1	1
6 to 20	53	37	34	28	35	28	-	13	7
21 to 50	-	10	4	24	-	11	6	11	8
51 to 200	-	-	-	3	-	2	47	30	35
201 to 1,000	-	-	-	-	-	-	19	11	14
Over 1,000	-	-	-	-	-	-	25	32	27
Totals (N)	(34)	(51)	(110)	(29)	(26)	(61)	(32)	(37)	(74)

Measures of Statistical Association between Temporal
Distance Span and Social Scope Orientation,
Temporally-Based Reason Responses

	Gamma	Somer's D		N
		XY	YX	
All temporal periods	.62*	.55	.42	245
Past choices only	.73*	.66	.54	95
Future choices only	.61*	.52	.42	114

*p < .001

In sum, there is empirical support for our theoretical assumption that the socially-derived content of temporally based concerns is related to how these concerns are ideationally patterned with regard to their temporal distance location.

While the results strengthen our confidence in this theoretical assumption, they are by no means unqualified. Rather, they are the starting point from which to begin a more probing exploration of the nature of this relationship both here and in the chapters to follow. To begin, we should note that we used Somer's D to assess the direction of the relationship both under the assumption of social scope as the independent variable (D_{xy}) and its reverse (D_{yx}). The results reveal that all three relationships shown to be significant above are stronger under the assumption of social scope as the determinant. However, they show that there is also a substantial amount of interaction between the two variables. Assessing these interactive effects requires a careful examination of the nature of the relationship as well as the manner in which it is being empirically assessed.

Matters for Further Consideration

There are three basic matters that need to be considered in order to understand more about the relationship between the social scope and the temporal locations of temporally-based concerns. First, we must consider the possibility that the interactive effects are an artifact of

the way we operationalized each of the variables or of the statistical tests used to examine the relationship. Second, there are some significant differences in the strength of the relationship when measured for the past and future. Consideration must be given to "uses" of the past and future trips in the context of the students' life situations, especially of the different roles that the students take in relation to the past and future states of affairs into which they are projecting themselves in response to the TMT. Third, we need to consider the possibility that interactive effects may be a function of the relation of these two variables to one or more other factors. The results of our investigation into the relationship of temporal and spatial distance choices come to mind in this regard. These results suggest that at least some attention be given to the interrelationships among the three "extensivity" dimensions under examination here: temporal distance, spatial distance, and the degree of social scope. In addition, we can also examine why there exists considerable overlap between the range of temporal distance choices across the three levels of social scope. In particular, there is question of the effect of the qualitative "break" between concerns within and outside the life span of the students.

Our main interest is with the second and third of these matters. Discussion of these matters will occupy our attention throughout the rest of this chapter and into the next, beginning with a more detailed discussion of the

variations in temporal location choices given for trips associated with each of the three levels of social scope. Examination of the problem of method and measurement effects is limited by the type of data available. Empirical assessment of the interactive effects in particular must await the collection of new data which meets two conditions not adequately fulfilled here. First, the TMT instructions must be revised to encourage more lengthy responses about the reasons for the particular time and place choices. This would permit more reliable coding. It would also allow for the development of a larger set of categories, reflecting more specific degrees of social scope. Secondly, using a larger sample one could develop a larger number of temporal distance categories, each covering a shorter span. This would be particularly helpful for the examination of the relationship within the generational span extending outward up to twenty years in both directions from the present. Nearly 70% of the choices fall into this span, yet they are all classified into only four categories (present, less than one year, one to five years, and six to twenty years). More categories should be also developed to classify temporal distance choices falling within the one hundred year span centered around the present.

IV

Interpretation and Elaboration
of the Findings

As we noted above, among the matters deserving further consideration is that of the relationships between the social scope and temporal locations (focused on in the empirical analysis) and the third extensivity dimension, that of spatial distance. Also, we sought further elaboration of the nature of the differences between responses lying within and outside of the generational span. In this section we focus on these points as a means of gaining additional insight into the nature of the relationship between the social scope and temporal location of temporally-based concerns. This is best accomplished by focusing on the temporal locations of concerns categorized into each of the three levels of social scope.

The Temporal Locations
of Ego-oriented Concerns

The TIME LINE distribution of the ego-oriented responses (cf. Table 6.2) shows that some 95% fall within the generational span, the remaining 5% are in the historical-future (though still within the span of the students' probable life expectancy). The plurality of temporal choices falls within the expected-future span of from one to twenty years ahead. In fact, future period ego choices are the most frequently given of all TMT responses, accounting for 17% of the total. The large proportion of choices

falling into this span extending from one year in the past to one year ahead is due to the inclusion of the "stay right here" responses in the ego category. Temporal choices for under one year in either direction account for only 6% of the total.

The relatively low proportion of future choices for less than one year suggests that the near future may be less ambiguous or uncertain for these students than the years after their college graduation. Whether this is a characteristic of ego-oriented concerns alone will be seen below. Alter-oriented reasons are much more likely to concentrate between the present and one year ahead. Perhaps this is because so many of these ego-oriented responses are future trips for the purpose of discovering the course of one's life-in-general, rather than to verify the outcome of some particular action or the occurrence of some specific event. While these data shed some light on this matter, a fuller consideration of the question of the relationship between certainty about the future and the various types of concerns people have awaits our discussions in Chapter Eight.

From the substantial number of ego-oriented choices that fall into the experienced past, the present, and near future, we might conclude that such concerns are most typically located at distances not too far removed from the students' present life situations. Most of these students were alive over 20 years ago. However, their early and

later years of life are not the temporal locations for concerns emphasizing the relationship of their present self to their self in time. The present appears more preferable as a temporal location for such personal concerns than these more distant stages.

Of all the three social scope categories, ego reasons exhibit the highest proportion of nonspecified place choices. Even with all of the "stay right here" responses included, 35% of the past, and a whopping 53% of the future ego place choices were nonspecified.* They are also the least expansive spatially. About one-third each of the specified place choices are for the test site location or the student's home. In contrast, place choices for the past are both more certain and more spatially expansive. Nearly 45% are for distant places within the United States or some foreign country.

The particular distributions of temporal and spatial choices among the ego reasons has most to do with the purposes indicated in the responses. Such variations in the content and purpose of the ego reasons can be best distinguished by examining their temporal period location. We have already discussed the reasons for present period

*For the future choices, this lack of certainty about spatial location is perhaps understandable. If a person is even somewhat unclear about how life will be in the years ahead, one is likely to be even more uncertain about where one will be. Hence, the large number of students writing such things as "unknown" or "wherever I am at that point in my life" when asked for a place choice.

choices, all being of the "stay right here" type. For students using the TMT to take them into their future, overwhelmingly the purpose was to gain knowledge about their life situation at some point ahead. While in some cases, this knowledge is about educational and occupation attainments, most often the purpose is to see either if their future life-in-general has turned out as well as hoped or when some anticipated event would occur or experience would be had.

Few indications are given by the students of seeking pre-knowledge as a means of altering current plans or modifying current behavior. Frankly, we had expected that there would be more evidence of such an interest in pre-knowledge. Instead, one gets the impression that the greater interest is in whether goals toward which they are striving and experiences they anticipate will be realized either in the manner or at the time expected.

Further, even though varying degrees of uncertainty are evident in the future ego responses, little anxiety is indicated. Most seem moderately clear about the general course of their lives--just hazy about the timing and affective impact of the specific events and experiences they anticipate.

The ego reasons given for past trips are most often focused on some event or experience that occurred during childhood or the later years of adolescence. Over half are for the span extending back from 6-20 years. By comparison,

nearly half of the future responses are for the span extending from 1-5 years ahead. Combining this observation with what we noted above about the differences between past and future place choices, we can state that among the ego-oriented concerns given here, memories tend to be most extensive in their temporal and spatial distribution.

Examining the content of reasons given for trips into the past reveals that, for most students, the purpose is based on a desire to recover some significant experience. In some cases, this involves re-living the significant experience for either its irrecoverable or never repeated pleasure, or as a means of escaping the burdens of the present. For those seeking to re-live the past, themes of nostalgia focusing on childhood experiences and the last years of high school are frequent. An example can be given from one young lady who expressed such a desire to re-live the past. During the course of her depth interview she said that she would "like to be little again, say like in the fourth grade when I lived in our old house. You're just so happy when you're little. You just don't realize how many problems there are. You don't really comprehend what a depressed person is. You just didn't realize what a crummy place it can be." None of her other responses suggest that she is a person overly concerned with the past. Instead, she is indicating her awareness (and the extent to which she realized that such awareness was retrospective) of the effects on her present life of a residential change

and a somewhat more recent period of severe depression for her mother.

Another type of intention to recover the past was by engaging in some action which would change the student's present life situation (e.g., not going into the army before entering college, overcoming one's social inhibitions sooner, or taking advantage of a lost opportunity).^{*} Again the underlying assumption is that the past, when viewed in retrospect, has had a determining effect on the present.

As such, these responses are interpretations of the present as well as selective reconstructions of the past. They are realizations that, given one's present knowledge, to have acted differently in the past would alter its effects on the present. Important here is that such a general interpretation of the relationship of past to present is only possible when a person has come to assume that he can be an active agent in the determination of his own life experience.

The last statement points to some significant contrasts between the contents and purposes of the several

^{*}The distinctions between pre-knowledge of the future and recovery of the past, re-living vs. changing the past, and active vs. passive stances with regard to past and future concerns are partially derived from similar distinctions made by Thomas Cottle and his several associates (cf. Cottle, 1969b and Cottle, et al., 1968) and used in several of his other studies. However, in some instances we have modified the definition and usage, making us solely responsible for their application here.

types of past and future ego reasons. For one, trips to the past are more likely to involve the student taking the role of an active participant in the events he believes to be shaping his life course. Not only is he less likely to view his role as that of a passive onlooker, he is also more likely to use his active participation for the purpose of altering the present.

In the case of future choices, this might have meant using imaginative pre-knowledge of the future to alter present plans and conduct. But as we have seen, this was rare. For the past, more often this actually meant changing the past to alter its effects on one's present state of affairs.

These different "uses" of the past and future may be a function of other contrasts between ego reasons given in the two periods. Future-oriented concerns indicated by the ego reasons are more frequent, less detailed, more likely to refer to one's general life course than to specific events and experiences, and more restricted in expansiveness of spatial and temporal location choices. The implications of these differences for our understanding of the "uses" of the ideational past and future awaits the presentation of still other contrasts found among the alter- and collectivity-oriented reason responses.

Temporal Locations of Alter-oriented Concerns

Compared to the ego-oriented, alter responses are more likely to be given for past and less likely to be given for present temporal period choices. By examining their TIME LINE distribution, we can also note that some 13% of the students giving alter reasons take trips into the historical past. This makes the alter reasons more temporally extensive in the past than in the future (the opposite of what we found for the ego reasons). Family reasons are given for all the choices falling into the historical past. The primary reasons given for these longer distance choices were either re-living part of the student's childhood with their family or being once again with a parent who had died.* However, for the most distant of these trips, the purpose was to view either their parents' own childhood or life together prior to the student's birth.

Only 10% of the alter responses are given for temporal locations in the immediate present. However, in all, one-third do fall within the span of the extended-present as defined on the TIME LINE. Most responses falling into this span are friendship-oriented. In all, some 65% of the temporal choices oriented toward non-family

*Nearly 19% of the students indicated that one or both parents were absent from the home by the time they were age 15. In about one-third of these cases, the reason given was the death of the parent.

alters fall within the extended-present, compared to only 13% of the temporal choices for the family-oriented type. For the responses given here, friendship concerns are held closer in time than are family concerns (which can extend backward to even before the student was born).

Alter responses falling into the expected-future most often involve some family relationship. Such trips typically have as their purpose taking a look at what their marriage and family life would be like then. Again we encounter the future trips being used to indicate when and how good one's life would be rather than if what was expected would take place at all. The passive onlooker role adopted in these trips again suggests the relative lack of interest in using knowledge about the future to modify plans and behavior in the present.

Before concluding our description of the alter-oriented concerns indicated here, we might note two rather interesting characteristics of their accompanying place choices. While again we found that place choices were more likely to be unspecified for the past than the future, the proportion of such responses among the total place choices dropped to one-quarter. It would appear that if you know who you are with, you are also more likely to know where you will be.

In addition, alter reasons were the most often associated with the "my home" place choice category. One-third of all the place choices are for one's past, present,

or future residence, with this number rising to as high as 53% among the future period family reasons. "Home" is a place invested with affective and shared meaning, not just a location. It is also a place likely to persist in its significance over an extended period of time. A person's home can therefore be regarded a temporally-extensive situation, rather than just a place for an occasion marked by some action, event, or experience taking place at a particular point in time.

We might speculate that such temporally-extensive situations are more likely than discrete occasions to serve as places for the diachronic binding of concerns into temporal images and conceptions. The home may serve such a purpose for personal concerns, just as public places with strong collective significance are the locations people often think about (and their leaders choose as their oration locations) when considering matters of long-term interest for social movements, ethnic and religious groups, and nations.

To summarize our discussion of alter-oriented concerns, we must begin by recalling that it is family members who are the significant others most frequently mentioned. The predominance of such concerns does much to make temporal period location choices more frequent for the past than the future, and more extensive in total distance span than was the case for the ego-oriented concerns. Further, concerns oriented toward friends and others were distinguished

from those which were family-oriented by their greater concentration in and near the present. Finally, while there were significant differences in both temporal period and distance span locations between the ego and alter reasons, the "uses" of the past and future were essentially similar in type.

Temporal Locations of Collectivity-oriented Concerns

The collectivity-oriented responses were the broadest in social scope and the most abstract of the temporally-based concerns. These TMT trips often had as their purpose the resolution of some uncertainty or the satisfaction of some curiosity about events the collectivity might encounter or create through its activities. In contrast to the ego and alter reasons, fewer instances were noted of trips which would involve the students taking the role of participants in actions and events beyond the limits of their own lifetimes, they also were more likely to engage in such activities and events in order to affect some present-day state of affairs. Awareness of the role of pre-knowledge of the future and of historical events in determining the nature of the present is somewhat more in evidence among collectivity-oriented responses than was the case for concerns focused on one's own past and future.

Collective reasons tend to be given somewhat more frequently for the past than the future. They are also the least likely among all three social scope categories to

fall into the immediate or extended-present. Most choices made on the basis of such concerns are for temporal distance locations evenly divided between the historical past and future (84%). Those falling within the generational span of the TIME LINE concentrate either in the immediate present or within the next five years.

Given these distributions, most of the differences described above between the very distant past and future choices apply to the collectivity reasons. In fact, nearly 70% of all TMT temporal distance choices outside the generational span are based on collectivity-oriented concerns. Of the past period choices, nearly half fall into the 51-200 year span. In contrast, distance choices for future period concerns are more evenly spread across the vast span extending outward from five years ahead into the millenia beyond. While collective future concerns are somewhat more likely to extend to distances within the probable lifetimes of those who hold them, it can be estimated that at least three-quarters of all the collective concerns indicated here lie at distances beyond the births and deaths of those expressing them.*

*Some 27% of the future and only 9% of the past temporal distance choices are for under 50 years. Combined with choices for the immediate present, this 100 year span around the present accounts for only 24% of the temporal location choices given for collectivity-oriented concerns. As all the students are under 30 and most will be deceased by the end of the next fifty years, the estimate made above probably errs in the direction of being too large.

The place choices indicated for the collective reasons show they are also the most spatially distant among the three social scope categories. While the proportion of non-specified place choices is about equal to that of the alter reasons, the contrast between past and future period uncertainty about spatial location is quite pronounced. Only 6% of those taking trips into the collective past either did not or could not indicate their ultimate spatial location.

By comparison, the future collective-reasons are more similar to the future ego and alter reasons in their much higher percentage of nonspecified choices. This suggests that for temporally-based concerns uncertainty about spatial location is highest among the future concerns, regardless of their social scope. However, we might further note the unexpected finding that the proportion of non-specified place responses given for past concerns decreases as the social scope expansiveness increases. The social scope of past concerns may therefore have some independent effect on their spatial location.

Among the collective reasons for which a place choice was specified, differences between the past and future locations are also indicated. For one, none of those taking trips into the past would remain in the test site location, with the majority (69%) indicating another country.*

*Even among the spatially-oriented reason responses fewer would go so far away. An impressionistic analysis of

Place choices for future collective reasons were much more likely to be located within the United States and to include the test site location. Interestingly, the most spatially distant of the future choices are for locations off the earth. All of the "other planet" place choices given by the students are associated with collective concerns for the future.*

In sum, most collective concerns take the student far away from both the here and now of everyday life. There are several possible explanations for both this association of social scope with temporal and spatial distance and the more basic finding that a substantial number of these students have concerns with temporal locations in the distant past and future. However, any such explanation needs to take into account the cultural or ideological

the types of collective reasons given for distant times and places suggests that in some instances this inter-relationship is an artifact of the relatively short span covered by the existence of the United States. Some 44% of the past collective reasons extend over 200 years back, making any location within the United States somewhat improbable. Further, we should not discount the fact that many Americans are oriented toward Europe and the Caribbean because of their national ancestry, one of several possible bases for a collectivity-oriented concern.

*There are obviously only a few conditions under which one might imagine oneself at an extra-planetary or interstellar location during one's lifetime. Nor would it be a particularly effective vantage point for observing the historical past. All the extraterrestrial place choices appear to assume that man will have visited other planets and stars in the distant future with most indicating directly, or indirectly, that such locations would be the best vantage points from which to observe the long range course of human progress.

setting in which the concerns were expressed and the fact that the concerns are constituted by a person's problems, interests, perceptions, and stock of knowledge in the present.

For example, if these collective concerns ideationally located in the distant future were found among priests and philosophers in traditional India, one might well consider that they have learned a conception of time in which there is a constant series of cycles within ever longer cycles extending into eternity. Or, if one were studying such concerns among the members of some millenialist social movement, the explanation might focus on the fact that members of utopian movements must often discount the relevancy of the present state of affairs to maintain their adherence to a conception of the future as ultimately redemptive. Again, if the sample were taken from among astronomers or futurologists, a concern for events taking place in the distant future would be explicable on the basis of their theoretical or practical interests. Finally, they might reflect what some have contended to be Western man's "repugnance" at the thought of his own death, escapist fantasies having the avoidance of death as their unconscious goal.

Yet, few of these collectivity-oriented reasons given for the TMT are open to interpretation as being escapist fantasies or whimsical imaginings. Further, while few, if any, of the students would fall into the categories

used in the examples above, the explanation of their responses would follow much the same line of theoretical reasoning. For example, while trips to the distant past are seldom for the same specific purpose, they often disclose an interest in discovering some basic historical truth or confirming the grounds for accepting an ethical or religious principle. Other past choices indicate an interest in what life was like during some particular historical period (especially for comparison with what the student viewed as a less desirable state of affairs today). Some students would even use the TMT to go back and change the course of history, to prevent or alter the occurrence of some historical event believed to have affected an ethnic or religious group. Among those giving choices focused on some future state of affairs, taking the role of a passive onlooker was more frequent and concerns about mankind were more typical for the longest distance ahead. Concerns about minority ethnic and religious groups are often about their condition one or two generations ahead. Trips to view the future of mankind most often had purposes like confirming some prediction about the outcome of present events, discovering if there was an overall purpose to man's existence, or seeing if we would ever encounter intelligent life from another world.

It is not surprising to discover that in many instances these concerns can be related to the students' social backgrounds. For example, all three students going

to Germany during Hitler's period of power are Jewish. Students with interests in the past or future condition of Blacks in the United States are either Black themselves or whites claiming liberal or radical political orientations. While more responses would permit a more systematic analysis, the implication that existential social factors are determining collectivity-oriented concerns with long range temporal spans is strong.

For the concerns having as their orientation mankind in general, social scope is at its most universal and diffuse point. At the same time, membership in the collectivity is at its most inclusive and existential commitment at its highest. On this level, the relationship of self to others may find its broadest spatial and temporal as well as social expansiveness. Edward Tirayakian provides some insight into the existential basis for this association when he states:

Another aspect of the openness of the self lies in its historical grounding; being-in-the-world means to participate in social time and thus in history. I am today what I am in part because of my historical past and in part because of what I anticipate to be my historical future. I am also historical in a collective or social sense, that is, I am open to and take as mine the history of my people and this leads me to realize that I am not contained in my finite and solid appearance but that my being goes out spatially and temporally. (Quoted in Cottle, 1969:123)

V

Implications of the TMT Analyses

This chapter, and the one preceding, present and discuss the results of several types of analyses on data derived from the Time Machine Test. The TMT was designed as a way of measuring the outcomes of the ideational process of orientational temporal patterning. The test provides data relevant to the examination of the temporal period and distance locations of people's concerns. It also permits the researcher to assess the relationship between these two modes of orientational patterning and the substantive content of the concerns. This is accomplished by content analysis of the reasons given for the TMT trips. At this point, results obtained from these analyses can be summarized and their various methodological and theoretical implications considered.

General Summary of Findings

1. The temporal period locations of the TMT responses fall into all three time periods. While a plurality is for the future, nearly as many are for the past, and a significant proportion are for the present. While there were often important variations in the distributions of temporal period choices between those respondents giving spatially- and temporally-based reason responses, as well as among the three social scope categories, for all types of reasons there are choices falling into all three temporal periods.

2. The temporal distance locations of past and future choices are distributed differently. These differences hold when examined in terms of the several reason response types. There are, however, variations in the distance location of choices among the several types of reasons. The primary indication of this variation was in the proportion of choices falling into the generational and historical spans, i.e., under and over 20 years into the past or future. More specific variations in the temporal distance locations are also indicated within each of these two general temporal distance spans for both past and future period choices.

3. Place choices associated with different temporal period and distance locations and with different reason response types also showed significant variations. Particularly among the temporally-based reasons, there are indications that the social scope, temporal distance span, and spatial breadth of concerns tend to be directly interrelated.

4. The most important source of variation discovered was in the temporal locations of choices among the several reason response types. This includes the differences between the temporal locations of the two general categories of reasons (spatial and temporal) and the three social scope categories. In particular, there is a strong degree of association between the social scope of the reason given for a TMT trip and the temporal distance location of the trip.

5. Statistical analyses demonstrated that while these relationships are strongest under the assumption that

the reasons are the source of variation in the temporal location choices, strong interactive effects are also indicated.

Methodological Implications

There are several methodological implications of our findings for the study of temporal thought. Some reflect upon the problems with the previous methodological strategies discussed in Chapter Four. Other implications bear more directly on problems of empirically assessing the leading theoretical assumptions guiding our own research.

There are two implications of the TMT analyses relevant to the general problem of test construction and data collection on subjective temporal thought. The most important of these implications is that the test must provide the researcher with data about the substantive content of temporal concerns being studied. So much of the variation in the temporal locations of responses reported above is related to the substantive content of the concerns that neglect of this dimension in the stages of test construction, data collection, and analysis would almost necessarily result in findings of dubious worth. This does not mean that the content analysis of responses must also reflect the categories of concerns developed here. There may be other sociologically relevant properties of the substantive content of temporal concerns relevant to other theoretical interests. However, our results do imply that future methodological strategies should include the potential for measuring such properties

of the substantive content and also analyze the results obtained from the test by taking this content into consideration as a source of variation in responses.

Second, our results strongly suggest that future methodological strategies allow for the assessment of temporal concerns by both their temporal period and distance locations. While past and future period concerns can be empirically examined apart from one another, an adequate understanding of the concerns located in either period requires comparison of both along some common dimension, e.g., the temporal distance location or the social scope. Further, what we termed historical spans, as well as the generational, must both be considered. Concerns about events lying outside of the respondents' lifetimes can affect their temporal images and conceptions within their lifetimes and their conduct in the present.

More directly important to our own theoretical interests are two further methodological implications of the TMT results. First, there remains the thorny problem of assessing the basis for the interactive effects noted in the analysis of the relationship between the social scope and temporal distance location of the temporally-based concerns. We suggested above some possible reasons for this interaction and the steps that might be taken to examine its basis.

However, a second similar problem of interaction needs to be considered in efforts aimed at improving the TMT

or in developing another test designed to get at the same type of data. This problem has to do with finding a way of assessing the interactive effects between the spatial and the temporal dimensions of human concerns. Our results indicate that these dimensions may be directly related and imply that they may both require consideration in the analysis of variation in the ways people temporally pattern their concerns. If the results of future research indicate that this is the case, then three phenomena would need to be studied concurrently: the temporal, spatial, and the social dimensions of human concerns.

Theoretical Implications

The most important theoretical implication of our results is that there is now evidence of a direct relationship between the socially derived content and the temporal location of human concerns. This evidence comes primarily from the analysis of the variations in TMT temporal period and distance location choices associated with each of the three social scope categories. While certainly not definitive, the results obtained here reflect more clearly what our examination of previous studies only implies--that how people orient themselves to the past and the future reflects the substantive meaning and significance they give to their memories and expectations.

