

# The life course as a theoretical orientation: Sequences of person-situation interaction<sup>1</sup>

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## ABSTRACT

The life course is proposed as a theoretical orientation concerned with the problems of describing, understanding, generalizing about, predicting, and intentionally changing the course of lives. A life course orientation provides a framework for analyzing the causal and probabilistic structure of the course of experience in individual lives, groups of lives, and lives in general.

The life course can be conceptualized as a sequence of person-situation interactions, or as a sequence of behavior-determining, person-determining, and situation-determining processes. This perspective is illustrated through an analysis of the careers of heroin users, and through a critical examination of several common strategies for predicting behavior. The study of lives is distinguished from the study of personality, and the historical and theoretical background for a life course orientation is briefly reviewed.

In the history of the behavioral sciences, we can identify a number of theoretical orientations which have each had a profound influence upon the questions that psychologists ask, the puzzles they try to solve, and the empirical research which they conduct. The function of a theoretical orientation is to "indicate types of variables which are somehow to be taken into account rather than specifying determinate relationships between particular variables" (Merton, 1968, p. 142). Psychodynamic, trait,

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behavioral, and phenomenological orientations have each directed our attention to a specific range of phenomena, suggested a kind of order which may be discovered in the world, and had distinct implications for theory construction, research design, and practical affairs.

The intentions of this paper are to outline the life course as a theoretical orientation, and to suggest that order may be discovered in the analysis of sequences of person  $\times$  situation interaction. The life course may be defined as the sequence of events and experiences in a life from birth until death, and the chain of personal states and encountered situations which influence, and are influenced by this sequence of events. The generative questions for a life course orientation are: What kinds of order or regularity may be found in the sequence of events and processes in individual lives, groups of lives, or lives in general? What is the causal and probabilistic structure of the course of experience? What processes (cognitive, affective, physiological, social, and historical) are responsible for the flow of subjective experience and overt behavior over time? Most simply, how do our lives work?

A life course orientation is concerned with the enduring problems of describing, understanding, making predictions about, and designing and evaluating efforts to change the course of lives. Specific generalizations about the life course may come and go (cf. Cronbach, 1975; Gergen, 1973), but these problems remain. To the extent that the structure of the life course varies across cultures and historical periods, our theories may need to be continually revised and freshly constructed.

The objectives of a life course orientation are somewhat different than those in the study of personality. Consider the following question: What are the aspirations of personality psychologists? If personality psychologists could know anything in the world, what would they most like to know? Answers will undoubtedly vary widely, but representative aspirations might be described as (a) understanding the psychological mechanisms and processes which regulate the expression of impulses, the satisfaction of needs, and the contents of consciousness, (b) identifying and measuring the major dimensions of personality, determining their correlational structure, and assessing their relationship to outcomes in the natural environment, (c) understanding the ways in which behavior is controlled by situational stimuli, (d) under-

standing how phenomenological awareness and self-concepts affect behavior, or (e) understanding how persons and situations reciprocally interact in determining behavior. In contrast, studies of the life course have more explicit temporal and ecological dimensions, and are concerned with questions about the causal structure of sequences of experience, about the processes through which persons and situations interact over the course of time, and about the movement of persons through social and historical worlds. The analysis of persons or personalities is not the same as the analysis of lives. Persons are one component of "the life structure" (Levinson et al., 1978), or of the life history process. These distinctions have not always been made, and it should be noted that study of the life course is congruent with several streams within the history of personality psychology, such as the personality of Henry Murray (1938), Robert White's (1966) study of lives, and recent investigations in interactional psychology (Magnusson & Endler, 1977).

The second section of this paper discusses sequences of person  $\times$  behavior  $\times$  situation interaction as an approach to conceptualizing the life course. The third section illustrates this orientation through an analysis of careers of heroin use, while the fourth section examines the implications of a life course orientation for the prediction of behavior. The fifth section provides a short overview of the historical and theoretical background of a life course orientation.

### *A Sequential Interactionist Conceptualization of the Life Course*

The life course may be conceptualized as a sequence of person  $\times$  situation interactions, or, more specifically, as a sequence of person  $\times$  behavior  $\times$  situation interactions. This is certainly not the only way of conceptualizing the life course (Runyan, 1975), but it is a useful one, and one which relates the life course to current discussions of interactionism in personality and social psychology (e.g., Alker, 1972; Argyle & Little, 1972; Bem & Allen, 1974; Bowers, 1973; Ekehammar, 1974; Endler & Magnusson, 1976; Magnusson & Endler, 1977; Mischel, 1973; and Wachtel, 1973).

