

tions are disciplined by socially defined age-graded requirements for events and fixity in social roles. The timing of transitions and the interconnectedness among transitions have implications for the experience of contemporary and future stress. The temporal context of stress not only refers to stage in the life course, but also to the historical context in which different life course stages are experienced. The same stage in life course will have very different implications for the experience of stress depending on the historical context in which a particular life transition occurs.

According to Elder and his associates, the life course as a research paradigm is distinguished by four themes encompassing the notions of historical time and place as the context for human lives, the fact that humans make choices but are socially constrained in the choices they make, the influence of individual choice and social constraints on the age grading of events and social roles, and the relational interdependence among human lives. Within the life course framework, stress is implicated in the intersection between individual characteristics and volition, normative constraint on age-related roles, and social change. The relevance of stage in the life course for stress is illustrated by Elder and his associates with regard to the phenomena of war, child abuse, and caregiving.

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Psychosocial Stress over the Life Course

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INTRODUCTION

The implications of life change for well-being have been duly noted since W. B. Cannon's pioneering work on bodily changes in emotional states (1929). Over the past several decades, these implications have prompted innovative research questions and empirical studies at an exponential rate. We view this development as concurrent with a paradigmatic shift toward the study of human lives in their full complexity, from life transitions to trajectories and a long view of personality (Elder, 1994). Yet the two developments have remained virtually indepen-

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dent. In theory and research, the meaning of life change depends on when it occurs across the life course and on what the change entails in social roles, statuses, and identities. Life changes are embedded in trajectories of social roles and events that give them distinctive meaning and form.

The emergence of a life course paradigm and its theoretical distinctions have received some attention from research practitioners in the field of psychosocial stress (e.g., Cummings, Greene, & Karraker, 1991). Cohler (1991: 297) concludes that if there is one summation to make on the stress and coping literature, it is that "psychological processes cannot be studied except in the context of both variations in social surround and change over time." The cross-fertilization has occurred at a time of rapid growth in empirical knowledge of the life course. However, a prominent theme remains one of *separate* streams of inquiry. We find a continuing neglect of life course theory and methodological considerations in studies of stressful life events (e.g., Wilson & Raphael, 1993; Goldberger & Breznitz, 1993). Research on stress and well-being is still largely uninformed by knowledge of how lives are socially organized and regulated by age norms, demographic patterns, and social structures. This work is also uninformed by how life experience changes over the life span, and by how life transitions are connected across the life course.

Indeed, the first edition of *Psychosocial Stress* (Kaplan, 1983) had nothing to say about the life course. Life change, social strains, and emotional distress were generally viewed from the perspective of a timeless role theory that makes no connection to social or historical time. The psychosocial implications of role entry, exit, and disruption were assumed to be similar across the life course. Social roles did not possess histories or role sequences. Role identities were static characteristics. This chapter takes issue with all static accounts by viewing stressful life change, coping, and adaptation from the perspective of life course dynamics, giving particular emphasis to the conceptual issues of social timing and interdependence among role histories.

We begin with a brief account of the life course as field of inquiry, concept, and paradigm. In life course study, contextual features of stress are located temporally within the intersection of personal lives and history. Initial efforts to place stress in context ignored issues of temporality. They did so by focusing on situations in general, and then on the contexts of social relationships, networks, and social structure. We review these efforts and then incorporate temporal distinctions in a survey of analytic issues on stress and adaptation across the life course. In closing the chapter, we explore some examples that integrate life course themes with stress research, including war, child abuse, and caregiving.

THE LIFE COURSE: AS FIELD, CONCEPT, AND PARADIGM

The life course paradigm represents a major change in how we think about and study human lives. Broadly speaking, the change is part of a general conceptual trend that has made time, context, and process more salient dimensions of theory and analysis in the social and behavioral sciences. Contemporary studies are more attentive to temporal distinctions in the historical and social world, to the social embeddedness of behavior and relationships, and to the process by which change occurs.

As a multidisciplinary field of ideas and empirical observations, the paradigm draws upon various conceptual streams, including the biographical tradition of Charlotte Bühler (1935), the generational relations of life history studies (Thomas & Znaniecki, 1918), the meanings of age in accounts of birth cohorts and age strata (Ryder, 1965; Riley, Johnson, & Foner, 1972; Elder, 1974), cultural and intergenerational models (Kertzner & Keith, 1984; Cole, 1992), and both developmental (Baltes, 1987) and personality life-span psychology (Funder, Parke, Tomlinson-Keasey, & Widaman, 1993).

The life course as a concept refers to an age-graded pattern of events and social roles that is embedded in social life and structures. It includes trajectories that extend across much of the life-span, such as work; and short-term changes or transitions, from leaving the family for school to first job, marriage, and parenthood. Transitions are always embedded in trajectories and social arrangements that give them distinctive meaning and form. Durations in a particular state or status connect these transitions over the life course.

Unlike the focus on single careers, so widely studied in the past, life course theory offers a framework for exploring the dynamics of multiple, interdependent pathways, an increasingly popular research topic in the field of stress and coping, especially in studies of the family (Eckenrode & Gore, 1990). Consider the relation between earnings and marital quality. Economic losses increase financial pressures, conflicts, and the risk of marital negativity. The greater this negativity, the more ineffective parenting is likely to be (McLoyd, 1990). Parenting of this kind increases the risk of problem behavior among children and their disruptive effect on family relations in general, adding fuel to a process of family dysfunction amidst interdependent lives.

The life course paradigm views social transitions in terms of their interconnections or dependencies. With an eye to the full life course, analysis is sensitive to the consequences of early transitions for later experiences and events. A life history of stressful experiences shapes the meaning of new situations and life changes. Moreover, we now more

fully appreciate the implications of early adult experiences and choices for the later years of retirement and old age (Clausen, 1993), from the later-life adequacy of economic resources to adaptive skills and activities. Relationship histories clearly matter for transition experiences and subsequent adaptations (Rutner & Rutner, 1993). The death of an elderly parent may bring emotional relief to an unwanted or rejected caregiver, or prolonged grief and sorrow to the life of an appreciated friend. These histories may explain why as many as a third of the elderly who have lost a spouse do not experience emotional depression or grief (Woraman & Silver, 1992).

Four general themes are distinctive of the life course as a research paradigm: (1) human lives in historical time and place; (2) human agency and social constraints in choice making; (3) the timing of lives as expressed in timetables and event sequences; and (4) linked or interdependent lives—primary and secondary relationships from the proximal world of family to workmates. Consistent with the temporal and contextual features of life course study, the first theme locates the lives of individuals in their historical and geographical worlds.