That the substantive content of their concerns determines these variations in orientational patterning is a matter that can only be assessed on the basis of an

accumulated body of evidence. Statements about causation are always theoretical and, consequently, only more or less plausible assertions in the light of available empirical evidence. For this reason, it must be recognized that while our findings are consistent with the theoretical assumptions presented in Chapters Two and Three, they might also be open to different interpretations using other theoretical assumptions.

While our theoretical position assumes that social factors are determining of the outcomes of the ideational process of temporal patterning, further research is needed which more directly assesses this assumption. In an exploratory study an investigator is permitted certain liberties which are inevitably lost as the process of theory construction is elaborated and as new data become available. Here we set out to analyze the TMT data with the matter of examining this theoretical assumption in mind. Future research must assess more directly how well these results hold up using research designs structured to refute the assumption, rather than to explore the possibility that it does have empirical support.

Further exploratory efforts taken in this direction are reported below. The next chapter discusses the results more generally in terms of their relationships to the process of time-binding and the effects of life spheres on the construction of temporal images and conceptions. By

assessing our results on the theoretical level, we are better able to consider how our theoretical assumptions can be subjected to more rigorous testing in the future.

CHAPTER SEVEN

THE TIME-BINDING OF TEMPORAL IMAGES:

SOCIAL BASES OF THE STRUCTURE OF TEMPORAL THOUGHT

Differences in the temporal locations of the Time Machine Test choices falling into the three social scope categories were the major focus of our discussion in the last chapter. However, there are also some basic similarities. These similarities are found in the ways the students are orienting themselves to past and future concerns and in the manner they are integrating their temporal concerns to their matters-at-hand. We have been able to identify what appear to be three of the common and typical ways in which the students are relating their matters-at-hand to their past and future concerns regardless of the level of social scope.

Two such common and typical ways of thinking about the past and the future are reflected in these students' TMT responses. One has to do with the roles the students indicate they would take in relation to objects, events, and experiences that are the content of their temporal concerns. In this regard we can consider the implications of the general tendency for the students to report taking the role of active participant with regard to past concerns and

that of a passive onlooker on the future states of affairs described in their TMT responses.

A second and related similarity found among many of the TMT responses was that the future was being viewed as an essentially continuous and gradually unfolding sequence of events and/or experiences about which the general course is "known" in advance. Consideration of these two factors takes us into the question of how past and future concerns are related to the self as an agent persisting in time and faced with the continual problems of maintaining a sense of continuity and of integrating temporally-based concerns into meaningful and coherent temporal images and conceptions.

These first two of the similarities we noted among the TMT responses might best be referred to as "uses" of the ideational past and future. The third type of similarity found among the TMT reason responses, and also in the analysis of the depth interviews, was that the concerns fell more frequently into some life spheres than others. In the final section of this chapter we take up the question of the general nature of three of the more frequently mentioned life spheres: the family, work, and informal social relationships in the contexts of school and the local residential community. This discussion permits us to relate the first two types of similarities to our more general interests in the relationships between life spheres and images of the future.

The discussions throughout are generally theoretical in level, interpretive in purpose, and, often, speculative in nature. However, they do provide an important link to our earlier theoretical discussions and a bridge between the results of the TMT analyses and the findings about the clarity of temporal images which follow in the next chapter.

I

Time-binding and the Roles Taken in the Process of Temporal Patterning

Among the TMT responses we analyzed, there appeared three basic types of roles taken with regard to how one imagined oneself in relation to the objects, events, and experiences of past and future concern. First, the student might take the role of a passive onlooker on the activities, relationships, and situations into which they had projected themselves. The "perceived" states of affairs they described might or might not include themselves among the objects of memory or anticipation. In either case, the direct "perception" of the past or future event has no relevance or consequence in the form of either an alteration of the past or in using pre-knowledge to modify present conduct and thereby alter its outcome in light of one's goals.

Secondly, the student might take the role of an active participant in a remembered or anticipated event, permitting either the recovery of the past or pre-knowledge of the experiential impact of some anticipated event. Further, such temporal recovery or pre-knowledge (cf.

Cottle, 1969a) may be either of an event that was or could be experienced or was not or could not be experienced. When the event was not capable of direct experience it might be because of the student's location at the time the event takes place or because its occurrence lies outside of the biological lifespan. In any case, the primary characteristic of the second type of role is that the participation enables the student to experience as well as "perceive" what is being remembered or anticipated. By recovering the past in this manner, one is projecting one's self into what is remembered for its experiential impact. By projecting one's self into the future, one gains a "pre-experiencing" as well as a "pre-viewing" of an anticipated state of affairs.

The third type of role has all the characteristics and possible variations that defined the second type. However, it also includes direct intervention in the projected state of affairs. Such intervention often has as its stated intention the alteration and/or modification of the consequences of that state of affairs. In one variation on this role, the image of the past contains in it the student's intervention for the purpose of changing the effects of some prior event on the present or future. In another variation, the student would return to the present and use his pre-knowledge of the future to initiate an action-event having as its intended outcome a state of affairs different

from and, probably, more desirable than the one "pre-viewed" and "pre-experienced" during the course of the TMT trip.

All three types of roles are represented among the past and future period TMT trips taken by the students. What is especially significant about these roles is that only the first type has any degree of "reality" to it for the past and only the third type represents a rational response to pre-knowledge of the future. One can never participate in past events, directly re-live what has come before, or change the past so the present and future will be different and more desirable. Yet, it is precisely the roles of active participation and intervention that are most often found among the reasons given for trips into the past. This is what the students state that they would do if permitted to recover the experienced past and is often found among the reasons given for trips into the historical past.

Trips into the future are similarly anomalous. While one's participation in a state of affairs that will occur within the limits of the expected-future is possible, most of those choosing to make trips into their own future would take the role of a passive observer, rather than use their imaginative opportunity to gain and make use of pre-knowledge of the future consequences of past and present events. The students making trips into their future show less of a quest for pre-knowledge than they do for assurance about the rate of attainment of their expected future (cf.

Gioscia, 1967:342-3) and the relative desirability of its experiential outcome.

"When will it happen?" and "How will I feel then?" appear as more important dimensions of future thought among the ego and alter-oriented reason responses than what will occur, either in general or in specifics. For example, those who would use the TMT to gain knowledge of their future family life exhibit little desire to discover if they will ever marry. In this regard, the future is not viewed as a probabilistic state of affairs. Instead, when they will marry, have children, have a spouse with whom they will be happy is of greatest interest.

How are we to understand such variations, inconsistencies, and anomalies in the ways the students are thinking about their pasts and futures? In part, the variations are a function of the particular and unique forms of temporal projection encouraged by the TMT. With it, the students are permitted an imaginative opportunity to actually return to the past or go forward into the future. This permissiveness that the TMT gives to the act of temporal projection is undoubtedly what gives the responses their seemingly unrealistic qualities.

However, this should not blind us to what such responses reveal about the various ways of temporally integrating concerns located in the past and the future with thoughts, conduct, and matters-at-hand in the present. In fact, these apparently unrealistic and, occasionally, even

"fantastic" ways of projecting one's self into past and future activities, relationships, and situations tell more about the nature of temporal thought than do those reason responses where the students indicate taking a passive role in relation to the past, or actively attempt to acquire pre-knowledge of some future state of affairs.

The importance of focusing attention on these types of "anomalous" roles is further understood when considered in the context of earlier findings. In Cottle's (1968; 1969c) previously noted study of young Naval station trainees, he concluded that they were demonstrating a generalized "avoidance" of the future. When the trainees were asked to place their ten most important life experiences into several time spans extending from the past through the present into the future, the overwhelming majority of these life experiences were placed in the near and distant past. Yet, the results of another test reported for the same sample (1967) shows that the magnitude of relative cognitive dominance for the three time periods was from future to present to past. Finally, still another test designed to measure the extent to which the trainees valued recovering their pasts or achieving pre-knowledge of their futures indicated that a substantial minority (about 40%) remained "unwilling to enter a game which offers the possibility of procuring the gratifications of so-called authentic fantasies, recovery and pre-knowledge" (Cottle, 1969a:119).

Using the Past for
Living in the Present

Those who write about the relation of memory and anticipation to present conduct often assume that the future dominates our subjective temporal thought because of the "settledness" and irrecoverability of the past and the hypothetical character of the future. The future is assumed to loom large in our thoughts because it both contains many of our most valued concerns and exists as a probabilistic state of affairs because we lack direct pre-knowledge. Starting from such a set of assumptions some writers often assume further that people who imagine themselves as reliving or re-experiencing the past are less than fully rational, while those who would reject any possibility for increasing their certainty about the future are so committed to the present as to be unable to plan ahead.

Truly, the past has a general quality of settledness, a comprehensibility that makes it possible for us to draw upon our memories in order to apprehend the present and future. Yet it is also this settledness of the past which makes it determinative of the present and future. Our recollections of participation in past events and our memories of past experiences provide us with guidelines, and even motives, for attempting to realize their repetition in the present and future. One can re-live the past by planning in the present for the occurrence of similar

outcomes in the future. Further, if one is committed to the modification of what was done in the past when constructing such plans, often one may better predict from what one knows the probability that a given sequence of events will produce a similar experiential outcome in the future.

Alfred Schutz (1959) has observed that what often passes as foresight is more often only anticipated hindsight. However, it was G. H. Mead who more fully understood that hindsight is an act of selection from the past for the present. That is, an interpretation and assessment of memory based on the human capacity to ideationally re-experience and re-live the past in order to integrate it with the present and make it relevant as a guide for conduct toward the future. This selective reconstruction of the past gives our images and conceptions of the past the properties of postdictability and remoteness. By means of these properties we come to recognize the past as the concrescence, the settledness, the anticipated hindsight that confronts our awareness of the past so directly.

TMT responses in which the student indicates a role of active participation or intervention in the past do not represent fantastic or otherwise unrealistic types of temporal projection. Quite the contrary. If anything, the students are doing what we all do in order to bind the past to the present and make it relevant (meaningful and coherent) to our conduct toward the future. That is, they are

selectively reconstructing, giving patterning to past events and experiences for the present in order to bring about their more or less modified repetition in the future.

Without such a perspective on the past, we could not draw upon it in responding to the exigencies of the present. And without meeting these exigencies in ways which insure at least the partial equivalence of past, present, and future patterns of action and interaction, the repetitive patterning of human conduct that makes the process of social organization possible could not exist. What we view to be the commonalities and typicalities of social life are just that--modified and, hence, only partially-equivalent repetitions of previously established patterns.

On Knowing the Future

A somewhat similar line of reasoning can be used to explain the tendency for so few of the students to make trips into the future which would allow them to gain knowledge permitting modifications in their present conduct. Likewise, we can consider why so few of Cottle's Naval trainees placed what they regarded as their most important life experiences into their expected-futures.

Only a handful of students in all of our tests of the TMT gave as a reason for their trips into the future a desire to bring back knowledge which would enable them or others to engage in some course of present conduct that

would bring about some particularly desired outcome. In fact, an initial reservation about using the "time machine" strategy was that trips into the future would have as their purpose bringing back stock market reports, racetrack results, cures for cancer, or warnings which might avert some disaster to come. Perhaps the students viewed the test more from a more reality-based perspective of the possible than as an opportunity for some type of fantastic voyage ahead in time.

However, any such reality-based perspective must rest on the assumption that the future, like the past, is experientially inaccessible. How, then, must one think about the future in its relation to the present in order for our thoughts to provide us with at least a projected sequence of concrete and specific plans and projects for dealing with our current matters-at-hand and at most a set of guidelines overarching the total course of our life and that of others who are important to us?

The answer to the first part of this complex question is founded on the recognition that while neither our memories or anticipations are open to direct experience, the basis for the experiential inaccessibility differs for each. To deal with the complete question requires that we understand that there are at least three possible ways in which people can relate the present to their images and conceptions of the future.

Memories of Futures Now Past

First of all, people think about the ideational future in terms of what they now remember of their earlier anticipations prior to actually making experiential contact. That is, the future can exist as a memory of what was anticipated prior to experiential contact. Both Schutz and Mead, following earlier treatments by Dewey and Bergson, discuss this quality of human thought as the "novelty" of the future upon sensory contact.

For Mead, such novelty is a function of the "hypothetical structure of the future situation" (1964:111). This quality of the future makes it inevitable that upon contact anticipations about the outcomes of our conduct should be recognized as different from the actual experience of those outcomes. For Schutz (1959:79ff) novelty is interpreted more specifically as a function of the fact that images of the future are typifications giving way to an experiential "uniqueness" in the contact situation.

In either case, people learn quite young that the future has "novel" outcomes. Such learning begins with the first experience of frustration and the first gratification of an expectation. To be aware that an actual state of affairs is always somewhat different from what one remembers expecting is a human universal. Whether frustrated or gratified, this novelty is a function of: (1) the degree of the incongruity between anticipation and experience, and (2) the value placed on the outcome.

Integrating our matters-at-hand in the present with our remembered or anticipated ideational futures is not limited solely to our awareness of this novelty and its evaluation as either gratifying or frustrating. If our temporal thought were in fact so limited, one might be drawn to reconsider the psychoanalytically-oriented theories of subjective temporality discussed so critically in Chapter Two.

There are two other ways in which people typically relate their ideational futures to their matters-at-hand. Each of these represents a different "use" of our ideas, images, and conceptions of the future concerns for our conduct in the present and our construction of a course of action toward the realization of some future state of affairs. These two ways can be referred to as the extrapolating and the retrospective projecting of future concerns in the construction of a temporal framework.

As we shall see, while it is the latter of these two ways of thinking about the future that is the most frequently discussed in theoretical treatments of rational planning for the future, the former of the two ways is most apparent in the reasons given for the TMT trips into the future. Further, it has the greatest significance for the understanding of social actions, processes, and structures.

Retrospective Projection:
Constructing a Past for
Things Still to Come

The notion of retrospective projecting as a means by which people ideationally integrate their future concerns with their matters-at-hand has its basis in Schutz's discussions of the "project" as a type of anticipation. The "project" has as its reference point the act or state of affairs that conduct is intended to bring about. The goal or end-state of the action-event is the object, event, or experience from which one begins the motivated fantasizing that leads to the selection and weighing of potential means on the basis of their practicality and performability. Thoughts about the future are oriented toward how each step taken along the way to the realization of some goal will enhance the probability of reaching that goal as expected. This process is usually referred to as rational planning. Among its purposes is the reduction of people's uncertainty about the realization of the state of affairs which will resolve their particular matters-at-hand. As the beginning of the project is that ultimate state of affairs, this way of binding together the present with the future is essentially teleological in construction.

However, while the project is oriented toward the future in a teleological manner, it is, in fact, ideationally retrospective in its construction. It involves a looking backward from the desired goal to an ongoing line of conduct taking place in ever changing presents yet to come about.

In the project, the person must assume that his future state of affairs is only probabilistic and that its realization requires an ongoing attention to his present state of affairs and the selective adjustment of his conduct until the goal is achieved.

Thus far, most of what we have said is either stated or derived directly from Schutz. Where we part company is with his implication that the image of the future that arises in the course of the project is defined within an individual frame of reference and that it involves the drafting of a set of plans which will be carried out within the confines of the actor's own lifetime.

Instead, we view this way of relating the future to the present as involving collective as well as individual matters-at-hand. Further, we view it as only one way in which people diachronically pattern their temporal concerns within a socially shared framework of apprehension. Finally, the very nature of this complex form of thought gives it only a limited scope of explanation when we consider the essentially non-rational approach most people take to solving the problems of everyday life. People do not typically think about the future this way. In part, this is because it requires a full and constant attention to today as well as to tomorrow and, in part, because people are often provided with blueprints for future conduct assumed to be equally, if not more, trustworthy as ways of realizing personal and collective goals.

In sum, often we do not need to imagine the consequences of intervention in the future because the steps taken to get there have been shown to us before we even begin to mount them.

Extrapolating from the Future around Us in the Present

Extrapolating, as a way of integrating the future with the present, involves the construction of images and conceptions of the future as a set of sequentially and durationally patterned anticipations about the outcomes of what one has learned and remembers about the past and what one perceives in the present. Such images and conceptions of the future are a function of people's interpretations and assessments of the diachronically arranged outcomes of past and present conditions. They represent what they can expect to occur with little or no active planning on their own part.

Extrapolation involves projecting one's self into the role of an active participant into the events and situations the future is expected to contain. While there may be only minimal certainty about precisely when or where a particular event will occur and what its experiential impact will be, extrapolating the future from the past provides a more or less adequate set of guidelines around which future concerns can be integrated with knowledge about the past and matters-at-hand in the present.

What is significant here is that extrapolating does not involve or require "using" anticipations about the

future to alter or modify behavior in the present. The future is pre-patterned in terms of its sequential unfolding or essential sameness with the present. In extrapolation, what may be lacking in pre-knowledge of the future is when the desired goal will be realized and what its experiential impact will be on one's self and others.

At first glance this does not appear to be a likely way for people to integrate their temporal concerns into an adequate framework of apprehension for dealing with their problems, interests, and perceptions in the present. The notion of people having pre-patterned temporal frames in the form of images and conceptions of the future may even strike us as unlikely. How can we "know" the future in advance of realizing our goals? How can we know what to do in the present unless we have a clear idea of the consequences of that behavior for achieving some desired state of affairs?

We have pre-knowledge of the future from what we have learned and remembered about the world around us. Our images and conceptions of the future can be ideationally pre-patterned because we often come to deal with our matters-at-hand already knowing that in the world in which we live "occurrences of such and such a type [are] typically placed in a typical constellation" (Schutz, 1959:81) and be expected to take place in the future in much the same way. Extrapolations are typical anticipations diachronically arranged in thought according to what has been learned are the typical sequences and durations found in our socio-

cultural milieu. They are ways of integrating the past, present, and future on the basis of what Schutz has described as our,

. . . knowledge of trustworthy recipes for interpreting the social world and for handling things and men in order to obtain the best results in every situation with a minimum of effort by avoiding undesirable consequences. The recipe works, on the one hand, as a precept for actions and thus serves as a scheme of expression: whoever wants to obtain a certain result has to proceed as indicated by the recipe provided for by this purpose. On the other hand, the recipe serves as a scheme of interpretation: whoever proceeds as indicated by a specific recipe is supposed to intend the correlated result. (Schutz, 1970:81)

Knowledge of these recipes pre-patterns anticipations into "ready made" images and conceptions of the future drawn from commonly held idealizations and typicalities of the life world. Extrapolations based on such recipes are among the most frequently used ways of integrating temporal concerns. They are socially derived, and often culturally standardized, set of blueprints given substance by our subjectively meaningful and commonly shared future concerns.

For most of the matters-at-hand that confront us as a result of our participation in a particular socio-cultural milieu, these pre-patterned anticipations are a sufficient basis for relating past, present, and future together in the temporal framework of an ongoing action-event. By extrapolating from our recipes we can participate in our socio-cultural milieux and respond to the problems, interests, and perceptions presented to us, as long as certain more or less "safe" assumptions continue to hold (cf. Schutz, 1970:

81-2). Our contact experiences with the future will still be novel, but not overly surprising in content.

Only when such "safe" assumptions no longer hold for us, or when there exists no available recipe for constructing such images of the future for orienting behavior toward the realization of goals, that we must engage in what was discussed above as retrospective projecting. Only when such recipes fail, or are not available to us, do we need to project ourselves into the future and take the role of a participant who constructs a plan for the actual intervention in the structure and processes of the socio-cultural milieu.

That most of the reasons given for future TMT trips do not reflect rationally constructed temporal images and conceptions characteristic of retrospective projection is consistent with our observation that these students typically expect that their futures will unfold according to a pattern already outlined in its general form. What Schutz has called recipes includes what we have referred to as the social tracks providing the students with images and conceptions of the future as a more or less continuous sequence of events about which the general course is already known. The remainder of this chapter explores more fully the nature of this pre-knowledge, dealing with the important question of its relation to the nature and characteristics of life spheres.

II

Taking the Train That Goes Along
the Tracks to Tomorrow

Examining the transcripts from the depth interviews sensitized us quite early to the rather intriguing way many of these students thought about the relationships among their past, present, and future concerns. Responses made to two of the questions asked in all the interviews are particularly enlightening in this regard.

The first question was primarily content oriented, "How do you see your life over the next ten years or so?" On the assumption that the respondents would be using what we later came to call retrospective projecting as a basis for formulating plans for realizing their future goals, we then went on to ask, "What sorts of things are you doing to plan ahead?" The responses to this question are instructive.

Responses from four of the students to this question illustrate in a concrete and relatively informal manner the various types of concerns which receive a more abstract, formal, and systematic treatment in the rest of this study. What we noted in our own examination of these responses, and what we ask the reader to consider now, are the number of important ways in which the students' present social situations serve to structure their thoughts about the types of events and experiences they expect over the next decade of their lives.

In the first excerpt, the student's future concerns take the form of his expectations about marriage and the way

in which going to school will enable him to get a "good job" if he decides that these are things he wants for the years ahead:

I really can't say. Mixed up, I expect to be married and have children and a good job. But I am not sure if that's what I want. [What sort of things are you doing to plan ahead?] I look to education, going to school, as a way of planning ahead. When you graduate you can get a job because you went to school for four years. (Male, age 18, Protestant, lower middle class background)

For the female student whose response appears below, marriage takes on more importance than work. However, again the act of going to school is seen as the primary mechanism for entering into the desired future state of affairs reflected in these concerns she expresses in the present:

I hope to be married. I don't want to be working. To raise a family, take care of a house. Not living with my parents. I guess I'm an idealist--I just want a happy home. [What sort of things are you going to plan ahead?] Going to college. My whole life revolves around college. . . . Getting a job, finding a husband. If I do well in school it would make a big difference in my life than if I dropped out. (Female, age 19, Jewish, lower middle class background)

In the next excerpt, work and marriage again appear to predominate among the areas of concern for the future, with doing well in school perceived as the main avenue to getting a graduate education and being engaged considered as a way of planning one's future family life:

I think definitely more dependence on myself and other people than on my family. I will be married within the next ten years and probably will be in school most of the time. My ideas and values will not change too much, though I probably will become more realistic about living and the concrete things in life. [What sort of things are you doing to plan

ahead?] Trying to do well in school to insure myself a place in graduate school. I'm planning to be married in that I'm engaged. I'm trying to be happy enough with myself so that I can work everything out. (Female, age 19, Jewish, working class background)

In the last excerpt, the future is also seen as likely to be different from the present and is defined by concerns relating to further education, work, and raising a family. In this case, the respondent is already married and has had several years of full-time work experience. Further along in the interview one discovers that the somewhat vaguely expressed idea that "alternative routes" might be planned refers to a possible change in residence, not to "dropping out" or pursuing some less "natural order of events":

It has to be different. I plan to change to another environment. To go into the field I want to go into. To go on for further education. To have a kid or two. A natural order of events. Maybe we [he is married] would plan some alternative routes. We could find out what we both want to do and go to what would be compatible with our situation. (Male, age 26, Puerto Rican, working class background)

What are the common concerns about and ways of relating to the future that run through these excerpts? For one, there is the obvious, but yet intriguing, fact that the expectations of these four students are quite ordinary. In each case, the future is thought about in terms of events and experiences both commonplace in our society and related to two of the most important realms of social experience in which they will participate over the course of their lives: the family and work. While all four of the students

expressed a number of expectations about the fulfillment of family and occupational plans, each also assumed that over the next ten years or so these events and experiences will be: (1) basically "connected" to their present actions and decisions; (2) essentially dominated by their family activities and relationships, and the situations in which these take place; and (3) highly probable outcomes given their social milieu and the knowledge and awareness it provides of what has happened to others who came before them.

Further, in response to the second question (about how they planned to bring about the future state of affairs which they were expecting), they all reply in a manner similar to what was expressed in the last excerpt: there is a "natural order of events" carrying people along into the futures they have learned to expect and, often, even desire. In a rather perplexing sense, teleology emerges as a way of life among these students. You do what you are doing and the future you expect will come about.

In such a way of thinking about and relating to future concerns, mere doing is the source of planning, rather than the other way around. You move toward a future work life by being in college, or get engaged as a means of getting married. Of course. What all eleven of these interviews point to most clearly is that planning for the future is not a deliberate and rational process of conscious reflection on the most adequate and appropriate means of achieving their goals. Instead it is much more a process

of one of the many culturally standardized and socially structured sequences of events and experiences which make up the social world. They are going along a social track, a sequence of events and experiences about which they are aware and which they assume will carry them along into the future life they now expect. By participating in the social world the students first become aware of and then engage in a series of steps which give them a "pre-packaged" set of anticipations taking the form of a "ready made," yet meaningful and coherent, image of the future. In some cases, this "pre-packaged" future is expected to differ from the present. In other cases, little or no basic change is anticipated. Yet, in both cases, what is known about the social world of the present is the primary basis for constructing an image of the future.