Olweus (1977) has distinguished at least four different meanings of the term *interaction*: (1) unidirectional interaction, or the combination of person and situation variables in determining behavior, (2) the interdependency of person and situation variables,

as in the situation being defined by a person's perception of it, (3) reciprocal interaction, or the ways in which persons and situations influence each other over time, and (4) statistical interaction, as used in the analysis of variance. The limitations of interaction terms in the analysis of variance for studying person  $\times$  situation interaction have been convincingly argued (Golding, 1975; Olweus, 1977). The fact that persons can perceive and conceptualize situations in a variety of ways, and that the perceived situation may be influential in determining behavior, does not, in my view, make persons and situations analytically inseparable (sense 2). So for this paper, interaction will refer to the combination of personal and situational variables in determining behavior (sense 1). This unidirectional interaction will be distinguished from reciprocal interaction over time (sense 3).

A life course orientation is concerned with sequences of experience in the natural environment, and thus with the processes through which persons, situations, and behaviors influence each other over the course of time. This is interactionism with an explicit temporal dimension, and is consistent with what Olweus (1977) and Bandura (1977) describe as reciprocal interaction, or Magnusson and Endler (1977) describe as "dynamic" interaction. It is also interaction with an explicit ecological dimension, in its concern with persons' movements through a social structure and an historical world over the course of time. This paper furthers the discussion of interaction sequences by analyzing the empirical probabilities of changes in persons, behaviors, and situations over a four-stage sequence (in careers of heroin use), by indicating the operation of different causal factors at different stages in the process, and by briefly exploring the implications of a sequential interactionist framework for prediction.

It is widely agreed (e.g., Magnusson & Endler, 1977; Overton & Reese, 1973; Pervin, in press) that recognizing interaction is not sufficient, and that attention needs to be paid to the *how* of interaction, or to the cognitive, affective, physiological, and social processes which determine how persons function within situations.

The life course can be conceptualized as a sequence of processes, as well as a sequence of interactions (cf., Haan, 1977, who argues that personality can best be conceptualized as processes and their organization). Three of the most general processes that

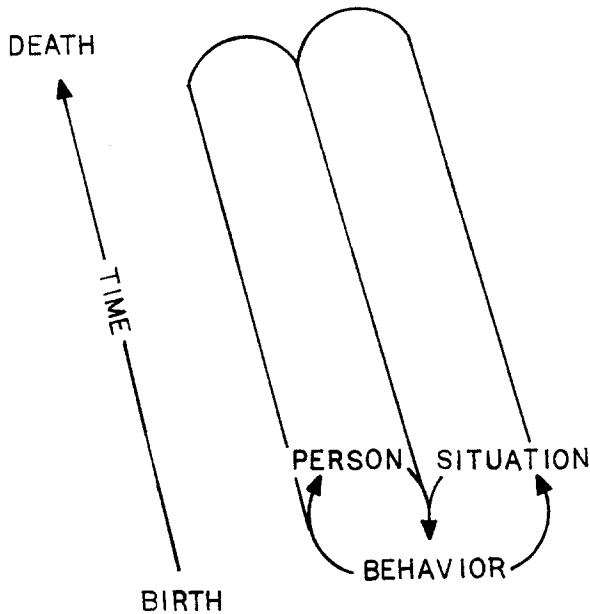


Figure 1. An interactional model of the life course.

need to be considered are (1) *behavior-determining processes*, resulting from the interaction of persons with situations, (2) *person-determining processes*, or the processes which create, maintain, and change personal states and characteristics, and (3) *situation-determining processes*, or the processes through which people select, create, and influence the situations they encounter. The relationship between these three processes over time is represented in an interactional model of the life course in Figure 1.

Each of the arrows in Figure 1 represents one of the three causal processes mentioned above. There are no arrows directly linking persons and situations with each other, which represents the assumption that the effects of persons upon situations are usually mediated through their behavior, and that the effects of situations upon persons are typically mediated by the person's experience within the situation. However, for a few analytical purposes, such as studying the effects of physical attractiveness, it will be useful to consider causal arrows which directly link persons and situations with each other. It should be noted that the person component of this diagram is not restricted to psychological

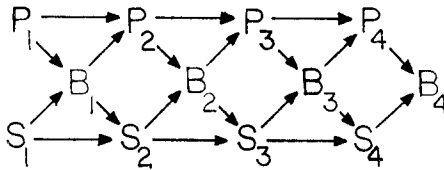


Figure 2. Sequences of person  $\times$  behavior  $\times$  situation interaction.

variables, but also includes biological, social, and economic variables, such as sex, appearance, credentials, and wealth.

Personal variables, such as intelligence or self-concept, and situational variables, such as home or college, are frequently of greater duration than behavioral or experiential variables, such as a specific act, thought, or feeling. At the risk of using a clumsy metaphor, the stream of behavior flows through banks of personal and situational variables which are of relatively greater stability.

An alternative way of representing a sequence of person  $\times$  situation interactions is contained in Figure 2. In this diagram there are no causal arrows which link behaviors directly to each other, representing the assumption that behaviors can not cause each other, except as mediated through changes in the organism, or less directly, through changes in the situation. For some purposes, it would be useful to add arrows coming from outside the system to indicate maturational or non-experiential sources of change upon person variables, and to indicate situational changes not caused by the person.