The life course is socially regulated by norms and social institutions, and it is also constructed in some degree by the choices people make within the context of structural constraints. Social timing and linked lives situate in time the choices and events of the life course that reflect interdependent lives. In combination, the four central themes bring temporality, context, and process to an understanding of the life course. Issues of timing, linked lives, and human agency also identify key mechanisms by which social-historical change and pathways influence the course and substance of human lives.

Lives in Time and Place

Especially in societies undergoing rapid change, a different birth year exposes individuals to different social-historical worlds, with their constraints and options. Historical effects on life trajectories take the form of a cohort effect when social change differentiates the life course of successive cohorts, such as older and younger men before the Second World War. History also takes the form of a period effect when the change effect is relatively uniform across successive birth cohorts. Birth year and cohort membership locate people in relation to historical forces, but they do not index exposure or the process by which historical influences are expressed. Direct study of such change and its influences is essential for identifying the explanatory mechanisms.

By probing the individual implications of historical change, long as well as short term, research must necessarily address the process by which the effects are expressed. In this case, the analyst begins with the particular environmental change at issue and traces out its multiple ef-

fects through proximal to more distal relationships, events, and outcomes. The change itself may take the form of a sudden economic decline in the rural Midwest of the United States during the early 1980s (Lasley, 1994) or of long-term changes that have influenced the lives of American children across the twentieth century, such as growth of the mass media and public education (Elder, Modell, & Park, 1993). Any implications for the individual life course are generally contingent on what people bring to the change process itself as well as on the nature and severity of the change itself.

Human Agency and Its Constraints

Concepts of human agency have always been prominent in life history studies (see Thomas & Znaniecki, 1918), and they are also prominent in the new wave of life course studies that relate individuals to the broader social context. People are plentiful and select options that construct their life course within the constraints of particular worlds (Clausen, 1993), ranging from totalitarian constraints of China's Cultural Revolution to the liberties of western democracies. In either case, the agency of individuals and their life choices ensures some measure of *laurel-coupling* (Elder & O'Rand, 1995) between social transitions and life stages.

The life course is age graded, but members of a birth cohort do not move through this age structure in concert according to the social roles they occupy. Some people do not experience certain transitions, such as marriage or parenthood, and those who do generally vary in the timing of events, regardless of the cultural prescription. "Loose coupling" reflects the agency of individuals even in constrained situations as well as their efforts to rewrite past journeys in the course of aging" (Elder & O'Rand, 1995: 457). Age grading and agency thus reflect a duality of the life course: the social regulation of action, and the actor's behavior both within and outside of conventional boundaries.

More generally, theoretical developments in the social and behavioral sciences favor a constructionist view of individuals in shaping their lives and developmental trajectory. These include the cognitive revolution and Bandura's pioneering research on personal efficacy (1986, 1995); selection into environments that influence genetic expressions (Dunn & Plomin, 1990); the prominence of rational choice theory over the past decade (Coleman, 1988); and the extension of life studies beyond the early years (Baltes & Baltes, 1990). Individual differences, as in sources of human agency, acquire particular significance through their interaction with changing environments in producing life course adaptations.

The Timing of Lives

The timing of lives refers to the age grading of events and social roles through social regulation and individual choice, as well as to historical

time or location. The normative concept of social time specifies an appropriate time or age for events, such as marriage, childbearing, and retirement. Neugarten and Danan (1973) introduced the notion of a social clock by which socially approved age norms are superimposed on the biological timetable marked by chronological age. Differential timing orders events, as when leaving school precedes entry into the first job, and determines the duration of waiting times between events. Social timing also applies to the scheduling and synchrony of multiple trajectories, both within and across individuals. Thus couples may schedule family, work, and leisure events in order to minimize competing demands and conflicts.

The timing of major environmental stressors in a person's life, from wars to economic depressions and natural disasters, has much to do with the fit between lives and new circumstances. According to this observation, the effects of particular changes or risk factors will vary in type and relative influence across the life course. An appreciation for the differential configuration of social, psychological, and biological influences along the life course is consistent with Kagan's (1979: 886) criticism of the search for "absolute principles which declare that a particular set of external conditions is inevitably associated with a fixed set of consequences for all children." Thus children born at opposite ends of the 1920s entered the Great Depression with different prospects (Elder, 1974, 1979). The older ones were nine to sixteen years old during the height of the Great Depression, too young to leave school and face an unpromising labor market and too old to be highly dependent on the family. By contrast, the younger children were one to eight years old in the economic crisis, ages when they were most dependent on families for emotional support. The boys, in particular, risked and experienced greater impairment of life opportunities and development.

Interdependent Lives

The subject of linked lives brings us to the fourth and last paradigmatic theme. Human lives are typically embedded in social relationships with kin and friends across the life-span. Kahn and Antonucci (1980a, b) refer to these lifetime associates as convoys of social integration, support, and obligation. Social relationships also represent a vehicle for transmitting and amplifying the effects of stressful change, as in families under economic stress (Conger & Elder, 1994). Linked lives convey negative and positive emotions.

The social regulation, structuring and support of human lives, and individual adaptations occur in part through multiple, interlocking relationships. Processes of this kind are expressed across the life cycle of socialization and exchange in generational succession. The misfortune and opportunity of adult children become intergenerational as well as

personal problems (Elder, 1985). Broken marriages and careers frequently lead adult sons and daughters back to the parental household and have profound implications for the parents' life plans in their later years.

The social relationships of individuals also connect individuals with the broader social changes taking place in society. In particular, linked lives have special relevance for understanding the impact of war. Consider the lives of Japanese men who grew up in the city of Shizuoka, a large metropolis south of Tokyo (Elder & Meguro, 1987). The older men, born around 1920, typically served in World War II, whereas the younger men, born around 1930, were too young to serve. However, the latter were exposed to war trauma through the lives of family members. Compared to the older cohort, they were just as likely to report the military service of family members, the death of a family member, and war damage to the family home.

Converging Conceptual Streams

As defined by these four central themes, the life course paradigm consists of well-established conceptual distinctions (e.g., interdependent lives and relationships), new or reworked concepts (e.g., the timing of lives and the relation between lives and times), and some theoretical integrations or syntheses. One notable integration joins two historical models of human lives, the social relation perspective on linked lives and age-based models with their sensitivity to historical and social time.