This is not to say that either deliberate efforts at planning or attempts at increasing one's ability to predict the effects of present and future contingencies may not also be evident and valued at many points in one's life. But such rational forms of planning are still what people do with the things they already know or assume they can acquire.

What is known always lies in the present and, though ever-changing in its content, it provides the basis for constructing images of the future. This is the case whether the reconstructing of this knowledge is: (1) through a rational process of weighing means against ends; (2) selecting a resolution to your matter-at-hand from among the

accumulation of "recipes" at your disposal; or (3) by looking around and observing what happens to others like you and then using what you become aware of as a "pre-packaged" future, the realization of which requires little more than flowing with the "natural order of events" you assume as a reliable characteristic of the social world of experience.

In sum, one of the several insights gained from analyzing responses to several questions posed to all eleven students was that the commonplace, everyday world in which they participate provides the experiences, awareness, and, most importantly, the knowledge by which they are able to construct their images of the future.

This insight and the sensitivity it provided was only one among several of the consequences of our analysis of the eleven depth interviews. Related to the prior discussion, we became aware of a second type of phenomenon which gave us even more insight into what was typical about the students' temporal concerns and ways of relating the passage of time.

We have already noted that their family life and occupational aspirations were important areas around which they marshalled their thoughts about and related their matters-at-hand to their images of the future. In addition to the life spheres of the family and work, there was one other which was mentioned as particularly significant in the course of many of the responses. This was the life sphere of informal social relations, or friendships. Other life

spheres such as religion, politics, and ethnicity were also mentioned by some. A wide range of temporal concerns were expressed in these interviews, as was the case among the many types of TMT reason responses.

However, even though other life spheres were mentioned in both these sources of data, the family, work, and friendship spheres were the ones in which the students placed what they expressed as their most significant future concerns. While they were given varying degrees of emphasis, temporal concerns were expressed for each of these three areas throughout most of the interviews and were noted for all three temporal periods.

Further, the future concerns focused around each of these three life spheres tended to take on a set of meanings that could be considered particular to and typical of the ways most college students relate to each of these realms of experience. Occupation was considered from the perspective of their college experiences and attendant future, namely work. Concerns about future family life focused not only on families in which they were brought up, but also on families they expected to form themselves. The relatively informal social relations of friendship were significant for most of the students primarily in the contexts of their school life and the local residential community (e.g., dorm or neighborhood). But, for some, friendship relations and activities had as their focal point the people they knew from some job experience they had now or in the past.

In sum, a second type of insight and awareness emerges from the analysis of these interviews: there is a dimension underlying the ways people think about and orient themselves to the future understandable only by taking into consideration their participation in social reality segmented into several qualitatively differentiated realms of experience.

These realms are what we have called the life spheres and discuss at a more general and abstract level at several points in the theoretical presentations found in Chapters One to Three. Here we encounter them again, but in a more concrete and empirical vein. The life spheres appear here and in the TMT reasons as aspects of life around which the students are focusing their images of the future and from which they derive the contents of many of the expectations, plans, and goals subjected to the apperceptive processes of orienting, binding, and marking in the course of constructing images of the future in these several life spheres.

At this point, as well as during the theoretical discussions presented below, there are reasons for suggesting that to varying degrees life spheres not only provide the contents, but are also a source of the structure of people's images of the future. On the one hand, the ongoing activities, relationships, and situations typical of a life sphere provide those who participate in its ongoing social life with relatively persistent and repetitive experiences.

On the other hand, these experiences provide one aspect of the knowledge-at-hand upon which the participants can draw in constructing relatively common and stable images of what the future has in store for themselves and others significant to them. By means of the role-playing and role-taking behavior that takes place throughout people's lives in the several life spheres in which they participate, they come to think about and orient themselves in common with others to the many and diverse objects, events, and experiences which are the basis of both images of the future and their sharing among the members of a society.

Taken together, the several insights that emerged from the TMT analyses reported above and those reported here for the depth interviews appear to us to point to the following principle: Instead of trying to understand the sources of people's images of the future by looking at their individual personality traits or by beginning with the basic mental processes of projection, anticipation, and expectation, one can more simply, directly, and profitably look at how they construct their images of the future out of an ever-changing stock of knowledge about the activities, relationships, and situations typical of the various life spheres among which their role-playing is divided and into which the resulting social experience is inevitably segmented.

By recognizing that the social world in a sense "presents" people with varying degrees of pre-knowledge

about the probable course of their lives and also "invites" them through various types of sanctions to act upon this pre-knowledge, then the door begins to open to the possibility of developing a sociological perspective on both the determinants and consequences of their images of the future. That such a recognition would be unlikely to enable the sociologist to predict the actual outcomes of conduct based on such images of the future is unimportant. The primary reason for developing an understanding of the nature of images of the future lies in the explanations they are able to provide for different people's conduct in the present.

At this point in our discussions we have laid enough of the necessary theoretical and empirical groundwork for the development of a more extensive analysis of the relation of life spheres to images of the future. Life spheres are the primary type of existential social milieu to which we are attempting to relate temporal thought in general and images of the future in particular. In the final section of this chapter we take up a number of matters dealing with the type of variations found among the different life spheres in American society and the particular characteristics of the family, occupational, and friendship life spheres which are the special focus of the empirical investigation into the clarity of images of the future found in the next chapter. Two questions are of primary concern in the discussions to follow:

(1) What are the similarities among the characteristics of the family, work, and friendship life spheres by which we may contrast them with other life spheres noted to be less frequently mentioned and generally given less significance in the TMT reasons and among the students who participated in the depth interviews?

(2) What differences in characteristics exist among the family, work, and friendship life spheres affecting the extent to which they provide the knowledge and matters-at-hand by which people are motivated to define their future concerns and structure their content into images of the future? In particular, what are the characteristics of each of these life spheres by which we might be able to understand the variations people have in the clarity they assume about the course of future life events and experiences?

Answering these related questions accomplished two important tasks: relating earlier theoretical discussions to empirical findings thus far, and setting the stage for the formulation of the empirical investigations to follow in the next chapter.

Similarities among Family, Work, and Friendship Life Spheres

The life spheres of the family, work, and friendship have a number of characteristics in common by which we can contrast them with the other life spheres of American society. Examples of these other life spheres would include education, religion, politics, ethnic communities, and the

military. First, the family, work, and informal friendship relations are, for most people, realms of social participation and experience significant to the course of everyday life in a modern industrial society. Most people have an active role involving them in a web of affiliations and activities in each of these life spheres.

Americans typically retain significant relationships with their families of orientation and most start ones of their own. Most men, and a substantial minority of women, are in the labor force. Even though most women are not themselves working, the work activities of their parents and husbands are significant to the course and quality of their own lives. In addition, throughout life we engage in informal social relationships with others sharing common interests, beliefs, and values that are both significant and different from those associated with our family and work roles. Such friendships are of continuing importance, even though the individuals with whom we share these commonalities may change over the course of the life cycle.

Secondly, the family, work, and friendships tend to be arenas of social participation and realms of experience within which most people's temporal concerns tend to be located throughout what we have termed the generational span of people's lives. Children, adults, and elders all have expectations and memories related to each of these life spheres. In contrast, many of the other life spheres are characterized by temporal concerns focused on temporal spans

at only some portions of the life cycle and may even involve concerns oriented toward the historical past or future. This is not a contrast by which one can draw hard and fast lines of demarcation between the several life spheres of our society. However, the family, work, and friendships are life spheres involving us in temporal concerns that persist and are salient throughout our lives. This persistence and significance of temporal concerns in these life spheres was evident in both the reasons given for TMT trips into the past and future and among the responses the students who participated in the depth interviews gave to questions about their most important past and future activities, relationships, and experiences.

Third, this selective emphasis on family, work, and friendship experiences is neither unexpected nor surprising. While experiences from and participation in life spheres such as religion and politics are often significant to people, in our society, such experiences and participation are not typically part of the round of everyday life. This is especially the case for people not involved in such activities as occupational functionaries. What makes the other three life spheres so significant is that the matters-at-hand in each are more likely to change. For example, religion, politics, and ethnicity are areas where role-playing is relatively the same throughout most people's lives. Further, activities and relationships in these other life spheres are most likely to become salient only on occasions that are

culturally defined as non-ordinary, such as elections in the case of politics or the sacred days of a religion. For these reasons, future concerns in these spheres are less likely to change, involving as they do stable expectations or ones relevant to special occasions.

By contrast, experiences and activities in the spheres of work, family, and informal social relations are more likely to change. In fact, for most people, they are expected to change. Few people expect to hold the same job all their lives. Few can expect to carry the friendships of childhood into later life. Given the nature of the American family system and its emphasis on the economic independence of the young, most people can also anticipate that their family life will change in a manner both prescribed and apparently inevitable.

Such changes have led some to regard America as a "nation of strangers" living in a "temporary society." Yet these changes in people's lives are not haphazard, unexpected, or even individually unique. There are socio-cultural factors which can account for both the stability and continuity of religious, political, and ethnic affiliations, activities, and experiences and for changes in the other three life spheres. Most important among these factors is the degree of social tracking of the particular life sphere.

We chose to focus on the life spheres of the family, work, and friendship, in part, because they represent typical and significant areas of transition and discontinuity

within our society, particularly among college students. Because of this, these three life spheres are most likely to involve the construction of images of the future as different from the present. Quite realistically, one cannot study a phenomenon with little or no variation in a sample population. To the extent that these three areas are likely to entail the construction of images of the future as different from the present, they provide the types of variation necessary to studying the ways people relate to their images of the future.

The two points just made are related to one another. The degree of social tracking in a life sphere and the continuities and discontinuities in experiences and expectations that those tracks provide are the basis for variations among the life spheres in the degree to which they are likely to entail the construction of images of the future as different from the present. Further, to the extent that images of the future as different from the present are inherently more probabilistic in outcome than those for which stability is assumed, they are also more likely to make greater demands upon the adequacy of the person's stock of knowledge. As such, they affect the certainty with which we hold these expectations and the clarity we assume about the total course of events covered by our images of the future in these life spheres. The three life spheres on which we have chosen to focus differ from one another in the extent to which each is likely to produce images of the future as

different from the present, in the nature and type of tracking, and in the adequacy of the knowledge upon which people can draw in constructing images of the future containing expectations integrated into a whole possessing a high degree of clarity about the timing, outcome, and effect upon the resolution of their matter-at-hand in the present.

The closing pages of this chapter examine, in turn, the characteristics of each of the three life spheres most relevant to the understanding of the construction of images of the future about which people assume a high degree of clarity about the changes that will occur in their social activities, affiliations, situations, and experiences.

Characteristics of the Family Life Sphere

The family is perhaps the most distinct of the three life spheres discussed here. As a qualitatively differentiated realm of social activities, relations, and situations, the family has certain characteristics not typical of the work or friendship spheres. For one, family life is the most highly institutionalized among the three spheres. As a realm of social experience and as a sphere of social participation, the family is the most culturally standardized and socially structured. This, in part, is related to its second distinguishing characteristic. Everyone has at least one family role, and most people have several at any point in their lives. Finally, role-playing and role-taking in the family sphere are tied most directly to the biological

life cycle and its socio-cultural expression, the passage of generations, and the transitions made from one culturally defined stage to another.

These characteristics make the family an important source of temporal experience and a basis for structuring thought about that experience. This is a characteristic of the family life of people in all human societies. The kinship structure of traditional societies, in conjunction with the individual life cycle, function both to place a person onto the tracks leading from the present into the future and to provide him with bonds to the social world of the past. Kinship relations provide people with a sense of cohesiveness over time. Such relations provide both a frame for the integration of present experiences with those of the personal and collective past and a set of passages carrying people along toward the futures they anticipate. Many traditional societies reckon the passage of time outward from the present by the recurring cycle of the generations. Similarly they mark events and experiences in the past in terms of genealogical accounts of the lives of heroic (and even ordinary) ancestors that are passed down from generation to generation.

Family life is regular and recurrent, making it an ideal basis for imposing structure upon the passage of time. For example, S. N. Eisenstadt has noted the functions that the passage of generations, in the form of graded age-sets, have on the members of many traditional African tribal groups.

Such graded age-sets provide people with a blueprint of the future which is both serial and continuous in the events and experiences it contains. The age-set,

. . . contains certain definite expectations of future activities, and of relationships with other people at the same time or different stages of their life career. . . . The function of differential age definitions is to enable the individual to learn and acquire new roles, to become an adult, etc., and in this way maintain social continuity. . . . Therefore he must develop his future roles as an adult, to include them in his life-expectation, in his own perception of his future. Such a relationship cannot be maintained if age differences are stressed as completely dichotomous and unrelated. The necessity of maintaining the continuity of the individual's progression through the different age stages calls for some complementariness of the differential age definitions. (1956:23, 28)

These age-specific groupings are especially important in the development of attitudes and orientations toward future roles. First, the grouping provides its members with defenses against the demands of maturation and the expectations of mastery that adulthood will bring. Second, membership in an age-set provides a set of shared and visible expectations as to how to enter into adult roles. Those who are members of previously defined age-sets are going through the experiences and engaging in the activities that members of one's own age-set will encounter later in life. In effect, awareness of these other age-sets is awareness of the past and future of one's own life.

These characteristics and functions of the graded age-sets of African societies are not as far from the modern western life as one might imagine. In our society we also

locate individuals in social space according to whether or not they have a common past. Distinctions between in-group and out-group are almost everywhere based on assumptions about the commonalities that result from a shared pasthood.

Some means of temporally ordering physical and social relations in space must occur for man to be social and, thus, human. What could be a more convenient way of providing this ordering than by relating it to the family? For it is in their families that people go through the biological changes that mark their passage through the life cycle and, also, in their families that each person can be related forward and backward to those others who have been part of that past.

The conjugal family found in the industrialized parts of today's world is not as well structured to provide the sense of bondedness with the past derived from the more complex kinship relations found among members of traditional societies. A pattern of neo-local residence, economic independence of the young, high rates of social mobility have all combined under the impact of industrialization and changing ideologies of family life to shift the family from a structured group of kin to a small group of interrelated personalities (cf. Goode, 1963). While kin relations still play a significant role in the conjugal family, the emphasis is primarily on parents and siblings, providing little basis for an extension of self into a familial past.

Though lacking the basis for the development of collective identifications with a genealogical past, the modern conjugal family possesses a number of significant characteristics which constrain and structure how the members look ahead in time. First of all, the small size of the family unit permits it to function as an informally structured small group, in contrast to the more formalized relations among the members of lineages, extended families, and corporate clans. The conjugal family exists as a social unit made up of interacting personalities constructing a life together in time. As in many types of small groups, members of modern family groups possess enough of an awareness of a common past to develop and maintain at least the limited sense of solidarity and collective identity. However, the modern family differs from other types of small groups in ways which permit its members to orient themselves toward the future.

There are three special characteristics setting the family apart from other types of small groups. First, family groups can make assumptions about continuity in their membership over an extended period of time. With minor exceptions, people expect their marital relationships to be permanent and that ties to their children will be lifelong. However, even though the bonds are expected to be permanent, the nature of the relationships is often expected to change in a culturally prescribed manner.

The second distinguishing characteristic of family groups lies in their ability to control their own resources. As a legally constituted group the family can own property and transfer wealth between generations.

The third distinguishing characteristic is that family life goes through its own cycle, taking the form of a cultural standardized sequence of events and experiences. The family life cycle finds its basis in the biological changes that take place in the course of maturation of the members of the family group. Coincident with, and as a result of these changes, family roles also change over time, often parallel with role changes occurring in the occupational and friendship life spheres.

Each of these three distinguishing characteristics of family groups provides their members with a basis for constructing their images of the future. As a consequence of continuity in membership and the ability to control its own resources, a family group can engage in long-range planning toward the realization of future goals. Many of the accoutrements of modern family economics are a result of this capacity for long-range planning. Housing mortgages, leases, life insurance policies, savings,* methods of family planning and birth control, and leisure activities taken

*Doob (1971) has discussed the implications for thoughts about the future of several of these economic aspects of family decision-making. The reader is referred to this work for a more detailed elaboration of the several mentioned here.

together reflect both an ability to plan and the setting of goals which direct the expectations and conduct of family members toward the future.

In sum, family members, acting both as individuals and as members of the group, can and do develop expectations and set goals which serve to impose patterning upon their images of future family life. These images of the future exist, of course, as complements to the images of the future the family members develop in the course of their participation in other life spheres. Nevertheless, the patterns and processes of modern family life provide a distinctive and significant basis for the construction of both images and conceptions of the future.

Characteristics of the Work Life Sphere

Of the three life spheres considered here, that of work is the most multifaceted, significant, and complex in both its temporal dimensions and implications for the construction of temporal images and conceptions. Much of the significance and complexity of the work life sphere lies in the multifaceted nature of both the objective and subjective manifestations of the passage of time in the course of economic and occupational activities, relationships, and situations.

The organization of work activities in modern, industrialized societies represents the highest degree of temporal coordination of man with man and of men to machines.

Both as a condition for and as a consequence of the requirement for a synchronic and diachronic coordination of work activities, the carrying out of modern occupational roles also requires a high level of temporal awareness* so that complex, cooperative work activities are undertaken within the context of common orientations to the passage of time. An emphasis on the workers' adherence to precise time schedules and timetables for the performance of interrelated tasks requires that they develop the levels of temporal awareness and share the images of the future which permit each of them to articulate their own temporal frames with their several co-workers and also with the rhythms, tempos, and periodicities of flow of tasks they perform.

Another of the multifaceted aspects of participation in the work life sphere is found in the competing and occasionally conflicting demands and constraints the temporal organization of work puts on people's abilities to allocate their "real" time resources among their many roles in all the several life spheres.** There has developed a

*Moore (1963:86-102) deals extensively with the temporal coordination of modern work activities from the administrative standpoint. Doob (1960, 1971) and Slotkin (1960) have both examined the consequences of the temporal synchronization of industrial work on the workers' levels of temporal awareness. Each also presents important contrasts and valuable insights with the temporal dimensions of pre-industrial work.

**Attention to the problem of time allocation occurs primarily in cultures where time is defined as a "scarce" resource. De Grazia (1962) has done much to trace the historical development of this problem of allocating time as scarce resource (though Marx must be given credit for the

massive, and still growing, body of research on the problems people face in allocating their "real" time resources given the often compulsory demands made by work role obligations as against those often more valued interests people have in carrying out responsibilities and realizing goals in other life spheres.

In a variety of complex and different ways, the particular temporal dimensions underlying the organization of work activities affect the temporal dimensions underlying participation and experiences in other life spheres. The round of economic and occupational activities of American society, with its complex requirements for the temporal coordination of the efforts of large numbers of people and a substantial part of the "real" time resources of most men and nearly one-third of the women, does much to structure the objective durations and successions from which temporal experiences are derived. This is the case whether people work or not and whether they participate in the round of economic life as consumers or as producers.

Meeting the many interrelated requirements for the awareness, coordination, and allocation of time among the diverse activities of those participating in the work life sphere is perhaps one of man's greatest accomplishments.

earliest insights). Likewise, Anderson (1961) and Moore (1963) point to the sharp contrasts between the temporal dimensions of family and work life that result from this problem and the complementary requirements of temporal coordination and awareness at work.

Within the economic and occupational activities of the work life sphere, modern man has been most successful in imposing order on the temporal durations and successions of his life world. Gurvitch (1964:82-3) has maintained that economic groupings in all societies are distinguished by their emphasis on gaining "mastery" over the passage of time in those aspects of social life affecting the production and distribution of goods and services. A major concern of such groupings is how to "manage time," to regulate the tempos and rhythms of its flow to their own ends through: (1) efforts at rational planning for the realization of goals; and (2) the use of an extensive array of bureaucratic controls. Such efforts are directed at insuring that what is expected takes place when expected and has the outcomes regarded as necessary to carrying out the plans.

In contrast to these efforts, the extent to which such mastery is successful rests, of course, on: (1) the disjunctions between rational planning as an ideal and as an activity engaged in by people varying in knowledge, planning skills, and commitment to the goals the plans are designed to realize; (2) the length of the timespan being planned for; and (3) the variable effectiveness of the administrative procedures and controls through which the passage of time is to be managed. Work invariably involves the planning of tasks toward the production of some material or service for sale in the marketplace. However, not all workers are equal contributors to the planning process. For

example, the temporal coordination of activities among assembly line workers and their machine environment is the consequence of a major planning effort by many people who never work the line themselves. Yet, for many assembly line workers, the consequence of higher level planning is a pattern of work activities so routinized that their own planning efforts are often directed toward developing (legitimate and illegitimate) means of mitigating the boredom that may often result from a constantly repetitive sequence of temporal experiences.

On the other side of the line dividing workers from planners and administrators, the organization's set of blueprints for the future may often become integrated with images of their own future work life. Those subject to the most direct bureaucratic controls may also be most likely to articulate their own images of the future with the collectively defined blueprints of the organization. The primary mechanism providing for this articulation is probably that of identification with the organization, with the consequence being an internalization of its plans with one's own. Even where this identification may be impeded, the various fringe benefits of modern corporate life (stock options, profit sharing, retirement benefits) encourage both workers and managers to recognize a direct relationship between the realization of the organization's goals and their own ability to accumulate resources required for realizing personal goals in some other life sphere (e.g., the job security and

income that might make it possible to buy a new home or send one's children to college).

Work activities, because they entail planning tasks, coordinating schedules, and articulating individual goals with those collectively defined, make participation in the work life sphere not only a means by which the passage of time is patterned, temporal awareness is heightened, and temporal experiences are structured. Work activity, in all its temporal dimensions and implications, provides people with a basis for constructing images of the future based on a knowledge of organizationally defined "recipes" and blueprints about what to expect both directly about work related events and experiences and indirectly about the potential for goal attainment in other life spheres.

The indirect consequences of the temporal dimensions of work are equal in importance to the direct ones. Of the three life spheres, work has the most significant implications for people's temporal thought and experience. This is intriguing, since reports indicate that only about one in four factory workers (cf. Dubin, 1956) and nearly half of all men working in middle-level managerial positions, work in a realm of social participation from which they derive their most valued social experiences (cf. Goldman, 1974). Family, community and associational settings, activities, and relationships are more central to their life interests and more highly valued for the experiences they provide.

What makes the temporal dimensions of the work life sphere so significant lies not in the value emphasis placed on work experiences and their direct effects on people's images of their future work life. Most Americans are now working, or plan to work upon completing their education. As a consequence, most Americans have a more or less clear set of expectations about the course of events and experiences constituting their future work life. Work in modern societies invariably results in people being concerned about what will happen at least in the short run and usually also in the long-run course of life events. Rarely does it involve an emphasis on the past or the immediate present, as against the future.

In a sense, all workers can be termed future-oriented, even though they may be oriented to different futures. Even though a person might have the same occupation all through his life, there may still be a considerable amount of discontinuity in the nature of the work experiences expected or realized, the settings within which the occupational role is performed, and the almost inevitable expectation of reaching the point in one's life when one will disengage from active participation through forced or voluntary retirement.

What makes work participation so significant in its effects on people's temporal thoughts and experiences lies in the indirect consequences it has on their ability to acquire the knowledge, allocate their limited time resources, and define the relevant temporal concerns which permit them

to pursue goals in other aspects of their lives. Role-playing and role-taking activities in the work sphere are most significant in their implications for the temporal patterning of concerns into images of the future in other life spheres. The American labor force is characterized by substantial amounts and types of change. This is a result of high rates of job turnover variously traced to seasonal and long-term changes in unemployment rates, shifts in occupations by individuals to others at the same skill level though in different industries, and, finally, through upward and downward patterns of career mobility over the life cycle. While in pre-industrial societies, continuity in work experiences was both an actuality and an expectation, today changes in jobs and occupations are the rule, and continuity an unexpected exception.

These changes, both as experienced and expected, have an impact on people's certainty about expectations in other aspects of their lives. Job and occupational changes are often accompanied by changes in residence, life style, and in the economic and temporal resources available for formulating goals, making decisions about means, and carrying out plans for one's future family life. Career mobility typically brings with it more economic resources, thereby affecting people's decisions to marry, have children, and all the many other types of expectations people develop about their future family life. Likewise, changes in location and type of work participation often bring people into

contact with others with whom they might develop or share the interests that are the basis of friendships, correspondingly changing the person's network of informal social relationships.