Figures 1 and 2 may be used for conceptualizing the temporal context of a specific behavior, for examining a particular sequence, process, or career, or for conceptualizing the entire life course. It should be clear that these diagrams of person  $\times$  behavior  $\times$  situation interaction represent only one way of conceptualizing the life course, and may be expected to prove useful for many, but not all, analytic purposes.

### *An Analysis of Heroin Use from a Life Course Perspective*

A specific substantive example, such as an analysis of heroin use, may help to illustrate the implications of a life course orientation, and to compare it with other orientations. Using a trait or psychodynamic view, one is led to raise questions about the

relationships of heroin use to personality variables. The personality characteristics of addicts have been assessed with the Rorschach, TAT, interviews, MMPI, CPI, Rotter Internal-External Control Scale, the Edwards Personal Preference Schedule, etc. (Kurtines, Hogan, & Weiss, 1975; Reith, Crockett, & Craig, 1975). Drug addicts have been characterized as maladjusted, hostile, immature, dependent, manipulative, and narcissistic (Feldman, 1968). One weakness of this approach is that most people with these characteristics do not become heroin addicts. A second problem is that the causal relationships between personality variables and heroin use are often unclear. Which personality characteristics led to heroin use, and which are a consequence of heroin use? There is, for example, evidence that elevations on the Hypochondriasis and Hysteria scales of the MMPI are a temporary consequence of the addict's stressful life on the street, rather than indicators of enduring personality characteristics which led to heroin use (Sheppard, Ricca, Fracchia, & Merlis, 1973; Sutker & Allain, 1973).

Using a situational orientation, one is inclined to ask questions about the contexts or environments associated with narcotics use. Heroin use in New York City has been found to be heaviest in neighborhoods with the highest poverty rates, the most crowded dwelling units, the highest incidence of broken families, and so on (Chein, Gerard, Lee, & Rosenfeld, 1964). A limitation of this approach is that most people exposed to these conditions do not become heroin users. A second problem is that some features of the environment may be a function of heroin use as well as a cause of it. A similar difficulty arises in ecological studies of mental illness and criminal behavior, in which it is unclear to what extent people with deviant tendencies move into high prevalence areas, and to what extent deviant behavior is elicited by the social environment (Moos, 1976).

Using an interactionist position, one is led to formulate questions about which individual tendencies interacting with what situational conditions will lead to heroin use. This orientation permits greater precision than the first two, but it does not provide an understanding of which persons get into which situations, or of how their behavior affects them and affects their environment, which will in turn affect future behavior.

A life course orientation builds on an interactionist perspec-

tive and suggests a more complex set of questions about the temporal course of behavior. The questions about heroin use suggested by a life course orientation are: (1) What kinds of persons in interaction with what kinds of situations lead to initial use of heroin? (2) How do these person  $\times$  situation configurations come about? (3) What are the consequences of initial use for the person and for the situation? (4) Which new person  $\times$  situation configurations will result in continuation vs. termination of opiate use? (5) If heroin use continues and leads to addiction, what are the further consequences for the person and the situation? (6) What person  $\times$  situation processes will lead to continuation or termination of addiction? (7) If the person breaks the habit, what new person  $\times$  situation configurations may lead to relapse?

The temporal course of heroin use can be usefully divided into the four stages of experimental use, occasional use, addictive use, and termination of use. How can the initial or experimental use of heroin be explained? In Chein et al.'s (1964) study of heroin users in New York City, the first opportunity for heroin use came through offers of a friend, or in a group setting. Few addicts actively sought this first opportunity. Even so, exposure to these situations was not random. The Chein study compared the experiences of four groups: nondelinquent addicts, delinquent addicts, nonusing delinquents, and controls with similar social characteristics living in the same neighborhoods. Fifty percent of the control group had an opportunity to try heroin, compared to two-thirds of the delinquent nonusers, and to 100 percent of the delinquent and nondelinquent users.

Differential exposure to situations where heroin was available is a partial explanation of initial use but not a complete one. Responses to this opportunity differed radically among the four groups. Of the nonusing delinquents, only 4 out of the 36 who had the opportunity tried it.

How can the differential response of these groups to the opportunity to try heroin be explained? Only 17 percent of the users (interviewed in 1953) claimed that they knew anything before age sixteen about the harmful effects of heroin, while 79 percent of the delinquent nonusers said that they were aware of its negative consequences in areas such as health, pressure toward criminal activity, and effect on character. Although part of these dif-



ferences may be due to retrospective distortion, the data still suggest that the anticipated consequences of heroin use differentiated those who responded to the opportunity from those who refused it.