Studies dating back to Durkheim's (1951) analysis of social integration and suicide and to Thomas and Znaniecki's (1918) research on migration have stressed the interdependence of lives across the generations, in marriage and friendships, and among associates in the workplace and community. Thomas and Znaniecki provide an ethnographic and historical account of village and country life in Poland and of the immigrants' settlement in their urban environments. They produced this account by viewing people's lives over time in a changing world. Continuous life records, typically retrospective, offered such a view and Thomas later became an advocate of life history data and the longitudinal study.

Over the years research in the social relations tradition has contributed in important ways to our understanding of social bonding and control in human behavior (Hirshi, 1969; Sampson & Laub, 1993), to knowledge of social interaction and socialization in developmental processes (Clausen, 1968), and to the developmental and regulatory dynamic of intergenerational processes (Rossi & Rossi, 1990). Kinship ties regulate or constrain choices and options across the life course. Social ties also expose people to the consequences of actions taken by family members (Burton & Bengtson, 1985). A daughter's teenage birth shifts her parents into the grandparent role and her grandparents into the role of great grandparents.

Despite its rich contributions, the social relations tradition of role theory did not come to terms with temporal markers that place individual lives in historical and lifetime contexts. These markers were provided by the fresh perspectives of sociological studies of age during the 1960s and early 1970s. They include a theory of age stratification by Matilda Riley and her associates (1972, 1988), which relates age cohorts and social structures over the life span. By placing people in age cohorts that permit assessments of historical effects, the theory advanced a view of age-graded life patterns that are responsive to social change. Norman Ryder (1965) also contributed to this theory through his writings on a cohort approach to social change and the life course. Another pioneer, Bernice Neugarten (with Datan, 1973), fashioned a social psychology of age grading across the life course, including a concept of normative timetables.

A number of more contemporary studies of stressful change and life patterns have drawn upon *both* theoretical streams, including a study of California children who grew up in the Great Depression (Elder, 1974). This represents an intergenerational and longitudinal study that focused on a birth cohort of children and their life course to the middle years. Other studies include Hareven's historical study of the family and life course in the declining textile community of Manchester (1982); Rossi and Rossi's (1990) three-generation study of the relation between individual aging and kin-defined relationships across the life course; and Moen's two-generation study of women into the later years (with Dempster-McClain & Williams, 1992), which examines some implications of the women's revolution.

These advances occurred in relation to a number of correlated developments, such as the unparalleled growth of longitudinal studies from the 1960s to the present (Young, Savola, & Phelps, 1991) and statistical models of life course development (Mayer & Tuma, 1990). Valuable data also came from retrospective life histories, as collected by life calendars (Freedman et al., 1988). This growth spurred the initiation of longitudinal analyses and the development of statistical operations to meet the analytic requirements of event sequences (Giele & Elder, in preparation). New methods have been devised to combine prospective and retrospective data, qualitative and quantitative, in analyses.

Few changes over the past 30 years more vividly document this intellectual change than the emergence of life course studies as a field of inquiry and research paradigm. The term life course was not part of the social science vocabulary at midcentury, neither in theory nor in research. Moreover, problems of development and aging from birth to death had yet to arouse substantial interest.

During this initial phase of life course study, models of stress and coping were beginning to attend to more structural concerns, including

the relational context of stressful events and the embedded strains of social structures. We turn to some of these contributions and then explore more deeply what the life course paradigm has to offer the field of psychosocial stress and coping.

STRESS, SITUATIONS, AND SOCIAL STRUCTURE

Studies of stress generally feature contributions from multiple disciplines. As a result, knowledge about stress has been enriched by a broad range of factors. However, the disciplinary mix has frustrated investigators who believe that cogent criticisms have not led to appropriate modifications in the strategies used to study stress. For example, sociologists frequently criticize the lack of attention to social context in studies (primarily studies by nonsociologists), while paying little attention to psychophysiologicals who claim that factors such as immune function should be routine elements in stress studies.

In this section, we turn to sociological studies of stress that provide an intellectual context for life course studies, giving attention to the major criticisms of stress research voiced by social scientists and the contributions that have resulted from corrective efforts.

Emergence of Scientific Studies of Stress

Selye's model of stress as a threat to the biological integrity of the organism (1956) and the Holmes/Rahe Social Readjustment Rating Scale (1967) have contributed to sociological perspectives on stress even though neither is sociological. At the time, a more sociological perspective appeared in Faris and Dunham's study of the ecology of mental illness (1939). Twenty years later, Hollingshead and Redlich (1958) completed their classic study of the relationship between social class and mental illness. Shortly thereafter, evidence from the Midtown Manhattan Study documented a strong relationship between social stress (measured in terms of what are now viewed as both life events and chronic stressors) and psychological distress (Langner & Michael, 1963; Srole et al., 1962). Indeed, Langner and Michael were the first sociologists to assert that stress mediates the relationship between social class and mental illness, although they are seldom credited with that hypothesis.

The works of Selye and Holmes/Rahe were enthusiastically received and severely criticized by sociologists, as was subsequent research built on those studies. The substance of those criticisms and the studies designed to address them comprise a major sociological contribution to the study of stress. The criticisms are centered on the neglect of: (1) theory; (2) subjective perceptions; (3) the role of social context; and (4) the

processual nature of stress. As these issues were confronted and, in part, resolved, studies of social stress came to more closely build on early sociological studies that discovered the robust relationships among social location, stress, and health. We turn now to those criticisms and how they have shaped research on social stress.

Sociological Contributions to Stress Research

Theoretical Advances

Research by Selye, Holmes/Rahe, and others who followed their lead has been criticized as atheoretical, but that is inaccurate. Selye (1956) was, in fact, explicit about his theoretical foundation, a homeostatic or equilibrium model. Stress involves internal or external changes of sufficient magnitude to threaten the homeostatic equilibrium of the organism. Thus, change is the underlying mechanism in stress. This view is shared by Holmes and Rahe, who calibrated their Social Readjustment Rating Scale (SRRS) to the degree of change generated by life events. The basic deficiency in this approach has to do with its neglect of social context and empirical knowledge about how people's lives are socially organized. Contemporary extensions of this approach in social psychiatry (Dohrenwend et al., 1993) remain vulnerable to their criticisms, though more sensitive to the social ecology of actors.

Sociologists used preexisting sociological theories to inform social stress research and proposed a distinctive theory of social stress. Both interactionist and role theoretical perspectives have informed and guided social stress research. Interactionist theories highlight the social construction of reality, while role theories address problems of social location and transition, task overload, and conflicting obligations.