Up to this point we have dealt primarily with the types of factors that make work life so multifaceted in its temporal aspects and so significant in its implications for understanding how people construct meaningful and coherent images of the future. It would take all, and even more, of the conceptual distinctions, theoretical assumptions, and empirical generalizations made so far to begin to fully comprehend the complex, diverse, and often subtle relationships among work organization, participation, and experience and the duality of time in social life. In the remaining pages we must therefore restrict our focus to those particular characteristics of the work life sphere which distinguish it from those of the family and friendships.

Nels Anderson (1961:14) has observed that the tempo of work activities, with its emphasis on maintaining precise time schedules, provides workers with qualitatively different types of temporal experience compared with those derived from family life or friendships. Family and friendship activities and relationships are rarely expected to take place according to formal timetables and rigid schedules for the completion of tasks. Nor are they likely to be, for the opposite reasons that work life is so highly synchronized in time. Work is instrumental in orientation and focused on

the realization of organizational goals set by others. For most blue-collar and many non-professional white-collar workers, the rewards expected from participation are monetary, and therefore extrinsic to the work itself. Finally, some form of work participation is strongly prescribed, if not compulsory, for adult males, and necessary for many adult females.

In sharp contrast, participation in family groupings or informal social relationships is typically more voluntary (you do not have to marry or be a friend to others), oriented toward the realization of intrinsic and expressive rewards, and focused on goals which are to some extent more discretionary in choice and in the means of attainment. As a consequence, the tempo of activities is more relaxed, even erratic if judged from the standpoint of work. Likewise, there is a lower level of temporal awareness. Clocks, calendars, schedules, and appointment books are not typically among the ways the passage of time is marked in the course of family and friendship activities. Instead, there are more qualitative types of marking often focused on special events and occasions which signify transitions from one stage to the next in the life cycle. Similarly in contrast to work, it may even be considered rude for a person to display a high level of temporal awareness while participating in some expressive activity with family members or friends. Time gone by unnoticed in these life spheres is often taken as an indicator of commitment to the relationship

and the extent to which the activities are valued for their intrinsic satisfactions.

Work also contrasts with the other two life spheres in the nature of its tracking. Like the family sphere, entrance onto tracks is related to the individual's stage in the biological life cycle and exits from these tracks are often characterized by a process of disengagement. However, occupational role selection often entails making passages along tracks involving the formally structured development of skills required for entrance into the occupation. In contrast, few "train" for their marriage and family roles by formally developing the skills and competencies required for successfully maintaining expressive relationships. To this extent the development of images of future work life are dependent upon the process of occupational selection and can take the form of a structured set of expectations even before actual participation in the work sphere. While the process of occupational selection itself may require commitment to a long period of training, without much possibility of reversing the decision without rather severe consequences, once the commitment is made, there is seldom much required in the way of precise planning as to how the passage will be conducted or experienced (cf. Doob, 1971:364-6). In fact, entrance onto a pre-occupational training track often brings people into contact with others who went through the same passage earlier. They come to have a pre-packaged future as

a result of the knowledge acquired about those around them, yet ahead of them along the track.

Once an entrance is made into the occupational system, the tracking that takes place is even more formally organized, in terms of the number and sequence of stages in the passage and the duration of each stage. This is due to two main factors. One was discussed above--the requirement for a temporal coordination of large scale cooperative work activities. Here we encounter the same requirement, but expressed now in terms of the diachronic, as well as synchronic, integration of work activities and relationships. The second factor is also familiar. The formal organization of passages along work tracks reflects the fact that work typically takes place in bureaucratic settings in which career patterns are clearly defined in advance by rules specifying such things as job requirements, seniority, and conditions of promotion.

The types of tracks and the experiences acquired in the course of passages in the work sphere differ in one final and significant way from those of the family. People enter onto a family track at birth and can usually anticipate the types of events and experiences that entrances onto pre-marital, marital, and parental tracks will bring about in the course of passage. In other words, the point of entrance onto any of the several tracks open to people in the family life sphere as one grows older is not likely to be the point at which a person stays over most of his life

Tied to the biological life cycle, the events and experiences of family life and the images of the family future people construct over the course of their lives are likely to change.

The probability of change in temporal experiences and images of the future from the point of entrance into the occupational system is much more varied and dependent upon the skill level required at that point of entrance. Unskilled and semi-skilled workers in both blue-collar and white-collar occupations are not as likely to enter onto career tracks leading to higher level occupational positions as are more highly skilled workers. In turn, they are also less likely to develop images of the future work life as different from the present. Such unskilled workers are not necessarily lacking in knowledge about the ways people get ahead, or even uninterested in "bettering themselves." Rather, whatever fanciful imaginings they may have about a lucky break, the basic realization is that they lack the means to get ahead, the requisites for entering onto the career tracks that carry one along into futures which are different from the present. They have an image of their future work life, just as the white collar manager counting on a steady sequence of promotions. Further, their images of the future are also often highly realistic. Other people, not themselves, have tickets for the train that goes along the tracks to tomorrow.*

*On these last points, cf. the discussions of images of future work life held by lower class Blacks (Liebow, 1967:

Characteristics of the Friendship Life Sphere

Of the three life spheres, that of friendship is perhaps the least differentiated, tracked, or institutionalized in American society. In fact, many sociologists have come to refer to the individual's participation within informal social networks as synonymous with the notion of friendship relations. This may be understandable in light of the paucity of research studies available on American friendship relations.* We must also recognize that friendships are more person-oriented than role-oriented in nature. Who, not what, the person is takes precedence in friendships.

63-4), by unskilled and semi-skilled British factory workers (Goldthorpe, et al., 1968:116-43), and, of course, the classic work of Ely Chinoy (1955) on automobile workers and their aspirations.

*Sociologists have tended to examine friendship relations in the context of research on related matters, such as community studies, participation in voluntary associations, adolescent peer groups, and family relations. What is valuable among these several indirect efforts is considered in Beth Hess' (1972) essay on friendship patterns of the elderly and in Myron Brenton's (1974) somewhat popularized, but well-documented, book on American friendship patterns.

In sum, this remains a wide-open area for sociological research. We were led to the consideration of friendship relations, in part, because of the depth interviews and pre-test TMT responses. During the course of the interviews several of the students marked the "five most important events" in their lives at points of transition from a former home and/or school to another because of the consequences these moves had for their friendships. Likewise, we noted the distinctive distributions of TMT temporal location choices associated with friendship oriented reason responses. Friendship-oriented reasons were, in a sense, "held" closer to the present than relations with family members. A second basis for our interest in images of future friendship relations lies in the contrasts between this life sphere and the other two, as discussed in this section.

Given the general lack of tracking for friendships, it is perhaps more accurate to refer to friendship relations and activities as sequentially ordered experiences, rather than as tracked. Yet tracking, as it occurs in other life spheres, frequently has its effect on friendships and the experiences one develops of their vulnerability to changes in role-playing and role-taking in the educational, occupational, and family life spheres. The school, work, and residential communities in which people participate as a result of these roles are the primary situations out of which friendships are developed and the basic contexts within which such personalized relationships take place. This relative dependency of friendship upon the activities and events taking place in other life spheres makes them more likely to change as a result of the frequent residential moves made by Americans and the changes that take place in role-playing in each of these life spheres over the course of the individual life cycle. New homes and new jobs often mean new friends as well. Maturation brings transitions from school to work, from the family of orientation to the family of procreation, and, later in life, from occupational roles to those of retirement and from active family roles to those of grandparents often living substantial distances from their own children and the grandchildren whose presence would make these new family roles meaningful.

Beth Hess has observed that friendships are dependent upon changes in social roles over the course of the

life cycle. For the individual, "as his cluster of social roles changes over his lifetime, so do his friendship relations undergo change" (1972:361). As a consequence, it might be expected that images of future friendship relations would be dependent for their structure and content upon the informal community relationships, or social networks, that arise in the course of educational, occupational, and family activities and relationships. Further, given the vulnerability of friendships to role changes in these life spheres, the clarity with which people hold their images of future friendship relations could be expected to be relatively low in comparison with the more highly tracked sequences of experience encountered in the course of participation in other life spheres.

The results we obtain in the study of the clarity of images of the future in each of these three life spheres gives some degree of support to these general expectations. However, there are also reasons for expecting that certain types of friendship relations may not fit into this general pattern.

Hess reviews several earlier studies describing the functions of peer groups in adolescence and early adulthood for images and conceptions of the future. For example, the friendship relations among members of adolescent peer groups often function to draw young adults out of their family of orientation and, through the dating process, set their thoughts on the role-taking process that will lead to the

formation of their own families.* Likewise, residentially-based peer groups, cliques in the school, and the informal occupational community of later work life all exercise varying degrees of control over their members' images of the future. Through mutual reinforcement and informal social controls, such networks of friends and acquaintances can impose a normative dimension upon the members' images of the future by defining for them the types of expectations that are considered appropriate of a member (cf. Hess, 1972: 382-5).

In sum, friendship relations are relations with significant others toward whom people orient their conduct as well as being people included in their expectations for the future. What is important to recognize here is that these friendship relations are to some degree independent of the contexts within which the relationships develop and are carried onward. Independently, and as dependent upon role changes in other life spheres, friendship relations represent often neglected, though very significant factors for the understanding of how people come to think about and orient themselves to their temporal concerns.

*Broderick's (1966) study of adolescent socio-sexual development demonstrates the effectiveness of the peer group as well as maturation on the teenagers' continual re-definition of their past, present, and future heterosexual involvements. For example, at each age level a majority claim that they are now "in love" for the first time. Bolton (1961) has provided a developmental approach to the analysis of the tracks leading adolescents from the dating stage through courtship to the point of first marriage.

III

Concluding Remarks

This chapter began with a more speculative theoretical elaboration of the matters discussed initially in Chapters Two and Three. As we stated then, elaboration and assessment of our overall theoretical approach requires reflection upon the results that come from the empirical analyses it suggests. From the results of the Time Machine Test analyses, we were drawn to the consideration of the "uses" made of temporal ideas, images, and conceptions. By focusing on the roles the students took in relation to the objectives of their TMT trips, the results obtained from depth interviews, and the characteristics of the life spheres, we are better able to understand the ideational processes by which people impose a meaningful and coherent structure upon their temporal concerns.

General Implications
of these Discussions

Our discussions strongly suggest that the manner in which temporal concerns are integrated into images and conceptions of the past and future are a function of people's ongoing social actions, knowledge, and experience in the several life spheres. People "use" their temporal concerns to resolve the matters-at-hand arising from their participation in the several life spheres among which their conduct and experience is segmented. Further, their participation brings with it an ever-increasing stock of knowledge about

the common and typical ways in which matters-at-hand can be resolved in that life sphere.

As a result of the "recipes" for actions provided by this knowledge, particularly pre-knowledge about the typical course of personal events and experiences in a life sphere, images of the future are often pre-patterned. That is, the basis for the integrative patterning of temporal concerns is often provided by knowledge about the diachronic arrangement (tracking) of objects, events, and experiences commonly encountered in the course of people's participation in the activities, relationships, and situations which define a life sphere as an existential social milieu.

Matters for further Consideration

This chapter also serves as a bridge between the TMT analyses and the study of the sources of variation in the clarity of images of the future to follow. There we draw heavily upon the discussions presented here on the characteristics of the family, work, and friendship life spheres. As we noted, these life spheres provide, to varying degrees, a pre-patterning of the contents of temporal concerns into the more ideationally complex temporal images and conceptions which provide people with the often shared schemes of interpretation and orientation that guide their conduct.

What is not examined below, and deserves further empirical exploration, is the general matter of complex interrelationships among all three ways of temporal

patterning. Analysis of the depth interviews suggests that the marking, as well as orienting and binding, of temporal concerns has determinants not fully understandable without examining the existential social milieu toward which the processes of temporal patterning are directed in the construction of temporal images and conceptions. People use ways of indicating time specific to their social milieu, as well as ways which are personally unique and culturally standardized temporal referents. For this reason, the relationships of marking to life spheres and to the other two ways of patterning should probably be examined together.

Hopefully, data specific to this matter will come available in the course of future research efforts by this investigator and others. To date, there is little work of direct relevance to the topic of marking in relation to both life spheres and the ways people orient themselves to and bind their temporal concerns. However, this is a matter important not only to the further assessment of our own theoretical efforts, but, also, to concurrent research on problems of time allocation among the life spheres, long-range policy planning, and the temporal coordination of social activities.

CHAPTER EIGHT

LIFE SPHERES AND THE CLARITY OF THE IMAGES OF THE FUTURE

Our explorations up to this point have shown that there is a good deal of variation in the degree of assuredness the students have about the course of their future lives. There are differences in the degree to which they are certain that specific expectations will be fulfilled. This uncertainty ranges from an inability to predict whether an expected event or experience will take place at all to the consideration of more specific matters related to the timing and affective impact of those expectations once they are manifested.

On the more general level of temporal images and conceptions, there are also variations in the clarity the students assume about the anticipated effects various events and experiences on their future plans and prospects. This variation in clarity, while a function of certainty about specific expectations, is more generalized. It represents people's more or less conscious reflections upon the total pattern and contents of life events and experiences over a given length of time. Just as people might be uncertain about when they will marry, how much they will enjoy becoming

a parent, and what their home will look like, they can also be unclear about their future family life over the total span of time in which they anticipate these concerns will occur.

I

Clarity about the Future As a Theoretical Problem

The closing section of Chapter Three discussed the clarity of images of the future in relation to both time-binding and the problem of maintaining a sense of continuity of selfhood. We noted there that clarity about the future is likely to reflect the adequacy with which a person's stock of knowledge provides him with a basis for the diachronic integration of his future concerns into a more or less meaningful and coherent image of the future. Further, we presented the argument that variations in clarity would be reflected in the general assuredness people had about relationships between their past experiences, present conduct and anticipations in general and, in specific, for each of the life spheres.

Based on these considerations, we then went on to ask the following question: How, and to what extent, does the segmentation and sequential patterning of social experience into life spheres affect the degree of clarity people assume for their images and conceptions of the future? Since posing this complex question we have covered much of the ground necessary to its further elaboration in the form

of more specific questions about the relationships among life spheres, the temporal distance span of images of the future, and the degree of clarity assumed about the course of events and experiences over a particular temporal distance span in a life sphere.

Stating these more specific questions, and describing how the results obtained from a set of empirical analyses bear on their answers, is the major focus of this chapter. These answers, as we shall see, have significant implications for both the more general question and a number of other matters considered at various points above. In particular, the data presented here bear directly on the question of whether it is the life spheres or what the psychologist approach terms future time perspective that is the more basic source of the variations the students report about their clarity of images of the personal future for several life spheres and for their conception of the future-in-general. In all, four aspects of the personal future are examined: three life spheres and the future-in-general.

Data for these empirical analyses derive from a set of question items developed to measure the students' clarity for four aspects of their future life in three overlapping temporal distance spans. The three life spheres for which data are available are the family, work, and friendships. The overlapping temporal distance spans are the next 2-3, 10, and 25 years. The choice of these three life spheres is

obvious from discussions in the last chapter. The basis for choosing the three temporal distance spans, and the methodological problems involved in operationalizing each of the three basic dimensions (aspects of the future, span, and clarity), are discussed in detail below.

Including the future-in-general is for the purpose of comparing conceptions of the future with images of life sphere futures along the dimension of clarity while controlling for temporal distance span. In addition, these data provided the basis for exploring the effects of the processes of synchronic coordination of segmented images of the future into an overall conception of the future-in-general necessary for maintaining continuity of selfhood. Altogether, there are twelve combinations of the three temporal distance spans and four aspects of the personal future being assessed along the single dimension of clarity.

Clarity and the Linearity Assumption

The degree of clarity a person has about his image of the future over increasingly extensive time spans can be discussed theoretically and subjected to empirical analysis if one could accept a relatively uncontroversial assumption. This can be called the linearity assumption. It states that the further ahead into the future one is motivated by one's matters-at-hand to think about, the more hypothetical and probabilistic are one's anticipations and expectations. It follows that one should tend to become less clear as the

time span increases, until some point is reached when there is no clarity at all.

That is, there should be a "ceiling" or upper limit to both the span of concerns and the degree of clarity assumed about the future. This "ceiling" on clarity would occur under two conditions, with the "floor" being the point of imminent actual contact with last anticipated outcome of one's action-event.

First, there may be a point ahead in the future beyond which a person has no anticipations or expectations because of the requirements of his ongoing action-event. In other words, he is not strongly motivated to think beyond that point. For example, if I have no offspring, considerations of my family beyond my own lifetime may be rather meaningless for my present conduct (though fantasy about what might have been is possible and, perhaps, even affectively meaningful).

The second condition is more important since it represents a problematic state. There may be a limit beyond which there are concerns which cannot be reliably predicted on the basis of the present stock of knowledge-at-hand. These concerns may be either too uncertain in outcome or too hypothetical to provide a basis for the construction of an action-event. For example, I may have offspring, but because of their young age, my lack of knowledge of their intentions to have children of their own, and/or my observation that many couples today have no children at all, I am

unable to consider the matter of how I might provide for any as yet unborn grandchildren in my will. Though some sort of contingency clause might be added to the will, I am nevertheless unable to consider my family in the future beyond a certain point in time.

Looking back to the TMT responses, it may be that some of the reasons for going into the future as a matter of self-stated curiosity reflect the first condition above. If so, it is interesting to note that many of these trips to satisfy one's curiosity were into fairly far away points in the future. Again risking the dangers of an ex post facto interpretation, it may also be that those TMT trips into the personal future for the purpose of gaining knowledge about it reflect the second condition. In reading many of these responses one senses that by having the knowledge such a trip would make possible, the student would be able to achieve a kind of "closure" to their span of temporal concerns for either their future-in-general or for some realm of events and experiences particularly significant at this point in their lives.

We can now turn to the question of the relationship between a person's knowledge-at-hand and his degree of clarity over the span of his image of the future. Our argument here is that this relationship can best be understood by examining the life sphere from which the person derives the contents of his particular image of the future. In our earlier discussion of the segmentation of social experience

into life spheres, we argued that some life spheres are more tracked than others and that this tracking has its subjective counterpart in the extent of the passage along the track. Further we argued that the further a person is along a track, the more likely he is to have his "future around him." That is, tracks are part of the temporal images and conceptions of the life spheres into which social participation and experience are segmented. Knowledge of the track is knowledge of the future and the further a person is in his passage along the track, the greater his knowledge-at-hand about what to expect even further along the track.

In bringing together this previous argument with our present question about the impact of knowledge on a person's degree of clarity over the span of his images of the future, we could hypothesize that life sphere differences will produce differences in the adequacy of the knowledge-at-hand and that these differences will be expressed in terms of varying degrees of clarity about the future in different life spheres.

Questions for Empirical Exploration

However, as this is an exploratory study, data are lacking for testing the full chain of determinants and consequences stated above. We will therefore limit ourselves to a series of empirical analyses designed to answer four questions which bear on the hypothesis in various ways.

Depending on the answers we get to these theoretically critical questions, the potential for full and adequate support of the hypothesis in a later study can be assessed. Likewise, if no relationship at all is found between life spheres and images of the future, the psychological approach to the explanation of temporal patterning would remain as the most viable, despite the deficiencies which we have noted.

The four questions are stated in their theoretical form below. Each is elaborated upon to only a minor extent at this point.

1. Given the same distance span of future concerns in a life sphere, do some people express higher amounts of clarity over that span than others? Here, we ask about the extent of variation in clarity for any one common realm of significant social experience. We expect that the student's degree of clarity of the future in a life sphere and for the future-in-general will tend to decrease over increasingly longer spans of concerns.

2. Comparing life spheres, do different spheres exhibit different distributions of the degree of clarity among actors for the same span and different degrees of decrease in mean clarity from one span to the next longer one? More specifically, is there any variability in clarity responses for a given population among the life spheres?

3. If the first two questions are answered in the affirmative, then the next important question is whether the

life spheres or the spans of concerns are determining the variability in responses about clarity. If the determinants of images of the future in one sphere are different from the determinants in another sphere, then all we have argued so far leads us to expect that the life spheres would determine variations in the degree of clarity over a given span of future concerns, not the length of the temporal distance span itself. If the realms of social experience in which we participate provide varying degrees of pre-knowledge of future concerns, then images of the future in these life spheres should vary in clarity at different points. In other words, the life spheres should structure the knowledge which determines the certainty with which we hold our expectations about the future over different spans of time.

4. What is it about different life spheres which would determine different patterns of response in clarity over different spans of temporal concerns? We expect that the extent to which a life sphere is tracked is a primary determinant of the extent to which there are variations in clarity over different spans. This expectation relates to what we have discussed as the general effect of tracking on the structure of expectations of an image of a life sphere future.

II

Methodological Considerations

Several methodological considerations and requirements were involved in bringing data to bear on the questions posed above. First, there was the requirement of developing a measure of clarity which would take into account the theoretical argument for a "ceiling" on clarity about the future. The Clarity of Future Life (CFL) scales presented below take this ceiling effect into account by defining an upper limit of "no clarity."

Second, both the life spheres and the temporal distance spans of the images needed to be examined together in the analysis. Life spheres were to be comparable for the same span of concerns. In addition, different temporal distance spans of concerns are to be comparable for the same life sphere. This required maintaining an underlying comparability as well as having a dimension common to all possible combinations of life spheres and spans of concerns. This requirement was met by making clarity the basic variable dimension. As a result, the several spheres and spans could be held constant when necessary.

This decision was particularly important to answering question three above. While each person has his own unique image of what the future will be like, it is nevertheless expected that there will be commonalities among people with regard to their images of the future in a particular life sphere. These commonalities should be evident

when individual variations are removed. This is accomplished by summing across the individual clarity scores and focusing on the distribution and central tendencies of the total set of scores on a CFL scale item. Factor analytic techniques are used for this purpose.

Finally, each life sphere should be capable of being empirically identifiable as a somewhat distinctive dimension in the analysis despite the variations in time spans for which clarity is being assessed. While we have discussed life spheres as segmented realms of social experience, we have nowhere argued that they represented segregated realms of participation, experience, or thought. Even so, the commonalities of apprehension for each life sphere should be empirically distinguishable from commonalities of apprehension in the others. Factor analytic methods are used to provide evidence of these commonalities so important to answering question three above.

With these empirical, theoretical, and methodological considerations in mind, we can now turn to an examination of the ways in which we actually went about measuring clarity of people's images of the future. In the analysis reported below, clarity about the personal future is measured for family, friendship, and occupational images of the future and for the conception of the future-in-general. In addition, three temporal distance spans are defined. These are the next 2-3, 10, and 25 years. Clarity, span, and life spheres were operationalized as follows:

The basic strategy used to measure clarity for each of the four aspects of the future and over all three of the temporal distance spans was a structured set of sentence-completion type items. Each of the 12 items defined an aspect of the future to be considered and span of time. Completion of each of the 12 statements involved the student indicating which of the four defined clarity scale values came closest to his own assessment of clarity for that particular life sphere and span of time.

Operationalizing Temporal Distance Spans for the CFL Analysis

For the time spans, a greater degree of structuring was imposed. Three considerations governed our choice of 2-3, 10, and 25 years as the spans over which clarity was to be measured. First, a small pre-test (N=25) of the clarity question statements using only two time spans (5 and 25 years) suggested that using three spans might yield more insight into the factors affecting changes in clarity in each of the three life spheres. Second, the three spans were specified to reflect relatively short, medium, and long term distances into the future relevant to a sample of young adults. These spans are neither too close to the present nor so far ahead as to involve thinking about things like grandchildren, retirement, the infirmities of old age, etc. Third, by using the same three time spans for all four aspects of the future, comparisons could be made both in terms of the changes in clarity from a shorter to a longer

span (e.g., from 2-3 to 10 years) and between the three life spheres over the same span. Comparisons of these changes in clarity were expected to provide important insights into how social factors affect clarity over different spans of future concerns. Only by holding the spans constant were the comparisons which yielded these insights made possible.* In sum, there were twelve statements which defined all of the possible combinations of the three time spans and the four aspects of the future.

Operationalizing Life Sphere and the Future-in-General

For each of the three life spheres, the question phrasing was in personal terms, i.e., as "my family life," "my relationships with my friends," and "my future work life." The phrase "my future in general" was used to indicate the student's conception of the future-in-general.