Second, what explanation can be given of the transition from experimental to occasional use of heroin? One variable is the effect of initial use on the person. Those who experience a positive reaction are more likely to progress to occasional use than those who do not. In Chein's sample, about half of the users reported a positive reaction upon first use, while a third reported negative reactions. This first reaction influenced the timing of subsequent use. Of those with favorable reactions, two-thirds continued immediately; while of those with unfavorable reactions, only two-fifths continued immediately. Given the appropriate individual predispositions, occasional use of a drug may continue largely as a function of its easy availability (Clausen, 1966).

Third, the transition from occasional to addictive use has been conceptualized in a variety of ways. When heroin is used regularly, physical tolerance develops, and increased doses are needed in order to obtain the same subjective effects. A major aspect of the transition to addiction is the growth of physical dependence and the desire to avoid the pain of withdrawal (Lindesmith, 1947). Recent evidence indicates that habitual narcotics users are motivated by a continuing desire for euphoria, as well as by avoidance of withdrawal symptoms (McAuliffe & Gordon, 1974).

Another theory emphasizes that the person may become labelled as a deviant, perhaps be fired from his job, and be cut off from participation in more conventional groups (Becker, 1963). This labelling process can be accompanied by changes in self-conception and changes in attitudes toward society. In addition, the heroin user may choose to disengage himself from people who disapprove of drugs and to select new friends primarily among other users (Feldman, 1968). Thus, the heroin user can create an environment for himself in which narcotics are more readily available, and where heroin use is not looked upon with such disapproval.

Heroin has fewer direct physical effects than is generally realized (Goode, 1973), but depending upon social, legal, and economic conditions, addictive use of heroin may radically alter

the person's whole way of life. For physicians, who have relatively free access to narcotics, addiction does not necessarily cause major life changes. There are wide variations across cultures and historical periods in the social, medical, and criminological correlates of heroin use, but for the contemporary street addict in the United States, addiction frequently leads to health problems, to crime, to alienation from family and friends, and to prison.

Fourth, heroin use may be terminated or reduced through a wide variety of person  $\times$  situation processes. The breaking of physical dependency does not, however, ensure the end of addiction. Out of 1,912 addicts living in New York City who were discharged from the drug rehabilitation program in Lexington, Kentucky, more than 90 percent were re-addicted six months after discharge (Hunt & Odoroff, 1962).

In spite of high re-addiction rates, there is a tendency for heroin use to decrease over time and to decrease with increasing age. In a sub-sample of the Hunt and Odoroff group, 9 percent were voluntarily abstinent six months after discharge, 17 percent two years after discharge, and 25 percent five years after discharge (Duvall, Locke, & Brill, 1963). Behavior change may come through a change in the situation (no drugs available), through changes in the person (physical detoxification, a decision to change), or through some interaction of personal and situational factors (losing a supplier and deciding not to make the effort to locate a new one). However, the various sequences of changes in person  $\times$  situation interaction which lead to the termination of heroin use are not well understood.

In review, let us formally conceptualize a sequence of processes involved in the four stages of a drug use career. At each stage, rough estimates of the state of selected person variables, situation variables, and behavior probabilities can be given. Although somewhat schematic, this should suggest a general approach to analyzing sequences of person  $\times$  behavior  $\times$  situation interaction.

At stage one, the period of experimental use, heroin is available infrequently, the person's desire for it is low-to-moderate, and the probability of taking the drug is moderately low. At stage two, the period of occasional use, heroin is available occasionally, but perhaps not much more frequently than at stage

one. If the individual has found his first experience pleasurable, the probability of taking heroin rises.

At stage three, the period of regular or heavy use, the whole person-behavior-situation configuration may change dramatically. The addict may be in a situation where heroin is readily available, and where most of his friends are drug users. His desire for heroin may be so intense that he is willing to do anything in order to obtain it. In situations where drugs are available, the probability that he will take them rises to near certainty. As a product of his increased desire, and of the increased availability of drugs, the frequency of heroin use may jump from once a month or once a week to three or four times a day.

At stage four, the period of discontinued use, change may occur in a variety of ways, such as a decision to withdraw on one's own, methadone treatment, or involvement with Synanon. The probability of taking heroin, if it is available, may shrink to near-zero. Environmental changes, such as being placed in prison, may make temporary withdrawal inevitable. However, termination of use is not necessarily permanent, and depending upon an individual's characteristics and later environments, the whole process may begin again.

In summary, a history of heroin use is characterized by a sequence of person  $\times$  behavior  $\times$  situation interactions. Psychodynamic, trait, behavioral, sociological, or interactive orientations may all shed light on some phases of narcotics use, but the career of a heroin-user cannot be adequately understood without considering sequences of behavior-determining, person-determining, and situation-determining processes.

Similar analyses may be made of histories of aggressive behavior, sexual behavior, altruistic behavior, abnormal behavior, creative behavior and other forms of behavior which vary with both changing personal states and encountered situations. A sequential process orientation can also be used for analyzing the temporal trajectory of personal characteristics which are subject to influence by situations and by experience, such as self-concept, level of anxiety, values, or attitudes. Finally, a life course orientation can be used to study "environmental histories" or "situational careers," and to explore the processes responsible for an individual's movement through a sequence of situations. In summary, a life course orientation provides a common conceptual

framework for analyzing sequences of behavior, sequences of personal states, and sequences of encountered situations.