Interactionists' criticism of stress research centered on the neglected meaning of life events. For example, they noted that instruments, such as the SRRS, included events that are commonly viewed as positive (e.g., marriage, promotions) as well as events that are usually viewed as negative (e.g., illness onset, death of a loved one). Other characteristics of life events, such as their perceived importance and the extent to which they are voluntary, were suggested as other potentially important dimensions of the meaning of events. This focus on individual interpretation is linked to symbolic interactionism and other theories that remind us that reality is in large part socially constructed. Attention to the meanings of stressors also forges a natural link between stress and identity theory (e.g., Burke, 1991; Thoits, 1991). Events that threaten major bases of personal identity should be more stressful than events that are less identity relevant.

Role theory also has offered important insights to social stress re-

search. Both stress and role theories note that many life events are transitions into and out of social roles (George, 1993) and that many chronic stressors are embedded in role demands (Pearlin, 1983; Pearlin & Schooler, 1978). For example, getting a job, marrying, becoming a parent, job loss, retirement, and widowhood are all role transitions as well as life events. Similarly, job stress, marital problems, and economic hardships are all chronic stressors that are embedded in social roles. As described elsewhere (George, 1993), role theories provide stress research with two important insights beyond the links between stressors and roles. First, they emphasize the normative character of many role transitions, rendering them predictable in occurrence and timing, which may, in turn, make them less stressful. Second, role theories remind us that social structure often transmits the skills and attitudes compatible with role changes via socialization. Thus, effective socialization should reduce the stressfulness of role transitions.

As research increased in volume and sophistication, stress theory emerged as a distinct sociological paradigm. This paradigm has been most clearly articulated by Pearlin and his associates (Pearlin, Lieberman, Menaghan, & Mullan, 1981; Pearlin, 1989). It reflects both conceptual developments in the field and the synthesis of empirical findings. The paradigm includes three major components: stressors, mediators and moderators, and outcomes. Stressors are the demands that challenge people's physical and psychological capacities and place them at risk of negative outcomes. Outcomes examined in relation to stressors are typically mental or physical illness or the more global concept of distress.

The mediators and moderators highlighted by social stress scholars are the primary sociological contributions to stress research, demonstrating the multiple ways that social context affects the stress process. Applications of this model have transformed stress research from an oversimplified focus on the strength and robustness of the relationships between stress and illness to a more fine-grained emphasis on the conditions under which stress does and does not have negative consequences. This line of research also has identified the mechanisms by which stress negatively affects health and by which social resources protect health and well-being.

An additional theoretical advance in social stress research has expanded the study of stress beyond discrete life events. Wheaton's Chapter 2, this volume, provides an elegant overview of the full range of stressors. Thus, we will only note here that social stress studies include chronic stressors, daily hassles, and even the nonoccurrence of desired events, as well as life events. Broadening the boundaries of stress research has been an important step in the maturation of this research tradition.

Subjective Perceptions of Stress

Most studies have focused on the valence of stressor perceptions—whether positive or negative; other dimensions include the extent to which events are perceived as important, voluntary, expected, resolved, and identity relevant. Note that sociological studies of perceptions of stress parallel psychological theory that focuses on stress appraisal (Lazarus, 1991) and attributional style (e.g., Alloy, Peterson, Abramson, & Seligman, 1984).

One of the simplest but most important findings in studies of stress perceptions is that there is virtually no life event that is viewed as uniformly positive or negative (e.g., Hughes, George, & Blazer, 1988), but especially when events are appraised over the passage of time. Even events such as placement in a nursing home and death of spouse are not always viewed negatively. Thus, to the extent that the valence of a potential stressor is related to its consequences, we must ask individuals about their assessments of events rather than rely on the investigator's appraisal.

Perceptions of life events are modestly related to negative health outcomes. Events perceived as negative are associated consistently with negative health outcomes, while those perceived as positive are not (e.g., George, Blazer, Hughes, & Fowler, 1989). Research on other perceptions of life events is less plentiful, but perceptions of expectedness (Gatz, Siegler, George, & Tyler, 1986), voluntary versus involuntary event experience (Thoits, 1983), identity relevance (Burke, 1991; Thoits, 1991), and the degree to which the life event is resolved (Thoits, 1994; Turner & Avison, 1992) make a difference in the impact of life events on mental health outcomes.

Not all sociologists advocate including stress perceptions in stress studies; some prefer more objective indicators of stress characteristics, such as event categories (e.g., loss events, network events). Wheaton (1990) has argued that role history is important in understanding whether life events are stressful or relieve stress. Although he defines the quality of the preevent situation as its "role history," it is not clear how this is different from eliciting individuals' perceptions of the life event: presumably a person with a problematic marriage would rate her divorce as positive, whereas an individual satisfied with his marriage would view divorce negatively.

Stress in Social Context

Stressors emerge in the contextual domains of work, family, and community roles (Pearlin, 1983; Pearlin & Schooler, 1978). Aneshensel (1992) recommends that we distinguish between systemic and random stressors, with the former referring to stressors linked to social location. Except for health problems, most sociological studies focus on systemic stressors.

Social context factors both mediate and moderate the effects of stress on health outcomes. The major factors examined to date are socioeconomic status, social integration, structural features of the social network, social support provided by the social network, and social-psychological resources (e.g., sense of control, self-esteem). Several conclusions can be offered on the basis of this research. First, socioeconomic status partially mediates the effects of demographic factors and stress on health outcomes (e.g., Kessler, 1982; Mirowsky & Ross, 1989; Ross & Bird, 1994). Second, social support plays a complex role in the stress process, with evidence that it has significant direct effects on health (e.g., Lin & Ensel, 1989; Turner, 1981), partially mediates the effects of stress on health (e.g., Ensel, 1991; Wheaton, 1985), and buffers the effects of stress on health (e.g., Landerman, George, Campbell, & Blazer, 1989; Wethington & Kessler, 1986). Third, there is strong evidence that social-psychological resources largely mediate the effects of socioeconomic status, stress, and social support on health (e.g., Krause, 1987; Pearlin et al., 1981; Ross & Mirowsky, 1989). This body of research provides compelling evidence that the effects of stress on health must be examined with attention to multiple facets of social context.

Another theme in studies of social stress has involved group differences in health (e.g., sex, race, and class differences) and whether they reflect differential exposure to stress or differential vulnerability to stress. Most studies claim to support the differential vulnerability perspective (e.g., Kessler, 1979; Mirowsky & Ross, 1989). But Turner, Wheaton, and Lloyd (1995) caution that results supporting the differential vulnerability hypothesis may reflect, in part, inadequate measurement of stress exposure. Undoubtedly, social location is related to both exposure and vulnerability to stress. For our purposes, the important point is that both perspectives concern the effects of social context on the stress process.