The rather general level of phrasing used in these statements is deliberate. First, in terms of our theoretical discussion of images as constructed around a particular

*In order to avoid any misconceptions on the part of the respondent that the statements referred to the exact span in time specified, the shortest span was defined as the "next 2-3 years." Also, the first statement appearing for each of the two longer spans was qualified with the phrase "or so," e.g., "the next 10 years or so of my family life." As a result, it would be reasonable to assume that our specifications of the spans were interpreted as "benchmarks" in the future, rather than requests for the respondent's perception of his clarity in, for example, exactly 25 years. Interpretation of the scores should also be made keeping in mind that the three time spans do overlap, with the next ten years containing within it the next 2-3 years, etc.

segmented realm of social experience, further specification of what was meant by each phrase would have been inconsistent. Second, the generality was intended to allow each respondent to "read into" the statement whatever he or she expected for the personal future in each of the three spheres. In the light of our earlier discussion of the effects of over-structuring the substantive stimuli, any further specification of the content of the future to be considered by the respondent would have been premature, if not altogether undesirable. As a consequence, the specific subjective content being rated for an individual student's image of his or her future family life is unknown.*

Operationalizing Clarity about the Future

To measure clarity for each of the twelve statements, the students were instructed to complete each of them by indicating which of four clarity scale values he felt was the "best choice." The four scale values were associated with descriptive phrases defining increasing degrees of clarity. The student was instructed to indicate the phrase number which appeared next to the scale value. The use of

*This is not to omit from consideration the possibility that in answering the items in the questionnaire which preceded the clarity scales, the students may have been sensitized to particular concerns in a life sphere. While such a response set is possible, its effects are both unknown and not necessarily undesirable from the point of view of getting the student to give some forethought to the realm of future concerns about which he is asked to indicate his degree of clarity.

these numbers was intended to give the scale a quasi-interval nature ranging along four points from no clarity at all to being very clear. As such the scale has both an absolute "ceiling" of no clarity and a "floor" defined by "a very clear idea"

These four scale values and the phrases associated with each value are as follows:

- (1) I have a very clear idea of what it will be like.
- (2) I have a good idea of what it will be like, but there are some unclear parts.
- (3) I don't have much of an idea of what it will be like, but there are some clear parts.
- (4) I have no idea of what it will be like.

Descriptive statistics for all twelve CFL scales are presented in Table 8.1. As these scales are used for statistics assuming both interval and ordinal level measurement, several types of descriptive statistics are presented. The original phrase numbers have been retained for scoring, so that the higher the score the lower the clarity. This has the heuristic purpose of focusing attention on the decreases in clarity at each time span.*

*Please note the abbreviations used to label each statement as these are used frequently throughout the analysis and in the tables to refer to the CFL scores. This label consists of the life sphere plus the time span, e.g., "the next 25 years of my work life" is abbreviated as WORK 25.

TABLE 8.1
PERCENTAGE DISTRIBUTIONS, MEANS, AND STANDARD
DEVIATIONS OF CLARITY OF FUTURE
LIFE SCALE SCORES

<u>Scale Value:</u>	(1)	(2)	(3)	(4)			
<u>Life Sphere and Span</u>	<u>Very Clear</u>	<u>Some Unclear</u>	<u>Some Clear</u>	<u>No Idea</u>	<u>N</u>	<u>Mean</u>	<u>S.D.</u>
Family 2-3	28%	44	15	13	313	2.1	.98
Family 10	8%	29	28	35	313	2.9	.98
Family 25	6%	18	23	53	313	3.2	.95
Friends 2-3	16%	40	29	15	313	2.4	.93
Friends 10	6%	26	33	35	313	3.0	.92
Friends 25	3%	11	30	56	313	3.4	.80
School 2-3	22%	45	21	12	311	2.2	.92
Work 10	7%	20	27	46	312	3.1	.96
Work 25	6%	9	26	59	312	3.4	.86
General 2-3	22%	50	22	6	313	2.1	.82
General 10	8%	25	46	21	313	2.8	.86
General 25	4%	14	30	52	312	3.3	.89

Initial Results

The most obvious and quite expected finding from the initial descriptive analysis is that mean clarity of the future decreases with the length of the time span the students are asked to consider. This statement holds for the score distributions in all three life spheres and for the future-in-general. For the 2-3 year span, the mean scores approximate the second of the four CFL scale phrases. For the most part, the students as a group believe they have a clear idea of what the future will be like in all four aspects measured for this shortest of the three spans. Only from 12% to 15% of the students report no clarity for the spheres over the next 2-3 years. At the other extreme of 25 years, the majority of students report no clarity at all.

Validity of CFL Scale as a Measure of Clarity

Before presenting and discussing our other findings from the CFL scores, we must first consider their validity as indicators of clarity. We can point first to the fact that the phrases provided for each of the four intervals on the scale all stress the dimension of clarity to the respondent and that the CFL scores do decrease in the expected direction.

In an effort to provide an external indication of validity, we also calculated the inter-correlations between all 12 CFL scores and the 18 Semantic Differential scale items used to rate each of four similar concepts used to

operationalize life sphere and the future-in-general in that part of the questionnaire. These four terms used as substantive stimuli for the Semantic Differential scale ratings were My Future, My Future Family Life, My Future Work Life, and My Future Friendships. Only the last term differs significantly from the phrasing used in the CFL question items.

While the largest of these 864 inter-correlations was only .42, the certainty-uncertainty and familiar-unfamiliar scales, along with several evaluative scales, tended to correlate the highest with the CFL scales. These findings suggest that CFL scales are measuring clarity along at least the dimensions of certainty and familiarity and that clarity may have an evaluative component.*

In sum, our own analyses suggest that the CFL scales will be found to be valid measures of clarity about people's images of the future in any attempt at replication or extensive effort to assess them.

*The one exception to these general findings applies to the friendship sphere CFL scores. Here, the general pattern of higher correlations with certainty, familiarity, and evaluative scales is attenuated. Further, the eternal-momentary scale for the My Future Friendships concept stimulus exhibited correlations of about .20 at all three time spans with the related CFL scale scores for this life sphere. This variation may be due to what we will see below as the many actual differences between the friendship sphere and the other two. It may also be a function of the slightly different wording for the term used to indicate the friendship sphere in the two sets of question items.

III

Empirical FindingsAssessing the Linearity Assumption
about Decreases in Clarity
over Increasing Lengths of
Temporal Distance Span

One of the important questions raised in the discussion of clarity in Chapter Three is that of the extent to which there exists any empirical basis for assuming that clarity about the future will decrease in a linear fashion over increasingly longer temporal distance spans. While this assumption appears at first glance to be relatively uncontroversial, our findings suggest that as a general principle it is questionable for a number of reasons. Clarity about the next few years might be low for some people while their overall clarity about the pattern and content of their expectations in a life sphere might be higher when viewed over a longer span of time. Both the imminent as well as the distant future can be relatively unclear while the middle-range course of life events and experiences might appear clearer in both pattern and content. For example, American middle class parents might feel fairly certain that their still infant child will go to college many years from now, but not know if the same child will recover from a cold by the next weekend. People can assume different degrees of clarity over different spans of future time because the contents of their images of the future over these spans are different.

Both the original linearity assumption and the possible types of variation just noted are reasonable but somewhat inconsistent with one another. Yet, neither has, to our knowledge, ever been subject to empirical test. Our data do bear on this question. The results provide some insight into how different life spheres provide the basis for constructing relatively clear images of the future over different temporal distance spans.

Table 8.2 presents our findings from an analysis of the patterns of continuity in clarity within each of the four aspects of the future being considered. Individual CFL scores for the three spans can exhibit three basic patterns. From one span to the next distant one a student's CFL score may decrease (the downward pattern), remain the same (the continuity pattern), or increase (the reversal pattern).

On the basis of the linearity assumption, one would expect that the scores from one span to the next would either decrease or remain the same. The latter would hold especially in the case where clarity over some shorter span had already reached its ceiling (a CFL scale score of 4). The findings presented in Table 8.2 suggest that the linearity assumption is generally supported. Were it not, the validity of the linear measurement assumption with the CFL scales would be seriously in question. The most frequently occurring pattern is for clarity to decrease between spans. Only in the friendship sphere is the continuity pattern as likely as the downward pattern from 2-3 to 10 years. The

TABLE 8.2

PATTERNS OF CONTINUITY AND CHANGE IN CFL SCALE
SCORES OVER THE THREE TIME SPANS, BY LIFE
SPHERES AND THE FUTURE-IN-GENERAL

<u>Patterns between 2-3 and 10 Year Spans</u>	<u>Future Family Life</u>	<u>Future Work Life</u>	<u>Future Friendship Relations</u>	<u>Future- in- General</u>
Downward	58%	63%	47%	60%
Continuity	37	32	46	36
Reversals	5	5	7	4
Totals (N)	(313)	(310)	(313)	(313)
 <u>Patterns between 10 and 25 Year Spans</u>				
Downward	38%	26%	38%	45%
Continuity	57	69	58	54
Reversals	5	5	4	1
Totals (N)	(313)	(311)	(313)	(312)
 <u>Patterns among 2-3, 10, and 25 Year Spans</u>				
Any downward	66%	69%	63%	77%
All continuity	23	21	26	18
Any reversals	11	10	11	5
Totals (N)	(313)	(310)	(313)	(312)

majority of students also report at least some degree of clarity over the 2-3 to 25 year span, ranging from a low of 63% for friendship relations to a high of 77% for the future-in-general. For the 10-25 year span, the continuity pattern is the most evident. However, most of this continuity is based on scores from students reporting no clarity for both spans. This is especially the case for the work sphere scores and least in evidence for the future-in-general.

The results also show that there are a significant and generally consistent number of reversals in clarity for all four aspects of the future represented here. These reversals are most evident between the 2-3 and 10 year spans and the 10 and 25 year spans. By contrast, reversals over the 2-3 to 25 year spans are most frequent for the three life spheres, while decreasing sharply for the future-in-general between the 10 and 25 year span (despite the lesser impact of the ceiling effect). Further, a substantial minority of these reversals for the life sphere scores are from the point of no clarity (a CFL score of 4) over the shorter span to at least some degree of clarity (CFL scores of 3, 2 or 1) over the longer span. Even though the number of such cases is small, the results do demonstrate that a person can report no clarity over a short-range span of future time and also report at least some clarity over a longer range span of time. Among those with some previous degree of clarity, increases from one time span to the next were also reported.

From these results we are led to conclude that the linearity assumption implicit in many of the writings about the nature of people's outlooks on the future must be seen as reflecting only a general tendency and not taken as an axiom. While the downward pattern is the most evident in the data presented here, even when taking the ceiling effect into account, there are still a substantial number of reports of continuity in clarity over all three time spans. There are also a consistent and significant number of reversals between any two spans for all three life spheres. In fact, from 2-3 to 25 years about 10% of the students show at least one reversal in reported scores from an earlier time span to a later one.

These results have a number of important implications. These are evident not only in the problems noted for the linearity assumption, but, also, in the comparison of patterns among the three life spheres and between the life spheres and the future-in-general. In particular, it is important that we go on to ask what it is about the life spheres which produce the patterns of continuity and reversal just described.

Each of the three life spheres, according to its type of social tracking and the adequacy of the knowledge participation in it provides, gives people a basis for constructing coherent images of the future over extensive temporal distance spans. The less adequate the stock of knowledge, the less the certainty attached to expectations.

Further, the less the degree of tracking or of continuity in passage from one stage of the life cycle to the next, the less the basis for an integrated patterning of expectations into meaningful and coherent images of the future about which people can assume a high degree of clarity.

The results reported here suggest a modest degree of indirect support for these assertions. The basis for asserting them more directly here lies in our descriptive analysis of the characteristics of life spheres at the end of the last chapter and what we know about the college student population whose scores are reported. What we take to be especially significant is that there are variations among the life spheres in the amount of downward and continuity patterning and in the types of reversals found between the 2-3 to 10 and 10 to 25 year spans. Between the 2-3 and 10 year spans, 63% of the students report a decrease in their work life clarity compared to a low of 47% reporting decreases in clarity for their future friendship relations. From the 10 to 25 year span, future work life clarity decreases the least, in part because so many students reach the ceiling of no clarity by the 10 year span. However, even over this span for this sphere, some of the students reporting no clarity over the next 10 years report at least some degree of clarity over the next 25 years. By examining the results here, it would appear that there are variations between the relatively tracked and untracked life spheres (family and work vs. friendships). In addition, the two

tracked spheres differ significantly from one another in the patterning of CFL scores across the three time spans.

Of final interest here are the contrasts between the life spheres and the future-in-general. As the latter are dealt with separately and at length below, only a few brief summary points are appropriate here. For one, the future-in-general scores tend to exhibit the least number of reversals between time spans and only about half the proportion of total reversals found for the life spheres over all three time spans. These differences in patterns of reversal are most striking between CFL scores for the 10 and 25 year spans. Only 1% of the students report reversals for their future-in-general, all of these being from students who had not yet reached the ceiling of no clarity. Likewise, looking at patterns and scores across all three time spans, the least amount of continuity and the greatest number of decreases are reported for the future-in-general. In part, this is undoubtedly a function of the fact that fewer students reach the point of no clarity at the 10 year span for the future-in-general than is the case with the three life spheres. However, it is also apparent that these contrasts, taken together, provide support for our notion that the temporal patterning of the life sphere futures is reflected in the integration provided by the conception of the future-in-general.

Variations in Clarity over the Three Temporal Distance Spans

Looking more closely now at the twelve CFL scores in Table 8.1, we find a wide range of variation in clarity for each time span for all four aspects of the future. While most students report high clarity for the 2-3 year spans, from 6% to 15% report no clarity at all. For the 10 year spans, less than half the students report that they are predominantly clear about their futures. At the 25 year spans, while most report no clarity at all, there are still from 14% to 24% reporting they have a predominantly clear idea of what to expect that far ahead in their lives. Expressed in another way, there is a standard deviation of close to one CFL scale unit for all four aspects of the personal future in all three time spans.

In sum, while there is a definite tendency for clarity to decrease over the time spans, there is also a substantial amount of variation among the students within each time span for each aspect of the future. This answers the first of our four questions: Does clarity generally decrease over time among these students? Important to the rest of our analysis is that there was a substantial amount of variation in clarity, even at the shortest and longest spans within a relatively homogeneous sample population. This range of variation is no doubt specific to both the sample and the way the three spans were defined. However, if there has been little or no variation, attempting to

answer the remaining questions posed above would be pointless. That substantial variation does exist would itself be reason enough to ask about the sources of such variation in a homogeneous population like college students. Given both the variation and our theoretical expectations, finding answers to the remaining questions takes on an even greater importance.

Variations in CFL Scores among the Life Spheres

In the second of our six questions we asked about the extent to which there were variations in CFL scores among images of familial, occupational, and friendship futures over increasingly longer temporal distance spans. Comparisons between the life spheres can be made by looking at either the mean scores or the percentage distributions given in Table 8.1. In either case, one notes that there are variations among the life spheres for all three spans.

Using the mean scores, we can see that it is the family sphere which shows a slight, but consistent, pattern of being the highest in clarity over all three spans. This pattern is even more evident if one compares the three spheres in terms of the percentage of students for whom the three spans are predominantly clear (score values 1 and 2). At each span, the family sphere has from 5% to 16% more students with high clarity. The ranks of the occupational and friendship spheres change from one span to the next, with friendships the least clear over the next 2-3 years,

work the least clear at 10 years, and both about the same in mean clarity at 25 years.

In sum, there are slight, but significant differences in the distributions and central tendencies of the life sphere CFL scores for each of the three spans. However, it is the differences in clarity among the spheres over the three spans of time which provide us with the most insight into the impact of these different realms of social experience upon the students' clarity.

Rates of Decrease in Clarity among the Life Spheres

The rate of decrease in clarity from one time span to the next longer one is different for each of the life spheres. To provide a means of expressing these differential changes in clarity from one span to the next, we calculated the Proportional Percentage Change (PPC) in mean clarity for each sphere between each time span. Given the ceiling effect of the upper limit of a complete absence of clarity in the CFL scale, the PPC score gives the most accurate expression of changes in mean clarity from one span to the next. PPC scores for changes in mean clarity within each sphere from one span to the next are given in Table 8.3.*

Examining these PPC scores for change in mean clarity within a sphere from one time span to the next reveals

*The correlation analysis of the twelve sets of scores presented in Table 8.4 essentially duplicates these results, but is less easily interpretable for our present purposes.

TABLE 8.3

PROPORTIONAL PERCENTAGE CHANGE (PPC) IN
MEAN CFL SCORES BETWEEN TIME SPANS
FOR LIFE SPHERES AND THE
FUTURE-IN-GENERAL

<u>Future Family Life Sphere</u>	<u>Proportional Percentage Change*</u>
2-3 to 10 years	40%**
10 to 25 years	30%
2-3 to 25 years	58%
<u>Future Relationships with Friends Life Sphere</u>	
2-3 to 10 years	34%
10 to 25 years	41%
2-3 to 25 years	61%
<u>Future School/Work Life Sphere</u>	
2-3 to 10 years	51%
10 to 25 years	30%
2-3 to 25 years	66%
<u>Future Life-in-General</u>	
2-3 to 10 years	38%
10 to 25 years	41%
2-3 to 25 years	66%

*This is a modification of the "Effectiveness Index" discussed by Hovland, et al. (1949). As computed here it is the change in mean CFL scores from an earlier to a later time span divided by the difference between the earlier score and the ceiling (4).

$$\text{Proportional Percentage Change} = \frac{\bar{X}_{t_2} - \bar{X}_{t_1}}{4 - \bar{X}_{t_1}}$$

where $\bar{X}_{t_1}$ is the mean score of the earlier time period, etc.

**It should be observed that all PPC scores represent the decrease in mean CFL scores from one time span to the next longer one. However, as calculated, the scores are expressed as a positive change. The mean scores upon which these calculations are based are found in Table . As a rule of thumb, PPC score differences of less than 10% were not considered significant.

that for the family and occupational spheres the greatest decrease occurs between the 2-3 and 10 year spans. In contrast, for relationships with friends, the highest PPC is found for the decrease in clarity between 10 and 25 years. It would appear that the students' clarity about the course of their future friendship relations decreases at a faster rate over relatively long-term spans and slowest over the short-term span of the next few years.

Clarity in the work life sphere decreases by about half from 2-3 to 10 years, compared to 40% for the family and 34% for friendships. From 10 to 25 years, the work and family life spheres both decrease by smaller and equal amounts. In contrast, friendship clarity decreases at a much faster rate. Finally, the future-in-general scores show a pattern of rates of decrease in clarity similar to the friendship scores.

In sum, the three life spheres show different rates of decrease in clarity from one span to the next as well as different patterns of decrease, with the family and work exhibiting the greatest changes over the shortest actual difference in time spans. Further, despite the different pattern of variation from 2-3 to 10 years and from 10 to 25 years among the three spheres, all decrease in mean clarity from 2-3 to 25 years at about the same rate.

What sense can we make of these variations among the three spheres in this stage of our analysis? The results suggest that not only the time span the students are

considering, but, also, what they expect for each realm of experience influences their overall change in clarity between spans within each sphere. Each sphere differs from the others whether measured in terms of percentage distribution in scores, mean scores, or the rate of decrease in clarity from one time span to another.

In our society, family and work life are more institutionalized in their extent of social tracking than is the case for friendships. These results show that the two more highly tracked life spheres decrease more rapidly in clarity over the near and shorter span of future concerns than does the relatively untracked sphere of friendship. Again in contrast, the family and work sphere CFL scores both show the same lower decrease in mean clarity over the long-term future while the friendship sphere shows the highest rate of decrease. We should observe that these contrasts are consistent with our findings from the TMT reason analysis. Responses involving friends tended to have temporal distance locations closer to the present than did those reasons in which the family was mentioned or where the purpose of the TMT trip was for learning about one's future-in-general. We find here that clarity decreases the most over the spans having the greatest number of TMT reason responses of these three types.

As a consequence of the variations one is led to explore the possibility that the segmentation of past and present social experiences among these spheres may carry

over to expectations about the course of future experiences. Therefore, we should go on to our third question: Do the spheres or the time spans have the greatest impact on the students' responses? If further analysis shows that it is the spheres, then we can consider more extensively what it is about these life spheres which produces the variations we have observed for these students.

Life Spheres vs. Temporal
Distance Span as Sources
of Variation in Clarity
about the Future

How are these variations among our twelve sets of scores related to the two distinct dimensions which underlie them? On the one hand, they cover three temporal distance spans of varying duration. On the other, three life spheres are represented, along with the future-in-general. A pattern of inter-relationships among the twelve sets of scores might therefore be evident in terms of either, or both, the time spans or the life spheres.

We have stated about the basis for our expectation that any such pattern will show the life spheres to be the more important source of variation. However, we have structured our question items so that either pattern of inter-relationship among the sets of CFL scores is likely to emerge. In fact, by grouping the twelve statements scored on the CFL scale by the time spans rather than by life spheres, we may even have created a bias in the direction of the temporal distance spans.

In order to discover which pattern of inter-relationship might exist among the twelve CFL scales, we first calculated the correlations among the scores. Table 8.4 gives the results of the correlation analysis. This matrix is organized by life sphere with intersphere correlations for each of the three time spans underlined to facilitate examination.

The results show that the strongest associations are among the three time spans within each life sphere. For all three spheres and for the future-in-general, the highest r 's are between the 10 and 25 year spans. The lowest are between the 2-3 and 25 year spans. Despite these differences in the magnitude of association between the time spans for each sphere, the average correlation between the time spans within a sphere is generally higher than the average correlation between the same time spans across the three spheres.

Of these inter-sphere correlations for a particular time span, only five are greater than .40. Of these high inter-sphere r 's, none are for the 2-3 year span and three are for the 25 year span. By contrast, all within sphere r 's for 2-3 and 10 years and for 10 and 25 years are over .40, with only the work sphere scores falling below this magnitude for the 2-3 and 25 year spans.

Leaving aside for now the associations between the sphere scores and the future-in-general scores, we can see that there is a tendency for higher r 's within spheres

TABLE 8.4
CORRELATIONS AMONG CFL SCALE SCORES

<u>Life Sphere and Span:</u>	<u>Family</u>		<u>Friendships</u>			<u>School/Work</u>			<u>General</u>		
	<u>10</u>	<u>25</u>	<u>2-3</u>	<u>10</u>	<u>25</u>	<u>2-3</u>	<u>10</u>	<u>25</u>	<u>2-3</u>	<u>10</u>	<u>25</u>
Family 2-3	.48	.40	<u>.36</u>	.25	.24	<u>.33</u>	.23	.19	<u>.41</u>	.32	.20
Family 10		.67	.35	<u>.45</u>	.42	.19	<u>.34</u>	.35	.30	<u>.40</u>	.39
Family 25			.28	.41	<u>.58</u>	.11	.35	<u>.47</u>	.26	.42	<u>.47</u>
Friends 2-3				.55	.41	<u>.27</u>	.27	.22	<u>.36</u>	.38	.27
Friends 10					.64	.27	<u>.43</u>	.37	.31	<u>.48</u>	.45
Friends 25						.18	.38	<u>.55</u>	.28	.48	<u>.60</u>
School 2-3							.42	.30	<u>.42</u>	.40	.27
Work 10								.70	.39	<u>.49</u>	.45
Work 25									.30	.48	<u>.50</u>
General 2-3										.61	.41
General 10											.73

$r < .11$ N.S. at .05 level

Lowest N = 310 with pairwise deletions on missing scores

Mean r scores:

<u>Within Spheres</u>		<u>Within Spans (Spheres Only)</u>	
Family	.52	2-3 years	.32
Friends	.53	10 years	.41
Work	.47	25 years	.53

rather than within spans. However, no clear pattern emerges from the correlational analysis alone. In particular, for the two longest time spans substantial associations are indicated between the friendship sphere and the family and work spheres.

Given this lack of a clear pattern, we can turn to the results of a factor analysis of this correlation matrix. We do this to examine more fully the patterns that underlie the correlation matrix and which produce the variations we have found. Using an initial Principal Factor solution, we went on first to rotate the first three and then four factors with the highest positive eigenvalues which resulted.* Rotating the first three factors would have been sufficient to exhibit a factor structure determined by the time spans. Four factors would have allowed for the appearance of a factor for each of the three life spheres and for the future-in-general. Since no clear cut pattern of factor loadings for the time spans appeared upon rotation of the three factor solution, the four factor solution is presented in Table 8.5

Description of the Four Factors

The four factors together account for 54% of the total variance in the correlation matrix. A substantial amount of this variance is due to the 25 year sphere scales,

*Appendix II contains a brief discussion of the nature of factor analysis, the specific methods used in this study, and the problem of interpreting the results obtained.