The utility of a life course or sequential process orientation can be suggested by considering research examples from a number of other substantive areas. In a study of disturbed pre-adolescent boys, Raush (1965) examined the "contingencies through which the antecedent action of one child exerts control on the subsequent actions of another" (p. 488). Normal and hyperaggressive boys, aged 9-12, in groups of 6, were systematically observed in 6 different situations (e.g., breakfast, or structured games). The two control groups produced 85 percent and 89 percent antecedent acts that could be classified as friendly, while the hyperaggressive group produced 58 percent friendly acts. In response to unfriendly antecedent acts, the control and disturbed boys both responded in an unfriendly way about 80 percent of the time. However, in response to antecedent acts which the staff saw as friendly, the normals responded in an unfriendly way only 8 percent of the time, while the hyperaggressive group responded in an unfriendly way 45 percent of the time early in treatment, and 19 percent of the time after 1.5 years of treatment. The hyperaggressive and control groups did not differ in their response to hostile acts, but did differ in response to friendly acts. Putting together a sequential chain of five behaviors, the hyperaggressive boys were behaving in a friendly way 40 percent of the time by the fifth behavior, while the two normal groups were behaving in a friendly way approximately 80 percent of the time.

Wachtel (1977), in an effort to integrate features of psychodynamic and behavioral theory, has spoken of "interaction cycles," in which early psychodynamic processes affect subsequent experiences and later environments, which in turn affect the continuation or change of earlier psychodynamic processes, and so on. Within this interactional-cyclical view, "the critical role of childhood is understood in terms of the way in which the particular patterns of behavior one develops skew the kinds of later experience one is likely to encounter and hence create an idiosyncratic environment of a sort likely to maintain the very pattern which produced that kind of environment in the first place" (Wachtel, 1977, p. 320). As an example, Wachtel considers the case of a man with a reaction formation against in-

tense rage. He is frightened by feelings of anger, so acts in excessively meek or conciliatory ways, which lead others to take advantage of him. This mistreatment arouses further feelings of resentment and anger. His defensive strategy has led to experiences which generate anger, and to the continued need to defend against it.

As a third example, Elder (1974) examined the life courses of a group of 167 persons born in 1920–21 in Oakland, California, and studied periodically since 1932 at the Institute of Human Development, University of California, Berkeley. He compared the life experiences of middle-class and working-class children growing up in families that were deprived (35 percent or more reduction in income) or nondeprived during the Depression. One surprising finding was that within each social class (middle vs. working class), economic deprivation in childhood did not lead to substantially lower occupational attainment at age 47. Within the working class, economic deprivation in childhood did reduce educational attainment, but this was largely offset by a sequence of events which went roughly as follows: men from deprived working-class families were faced earlier with adult-like responsibilities in the family, which led to earlier crystallization of vocational goals, and to earlier establishment of a stable career line, which led to higher occupational attainment. In this example, and in others throughout the book, Elder's work illustrates the possibilities for studying sequences of person  $\times$  situation interaction in the natural environment.

The importance of studying sequences and processes of person  $\times$  situation interaction has recently been stated in a number of general theoretical formulations (e.g., Bandura, 1977; Magnusson & Endler, 1977; Pervin, in press), and in analyses of interpersonal relationships (Peterson, 1977), marital interaction (Raush, Barry, Hertel, & Swain, 1974), and processes of stress and coping (Lazarus & Launier, in press).

### *Implications for the Prediction of Behavior*

The limitations of atemporal perspectives in personality theory become particularly apparent when one is concerned with the issue of prediction. A life course orientation, considering the interaction of personal, behavioral, and situational variables over time, provides a more adequate foundation for predictive efforts

than do orientations focussing primarily on traits, psychodynamic processes, or situational influences on behavior.

The utility of predictions based on inferences about global traits has been seriously questioned. It has been argued that trait-based predictions have not been very successful, except in the domain of intelligence and ability variables (Mischel, 1968; Peterson, 1968; Vernon, 1964).

According to one view, the disappointing results of predictive studies indicate that the trait paradigm is faulty (Mischel, 1968, 1973), while another view is that predictive failures are often a result of seriously defective research, and that adequate research does provide examples of predictive success (Block, 1977). Alternatively, as will be argued here, the trait paradigm may be appropriate under a limited and specifiable set of conditions.

If one assumes that behavior is a function of stable individual traits, then it makes sense to measure these traits, and to use these measurements in predicting future behavior. This strategy can be effective only under a restricted set of conditions. If a trait, such as intelligence or introversion-extraversion, is relatively stable over time, and is fairly consistent across situations, then trait assessments can yield valid predictions. Conversely, to the extent that behavior is situationally or interactively determined, and to the extent that person variables change as a result of experience, a trait approach to prediction cannot be expected to be widely effective.