Stress as Process

Stress has been viewed as a process for many years, but only recently has it been actually studied. Virtually all conceptual models of stress include explicit attention to process, and the research base now includes a significant number of longitudinal studies.

Early conceptual models with an explicit dynamic focus include House's model of stress and cardiovascular disease (1974), which noted the importance of examining both short- and long-term outcomes of stress, and Brown and Harris's model of the social origins of depression (1978), which distinguished between general risk factors (including chronic stressors) and specific "provoking agents" (typically life events) that trigger the onset of mental illness. More recent models also focus explicitly on the stress process (e.g., Mirowsky & Ross, 1989; Pearlin et

al., 1981). Some of the important work in this area concerns individual elements of the stress process rather than the process as a whole. Illustrations include work on the distribution of life events over the life course (e.g., Hughes et al., 1988; McLanahan & Sorensen, 1985) and Jacobson's theory (1986) about the differential effectiveness of various types of social support across the stress process.

Some studies have begun to explore the boundaries of the stress-illness relationship with a processual perspective, as in research on widowhood. The effects of bereavement on health have been shown to be initially strong but dissipate after about six months (e.g., Murrell & Himelfarb, 1989; Umberson, Wortman, & Kessler, 1992). Longitudinal studies have helped as well to clarify occasional puzzling findings in cross-sectional studies. For example, they have shown that support mobilization can be confounded with health outcomes in cross-sectional studies (George et al., 1989; Stoller & Pugliesi, 1991).

A Methodological Note

The increased statistical sophistication of the social sciences also has played a vital part in the maturation of stress research. The emergence of path analysis in sociological studies of the 1960s and 1970s spurred increased attention to the conceptual and temporal pathways by which stress affects health. These models also enabled the partitioning of variance in a way that allowed comparisons of stress exposure versus vulnerability to stress in hypotheses. Later, hypotheses about the mediating and moderating effects of social support became a major focus of stress research. More recently, studies have focused attention on potential curvilinear and threshold effects among elements of the stress process.

Recent statistical advances hold considerable promise for stress research. Multilevel analysis permits estimation of the effects of both individual and environmental factors on outcomes of interest. In stress research, multilevel models can be used to determine whether environmental characteristics interact with stressors to affect health outcomes. For example, LaGory and Fitzpatrick (1992) report that the effects of chronic disability on depressive symptoms differ, depending on the age structure and range of services available in respondents' neighborhoods.

We can imagine a broad range of questions for which it would be useful to examine the interactions of stress and mediating factors with ecological characteristics such as levels of social organization and class composition. Event history analysis, which has already transformed the ways many research questions are conceptualized and put to empirical test, offers opportunities to stress researchers that are, as yet, untapped. For example, although exposure to stress has been studied in terms of the number of life events and chronic stressors experienced by individuals, little is known about the relationship between length of exposure to both risk and protective factors and illness outcomes.

The central point of this discussion is that advances in stress research, like all social research, do not rest solely on theoretical developments or the diffusion of statistical methods, but rather on the coupling of theory and methods. In addition to theory and statistical technology, research advances also rest on the availability of appropriate data. We anticipate that, during the next few years, stress researchers will locate and/or collect the kinds of data that will allow them to apply multilevel analysis, event history analysis, and other emerging statistical approaches to unanswered, and perhaps unasked, questions about the stress process, a development that is currently under way in life course studies.

Setting the Stage for a Life Course View of Social Stress

Though stress research has matured considerably over the last quarter century, it has much to gain from the insights of life course theory and studies. Two examples convey a sense of the potential contributions, with emphasis on greater attention to the multiple temporalities of human lives.

First, stress is typically measured with a temporal focus on the present and recent past. Most life event measures include short-term temporal boundaries (e.g., events experienced in the past year). Chronic stressors are typically measured with little attention to duration. Indeed, it is surprising how little attention has been paid to the duration of chronic stressors given that duration is presumably an inherent aspect of chronicity. Instead, most investigators seem content to assume that economic difficulties or marital problems are by definition chronic.

Wheaton and Roszell (1992), however, call attention to levels of stress experienced over the lifetime and the nonlinear relationships between cumulative stress and psychological distress. Similarly, Turner et al. (1995) demonstrate that operant stress, the total burden of stress currently affecting individuals, includes ongoing effects of stressors experienced quite long ago, as well as recent stressful experiences. This temporally expanded view of stressors is highly compatible with life course perspectives that highlight the long-term trajectories or pathways within which contemporaneous social situations are embedded.

A second issue concerns the links between traumatic childhood experiences and mental health during adulthood. Brown and Harris (1978) were among the first to document a robust relationship between childhood trauma, especially loss of a parent, and adult mental illness. Although their work initially generated little interest among sociologists, several recent studies focus on this issue. The most general conclusion is support for the hypothesis that parental loss is significantly related to psychological distress and mental illness during adulthood, including old age (e.g., Krause, 1993; Landerman, George, & Blazer, 1991; Umberson & Chen, 1994). Both the study by Krause and that by Umberson and

Chen suggest that most of the effects of parental loss are indirect, operating via subsequent educational attainment, chronic financial strain, and poor-quality social relationships. Consistent with these findings, Landerman et al. (1991) report an interaction between parental divorce during childhood and recent stressors: parental divorce intensifies the effects of recent life events, increasing the risk of multiple psychiatric disorders. These studies represent beginning efforts to trace the pathways that result in childhood traumas having persisting effects as much as sixty years later, and are highly compatible with the long-term trajectories emphasized in life course studies.

These examples highlight a few of the ways that attention to life course theory might enrich our understanding of stressful change. We turn now to a more detailed and systematic consideration of stress over the life course.

STRESSFUL EVENTS OVER THE LIFE COURSE

Worklives represent a strategic domain in which to initiate an account of psychosocial stress from a life course perspective. Adverse events range from demotions to unemployment, and their consequences depend on matters of duration, life stage, and historical context, all distinctions that are part of life course theory. However, studies of worklife up to the 1970s were not uninformed by an age-graded view of the life course or by the interdependency of work and other social roles. Work events were seldom analyzed in terms of their connections with marriage, parenthood, and leisure histories. Harold Wilensky's Labor and Leisure Project (1961) in Detroit qualifies as a singular exception with its perceptive account of interlocking life cycles, work, family, and leisure. Unstable work minimized social integration and involvement. This project was shaped by the Chicago School of Sociology and its innovative thinking about the human life course, dating back to the early work of Thomas and Znaniecki's (1918) *The Polish Peasant in Europe and America*.