TABLE 8.5

VARIMAX ROTATION SOLUTION FOR FACTOR ANALYSIS
OF CFL SCALE SCORE INTERCORRELATIONS

<u>Life Sphere and Span</u>	<u>Factors</u>				<u>h²</u>
	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	
Work 25	.78	.15	.18	.16	.69
Work 10	.65	.11	.10	.36	.57
General 25	.58	.32	.26	.21	.56
General 10	.49	.32	.22	.46	.60
Friends 10	.28	.73	.19	.18	.68
Friends 25	.49	.64	.29	-.00	.73
Friends 2-3	.02	.58	.19	.37	.51
Family 25	.36	.23	.76	.01	.76
Family 10	.18	.24	.72	.20	.65
General 2-3	.24	.15	.15	.63	.50
School 2-3	.25	.12	-.00	.56	.39
Family 2-3	-.02	.11	.49	.51	.51
Sum of Squares	2.21	1.68	1.68	1.58	7.15
Percentage of variance	18.5	14.0	14.0	13.1	54.0

each of which is highly correlated with one of the first three factors. The nature of each of the four factors is as follows:

FACTOR ONE: This factor accounts for the greatest amount of variance in the matrix. It is clearly defined by high loadings for the work sphere CFL scales for 10 and 25 years. Lower loadings appear for the future-in-general CFL scores for these same two longer spans and for FRIENDS 25. This pattern of CFL scale loadings indicates that this factor is interpretable as a work sphere factor. Further, the pattern of loading suggests that for these students, the future-in-general is being scored along much the same dimension of clarity as is future work. We also note that where scales from the two other spheres load on this factor, they tend to be for the 25 year span.

FACTOR TWO: All three friendship sphere CFL scales have the highest loadings on this factor. Again, scales for the longer time spans load higher. This is therefore interpretable as a friendship sphere factor.

FACTOR THREE: This is defined by the very high loadings of the 10 and 25 year family clarity scales. It is interpretable as a family sphere factor.

FACTOR FOUR: The 2-3 year scales for the future-in-general, schoolwork, and the family provide the highest loadings on this factor. Of the four factors, this is the only one that may be interpretable as a time span rather than a life sphere factor.

In general, the factor structure most clearly shows that the students are scoring each of the three spheres independently of the others for the longer spans and in somewhat the same way for the 2-3 year span. However, while each CFL scale has a large loading on one of the four factors, some have moderate loadings on a second factor. Examining these secondary loadings makes possible a more meaningful general interpretation of our results.

The first factor, while predominantly a work sphere factor, also has moderately high loadings for the 25 year scales for the family and friendship spheres. This suggests that while the life spheres are basically more important than the time spans in determining how the students are scoring the CFL scales, the 25 year CFL scales for all three spheres tend to be scored in some similar way. The most reasonable interpretation of this similarity is that clarity in general over the next 25 years is so low that differentiation by sphere is negligible. What one views in any one life sphere, or for life-in-general, over the next 25 years may be difficult to distinguish in a separate and distinct way.

Likewise, FACTOR FOUR may reflect a tendency for all three spheres and for the future-in-general to all be perceived as being relatively clear over the next few years. The high secondary loading of FRIENDS 2-3 on this factor lends support to this interpretation. In sum, we find that at each of the two extreme time spans, there is a definite tendency for the spans to interact with the life spheres in

determining how the students are scoring the CFL scores. However, each of these two extreme time spans is likely to be scored for clarity independently of the other. In support of this statement, we note the very low and near zero loadings of the 25 year CFL scores on FACTOR FOUR.

However, the more pronounced pattern is that of the first three factors each defined by high CFL scale loadings from only one sphere. Life sphere CFL scores, especially for the 10 year spans, have the highest loadings on these three factors and the lowest secondary loadings on other factors. We further note that the friendship and family CFL scales most distinctly define their respective life sphere factors. Even family 2-3 has as high a loading on FACTOR THREE as it does on FACTOR FOUR. In sum, while the life spheres emerge as more important than the time spans in defining the four factors, it is also likely that the extent to which the short or long term future is perceived as clear is a function of just how far into the future the students are being asked to project themselves. In particular, the loading of 2-3 year span CFL scales on FACTOR FOUR suggests that the clarity over short term future is scored in a more or less unitary manner across all three life spheres. However, when one examines the loadings for the three spheres at the 10 and 25 year spans the realm of social experience being considered shows the greatest differentiation in ways of scoring the CFL scales.

What also emerges from this analysis is the close association of future work life clarity with the future-in-general and with future friendship relationships. For most of these students work is the realm of social experience most likely to determine the anticipated and actual content of their future as a whole. It is also most likely to present them with a set of contingencies which will affect their experiences in other life spheres.

Finally, the results suggest that for the students' present expectations, the next ten years may be perceived as the period of greatest change in their lives. Note in this regard the clearly defined loadings of the 10 year CFL scales on the first three factors, as well as the PPC scores presented above. Also significant are the high loadings of GENERAL 10 on both FACTORS ONE and FOUR. The students' conceptions of the future-in-general over the next ten years have a sort of pivotal position, being associated with both short-term and long-term clarity in all three life spheres.

In summary, the factor analysis strategy used here summed across individual differences in how each of the four aspects of the future were scored on the CFL scale. The results indicate that each of the three life spheres can be regarded as a more or less empirically distinct conceptual dimension in the students' thoughts. While this finding generally supports the expectations stated in question three, there is evidence of interaction between the life spheres and the spans of temporal concerns in the determination of

how the students responded on the CFL scales. This interaction is more pronounced for the three spheres over the next 2-3 years and least evident when the students are considering the next 10 years of their lives.

IV

Implications of the CFL Analyses

Theoretical Implications:

I. Images of the Future and the Segmentation of Social Experience

One of our most important theoretical arguments received varying degrees of support from this analysis: that thought about the future is segmented into life spheres. The differentiation of ongoing social participation and of the experiences this provides into qualitatively segmented realms is carried over to the way we structure our anticipations and expectations into images of the future. The segmentation of social life into these qualitatively differentiated realms of participation and experience is shown to be one of the basic existential social factors around which people impose integrative temporal patterns upon their future concerns. The overall degree of empirical support our results give to this assertion should be made clear in the light of what might appear as contrary evidence. In the discussion of both the correlation and factor analyses we noted definite indications of empirical associations among the clarify scores given for the three life spheres.

We do not regard this evidence of association of clarity scores among the life sphere as inconsistent with our initial expectations. It should be recalled that these expectations were based on the theoretical argument that to the extent social participation and experience are segmented into life spheres, our future concerns, and their integration into temporal images, should also be segmented into the life spheres out of which the concerns arise. The relationship between this theoretical argument and the empirical results requires further discussion. The absence of a definitive one-to-one relationship between the two levels of analysis is a function of three related matters:

First, it is difficult to empirically establish the boundaries of a life sphere. The three life spheres examined in this study are analytically distinctive as realms of social role-playing and experience. Empirically they are recognizable as qualitatively different realms of behavior, but by no means clearly demarcated from one another. For example, if a man is talking to his wife about what went on in his job that day, is this behavior in the family sphere, or work sphere, or both? There is evidence to suggest that this type of communication affects the wife's satisfaction with the husband's companionship (Blood and Wolfe, 1960:175-220). But it may also affect the husband's work performance by permitting the release of tensions developed on the job in a more emotionally supportive setting. Without taking this example as evidence, it does point out that on the

empirical level the differentiation of behavior according to its sphere is likely to be a complex and difficult matter.

Second, the example points to the likelihood that experiences in one sphere can and do "flow" over into another. By segmentation we do not mean the segregation or isolation of different types of experiences. A sizeable body of research on the sources of role conflict attests to this point and to our more basic assumption that experiences and memories in different spheres can be kept separate.

Third, the patterns of association presented are for the sample as a whole. The example further suggests that for the husband and wife, the behavior they were engaged in together might be categorized differently for each of them as to the realm of experience involved. Different groups in the population may exhibit different patterns of association among the life spheres into which we have analytically categorized their behavior. Another example provides elaboration. Workers in the printing industry have been found to have a strong occupational community (Lipset, et al., 1956: 92-159). The nature of the work itself encourages printers to spend their leisure time together more often than would be typical in other occupations. For them, work activities and friendship relations become parts of a single realm of experience. The behavior of printers is fully understandable only if the work situation and their informal social relationships in the occupational community are taken into joint consideration.

Theoretical Implications:

II. The Relationship of Images
of the Future to the Conception
of the Future-in-General

In our earlier discussions of the nature of time-binding we argued that conceptions of the future-in-general represented one of the ways people impose a sense of unity upon their various and segmented images of the future. This argument rested, in turn, on the assumption that conceptions of the future were more general and abstract than their component ideas and images. At this point, we can pull together many of the heretofore neglected insights our results provide about the relationship between the clarity of images of life sphere future and that of the future-in-general. Our purpose in doing so is to assess the degree of empirical support that exists for our theoretical arguments about the relationship between the unity of selfhood and the segmentation of social experience and between the time-binding of temporal ideas and images into conceptions.

Let us now review the findings from our several CFL scale analyses which bear on the assessment of these relationships.

(1) Mean CLF scale scores and the proportion of "no idea" responses for the 2-3 and 10 year spans indicated that clarity for the future-in-general was substantially greater than for the three life spheres. Only over the 25 year span are clarity scores about the same for all four of these aspects of the future. Therefore, over the next ten years

or so of their lives, these students report scores indicating more clarity for their conception of the future-in-general than for their images of the future in any of the life spheres.

(2) The PPC in mean clarity for the future-in-general CFL scores from 2-3 to 10 and from 10 to 25 years showed a pattern and magnitude of decrease in clarity most similar to that found for friendship relations and least similar to that found for the work sphere scores. The major exception to this generalization is for the PPC's in mean clarity from the 2-3 year to the 25 year spans. For these, the rate of decrease was greatest for both work and the future-in-general and least for the other two life spheres.

(3) However, this second finding is somewhat at odds with several of the others that followed. Results presented in the course of assessing the linearity assumption showed that the pattern of scores over the three spans was distinctively different for the future-in-general in contrast to all three life spheres. The future-in-general scores showed the least number of reversals (increases in clarity) from one span to the next longer one, as well as being the least likely to be continuous (remain the same) between spans and the most likely to decrease. Viewed in terms of these three patterns of change in scores from one span to the next, rather than in terms of the relative PPC's in mean CFL scores, the future-in-general is shown as distinctive when contrasted to the life spheres.

(4) Other patterns of similarity and difference between the life sphere futures and the future-in-general emerge from the correlational and factor analyses. The strength of association between the life sphere CFL scale scores and those for the future-in-general tends to be high. While the highest correlations are for scores within a given aspect of the future between different time spans, correlations between a sphere and the future-in-general scores tend to be higher than for those among the different spheres. There are 32 correlations over .40 in the matrix. Of this set of higher correlations, six of a possible 27 are between two of the three spheres while 15 of a possible 27 are between a life sphere and the future-in-general. It would appear that a pattern of high association between a sphere and the future-in-general is more likely than high associations among the CFL scores in different spheres. This is the case even if one were to further control for the different time spans involved. Most of these higher correlations are for the same time span. This is the case for 5 of the 6 between sphere high correlations and 8 of the 15 high correlations between scores for a life sphere and the future-in-general. However, the number of higher correlations of the latter type between different spans is much greater. Life sphere scores are therefore good predictors of future-in-general scores both over the same time span and between time spans. A parallel statement cannot be made for the pattern of associations found among the life sphere scores. There,

most of the higher correlations are for the same time span between different spheres. Of particular interest are the seven high correlations indicated between a life sphere and future-in-general scores for different distance spans. Of the 7, 5 are for scores over the 10 and 25 year spans. Of these 5, 3 show that clarity of the future-in-general over the next ten years is a good predictor of clarity for a life sphere future over the next 25 years. Further, of these 7 "up time" association, 4 involve work sphere CFL scores while only 1 involves family sphere scores.

(5) The above pattern of association between life sphere CFL scores at different time spans and the future-in-general also appears in the results of the factor analysis. The GENERAL 10 and 25 year CFL scores load highest on FACTOR I. This pattern of loadings was interpreted to indicate a work sphere factor. GENERAL 2-3 had its highest loadings with the other 2-3 year CFL scores for the family and work on FACTOR IV. In addition, GENERAL 10 had about the same loadings on both FACTORS I and IV.

What is the relationship of these somewhat disparate empirical findings to our more general theoretical expectations? For one, the distinctive patterns of distribution for CFL scores, and of changes in scores from one span to the next, exhibited for the future-in-general, and in contrast to the life spheres, lends a modest degree of support to our contentions. Some kind of distinctive pattern would be expected if images of life sphere futures are constructed

on the basis of social factors, while conceptions of the future are based on the integration of these component images by means of the two modes of time-binding discussed at length in Chapter Three.

The rates and patterns of change in future-in-general CFL scores also lend support to the notion that clarity on the level of temporal conceptions decreases less than that for images. Further, such decreases approximated more closely the linearity assumption. These results were among those that might be expected if images are the more concrete components out of which conceptions are constructed. The whole is clearer in structure and content than the separate parts because it is both more abstract and tied into the mechanisms by which people maintain a sense of continuity of selfhood. Finally, we note that only over the 25 year span, when clarity is at its lowest for all three life spheres, does clarity of the future-in-general decrease to the average level of the CFL scores for the life spheres. This is as it should be if our theoretical explorations are moving in the right direction.

What also emerges here is that the time span over which the conception of the future is projected is important. We noted above that among these students' CFL scores, the conception of the future-in-general over the next ten years has a sort of pivotal position between the relatively undifferentiated CFL scale scores for the next 2-3 years loading on

FACTOR IV and those for the image of the students' future work life over the next 10 and 25 years loading on FACTOR I.

Finally, there is a general indication of a stronger pattern of association between work sphere scores and those for the future-in-general that is the case for either of the other two life spheres. Even though we stated that images of life sphere futures are components of the conception of the future-in-general, there is no reason to expect that each of the several life spheres has an equal impact on the structure and contents of temporal conceptions. Among these students, it is apparent the future concerns in the occupational sphere are given more weight in the construction of their conception of the long-run future course of their lives than is the case for either the family or friendships.

Much of what was just stated must be regarded as tentative. Our data provide no direct means of empirically assessing the theoretical assumptions upon which these interpretations are based. Linear regression analysis might enable one to assess the weight given to various life sphere futures in predicting variations in scores for the future-in-general. However, this would require us to make the assumption that there is a linear, additive model underlying the relationships among the life spheres and time spans. Assuming such a model is difficult, since we have already noted the existence of interactive effects between these three dimensions of future concerns. Further, only clarity

of the future would be considered, limiting the generalizability of the results and neglecting many of the other substantive properties of temporal concerns considered above.

So the problem is not just one of methods. No researcher is likely to develop the means of directly testing these theoretical assumptions about the nature and functions of integrated temporal patterning. As a result, perhaps the only basis for establishing the plausibility of the assumptions and their explanatory power is through the incremental effect of many indirect tests. The discussion presented here is a step in this direction.

Empirical Implications: The Problem of Interactive Effects

Another important implication of our results is that they are contrary to those one might expect from the more prevalent psychologically-oriented assumptions discussed in Chapter Three. Our results suggest that clarity about the future is being ideationally patterned in terms of the life spheres from which one derives one's stock of knowledge and one's matter-at-hand, not in terms of the temporal distance over which future concerns are being projected. However, there is still evidence of interactive effects between the social and temporal phenomena being studied. Such interaction was also found in the results obtained from the analysis of the relationship between social scope and temporal distance span. As we proposed there, one possibility is that these effects are an artifact of the methods used. In

this case we did structure our test items so that life sphere and span were simultaneously held constant, while perceived clarity of the future for a particular sphere over a specific span was left to vary. Alternative strategies which allowed one of the other dimensions to vary might produce a different, though not necessarily inconsistent, outcome. Temporal distance span might be the best possibility of this type, although the test format resulting from this approach might prove unwieldy and the scores more difficult to analyze.

We also noted in discussing the results of the earlier analysis that such interactive effects might well be real and require the consideration of other factors and/or a more complex type of relationship.* For further evidence in this direction we look forward to the completion of two sets of analyses on other data obtained from the TIQ. One focuses on the Semantic Differential ratings given for a number of temporal concepts. Hopefully these will reveal more about the various dimensions along which people are thinking about the passage of time in various life spheres and the future-in-general. This should provide a basis for

*This is a good point to stress again that our primary purpose has been to explore the nature of relationships rather than to test specific hypotheses drawn from pre-existing theory. We are exploring empirical relationships because the results we obtain will help in modifying the theoretical assumptions that prompted these explorations. Obviously, even the theoretical discussions presented above contain assumptions and arguments that were modified as a result of our pilot studies, as did (to be truthful) preliminary analyses of this data.

identifying and then exploring the potential influence of other factors on the relationships analyzed here.

The second set of analyses focus on the effect of what we term Life Sphere Orientation (LSO) on variations in clarity about the contents of images of the future. Individuals vary in the degree to which they value their participation in and experiences derived from different life spheres. For some family life is more important than work, while for others informal social relationships in the community are most valued. Life sphere orientation is the relative value emphasis given to the various life spheres in which one participates. We expect that LSO will affect clarity of the images of the future in the various life spheres by virtue of the variations it would provide in people's motivations to increase the adequacy of their stock of knowledge about particular life spheres. Other parts of this analysis explore the effects of variations in continuity of LSO from the past to the present and as expected for the future.

What these two sets of analyses should provide is further insight into the inter-relationships between life spheres and temporal distance spans as these influence clarity about images and conceptions of the future. Both should also assist in exploring the relationship between life spheres and other properties of temporal concerns. Clarity is only one of the several properties we propose as open to sociological assessment.

General Implications: Evidence
for the Effects of "Future Shock"
on Clarity about Images and
Conceptions of the Future

In our earlier theoretical discussion of the clarity of temporal images and conceptions and its relation to temporal patterning, we noted our own interest as well as that of others like Toffler in the effects of "future shock" on the assuredness people have about the future course of affairs. We are limited by the range of our data and the nature of our sample from making any generalizations about these effects. However, our results do have two implications which may help in assessing the arguments that have arisen over the causes and consequences of "future shock." First, the CFL scores for this sample of college students lends some support to the existence of a substantial lack of assuredness in people's expectations about their own future. The majority of students report that they have little or no idea about what the next 10 years of their life will be like either in general or in three of the most significant life spheres in which they expect to participate. For the next 25 years, the majority report that they have no idea at all about what their life will be like in all four of the aspects of the future we studied.

Yet, we also reported that the reasons given for TMT trips into the future and the responses given in the course of the depth interviews did not indicate any widespread sense of bewilderment about the future course of life events

and experiences. When things would occur and how they would affect the student were significant factors in the students' TMT choices. However, these responses and those given to the interview questions all suggest that while there is uncertainty for particular expectations, there is also what might be termed a basic trust that the future will unfold without the appearance of any major surprises.

Pulling together the results of these several analyses we might conclude that while the long-term future is generally viewed as unclear among these students, their uncertainty about things to come is particularistic to matters of timing and the affective consequences of specific types of events. There is uncertainty, but not confusion. There is a lack of clarity about the long-range course of life events and experiences, but this is to some extent coupled with a sense of assurance that even if planning is difficult, the course of their future will take care of itself because, as one respondent put it, there is a "natural order" of things.

A second implication of our findings is that the rapid rate of change held to be the cause of "future shock" might be more adequately explained if consideration were given to the differences in the degree of clarity for different life spheres and the impact of these changes on specific groupings within the society. These college students are not only faced with a rapidly changing society, they are also going through a period of major transitions in many

aspects of their lives. In fact, to some extent what is observed as evidence of "future shock" may be a function of the large proportion of young people in our society going through long-standing transitions from their parental home life into marriage and new family roles and obligations, from school into the occupational force, and from the community-based friendships of adolescence to participation in new social networks reflecting their new family roles, residential changes, and entrance into the world of work. Further efforts must be made to distinguish between the effects of these transitions typical of young adults and the more generalized and indirect effects of technological change on people's clarity about and ability to plan for their future.

Each of the life spheres appears to have a somewhat different type of effect on the way we view the future at different points ahead. While clarity is generally highest for the short-term future and lowest for the long-term span of 25 years, the degree of clarity varies with the life sphere which the student is considering.

V

General Summary and Discussion of Results

We have presented up to this point the results of several analyses bearing on the relationship between life spheres and the distance span of future concerns in determining variations in clarity about the future. Our basic argument is that the life spheres have a greater impact on clarity about the personal future than does the distance into the future being considered.

Having identified the common effects of the life spheres on the clarity of images of the future, we can now turn to a more detailed consideration of the particular effects of each life sphere on clarity of the future in that realm of social experience. Recall that there were significant differences among the life spheres in the clarity of their respective images over increasing distant future spans of time. First, let us briefly review the nature and extent of these variations in clarity by bringing together the evidence accumulated in the preceding analyses.

Variations in Clarity Due to
Characteristics of the
Life Spheres

Each life sphere emerges in the data analysis as having one or more characteristics special to it. Among the spheres, the family clarity scores are the lowest for all three time spans measured. This life sphere also tends to exhibit consistent decreases in clarity from shorter to

longer time spans, as well as the lowest overall decrease in clarity from 2-3 up to 25 years. Even though these differences are often slight, and possibly not statistically significant, they are consistent enough to suggest that the family sphere is the one for which the most students have the greatest degree of certainty about the specific contents of their future.

In contrast, analysis of the work sphere clarity scores generally suggests that clarity about their future work life is the lowest among the three spheres. While only about a third of the students report that they have "no idea" about the family life and friendships over the next ten years, close to half report this lack of clarity for their work life over the same span of time.

The future friendship sphere clarity scores also exhibit a special pattern. While intermediate in the degree of clarity recorded by the students over the longest of the three spans, friendship clarity over the 2-3 year span is significantly lower. Only 56% of the students report that they are predominantly clear about the relationship with their friends over the next 2-3 years compared to 67% for their school or work life and 72% for their family life over the same length of time. As a consequence of this generally lower degree of clarity among the students in the short-term future, friendship clarity decreases the least for the three spheres up to 10 years, but the most between 10 and 25 years. Further, of what were interpreted as the three life sphere

factors in the factor analysis, it was the friendship sphere factor that was most clearly defined.

These special patterns of variation exhibited by each of the three life spheres suggest the unique characteristics of each for the manner in which the students are considering their future. However, there is a more general pattern of contrast which also emerges upon examination of the findings for the three spheres, taken together and separately. This contrast is between the findings for family and work sphere clarity on the one hand, and friendship clarity on the other. The major indication of this contrast is the relationship between the 2-3 year and the two longer span scores for each of the three spheres. While the 10 and 25 year clarity scores are the best predictors of the three life sphere factors, the friendship scores for 2-3 years not only correlate the highest of all the 2-3 year scores with its life sphere factor, these scores also correlate the lowest with the only temporal distance span factor to emerge. Again, from the analysis of decreases in clarity from one time span to the next longer one, friendship clarity tends to start off lower, decrease the least up to 10 years, and then fall off the most from 10 to 25 years.

These differences suggest that while the length of the distance ahead one is considering one's future affects the clarity one has about what to expect, time takes its toll of clarity for friendship the earliest and then consistently and continually decreases even more over the longer

spans. By contrast, for work and family futures, the students appear to view their near future with more certainty, decrease their certainty the most over the next seven years or so, and then tend to decrease much more gradually over the final 15 years.

Variations Due to College
as a Stage of Transition
in the Life Cycle

How are we to understand the basis for this contrast between the friendship and the other spheres in patterns of change and clarity over the three time spans? We can do so only by considering the nature of experiences in these three spheres both generally for American society and specifically for these college students. What is involved in being a college student and a participant in the activities, relationships, and situations common and typical of each of these three life spheres?

First, and foremost, it means that one's life is going to be altered to varying degrees in each of these three spheres over the next 25 years. Being a college student is a temporary status. After graduation, the vast majority of these students will begin to go through a series of major transitions in their lives. Many will enter employment and begin an occupational career. Most will marry. Accompanying these moves will be changes in residence, the establishment of new friendships based on new activities, interests, and locale, and the modification of relationships with their own family.

For these students, the course of life experience between the next few years and the longer spans of 10 and 25 years is a course of change. However, the extent and quality of this change is not the same for all three of these life spheres. For one, while most students participate in a network of informal social relationships today, they, as yet, have little direct knowledge and experience with their future work and family life. While 58% of the students have chosen a future occupation, the majority still have no direct work experience in their chosen fields. Among the single students nearly two-thirds report that they are not yet thinking about getting married. Of those who are thinking about marriage, only one-half report that they plan to marry someone they are going out with now.

In sum, for these students there exists a yet-to-be bridged gap between their past and present experiences on the educational family tracks and their future experiences on family and work tracks. In contrast, most are now to at least some extent involved in the friendship sphere, with 55% reporting that they have an "active social life."

Coincident with this gap in continuity of experience for the family and work spheres is the fact that it is these two spheres which are the most highly tracked in our society. The next 2-3 years in these two tracked spheres are not yet the time of major transition and entrance onto family and work tracks. Over the next 2-3 years, at most only 80% of these students will have graduated from college and among

those who will graduate sooner, many have chosen fields in which further academic work is required prior to entrance. Again, while most of the students are no longer living at home with their parents, we have noticed that relatively few see their own marriages as just over the horizon. However, it is reasonable to predict over the next ten years most will work and marry.