A behavioral or social learning orientation is frequently proposed as an alternative to trait approaches. The implications of a social learning orientation for the assessment and change of behavior are fairly clear, but what are its implications for the prediction of behavior? A social behavior orientation emphasizes the specificity of behavior, or its dependence upon the environmental conditions which maintain and change behavior. The predictive implications of this view are that, most generally, future behavior will depend upon future situations. In conditions where the future situation is known, assessment and prediction proceed by taking "samples" of a person's behavior in similar situations. "A person's relevant past behaviors tend to be the best predictors of his future behavior in similar situations" (Mischel, 1968, p. 135). If behavior is determined largely by situations, the strategy of predicting future behavior from samples of past behavior can be successful only to the extent that future situations are similar

to past situations. The prediction of future situations has never received much attention, but if social behaviorists, or interactionists, seek to accurately predict future behavior, research on situation-determining processes in the natural environment seems to be a necessity.

Even in those circumstances where future situations are known, the social learning paradigm will be useful under only a limited set of conditions. To the extent that relevant person variables change during the time interval between assessment and criterion periods, predictions from behavior samples are likely to be inaccurate. For example, suppose that we want to predict the response of a woman with a snake phobia to handling a live snake three weeks from now. As part of a systematic desensitization treatment, she has constructed an anxiety hierarchy ranking situations related to snakes from least to most anxiety provoking, with "handling a live snake" as the most frightening situation. The strategy of predicting future behavior on the basis of past behavior in similar situations would lead one to assess her response to this situation at  $T_1$ , and predict that if exposed to the same situation at  $T_3$ , her behavior would most likely be the same. The weakness in this predictive strategy is obvious. If the subject spends the intervening time period working her way through the stimulus hierarchy, then her response at  $T_3$  is likely to be quite different. Knowledge of likely intervening experiences enables us to improve over predictions based solely on past behavior in similar situations.

In itself, this is a minor example, chosen for its transparency. But in principle, is the situation any different in the prediction of vocational performance, criminal behavior, or interpersonal behavior? The accuracy of behavioral prediction depends upon assuming that person variables remain stable. To the extent that relevant person variables change over the predictive interval, predictions based on behavior samples are likely to be inaccurate.

If an interactionist position is taken seriously, what are its implications for the prediction of behavior? An interactionist orientation implies that future behavior will be determined by an interaction of future person states with future situations. This suggests that the problems of assessment and prediction cannot be solved by the consideration of personal or situational variables alone.

A life course orientation suggests a strategy for integrating

person-centered and situation-centered assessment, enabling us to avoid some of the limitations inherent in either approach taken individually. This strategy focusses on the assessment of person-situation configurations, and on the likelihood of alternative person-situation configurations developing out of this initial system. For example, in an effort to predict the termination of heroin addiction, assessments would be made of personal characteristics and of the person's location in an environmental network. For men living in New York City, the probability of voluntary heroin abstinence one year after treatment for addiction was about 10-to-15 percent (Duvall et al., 1963). For addicts in the army in Viet Nam, the probability of abstinence one year after return to the United States was greater than 90 percent (McGlothlin, 1975). Our best predictions of the termination of heroin use would depend upon assessment of subjects' locations in environmental networks, and upon their likelihood of moving to alternative future environments, as well as upon assessment of their personal characteristics.

In summary, trait-based approaches to prediction are useful only when person attributes can be assumed to be stable over time, and only to the extent that behavior is stable across predictor and criterion situations. Situational or behavioral approaches are useful only when relevant person variables can be assumed to be stable, and only to the extent that future situations are known or that behavior is invariant across the range of expectable future situations. If behavior is determined by the interaction of persons with situations, then a comprehensive approach to prediction must assess person-behavior-situation configurations, and estimate the probability of alternative configurations developing out of this initial system. This more complex view of the prediction problem suggested by a life course orientation will, in some domains, enable us to increase our predictive capacities, but in other areas, it can help us to recognize exaggerated predictive claims, and to better understand those conditions which inevitably limit the possibilities of accurate prediction.

### *Historical and Theoretical Background*

Life histories have been studied, with waxing and waning degrees of enthusiasm, by a wide range of social scientists



throughout the twentieth century. The history of life history studies in psychology is discussed by Allport (1942) and Murray (1955); in anthropology by Kluckhohn (1945) and Langness (1965); in sociology by Angell (1945) and Becker (1966); and in political science by Greenstein (1969) and Glad (1973).

Some authors (e.g., Denzin, 1970) have spoken of a "life history method," by which they mean the procedure of having a subject tell his or her own story. However, the term *life history* also refers to the sequence of events in a life. In this latter sense, it should be clear that there is no single life history method, any more than there is a single personality research method, and that life histories may be studied through phenomenological reports, the case study method, survey research, longitudinal research, and experimental research. The term *life history* applies most readily to a past sequence of events, while *life course* is a more general term, which may refer to either past or future sequences of life events.