At the end of the 1960s, *The American Occupational Structure* (Blau & Duncan, 1967) advanced the field with a temporal concept of socioeconomic standing in which work statuses, transitions, and trajectories are part of the socioeconomic life cycle in human populations. Work is linked dynamically to other social domains, and status attainment occurs across the socioeconomic life cycle of family, school, and work activities. Duncan, Featherman, and Duncan (1972) elaborated this process by specifying cognitive-motivational links between family origins and education, and by identifying career contingencies such as the timing of the first job, migration, disruption of marriage, and military service.

These studies represent a well-established tradition of life course

study, that of role relationships, especially involving kin. Their distinctive concepts are generation, intergenerational exchange, ties, transmission, and the life cycle of reproduction in human populations. Within a framework of generational succession, newborns are socialized to maturity, give birth to the next generation, grow old and die. The cycle is repeated from one generation to the next within a population. However, age grading and the timing of events and social roles were never part of the analytic model. What Blau and Duncan saw in data on age and events was "life course disorder," to anticipate an observation made in the 1980s (Rindfuss, Swicegood, & Rosenfeld, 1987), and the apparent disarray reinforced their desire to exclude the age grading of life events from the research.

This neglect of timing placed severe limits on understanding work stresses, career discontinuities, and status disparities. A case in point comes from the literature on status crystallization. During the 1960s and 1970s, a flourishing research industry developed around the hypothesized stressfulness of certain kinds of status inconsistency, such as a disparity between education and occupational status. In theory, status disparities generate conflicting expectations and reactions from others. As House and Harkins noted (1975: 400), "Persons with high educational but low occupational status should feel underutilized or underloaded; those with high occupational but low educational status, overloaded. Both overload and underload may be stressful."

This rationale failed to take into account the normative links between work and education across the life course, and correlated perceptions of equitable balances. Indeed, House and Harkins only found support for these expectations when age grading and life stage were introduced. The disparities mattered exclusively among the older, middle-aged men. Age-graded expectations provide one interpretation. The underload pattern is more normative for the early worklife, which serves as an apprenticeship of sorts. Advancements will come in time. However, rationales of this kind lack credibility with the passage of years.

Perhaps the greatest barrier to an understanding of work stresses over the life course involves the long-standing neglect of age by role theory, a dominant theoretical domain within the "social relations" tradition of life course study. The same neglect of age and timing appears in Ebaugh's (1988) theoretical study of role exit and its implications for identity. Role disengagement involves change of one's self-identity in terms of the new role and its predecessor. A role exit is marked by four stages: first doubts, the seeking and weighing of alternatives, turning points, and postexit adjustment. Issues of timing are implied, but the work makes no reference to timing across the life course and in history. To judge from her analysis, it is not important whether a death involves a child or a grandparent, whether divorce occurs in one's 20s or 50s, or whether dismissal

from a job comes in the 30s or at the end of 30 years of work. The evidence, however, suggests that timing matters in all of these ways (George, 1993) and it does so precisely because we are guided by expectation timetables based on social arrangements and practices, age norms, and age-graded beliefs.

Timing can provide an explanation as to why some multiple roles are a burden and others are not. As William Goode (1960) has pointed out, the differential timing of role demands within a day and week, across the seasons of a year, and over phases of a life-span, can markedly lessen the risk of a stressful pileup of responsibilities, a form of cumulative disadvantage. The scheduling of childbearing and family formation until after a woman's phase of career establishment illustrates this point. Life course and family strategies are frequently viewed as a means of coordinating role demands, needs, and options in this manner. Planful coordination of role responsibilities can lead to cumulative advantages in social and psychological well-being.

From another angle, the strategic timing of social roles and transitions bears upon whether they represent a source of intellectual growth, rewarding integration and support, and social development. During the early 1970s, Sieber (1974: 577) made a persuasive case for the developmental benefits of multiple roles, arguing that "role accumulation tends in principle to be more gratifying than stressful." Multiple roles involve people in relatively complex social environments, and social complexity is believed to foster intellectual growth and management skills (Schooler, 1984). Coser (1991: 21) notes that a plurality of social roles enriches the lives of participants through their articulation.

Ten years after Sieber's contribution, Thoits (1983: 175) stressed the importance of identity-relevant roles for psychological well-being, drawing from Sieber's analysis as well as symbolic interaction theory. She asserts that "identity accumulation should enhance psychological well-being and identity lack or loss should impair it. The number and salience of role identities presumably influences such outcomes. That is, the loss of a salient role could be defined as more distressing, other things being equal, than the loss of a less important person. However, empirical support (Thoits, 1992) is still lacking in current research.

Consistent with the limitations of role theory, these observations and theoretical positions include few insights from the study of age and the life course. Does the life history that people bring to events shape their meaning and personal adaptations? Social losses may bring relief from a lifetime of abuse as well as deep feelings of painful separation and guilt. As Wheaton (1990) points out, a divorce may actually provide an escape from emotional deprivation for one spouse, while the other partner experiences a personal loss of great magnitude. Social losses through death provide other examples. The meaning of a parent's death for adult

children understandably depends on the quality of their relationship with this person (Umberson & Chen, 1994). A treasured parent's death is clearly a different event from the death of a parent who bequeathed a legacy of rejection and cruelty to offspring.

The meanings of social roles and events vary according to their normative timetable, reflecting in part their distribution by chronological age. Thus unstable work events are common before the age of 35, but are experienced very rarely after the age of 50. As such, work instability presumably has different meanings in the labor market across these life stages. From the perspective of conventional patterns, unstable work in later life should be more destabilizing than a work pattern of this kind early in life. Likewise, the death of a young mother with dependent children would violate the normative concept of an expected life-span. Its legacy of emotional depression may surface in the middle years of adult women (Brown & Harris, 1978; McLeod, 1991). By comparison, death in the later years is more normative and expected.

Consistent with the normative timing argument, Menaghan (1989: 711) points out that "psychological distress is more likely, not simply when role counts rise or fall, are high or low, but when one's role repertoire departs from the normal." As departures from the expectable life course, off-timed events can set in motion a series of off-timed sequences—late marriage, late childbearing, late career establishment in work, and late retirement. Individual differences in temperament, as in the case of shyness or inhibition (Caspi, Bem, & Elder, 1989), delay the timing of such event sequences and thereby increase the risk of stress experiences. Likewise, antisocial behavior is a powerful source of social disruption and stress (Sampson & Laub, 1993).

An age-graded model of social roles and events in the life course implicates a social regulatory process in which people enter and leave social roles and activities in an orderly pattern. Of course, not all events are correlated with age by any means, but some order is clearly evident in both social pattern and beliefs. For many decades, a majority of American men tended to leave school, get a job, and marry in that order (Hogan, 1981). Many factors disrupted this process, including mass mobilizations for wars and the increasing disconnection between marriage and childbearing.