What we have seen in our analysis of the CFL scores is that for the family and work spheres, clarity is the highest over the next 2-3 years, the span over which the continuity with present experiences will be highest. Consistent with this period of transition is a large decrease in the reported clarity, especially from college to work. Once this transition is made, the decrease in clarity is significantly lower for the period between 10 and 25 years.

Knowledge of the "Future Around Us"

Let us make clear the bases for this interpretation. The students have not reported that they anticipate a major transition in the life experience in the family and work sphere. They have reported only that their family and occupational decisions and plans are still up in the air. Yet, the majority (nearly 70%) report that they view the next 2-3 years in these two spheres as predominantly clear. But, by expecting no change, one is expecting a future little different from the present. A future viewed as the same as the present possesses the potential for a high degree of

certainty. Desired or not, an image of the future as a continuation of the present has a quality of assuredness about it. We can view it more clearly because we are already participants in it.

In our interpretation of these differences between the relatively tracked life sphere of the family and work and that of friendships, we are assuming that the students' reports about both high clarity and a relative lack of firm plans for the next few years are interrelated by virtue of their present situation providing the knowledge for constructing an image of the future containing events and experiences essentially the same or similar to those encountered today and in the recent past. As a result, clarity is high. But, we are also assuming that these students expect to marry, work, have children, change their residential and community milieux. That is, we assume that they know that the long-term future will be substantially different from the past, the present, and the short-term future. At the same time, they have not as yet entered onto the tracks which will carry them along through those futures. Their life experience has yet to put them in actual contact with their "futures" as spouses, parents, and workers. They have, as yet, no direct contact with the activities, relationships, and situations of those futures.

In sum, the future, after the transition to new work and family tracks, is not a "future around them." When the present milieu does not let us see the expected future around

us, we know less of that future. Knowing less, we have less clarity. Almost literally, we "see" it less clearly. We have no personal memories of, nor sensory contacts with, the "stuff" out of which our expectations are constructed. Under such conditions, we know the future on a second-hand basis. Our expectations are like a used car, purchased sight unseen.*

*We can recall here Cottle's (1969c) finding that when asked to place the ten most significant experiences in their life along a time line extending from the past into the future, most of their choices were placed in the past and present. What he calls their "avoidance" of the future is, in the light of the above, not an avoidance at all. In the context of their life situation, the young adults he studied were not likely to know the specific nature of the events to occur to them, much less to assess the events in terms of their relative importance over their life course.

CHAPTER NINE

CONCLUSION: PROSPECTUS AND COMMENT

The several types of explorations reported below were all initiated as part of ongoing effort to find an answer to a single question: how, and to what extent, are the ways people think about and orient themselves to the passage of time affected by the several existential milieux in which they participate and from which they derive their experiences? In terms of the theoretical framework developed here, we have been able to restate this question as one asking about the relationship of social action in life spheres to the ways in which actors possessing selves are able to locate, mark, and bind together their temporal concerns arising from the requirements of action in a life sphere.

Answering this more specific question has required, in turn, a series of methodological and empirical explorations into matters of testing the leading assumptions contained in the theoretical framework. The results of these explorations are reported below and assessed for their many implications in the conclusions of the chapters in which they appear. Our purpose here is not an inventory of these specific implications, the empirical findings on which they

are based, or the particular theoretical assumptions to which they pertain.

However, taken together the results of our ongoing explorations into the problem of time and its relation to social life have several important consequences both for sociological theory and for the capacity of man to control the quality of his life.

I

Implications of these Inquiries for Sociological Theory

Following the leads taken by Sorokin (1943), Gurvitch (1964), and Kojala (1969), we would argue from our own efforts that the study of the dual aspects of time in social life is a matter of crucial importance to the development of any general sociological theory of social process, structure, and change. Social experience, knowledge, and action have a temporal dimension that must be considered in any attempt to answer basic theoretical questions about how is society possible, how does it maintain itself over time, and why it it changes?

Social life has as a major facet the passage of time which man experiences, gives meaning to, and imposes pattern upon in the course of his existence. Social life is life in time, and cannot be adequately understood without examining the relationships among man as a creature possessing a self, the dual aspects of time, and the actions in which people engage alone and with others in pursuit of their goals.

Problems of Extensivity and Process

If our own work is to contribute to furthering the understanding of these complex interrelationships, it requires further explorations of three related types. First, we need to consider the general phenomena of extensivity and process in social action. In light of our serendipitous findings about the relationships among the temporal, spatial, and social dimensions from the analysis of the TMT data, the question of a general extensivity dimension underlying all three needs to be raised. Is there some basic dimension of extensivity which underlies the subjective and objective aspects of social experience, knowledge, and action?

Life Spheres, Temporal Thought, and the Conceptual System of Societies

This question relates, in turn, to another more general matter for further exploration. We have stressed the relationship between the repetitive patterning of social life in its objective manifestations and the ways people give subjectively meaningful and coherent patterning to their temporal thought. One was held to be a reification of the other, and both represent necessary conditions for collective life. However, we have not explored fully the more concrete and specific nature of this linkage between the patterning of temporal thought and the patterning that arises from collective action. Further, there may exist a higher level of ideational patterning which provides for

this linkage along the spatial, as well as the social and temporal, dimensions of human existence.

One approach to this problem of an underlying dimension or set of dimensions which provide the members of a society with a way of patterning their thought and conduct is found in the work of Stanley Taylor (1956). For this often neglected contributor to the contemporary sociology of knowledge, social institutions (life spheres) "represent the common response of all individuals (in the society in which they are formed) to a given situation" (1956:111) and exist on the subjective level as the many types of images and conceptions that people share about the world of everyday life.

Images and conceptions of institutions arise from social participation and experience and are reified through that participation and experience. For Taylor, this complex conceptual system provides the members of a society with a collective "logic," a "network of thought determinations," and "a set of statements by a society in its collective experience of the nature of reality" which have a "validational function upon thought and conduct [which] assures for the members of a society an ordered and meaningful existence" (1956:105, 107, 115).

Temporal images and conceptions are part of this more general and abstract conceptual system by which man imposes pattern and meaning upon his collective life. However, its full understanding requires further effort in the direction of relating our results to those of thinkers, like

Taylor, who have given consideration to the relationship of ideational conceptions to ongoing social processes.

Societal Variations in Outlooks on the Passage of Time

A final matter deserving study is that of variations in outlooks on the passage of time. One of the most obvious limitations of the present study is the fact that we have drawn our data from an American college population. Therefore, it is especially important that the results be assessed for their generalizability to other populations, both Western and non-Western. We need to explore differences among and between people of different sexes, ages, social class positions, ethnic backgrounds, and other sources of variation in the way they relate to the several life spheres of social participation and experience.

We suspect that the basic relationships reported above would remain essentially the same. However, variations in the distribution of responses to the various tests and measures should be evident and would provide further insight into the ways people construct and give expression to their temporal images and conceptions. Most previous research on temporal thought reports, with frequently gross inconsistencies, the existence of such variations in responses.

Of special importance is the matter of examining images of the future held by persons at various stages in passage along the tracks in each of the several life spheres.

For example, outlooks on future family life should be examined by contrasting the married with the single. Likewise, images of future work life might be examined by comparing those yet to choose an occupation with those who already have. Those people making many residential moves might be compared with those making few such changes in terms of their expectations about the continuity of their informal social relationships.

In this manner we can elaborate upon our results by shifting our analytical perspective from that of variations in the nature and degree of tracking characteristic of the life spheres to that of characteristics of people in their relation to the tracks within each life sphere. Further, consideration must be given to the effects of variations in sex, age, and social class position on people's relation to the tracks in a life sphere and the resulting images of the future they hold at any given point in their lives.

We need to explore both the extent of these variations and their basis in light of our theoretical and empirical explorations. For example, many studies report sex differences in outlooks on the future. Are these differences the consequence of different relationships of the sexes to the life spheres, of their socialization patterns, or of still other factors affecting the: (1) matters-at-hand that confront men and women; (2) knowledge drawn upon in constructing images of the future; and (3) constraints social

reality imposes on each sex in the realization of their aspirations?

Finally, we need to examine the effects of such variations on people's conduct, as well as their thought. For images of the future are only worth studying if, ultimately, they enable us to better understand how and why people behave in the present as members of a society existing in time.

II

The Problems of Man and Time

Ancient Greek myth tells of the reign of Cronos. Under the rule of this god, men were believed to have lived in an eternal paradise. Without material wants, a fear of death, or dependencies on one another, man lived in a golden age. Biological existence, the material world, and the relations of man to man had not yet come to require the construction of a temporal frame around human concerns. Though life went on, time had not yet been born.

As in many such myths of creation, paradise came to an end. This myth tells of how Cronos was confronted with a problem created by the birth of his own children. Through them, time threatened to enter into the eternal world over which he ruled. For in the birth of a child, a man or even a god must become aware of his own temporal existence and the transcendence of the span of collective life over that of the individual. Cronos responded to this threat by

devouring his own children, thereby avoiding the destruction of eternal paradise by time.

Yet, through the cunning of his sister-wife, Rhea, one child survived. Zeus was hidden from Cronos when he was born. Taken to Crete, Zeus grew to manhood and unleashed upon the world the forces of chaos which destroyed Cronos and threw man into the world of time.

Thus, Cronos was unable to prevent the intrusion of time into the world. Since then man has had to deal with time and the threats it poses to his existence. Living outside of paradise, man must become concerned with things that lie beyond the present. He must learn to live in time.

The myths of many peoples tell of man's fall from eternity. Of these, a recurring insight they give is of man's encounter with time, the problems that time brings to man, and the need for man to control time. For time out of control brings chaos.

Man has always been a creature of time. Yet time, as it confronts man in today's world has taken on the qualities of a "thing": an object apart from man with qualities measured by clocks and valued in dollars. Among the ancient Greeks, time was viewed as a dimension of life given to man, in fact, brutally imposed on him by forces beyond his control. While it has only been in the recent past that social scientists have demonstrated that man is the giver of time, that it is a social and cultural creation, man is now faced

with the threat of losing his control over the passage of time. With this loss may come a temporal fragmentation of the great chain of being against which man assesses the quality of his life.

In the modern industrialized societies of today's world, time itself has become the great scale of being. In becoming so, it has again taken on an aspect apart from man. In many cultures of the past, time was a dimension, not of the cosmos, but of man himself; something against which man was the measure or scale. In the transition from then to now, and as a result of it, time has become a means of scheduling, co-ordinating and segregating the activities of men and machines into that tightly knit form of social organization we call modern society.

Instead of temporality being bonded to man, man has become bonded to temporality. Cronos the devourer is in turn devoured by the machine. Today, we direct our behavior toward goals that will be reached in time, but not in life. We standardize time, give it a monetary value, make it a place into which we can place our pleasures. We have made a thing of time, and by doing so obscured our knowledge of its relation to man and are losing our capacity to impose order and meaning upon the world in which we live. In this context, the explorations reported here represent what may perhaps be only a futile attempt to help man regain his control over time and its consequences for the quality of his life.

APPENDIX I

TEMPORAL INVENTORY

QUESTIONNAIRE

This questionnaire is designed to find out about the various ways in which people think about the past and the future. There are several different types of questions. All are important and deserve your serious attention in answering them. Should you have any question about any of the instructions or the items themselves, please raise your hand and the person administering the questionnaire will assist you.

It is often helpful to have an opportunity to talk to people who have filled out the questionnaire when we are interpreting the results. Should you be interested in assisting us in the Fall, please place your name and phone number on the other side of this page.

Thank you for your cooperation in this research. A report of the results will be made in an open lecture during the club meeting hours in the Spring semester.

1. My sex is: Male() Female() Check one.

2. My age is: 15-19() 20-24() 25-29()
30-34() over 35()

3. I was born in the United States: Yes() No()
If NO, where were you born? _____

4. I am now a: Freshman() Sophomore() Junior()
Senior() Graduate Student()

5. My major is _____
Undecided()

6. My present religion is: Protestant() Catholic()
Jewish() None() Other _____

7. The religion I was brought up in was:
Same as the above()
Other, please specify _____

8. My religious beliefs are:
Strong() Moderate() Weak()

9. I identify myself as: White() Black() Oriental()
Puerto Rican() Other _____

10. My parent(s) highest level of education is:

Father	Mother
Elementary School Only	()
Some High School	()
Finished High School Only	()
Some College or Further Formal	()
Vocational Training	()
Finished College Only	()
Graduate School	()

11. How many different places have you lived in since you were born? Do not include vacations, places where you lived for less than two weeks, or any exceptional periods that took you away from your usual residence.

Number of residences: _____

12. I am presently living _____

For example, at home with my parents, by myself, with friends, relatives, my spouse, a girlfriend or boyfriend, in a dorm, commune, etc.

13. When I was growing up, both of my parents were normally living in our home: Yes() No()
If your response is NO, please answer A and B below.

A. My age at the time my parent(s) left the home was _____ years old. Enter age.

B.

	Mother not present due to:	Father not present due to:
Illness	()	()
Separation	()	()
Divorce	()	()
Death	()	()
Other reason,	()	()
please specify	_____	_____

14. My political beliefs would be closest to the type I have checked below.

Very Conservative ()
 Conservative ()
 Middle of the Road ()
 Liberal ()
 Radical ()

15. How many of your grandparents do you know about well enough to write a short (200 word) biography of them?

() () () ()
 None One Two Three All Four

16. Do you know enough about any of your great-grandparents to write a short (200 word) biography about any of them? None()

How many? _____

17. I have _____ brothers and sisters.

Of these, _____ are older than I am.

Of these, _____ are younger than I am.

18. I have at least one older brother or older sister of my own sex with whom I have a close relationship:
Yes() No()

19. Check one:

- () I am married now.
() I was married.
() I have never been married.

20. Check one. Only if you are now single.

- () I am planning to get married to someone I am going with now.
() I am going with someone now, but this may or may not result in a marriage.
() I am not going with anyone now, but I have given some serious thought to getting married in the past.
() I am not going with anyone now, nor have I thought very much about getting married.

21. How old were you when you first thought about going to college?
I was _____ years old.

22. Who, if anyone, had the greatest influence on your decision to go to college? For example, a parent, teacher, friend, relative, etc.

State person's relation to you: _____

23. Comparing my overall experience in high school (academic and otherwise) with my experience in college, I have found the two to be:

- () Very much the same.
() More similar than different.
() More different than similar.
() Very different.

24. In terms of how well you thought you would do in college before you started college, how well are you doing now?

- () Better than I expected.
() About the same as I expected.
() Not as well as I expected.
() This is my first semester, too early to tell.

25. Have you decided yet what you want to do when you have finished college?
Yes() No()

If you responded YES, please answer questions A, B, C and D below.

- A. What is it that you want to do? Please be as specific as you can. Use the line below.

- B. Have you had any direct experience with this type of work?

Check all that apply.

- () None
() Have worked in this area myself.
() Know someone working in this area.
() Have read about or observed people working in this area.

- C. How old were you when you first thought about working in this area?

Enter age in years: _____

- D. In comparison with your work and school experiences up to now, what do you think working in this area will be like?

- () Very much the same.
() More similar than different.
() More different than similar.
() Very different.

26. I am now financially independent of my parents.

Yes() No()

PLEASE GO ON TO THE NEXT PAGE AND READ THE INSTRUCTIONS AT THE TOP OF THAT PAGE BEFORE YOU START ANSWERING THE QUESTIONS THERE.



Complete the ten statements below by circling the letter of the phrase which you regard as the best choice for that statement:

- (A) My family (parents, spouse, siblings, etc.)
- (B) Friends I see mostly in my community and in groups that I belong to.
- (C) Friends I see mostly in school or at work.

- Circle one
1. I am at my best when I am with A B C
 2. It hurts me most when I am criticized by . . . A B C
 3. I prefer talking to A B C
 4. If you want to get ahead in this world it is most important that you keep up your ties with A B C
 5. The most pleasant things I do are with . . . A B C
 6. When I am worried, it is usually about things having to do with A B C
 7. I would rather spend my free time with . . . A B C
 8. Overall, of the three groups, the most important to me today is A B C
 9. The most important to me in the past was. . . A B C
 10. In the future, I expect that the most important to me will be. A B C

Complete the statements below by circling the number of the phrase that you feel is the best choice for that particular statement:

- (1) I have a very clear idea of what it will be like.
- (2) I have a good idea of what it will be like, but there are some unclear parts.
- (3) I don't have much of an idea of what it will be like, but there are some clear parts.
- (4) I have no idea of what it will be like.

- Circle one
1. The next 2-3 years of my family life 1 2 3 4
 2. The next 2-3 years of my relationships with my friends 1 2 3 4
 3. The next 2-3 years of my school/work life. . . 1 2 3 4
 4. The next 10 years or so of my family life. . . 1 2 3 4
 5. The next 10 years of my relationships with my friends 1 2 3 4
 6. The next 10 years of my work life 1 2 3 4
 7. The next 25 years or so of my family life. . . 1 2 3 4
 8. The next 25 years of my relationships with my friends 1 2 3 4
 9. The next 25 years of my work life 1 2 3 4
 10. The next 2-3 years of my life in general. . . 1 2 3 4
 11. The next 10 years or so of my life in general 1 2 3 4
 12. The next 25 years or so of my life in general 1 2 3 4

PLEASE GO ON TO THE NEXT PAGE AND READ THE INSTRUCTIONS AT THE TOP OF THAT PAGE BEFORE YOU START ANSWERING THE QUESTIONS THERE.



For each of the following statements, indicate your agreement or disagreement by checking the appropriate space to the right. Select the choice that you feel is best and use the Not Sure choice only if you are unable to make up your mind one way or the other.

Dis- Not
Agree agree Sure

All in all, I would say that my experiences with persons of the opposite sex of my own age have been happy, satisfying ones. () () ()

I believe that most people are able to determine for themselves what their life will be like. () () ()

Since there are no values which can be eternal, the only real values are those that meet the needs of a given moment. () () ()

A person should keep a diary or personal journal of what happens in their life. () () ()

Let us eat, drink, and be merry, for tomorrow we die () () ()

To be superior, a man must stand alone () () ()

It's hardly fair to bring a child into the world with the way things look for the future () () ()

I expect that I will have much the same type of family life as my own parents. () () ()

In spite of what people say, the situation of the average man is getting worse, not better. () () ()

When I get out of college, I will probably work for the rest of my life () () ()

Dis- Not
Agree agree Sure

Nowadays, a person has to live pretty much for today and let tomorrow take care of itself. () () ()

All in all, my life today is not as good as I expected it to be when I was younger. () () ()

In life, an individual should for the most part "go it alone", assuring himself of privacy, having much time to himself, attempting to control his own life. () () ()

I believe in astrology. () () ()

Most public officials (people in public office) are not really interested in the problems of the average man () () ()

I have what I would regard as an active social life. () () ()

These days a person doesn't really know whom he can count on. () () ()

It is the man who stands alone who excites our admiration. () () ()

Nothing is static, nothing is everlasting, at any moment one must be ready to meet the change in the environment by a necessary change in one's moral view () () ()

PLEASE GO ON TO THE NEXT PAGE AND CAREFULLY READ THE INSTRUCTIONS THERE BEFORE COMPLETING THE REST OF THIS QUESTIONNAIRE. IF YOU WANT ANY ASSISTANCE IN INTERPRETING THOSE INSTRUCTIONS, ASK THE PERSON ADMINISTERING THE QUESTIONNAIRE.



INSTRUCTIONS

The purpose of this part of the questionnaire is to measure the meanings of certain concepts by having them judged against a series of description scales. In taking this test, please make your judgments on the basis of what these concepts mean to you. On the tops of the following pages you will find the concept printed in bold type. You are to rate the concept on each of the scales in order.

If you feel that the concept on the top of the page is very closely related to one end of the scale, place your mark as follows:

Fair X : : : : : Unfair
or
Fair : : : : : X Unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), place your mark as follows:

Serious : X : : : : : Humorous
or
Serious : : : : : X : Humorous

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), place your mark as follows:

Expensive : : X : : : : Cheap
or
Expensive : : : : : X : Cheap

If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, place your mark in the middle space:

Safe : : : : : X : : : Dangerous

- IMPORTANT:** (1) The direction toward which you check depends on which of the two ends of the scale seems most characteristic of the concept you are judging. Never put more than one check on a single scale.
- (2) Place your checks in the middle of the spaces.
- (3) Make each item a separate and independent judgment. It is your first impression that we want. Work at a fairly high speed.
- (4) Do not look back and forth between the pages.
- (5) All scales for a single concept must be answered for the score on the concept to be valid. Please work carefully.

MY FUTURE

Good _____:_____ Bad _____
 Narrow _____:_____ Broad _____
 Moving _____:_____ Still _____
 Tense _____:_____ Relaxed _____
 Eternal _____:_____ Momentary _____
 Same _____:_____ Different _____
 Large _____:_____ Small _____
 Shallow _____:_____ Deep _____
 Active _____:_____ Passive _____
 Far _____:_____ Near _____
 Certain _____:_____ Uncertain _____
 Weak _____:_____ Strong _____
 Happy _____:_____ Sad _____
 Slow _____:_____ Fast _____
 Long _____:_____ Short _____
 Empty _____:_____ Full _____
 Alive _____:_____ Dead _____
 Familiar _____:_____ Unfamiliar _____
 Useless _____:_____ Useful _____
 Like a _____:_____ Like a _____
 Circle _____:_____ Circle _____
 Straight Line _____:_____ Straight Line _____

MY PAST

Good _____:_____ Bad _____
 Narrow _____:_____ Broad _____
 Moving _____:_____ Still _____
 Tense _____:_____ Relaxed _____
 Eternal _____:_____ Momentary _____
 Same _____:_____ Different _____
 Large _____:_____ Small _____
 Shallow _____:_____ Deep _____
 Active _____:_____ Passive _____
 Far _____:_____ Near _____
 Certain _____:_____ Uncertain _____
 Weak _____:_____ Strong _____
 Happy _____:_____ Sad _____
 Slow _____:_____ Fast _____
 Long _____:_____ Short _____
 Empty _____:_____ Full _____
 Alive _____:_____ Dead _____
 Familiar _____:_____ Unfamiliar _____
 Useless _____:_____ Useful _____
 Like a _____:_____ Like a _____
 Circle _____:_____ Circle _____
 Straight Line _____:_____ Straight Line _____



DO THIS QUESTION FIRST

If you had a Time Machine available to you that would take you anywhere you wanted to go in the past, present or future for up to 24 hours.....

A. Where would you go? Please state both the time and the place as specifically as you can.

B. If it is into the past or the future, how far from this date (today) would you go? Please be as specific as you can.

C. Why would you go there?

D. Using the scales on the other side of this page, rate your TIME AND PLACE CHOICE AS A SINGLE CONCEPT as you did with the concepts on the preceding pages.

[illegible]

APPENDIX II

BACKGROUND AND PROCEDURES USEDIN THE FACTOR ANALYSISThe Uses of Factor Analysis

Factor analysis is a transformational technique designed to provide a linear description of the relationships among a set of scores in a correlation matrix. As such, it has two primary uses. First, a set of original scores can be combined into a smaller set of indices, providing a more parsimonious treatment of the original variables. The second and more frequent use of factor analysis is in the search for the underlying factors or hypothetical constructs which account for the correlations among the original set of scores. One tries to get an interpretative understanding of these factors by examining how strongly each of the variables associates with them.

This strength of association is indicated by the factor loadings. These loadings represent the degree of association of each of the original variables with the several factors. If a variable has a high loading on a factor and a very low loading on other factors in the matrix, that variable can be regarded as a relatively "pure" indicator of the nature of that factor. From this

it should be clear that the variables define the factors through the structure and pattern of their loadings. They are not themselves the factors. Just what the factors are requires theoretical interpretation consistent with the whole factor matrix of n variables by m factors.

Ideally, one would like to find a set of factors both theoretically meaningful and well-measured by the test items which define them. One approximates this ideal by hypothesizing the expected number and type of factors in advance and then selecting measures which will provide a test of that hypothesis.

However, the number of factors found is limited by the nature of the data itself. Extraction of factors from the correlation matrix proceeds in such a way that after the effects of the first factor have been removed from the matrix, successive additional factors are sought until one accounts for all the covariance present.

In practice, all possible factors are rarely extracted. Each successive factor extracted accounts for an ever-diminishing proportion of the residual variance. With a large correlation matrix, one could probably extract many factors. However, only the first few might be open to meaningful interpretation. Further, factor analysis is covariance oriented and some of the variance in any correlation matrix will be either error variance or specific to the variables being correlated. For these reasons, less than the total number of possible factors were extracted in

each of the analyses presented in this study. The decision as to when to stop extracting factors here was based on the theoretical and methodological grounds discussed in Chapter Eight.