Focussing on the disciplines of psychology and sociology, we can roughly identify three periods in the study of life histories. From approximately 1920 through the 1940s, there was a substantial and growing interest in the study of life histories, much of it associated with the analysis of personal documents (e.g., Thomas & Znaniecki, 1920; Shaw, 1930; Buhler, 1933; Dollard, 1935; Murray, 1938; Blumer, 1939; Allport, 1942; Gottschalk, Kluckhohn, & Angell, 1945; Leighton & Leighton, 1949).

In the 1950s and early 1960s, the energies of psychologists seemed directed more toward laboratory experimentation, and relatively little was published in the study of life histories, although there were some significant exceptions (e.g., Pressey & Kuhlen, 1957; Erikson, 1958). As dissatisfaction with laboratory experimentation as an exclusive methodology increased in the late sixties and seventies, more attention was devoted to problem-oriented research, to field experiments, to cognitive processes, and to interactive paradigms. During this period, studies of the life course and of life transitions increased dramatically (e.g., Buhler & Massarik, 1968; Block with Haan, 1971; Dailey, 1971; Clausen, 1972; Elder, 1974; Lowenthal, Thurnher, & Chiriboga, 1975; Sheehy, 1976; Vaillant, 1977; Levinson et al., 1978).

An understanding of the course of lives and of the processes

through which persons interact with situations over the course of time is currently pursued in a remarkable range of fields. It is, I believe, worth identifying the range of fields having a common concern with analyses of the life course or of sequences of person  $\times$  situation interaction, and not proceeding as if the issues were an exclusive concern of a single field. The study of person  $\times$  situation interaction in personality psychology, although suggested in the work of Murray (1938) and Lewin (1951), has only recently received a great deal of attention (e.g., Argyle & Little, 1972; Bowers, 1973; Ekehammar, 1974; Endler & Magnusson, 1976; Magnusson & Endler, 1977). A wide-ranging and sophisticated discussion of the interaction of personal and situational determinants of behavior, which seems to have been overlooked in this literature, was previously presented by sociologist J. M. Yinger (1965).

In clinical psychology and psychiatry, life history researchers in psychopathology are investigating the interacting biological, psychological, and sociological antecedents and consequents of different forms of deviance, such as schizophrenia, neuroses, and delinquency (e.g., Roff & Ricks, 1970; Ricks, Thomas, & Roff, 1974). They are also concerned with "constructing a life history framework for the interpretation of intervention and outcome studies" (Ricks, Thomas, & Roff, 1974, p. viii).

Within developmental and life-span developmental psychology, there is an increasing emphasis on interactive analyses of developmental processes, and on the ecology of human development (Bronfenbrenner & Mahoney, 1975). Nesselroade and Baltes (1974) argue that a substantial amount of influence on the developmental process lies outside the person, and that studies of human development cannot be confined within the discipline of psychology. They believe that "future research should focus on conjoint measurement and analysis of organism-environment systems" (p. 71).

There are significant similarities between a life course orientation and a life-span developmental orientation in that both are concerned with processes of person  $\times$  situation interaction over time, yet there are also substantial differences. It is difficult to attain consensus on a precise definition of developmental psychology, yet it is widely agreed that developmental changes occur in a relatively common sequence, and are generally ir-

reversible. Developmental changes are most significant in childhood and in old age, the two areas that have received the greatest research attention. However, not all changes over time are developmental, and particularly not in the lengthy period between maturation and degeneration. The effects of psychotherapy, or of heroin use, or of getting a new job cannot, in any meaningful sense of the term, be considered developmental. If developmental changes are defined as changes due to maturation or aging, then clearly, developmental changes are only one kind of change over time. Even though events and changes in adult life are studied by developmental psychologists, it is awkward trying to fit them into any systematic definition of developmental psychology. Another way of making the distinction is to say that a person is faced with a wide variety of ways of living, of possible life courses, while facing a limited number of ways of developing. Persons are free to create the course of their lives, or to direct the course of their experience, in ways that they are not able to alter the course of their physical or psychological development.

Interest in the life course is not confined to psychology, but is also emerging within several sub-fields of sociology, such as social mobility research (Blau & Duncan, 1967), socialization research (Clausen, 1968), and the sociology of aging (Elder, 1975), all of which share a concern with the interaction of changing persons with the social structure over the course of time. Aspects of the life course are also being investigated in family history and quantitative historical biography (Shorter, 1975; Stone, 1972; Thernstrom, 1973), and in psychohistory and psychobiography (Lifton & Olson, 1974; Mazlish, 1971).