If the normative foundation of the life course seems grounded more on assumptions and anecdotes than on systematically assembled facts (see Marini, 1984), it still makes possible "the expectable life course," a mental image that guides decisions and actions. The young adult years are characterized by a high degree of disorder in the sequencing of key life events (Rindfuss et al., 1987), and yet the meaning of this condition is uncertain. Long-term consequences of this disarray have yet to be documented. In any case, empirical observations tell us that conflict between

life events and the expectable life course often bring misery, disappointment, and turning points to people's lives. As noted, deaths that do not conform "to the expectable life course" are a case in point.

Life course timing brings needed sensitivity to the sometimes problematic relation between social and developmental timetables. Consider, for example, the consequences of differential rates of physical maturation. Girls experience their physical growth spurt at an earlier age than boys, and they do so at different stages of the maturational process (Brooks-Gunn & Reiter, 1990: 41). As a result, an off-timed pattern of development involves different groups of girls and boys, the early-maturing girls who are accelerated beyond the more rapidly maturing girls and the late-maturing boys who pass through stages of maturation at the very end of the age group. Early maturing girls tend to weigh more and are shorter on average than later maturers at the end of the maturational process. They are at greater risk of poor emotional health and early involvement in adult behaviors, such as smoking, drinking, and sexual activity, owing perhaps to their greater involvement with older boys. Late maturing boys are at greater risk of poor emotional health and unsatisfactory academic performance, when compared to the early maturers. Most of these pubertal correlates disappear in young adulthood.

Off-timed groups may represent an important type of vulnerability to adverse life changes. Evidence of this has been reported for girls in early adolescence. Girls tend to show an increasing level of depressed affect as they pass through the years of early adolescence, while boys generally report a declining rate of depression symptoms across these years. This differential in emotional trajectories appears to be due in part to the stronger impact of negative uncontrollable events on the psychological health of girls (Ge et al., 1994). Such vulnerability may be linked to a perceived decline of parental understanding and warmth during early adolescence. In fact, the impact seems to be minimized when families possess above-average levels of parental warmth. Other empirical evidence suggests that it is most evident among the *early* maturing girls (Brooks-Gunn & Reiter, 1990: 43) who tend to be especially troubled in emotional state.

Up to this point we have stressed the neglect and importance of life course timing in efforts to assess the effects of life changes. Historically, the neglect has been coupled with role theory's insensitivity to issues of temporality. These issues have recently come to the forefront of life course studies through expanding knowledge of the meanings of age. Contemporary studies of age have underscored the significance of time, process, and context in life studies of stress, such as the social timing of events and roles, and the divergent timing implications of maturation and social clocks. Social relationships and linked lives are coordinated through the planful scheduling of events, roles, and activities. Strategic

timing minimizes the time, energy, and labor cross-pressures that make linked lives stressful.

Little has been said about historical time and its consequences for stressful change over the life course. Across successive cohorts of American women in this century, a number of life events and configurations have become more common: births outside of marriage, divorce, full-time employment with young children at home, and caregiving in relation to aged parents. Some of these events have acquired different meanings among contemporary women, such as divorce and the acceptability of bearing children outside of marriage.

In a longitudinal study of women (upstate New York) who had children in the 1950s, Moen and her colleagues (1989, 1992; Moen, Dempster-McClain et al., 1994; Moen, Robison et al., 1994) found the likelihood of divorce, caregiving, and full-time employment to be especially common among members of the most recent birth cohort. A number of women in this cohort were managing a home, full-time employment, some caregiving, and volunteer activities. What did these multiple roles and responsibilities add up to in their lives and psychological health? Were they a source of emotional strain and accelerated aging, a source of greater competence, satisfaction, and resilience, or a combination of both kinds of outcomes?

The study (Moen, Robison et al., 1994) first assessed the effects of multiple roles and social factors in 1956 on psychological well-being (mastery, self-esteem, and life satisfaction) and then assessed the independent contribution of role change and biographies—the sequence of social roles over the life course. The results show that role biographies matter above and beyond initial social involvements and characteristics. Apart from well-being in 1956, women with strong feelings of mastery in 1986 tended to be highly involved in multiple roles across the years, devoted much time to volunteering, and returned to education after childbearing. Similar influences appear in relation to self-esteem, with a career of volunteering work playing an important role. Life changes were less predictive of life satisfaction.

Overall, the multiple role trajectories of these women had positive consequences, but many questions remain on the negative effects. What were the effects of prolonged caregiving when added to other responsibilities? Employment, volunteering, caregiving, and childrearing are activities that vary greatly in rewarding qualities and deprivations or constraints. Details of this kind would enable a more satisfying understanding of the developmental and burdensome features of multiple roles. Some of the role activities have changed their meaning over time, but the authors found no cohort differences in psychological consequences.

This study of New York State women is uniquely equipped to address issues of temporality in relation to stress over the life course because it

collected in a retrospective life history annual information on entry, duration, and exit for all social activities or roles from the 1950s to the 1980s. The data generated lifetime records on employment, volunteer activity, caregiving, and psychological health indicators, among other factors. As such, the investigators could address the question of time in particular activities. Does duration matter and how does it matter? The findings highlight the importance of duration in a particular role or activity.

What about the duration of *exposure to stressful circumstances* and its consequences? What do we know about the effect of a person's duration of exposure? Related to this issue is the span of time that is required to capture the life course effects of stressful or traumatic events and change. Are the effects of unemployment likely to surface within the first two years after the experience, or must observation extend across the life-span? The emergence of stress symptoms among veterans from World War II in later life (van der Kolk, 1987) dramatically underscores the value of a lifetime frame of study and observation. The frame should also be intergenerational, since the traumas of one generation are passed on in transmuted form to the next generation. The experiences of two world wars and the Holocaust (Kahana, Harel, & Kahana, 1988) vividly illustrate this point.

Issues concerning the duration of stressful experiences and influences gain importance from the realities of linked lives and generations in convoys of stress and support. The impact of a prolonged stressful experience, as during the Great Depression among hard-pressed families, generally ramifies through the lives of individuals and their family, kin, and friends. Convoys of stress and support refer, in this case, to linked lives in the proximate social worlds and lives of individuals. We explore the implications of these convoys in relationship histories, the intergenerational transmission of behavior and beliefs, and the impact of role change in other people's lives.