Calculation of Factor Solutions

The procedure used to calculate the factor solutions for this study followed these four basic steps:

A. A correlation matrix was computed for all variances used in the analysis for all students with non-missing data. For the factor analysis of the Clarity of Future Life scales this was a 12x12 matrix for 311 cases.

B. The squared multiple correlation (SMC) of each variable with the other variables was then computed and entered into the diagonal of the correlation matrix. The SMC was thus used as an estimate of the communalities (h^2) following the recommendation of Harman (1967:86-88) to the effect that this measure of predicted common variance is the "best possible" approximation of the true communalities. The latter are somewhere between the SMC and one.

C. A Principal Factor, or iterative, factor analysis was done with the number of factors to be extracted specified in advanced. In the CFL scale factor analysis first three and then four significant roots were assumed.

D. Orthogonal rotations were done on the result of this initial solution to optimize the interpretability. A varimax rotation solution was calculated.

Output from these four steps included: (1) Means, variances, and standard deviations for all the variables used in the calculation of the correlations; (2) the correlation matrix with the SMC's in the diagonal; (3) the record of results of the three iterations; (4) the values and sum of all positive and negative eigenroots as well as the calculated diagonal values and the output eigenvectors; (5) the complete Principal-Factor solution matrix; (6) the Varimax rotated factor matrix and its transformation matrix; (7) the record of variance change for each rotation cycle; and (8) the sum of squares for each of the factors in the rotated matrix. This data was then used to calculate the proportion of the total variance accounted for by the individual factors. This variance is calculated as the sum of squares of the rotated factor loadings divided by the number of scales used, times 100.

Interpretation of Factor Solutions

Factor interpretation is still very much of an art. The factor matrix with its pattern of loadings for each variable on each factor is sometimes only suggestive of the underlying dimensions or hypothetical constructs that each factor is interpreted to represent. While some patterns may emerge very clearly from the data and some factors show a stronger pattern of measurement than others, both the separate factors and the overall pattern of loadings must be taken into account. The end result of the interpretative

process must form a whole which is theoretically meaningful as well as internally consistent.

In general, interpretation is enhanced by:

A. Observing the pattern and size of the scale loadings on a factor. Since a loading is the extent to which that variable associates with the factor, the higher the loading of a scale on a factor, the better it is as an indicator of the nature of that factor. In addition, attention should be paid to the lower loading scales on each factor since they may provide an indication of the relationships between the factor and insight into the factor matrix as a whole.

B. Observe the separation of the scale loadings on one factor from the loadings of the same scales on other factors. A single scale may show loadings on several factors. As such, it is an indicator of all of them to varying extents.

C. Looking for identifiable patterns of scales loading on a single factor or across several factors. This may assist in the understanding of the properties of the factor matrix as a whole as those properties illuminate the relationships among the original variables used in the correlation matrix.

D. Most importantly, comparing the results of the factor analysis with the theoretical assumptions guiding the research as a whole.

BIBLIOGRAPHY

- Aberle, D. F., A. K. Davis, M. J. Levy, Jr. and F. X. Sutton
 1950 "The functional prerequisites of a society." *Ethics* 60:100-11.
- Anderson, Nels
 1961 *Work and Leisure*. London: Routledge and Kegan Paul.
- Apostle, Chris N.
 1966 "Time consciousness and social structure." *Indian Sociological Bulletin* 3:251-66.
- Barabasz, Arreed F.
 1970 "Temporal orientation and academic achievement in college." *Journal of Social Psychology* 80:231-2.
- Barndt, Deborah
 1969 "Changing time-conceptions." *Summation* 1:17-28.
- Barndt, Robert J. and Donald M. Johnson
 1955 "Time orientation and social class." *Journal of Abnormal and Social Psychology* 51:343-5.
- Barton, Allen H.
 1955 "The concept of property-space in social research." Pp. 40-53 in Paul Lazarsfeld and Morris Rosenberg (eds.), *The Language of Social Research: A Reader in the Methodology of Social Research*. New York: Free Press.
- Beidelman, T. O.
 1963 "Kaguru time reckoning: an aspect of the cosmology of an East African people." *Southwestern Journal of Anthropology* 19:9-20.
- Bell, Wendell and James A. Mau
 1971 "Images of the future: theory and research." Pp. 6-64 in Wendell Bell and James A. Mau (eds.), *The Sociology of the Future*. New York: Russell Sage.
- Berger, Peter L. and Thomas Luckmann
 1967 *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. Garden City: Doubleday-Anchor.

- Bews, James E.
1970 "Future time perspective and academic achievement in black adolescents." Doctoral dissertation. Columbia University.
- Blood, Robert O., Jr. and Donald M. Wolfe
1960 Husbands and Wives: The Dynamics of Married Living. New York: Free Press.
- Bohannon, Paul
1953 "Concepts of time among the Tiv of Nigeria." Southwestern Journal of Anthropology 9:251-62.
- Bolton, Charles D.
1961 "Mate selection as the development of a relationship." Marriage and Family Living 23:234-40.
- Boulding, Kenneth E.
[1956] The Image: Knowledge in Life and Society. Ann Arbor: Ann Arbor Paperback.
- Brenton, Myron
1974 Friendship. Briarcliff Manor: Stein and Day.
- Brim, Orville G. and Raymond Forer.
1956 "A note on the relation of values and social structure to life planning." Sociometry 19:54-60.
- Broderick, Carlfred
1966 "Socio-sexual development in the suburban community." The Journal of Sex Research 2:1-24.
- Buhler, Roald
1972 PSTAT: A Computing System for File Manipulation and Statistical Analysis of Social Science Data. Version 3.04. Princeton: Princeton University Computer Center.
- Calkins, Kathy
1970 "Time: perspectives, marking and styles of usage." Social Problems 17:487-501.
- Cantril, Hadley
1965 The Pattern of Human Concerns. New Brunswick: Rutgers University Press.
- Cohen, Norman
1957 The Pursuit of the Millenium. Fairlawn, N.J.: Essential Books.
- Cohen, Stanley and Laurie Taylor
1970 "The experience of time in long-term imprisonment." New Society 16:1156-8.

- Coser, Lewis A. and Rose L. Coser
 1963 "Time perspective and social structure." Pp. 638-47 in Alvin W. Gouldner and Helen P. Gouldner (eds.), *Modern Society*. New York: Harcourt, Brace, and World.
- Cottle, Thomas J.
 1967 "The circles test: an investigation of perceptions of temporal relatedness and dominance." *Journal of Projective Techniques and Personality Assessment* 31: 58-71.
 1968 "The location of experience: a manifest time orientation." *Acta Psychologica* 28:129-49.
 1969a "The money game: notes on fantasies of temporal recovery and preknowledge." *Diogenes* 65:110-34.
 1969b "The durational inventory: subjective extensions of temporal zones." *Acta Psychologica* 29:333-52.
 1969c "Future orientations and avoidance: speculations on the time of achievement and social roles." *Sociological Quarterly* 10:419-37.
- Cottle, Thomas J. and Stephen L. Klineberg
 1974 *The Present of Things Future: Explorations of Time in Human Experience*. New York: Free Press.
- Cottle, Thomas J., Joseph H. Pleck, and S. Kakar
 1968 "Time and the content of significant life experiences." *Perceptual and Motor Skills* 27:155-71.
- Cottrell, W. Fred
 1939 "Of time and the railroader." *American Sociological Review* 4:190-98.
- Danziger, Kurt
 1963 "Ideology and utopia in South Africa: a methodological contribution to the sociology of knowledge." *British Journal of Sociology* 14:59-76.
- Davids, Anthony, Catherine Kidder and Melvyn Reich
 1962 "Time orientation in male and female delinquents." *Journal of Abnormal and Social Psychology* 64:239-40.
- Davis, Fred
 1956 "Definitions of time and recovery in paralytic polio convalescence." *American Journal of Sociology* 61:582-7.
- de Grazia, Sebastian
 1962 *Of Time, Work, and Leisure*. New York: Twentieth Century Fund.

Doob, Leonard W.

1960 Becoming More Civilized: A Psychological Exploration. New Haven: Yale University Press.

1971 Patterning of Time. New Haven: Yale University Press.

Dubin, Robert

1956 "Industrial worker's worlds: a study of the 'central life interest' of industrial workers." Social Problems 3:131-42.

Durkheim, Emile

1965 The Elementary Forms of Religious Life. New York: Free Press.

Durkheim, Emile and Marcel Mauss

1963 Primitive Classification. Chicago: University of Chicago Press.

Eisenstadt, S. N.

1956 From Generation to Generation: Age Groups and Social Structure. New York: Free Press.

Ellis, Laura M. et al.

1955 "Time orientation and social class." Journal of Abnormal and Social Psychology 51:146-7.

Epley, David and David R. Ricks

1963 "Foresight and hindsight in the TAT." Journal of Projective Techniques 27:51-9.

Eson, Morris E.

1951 "An analysis of time perspectives at five age levels." Doctoral dissertation. University of Chicago.

Ezekiel, Raphael

1968 "The personal future and Peace Corps competence." Journal of Personality and Social Psychology 8:1-26.

Farber, Maurice L.

1944 "Suffering and time perspective of the prisoner." Pp. 153-227 in Authority and Frustration: Studies in Topological and Vector Psychology, III. University of Iowa Studies in Child Welfare, XX.

Farberman, Harvey A.

1970 "Mannheim, Cooley, and Mead: toward a social theory of mentality." Sociological Quarterly 11: 3-13.

- Fink, Howard H.
 1957 "The relationship of time perspective to age, institutionalization, and activity." *Journal of Gerontology* 12:414-7.
- Firey, Walter
 1967 "Conditions for the realization of values remote in time." Pp. 147-59 in Edward A. Tiryakian (ed.), *Sociocultural Theory, Values, and Sociocultural Change: Essays in Honor of Pitirim A. Sorokin*. New York: Harper Torchbooks.
- Fraisse, Paul
 [1957] *The Psychology of Time*. Translated by J. Leith.
 1963 New York: Harper and Row.
- Fraser, J. T. (ed.)
 1966 *The Voices of Time*. New York: George Braziller.
- Gerth, Hans and C. Wright Mills
 1953 *Character and Social Structure*. New York: Harcourt, Brace and World.
- Gillespie, James M. and Gordon W. Allport
 1955 *Youth's Outlook on the Future*. Garden City, N.Y.: Doubleday.
- Gioscia, Victor
 1967 "Adolescence, addiction, and achrony." Pp. 330-45 in Robert Endleman (ed.), *Personality and Social Life*. New York: Random House.
- Glaser, Barney G. and Anselm Strauss
 1968 *A Time for Dying*. Chicago: Aldine.
 1971 *Status Passage: A Formal Theory*. Chicago: Aldine-Atherton.
- Goldman, Daniel R.
 1973 "Managerial motivations and central life interests." *American Sociological Review* 38:119-26.
- Goldthorpe, John H., David Lockwood, Frank Bechhofer and
 1968 Jennifer Platt
The Affluent Worker: Industrial Attitudes and Behavior. Cambridge Studies in Sociology 1. Cambridge: Cambridge University Press.
- Goode, William J.
 1963 *World Revolution and Family Patterns*. New York: Free Press.

- Granet, Marcel
1934 La Pensée Chinoise. Paris: Renaissance.
- Greene, Joel E. and Alan H. Roberts
1961 "Time orientation and social class: a correction."
Journal of Abnormal and Social Psychology 62:141.
- Gurvitch, Georges
1964 The Spectrum of Social Time. Translated by Myrtle
Korenbaum. Dordrecht-Holland: R. Reidel.
- Halbwachs, Maurice
1925 Les Cadres Sociaux de la Memoire. Paris: Alcan.
- Hallowell, A. I.
[1937] "Temporal orientation in Western civilization and
1967 in a pre-literate society." Pp. 216-35 in his
Culture and Experience. New York: Schocken.
- Harman, Harry
1967 Modern Factor Analysis. Chicago: University of
Chicago Press.
- Hausknecht, Murray
1962 The Joiners. New York: Bedminster Press.
- Heirich, Max
1964 "The use of time in the study of social change."
American Sociological Review 29:386-97.
- Hess, Beth
1972 "Friendship." Pp. 359-93 in Matilda W. Riley et
al., Aging and Society: A Sociology of Age Strati-
fication, Vol. 3. New York: Russell Sage.
- Hill, Reuben
1966 "The significance of the family in population
research." Pp. 3-22 in William T. Liu (ed.),
Family and Fertility. Notre Dame: University of
Indiana Press.
- Hoagland, Hudson
1966 "Some biochemical considerations of time." Pp. 312-
29 in J. T. Fraser (ed.), The Voices of Time. New
York: George Braziller.
- Hobsbawn, Eric J.
1959 Primitive Rebels. Manchester: University of Man-
chester Press.
- Hovland, Carl I., Arthur A. Lumsdaine and Fred Sheffield
1949 Experiments on Mass Communication. Princeton:
Princeton University Press.

- Huber, Bettina and Wendell Bell
 1971 "Sociology and the emergent study of the future." American Sociologist 6:287-95.
- Hubert, H. and Marcel Mauss
 1909 "Etude sommaire de la représentation du temps dans la religion et la magie." In their *Mélanges d'Histoire des Religions*. Paris: Alcan.
- Inkeles, Alex
 1969 "Making men modern: on the causes and consequences of individual change in six developing countries." American Journal of Sociology 75:208-25.
- Judson, Abe J. and Cynthia E. Tuttle
 1966 "Time perspective and social class." Perceptual and Motor Skills 23:1074.
- Kar, S. B.
 1971 "Individual Aspirations as related to early and late acceptance of contraception." Journal of Social Psychology 83:235-45.
- Kastenbaum, Robert
 1961 "The dimensions of future time perspective: an experimental analysis." Journal of General Psychology 65:203-18.
 1965 "The direction of time perspective: I. the influence of affective set." Journal of General Psychology 73:189-201.
- Kendall, Martha B. and Ralph F. Sibley
 1970 "Social class differences in time orientation: artifact?" Journal of Social Psychology 82:187-91.
- Klineberg, Stephen L.
 1968 "Future time perspective and the preference for delayed rewards." Journal of Personality and Social Psychology 8:253-7.
- Kluckhohn, Florence F. and Fred L. Strodbeck
 1961 Variations in Value Orientations. Evanston, Ill.: Row, Peterson.
- Kojala, Jiri
 1969 Social System and Time and Space: An Introduction to the Theory of Recurrent Behavior. Pittsburgh: Duquesne University Press.
- Lavine, Thelma Z.
 1942 "Sociological analysis of cognitive norms." Journal of Philosophy 39:342-56.

- Lazarsfeld, Paul F. and Allen H. Barton
 1955 "Some general principles of questionnaire classification." Pp. 83-93 in Paul F. Lazarsfeld and Morris Rosenberg (eds.), *The Language of Social Research*. New York: Free Press.
- Leach, Edmund R.
 1961 *Rethinking Anthropology*. London: Athlone Press.
- Leonhard, Philip
 1968 "The social basis of the conception of time: an inquiry into the sociology of knowledge." Unpublished manuscript.
- LeShan, Lawrence
 1952 "Time orientation and social class." *Journal of Abnormal and Social Psychology* 47:589-92.
- Lessing, Elise E.
 1968 "Demographic, developmental, and personality correlates of length of future time perspective (FTP)." *Journal of Personality* 36:183-201.
- Lévy-Bruhl, Lucien
 1925 *La Mentalité Primitive*. Paris: Alcan.
- Lewin, Kurt
 1936 *Principles of Topological Psychology*. Translated by F. Heider and Grace Heider. New York: McGraw-Hill.
 1948 "Time perspective and morale." Pp. 104-5 in Gertrude Lewin (ed.), *Resolving Social Conflicts*. New York: Harper.
- Lewis, Wyndham
 [1927] *Time and Western Man*. Boston: Beacon Press.
 1957
- Liebow, Elliot
 1967 *Tally's Corner*. Boston: Little Brown.
- Lipset, Seymour Martin
 1960 *Political Man: The Social Bases of Politics*. Garden City, N.Y.: Doubleday.
- Lipset, Seymour Martin, James Coleman and Martin Trow
 1956 *Union Democracy*. Garden City, N.Y.: Doubleday-Anchor.
- Lyman, Stanford M. and Marvin B. Scott
 1970 *A Sociology of the Absurd*. New York: Appleton-Century-Crofts.

- McClelland, David C.
1961 The Achieving Society. Princeton: Van Nostrand.
- McKinney, John C.
1967 "Constructive typology: explication of a procedure." Pp. 213-43 in John T. Doby (ed.), An Introduction to Social Research. 2d. ed. New York: Appleton-Century Crofts.
- Maltz, Daniel N.
1968 "Primitive time-reckoning as a symbolic system." Cornell Journal of Social Relations 3:85-113.
- Mann, Harriet, Miriam Siegler and Humphrey Osmond
1972 "The psychotopology of time." Pp. 142-78 in Henri Yaker et al. (eds.), The Future of Time: Man's Temporal Environment. Garden City, N.Y.: Doubleday-Anchor.
- Mannheim, Karl
1936 Ideology and Utopia. New York: Harcourt, Brace and World.
- Mau, James A.
1968 Social Change and Images of the Future. Cambridge, Mass.: Schenkman.
- Mead, George Herbert
1964 On Social Psychology. Edited with an introduction by Anselm Strauss. Chicago: University of Chicago Press.
- Meade, Robert D.
1971 "Future time perspectives of college students in America and in India." Journal of Social Psychology 83:175-82.

1972 "Future time perspectives of Americans and sub-cultures in India." Journal of Cross-Cultural Psychology 3:93-99.
- Merton, Robert K.
1957 Social Theory and Social Structure. New York: Free Press.
- Miller, S. M., Frank Reissman and Arthur A. Seagull
1968 "Poverty and self-indulgence." Pp. 285-302 in L. A. Ferman, J. L. Kornbluh and A. Haber (eds.), Poverty in America. Ann Arbor: University of Michigan Press.
- Mishima, Yukio
1959 The Temple of the Golden Pavilion. New York: Knopf.

- Moore, Wilbert E.
1963 Man, Time, and Society. New York: Wiley.
- Nilsson, Martin P.
1920 Primitive Time-Reckoning. (Skirfter Utgivna Av Humaniska Vetenskapssamfundet I Lund). Lund: C. W. K. Gleerup.
- Oberndorf, C. P.
1941 "Time--its relationship to reality and purpose." Psychoanalytic Review 28:139-55.
- Ohnuki-Tierney, Emiko
1969 "Concepts of time among the Ainu of the Northwest Coast of Sakhalin." American Anthropologist 71: 488-92.
- Ornauer, H., J. Galtung, H. Wiberg and A. Sicinski (eds.)
Forth- Images of the World in the Year 2000: A Compara-
coming tive Ten Nation Study. The Hague: Mouton.
- Osgood, Charles E., George J. Suci and Percy H. Tannenbaum
1957 The Measurement of Meaning. Urbana: University of Illinois Press.
- Ossowski, Stanislaw
1960 Class Structure in the Social Consciousness. New York: Free Press.
- Parsons, Talcott
1951 The Social System. New York: Free Press.
- Parsons, Talcott et al.
[1951] "Some fundamental categories of the theory of
1962 action: a general statement." Pp. 3-29 in Talcott Parsons and Edward A. Shils (eds.), Toward a General Theory of Action. New York: Harper and Row.
- Panoff, Michael
1969 "The notion of time among the Maenge people of New Britain." Ethnology 8:153-66.
- Piaget, Jean
[1927] The Child's Conception of Time. Translated by
1971 A. J. Pomerans. New York: Ballantine Books.
- Platt, Jerome J., Russell Eisenman, Oswald Delisser and Alex Darbes
1971 "Temporal perspective as a personality dimension in college students: a re-evaluation." Perceptual and Motor Skills 33:103-9.

- Platt, Jerome J., Dennis D. Mousakis and Russell Eisenman
1968 "Sex and birth order, and future expectations of occupational status and salary." *Journal of Individual Psychology* 24:170-3.
- Platt, Jerome J. and Robert E. Taylor
1967 "Homesickness, future time perspective, and the self concept." *Journal of Individual Psychology* 23:94-7.
- Pocock, David F.
1964 "The anthropology of time-reckoning." *Contributions to Indian Sociology* 7:18-30.
- Polak, Frederick L.
1961 *The Image of the Future: Enlightening the Past, Orienting the Present, Forecasting the Future.* 2 volumes. New York: Oceana Publications.
- Postema, Leonard J.
1971 "Reminiscing, time orientation and self-concept in aged males." Doctoral dissertation. Michigan State University.
- Rainwater, Lee
1960 *And the Poor Get Children.* Chicago: Quadrangle Books.
- Reschazy, Rudolf
1965 "Socio-culturali dello sviluppo: la nozione sociale del tempo." (Socio-cultural factors of development: the social notion of time.) *Tempi Moderni* 22:87-95.
- 1970 *Temps Social et Développement: Le Role des Facteurs Socio-culturels dans la Croissance.* Brussels: La Renaissance du Livre.
- Roberts, Alan H. and Joel E. Greene
1971 "Cross-cultural study of relationships among four dimensions of time perspective." *Perceptual and Motor Skills* 33:163-73.
- Ruiz, Rene A., Ronald S. Revich and Herbert H. Krauss
1967 "Tests of temporal perspective: do they measure the same construct?" *Psychological Reports* 21: 849-52.
- Rychlak, Joseph F.
1972 "Manifest anxiety as reflecting commitment to the psychological present at the expense of cognitive futurity." *Journal of Consulting and Clinical Psychology* 38:70-9.

- Schutz, Alfred
 1959 "Tiresias, or our knowledge of future events." Social Research 26:71-89.
- 1970 On Phenomenology and Social Relations. Edited by Helmut R. Wagner. Chicago: University of Chicago Press.
- Slotkin, James S.
 1960 From Field to Factory: New Industrial Employees. Glencoe, Ill.: Free Press.
- Sorokin, Pitirim A.
 1937 Social and Cultural Dynamics, Vol. II. New York: American Book.
- 1943 Sociocultural Causality, Space, Time. Durham, N.C.: Duke University Press.
- Stark, Werner
 1958 The Sociology of Knowledge. London: Routledge and Kegan Paul.
- Stein, Kenneth B. and Kenneth H. Craik
 1965 "Relationship between motorific and ideational activity preference and time perspective in neurotics and schizophrenics." Journal of Consulting Psychology 29:460-7.
- Stein, Kenneth, Theodore R. Sarbin and James A. Kulik
 1968 "Future time perspective: its relation to the socialization process and the delinquent role." Journal of Consulting and Clinical Psychology 32: 257-64.
- Taylor, Stanley
 1956 Conceptions of Institutions and the Theory of Knowledge. New York: Bookman.
- Teahan, John E.
 1958 "Future time perspective, optimism and academic achievement." Journal of Abnormal and Social Psychology 57:379-80.
- Toban, Eileen V.
 1970 "Relation between future time perspective, age, and militancy." Journal of Genetic Psychology 116:63-8.
- Toffler, Alvin
 1971 Future Shock. New York: Bantam Books.

- Tolor, Alexander, Gary G. Brannigan and Vincent M. Murphy
 1970 "Psychological distance, future time perspective and internal-external expectancy." *Journal of Projective Techniques and Personality Assessment* 34:283-94.
- Wallace, Anthony F. C.
 1961a *Culture and Personality*. New York: Random House.
 1961b "The psychic unity of human groups." Pp. 129-63 in Bert Kaplan (ed.), *Studying Personality Cross-culturally*. New York: Harper and Row.
- Wallace, Melvin
 1956 "Future-time perspective in schizophrenia." *Journal of Abnormal and Social Psychology* 52:240-5.
- Wallace, Melvin and Albert I. Rabin
 1960 "Temporal experience." *Psychological Bulletin* 57:213-39.
- Whorf, Benjamin L.
 1956 *Language, Thought, and Reality*. Edited by J. B. Carroll. Cambridge: M.I.T. Press.
- Winthrop, Henry
 1968 "The sociologist and the study of the future." *American Sociologist* 3:136-45.
- Wolk, Rochelle B.
 1970 "The dimensions of future time perspective in black and white children." Doctoral dissertation. Fordham University.
- Worsley, Peter
 1957 *The Trumpet Shall Sound*. London: MacGibbon and Kee.
- Yaker, Henri, Humphrey Osmond and Frances Cheek (eds.)
 [1971] *The Future of Time: Man's Temporal Environment*.
 1972 Garden City, N.Y.: Doubleday.
- Zenter, H.
 1966 "The social space-time relationship: a theoretical formulation." *Sociological Inquiry* 36:61-79.
- Zern, David
 1970 "The influence of certain child-rearing factors upon the development of a structured and salient sense of time." *Genetic Psychology Monographs* 81:197-254.