One additional field related to the study of life courses is evaluation research or outcome research (Bergin & Garfield, 1971; Struening & Guttentag, 1975). A common endeavor of these studies is to trace the effects of a given intervention, such as psychotherapy, compensatory education, or job training upon the subsequent characteristics or experiences of its participants. The net value of an intervention is determined by its effects on a sequence of future experiences, and not by its effects on a single dependent variable at a single point in time. Thus, some forms of outcome research must investigate sequences of experience, and can be informed by an understanding of life courses. In turn, the systematic evaluation of social action programs can provide

us with experimental or quasi-experimental studies of the life course.

In summary, studies of the life course, or studies of the process of living, are not an exclusive concern of personality psychologists, but are also related to selected lines of work in developmental, social, and clinical psychology, to several subfields within sociology, to psychohistory and quantitative history, and to longitudinal outcome research.

#### CONCLUSION

There is little doubt that order can be found, and has been found, by those pursuing psychodynamic, trait, behavioral, and phenomenological orientations. By using a criterion of "statistical significance," some empirical support can be found for each of these orientations. No single orientation has a monopoly upon empirical support. By using the more rigorous criterion of proportion of variance accounted for, or of complete predictability, it also becomes apparent that no single orientation provides a completely adequate theory of behavior.

Each orientation seems to find its strongest support in different methodological foundations, and to be particularly suited for different applications. For example, a behavioral view seems to receive its strongest support on experimental grounds, and to be particularly suited for problems of behavior change. A psychodynamic view seems to receive its strongest support from clinical observation and from personal experiences in therapy, and to be most useful for the interpretation of disturbed thought, affect, and behavior. A phenomenological view seems to receive some support from both clinical and scientific contexts, and to be most useful in the conduct of interpersonal relationships. A trait-factor approach seems to receive its strongest support from correlational research, and to be most useful for purposes of selection and decision-making. (This comparative assessment is not intended to imply that all orientations are equal in scope, power, or utility, but rather is an effort to comprehend the relationships of the different orientations to each other, and to understand how intelligent and well-meaning scientists can be so passionately divided in their theoretical loyalties.)

Each orientation may appear unimpressive when viewed from different epistemological bases, or when applied to different

uses. For example, a psychoanalytic view does not receive very strong support when tested experimentally, or, a trait-factor approach is not that useful for the conduct of psychotherapy. Although the strengths and weaknesses of these orientations might well be characterized in other ways, it is unlikely that this would lead to disagreement with the view that each of these orientations has discovered some form of order in the world, each has relied upon somewhat different procedures for discovering this order, and each has proven useful for some practical concerns, but not for others. Similarly, a life course orientation (1) suggests a type of order that may be found in the world, (2) requires methods and strategies appropriate for discovering this kind of order, and (3) has implications for a particular range of practical concerns.

To expand briefly on these points, a life course orientation suggests that order may be found in the causal structure of the flow of experience, and in the accompanying processes of person  $\times$  behavior  $\times$  situation interaction. It directs our attention to a fundamental and enduring set of problems in describing, understanding, making predictions about, and intentionally changing the course of lives.

The methodological problems are enormous and demand our creative attention. Understanding of the course of lives may be pursued through (a) quantitative experimental and correlational research, (b) historical and biographical research, (c) analyses of personal experience, and (d) clinical and professional practice.

We need research designs capable of studying sequences of person  $\times$  behavior  $\times$  situation interaction, in both natural and controlled settings. However, understanding the course of lives demands more than the development of more complex research designs; it also requires a shift in our strategies of explanation and prediction away from purely nomothetic-deductive ones in which individual cases are subsumed under general laws. Anyone who has attempted to interpret a life history using solely general theories will appreciate the limitations of this approach. Due to the enormous variety and change in the course of experience across cultures, across historical periods, and even across individuals, greater attention must be paid to the development of idiographic methods,  $N = 1$  methodology, and explanation via

patterning or colligation. A valuable alternative model is outlined by Bromley (1977), who advocates a "quasi-judicial method" for the collection and interpretation of evidence in case studies.

Increased understanding of the course of lives, and the development of appropriate research strategies should prove useful (a) for social scientists in their theoretical concerns, (b) for psychobiographers and psychohistorians, in their efforts to describe and interpret the lives of public and historical figures, (c) for clinicians and professionals, in those tasks of assessment, prediction, intervention, or evaluation which involve the course of experience (e.g., Runyan, 1977), and (d) for individuals, in trying to understand, predict, and make decisions within the course of their own lives.

Skeptics may feel that the study of lives is impractical, or hopelessly complex. It is granted that research on the life course may be methodologically complex, and that absolute certainty in the understanding of lives may be forever beyond us. However, assumptions about the causal structure of the course of experience and about the long-range effects of different courses of action upon this experience are inextricably bound into our personal lives, out intellectual and professional lives, and even our social policies. Demands for interpreting, making predictions about, and intentionally changing the course of lives are ever before us. Is there any viable course other than to pursue these tasks as rigorously and intelligently as we can?

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