Stress Duration and the Life Course

Duration of exposure to a stressor bears directly upon the life course implications of stressful experience, and yet very little attention has been given to the duration of exposure, and to why some people are more exposed than others. Empirical research on such issues is relatively well developed in studies of military veterans with wartime service (Gimbel & Booth, 1994; Clipp & Elder, in press). This work addresses the recruitment process, the allocation decision in which some recruits are assigned to combat units and others to support groups, and the conditions that maximize the likelihood that fighting men will persevere under combat and not flee to the relative safety of the rear. The duration issue in studies of wartime stress is linked historically to the question of "breaking

point." Why do some soldiers break down under combat, while others do not? To answer this question, the duration and nature of the combat experience had to be assessed. Life history dispositions interact with wartime experiences to produce psychosocial outcomes. The life history antecedents of persisting stress symptoms may change their potency and meaning over phases of the process. Predictors of stress symptoms may vary markedly between men with short- and long-term exposures to combat stress, though empirical evidence on this longitudinal process is lacking.

Combat casualties in World War II were interpreted initially in terms of predisposing vulnerabilities, such as a dysfunctional family, childhood problems, and coping deficiencies, including limited education. One or more of these factors in a life history placed the serviceman at risk of mental exhaustion from exposure to combat. For example, Grinker and colleagues (1946) sought to identify specific psychological predispositions to "operational fatigue" among air crew officers during World War II. They found that victims of the disorder were significantly more likely than controls in the study to report histories of neurotic family background, irritability, minor depressions, feelings of inferiority or homesickness, obsessive and compulsive personality traits, and inadequate controls over anxiety. Similar results were reported in studies of enlisted men in the Air Force.

Forty years later behavioral scientists are still posing questions about the health effects of combat that direct attention to the selection process. The enduring psychosocial effect of combat is a function of the kinds of people who are selected into combat and of the nature and duration of combat. The mental health casualties among Vietnam veterans should be interpreted in terms of the people assigned to combat. Gimbel and Booth (1994) used a large national sample of men who served in the Army between 1965 and 1971 to investigate pathways to combat and their consequences. They did so by focusing on three phases of the process: selection for use of arms, selection for service in Vietnam, and selection for level of combat exposure in Vietnam.

In the first two phases, men selected for combat ranked low on skills and personal qualities that were compatible with noncombat roles. They scored lower on measures of intelligence and were younger at time of entry. Among all Vietnam veterans, the men who ended up with the greatest exposure to combat ranked highest on aggressiveness and the study's retrospective design may have understated this difference through the combat loss of aggressive risk takers. Clearly such selection factors do not have relevance as protective factors for resilient adaptations and psychological well-being.

Duration represents an important conceptual dimension of combat, though studies have not adequately assessed its independent and interac-

tive effects on stress symptoms. Nevertheless, the effects can be inferred from the literature. For example, the adverse effects of POW status in World War II document the powerful implications of duration of exposure to wartime stresses (Zeiss & Dickman, 1989). Moreover, studies of veterans to date generally affirm the principle that each person has a psychological breakpoint under enduring stress, one that varies by individual differences.

Linked Lives as Convoys of Support and Stress

A person's worklife entails benefits as well as stressful moments, and the same observation applies to social relationships. Predictable and orderly careers are generally embedded in social relationships that both nurture and sanction, whereas disorderly careers make life more stressful, while minimizing the effective presence of friends or associates in time of need. These significant others may also become a source of emotional strain, as documented by Kessler and McLeod (1984) in their account of why women report more emotional distress than men. The former are more exposed to the personal crises of others through caring relationships, but these relationships are also a source of emotional support and adaptive strength.

Linked lives do not ensure emotional support, as the marriage literature makes clear (Conger et al., 1993). Indeed, a supportive act to one spouse may be seen as a threat or danger by the other spouse. For example, a spouse who turns to friends and relatives for emotional support may be viewed by the male partner as disloyal or rejecting, especially when the partner anticipates criticism as a result of his or her role in the family problem. A relevant case is the husband with erratic employment. With stable employment a prime source of personal worth for the husband, an erratic worklife would heighten vulnerability to ego-threatening events. One such event is the wife's effort to seek understanding and emotional support from friends and relatives. In a recent study (Robertson, Elder, Skinner, & Conger, 1991), such initiatives were interpreted by husbands as a hostile act. The more wives sought help outside the family, the more negative their husbands became, thereby reinforcing a downward spiral of marital relations.

In all enduring associations, "relationship histories" figure prominently in how individuals get along at a point in time. Unsatisfactory early relationships in marriage may lead to separation and divorce, yet parents and children are forever bound together regardless of the early or later quality of their social relations. This relationship does not end as children leave home, whether emotionally satisfying or adversarial, but continues across the life-span and into the last chapter as elderly sons and daughters care for an aged parent.

Prospective evidence that links early relationships with later experi-

ences, many decades later, is not available, though retrospective reports document substantial continuity in relationship quality from the perspective of middle-aged children (Rossi & Rossi, 1990: 320). Similar levels of continuity appear in other multigeneration studies (Elder, Caspi, & Downey, 1986; Whitbeck et al., 1992). These studies and others (Quinton & Rutter, 1988) document the intergenerational reproduction of inept parenting and family stress.

What are the mechanisms by which relationship problems persist? One answer centers on the link between relationships of emotional negativity and punitive behavior, on one hand, and the development of problem behavior, on the other, such as irritability and explosiveness. The unstable behavior of parents is reproduced in the next generation through their unstable relationships. To investigate this process over the life course, research must join two designs that are typically employed in isolation, a study of intergenerational transmission and a longitudinal panel in which behavioral trajectories are studied over time. In a four-generation study, Elder et al. (1986) joined the two models in a test of the proposition that unstable personalities (explosive, volatile) and unstable family relations (marital, parent-child) are mutually reinforcing dynamics across the life course. They persist from one generation to the next through a process of individual continuity and intergenerational transmission.

The four generations come from the Berkeley Guidance archive: grandparents (G1), parents (G2), Study children (G3), and great grandchildren (G4). The Study children were born in 1928-1929 to parents with birthdates between 1890 and 1910. All of the data on the grandparents were reported by the parents in 1929-1930. The parents were linked to their own parents (G1) and to their own children (G3) during the Great Depression. The Study children were followed from childhood to their own parental years, and then to their own children.

Overall, the intergenerational continuity of unstable, problem behavior was most pronounced among women, and unstable family relationships played an important role in this reproduction. The causal influence flowed from unstable personalities to unstable family relations and then to unstable personalities in the next generation. Relations of hostility and discord linked unstable personalities in one generation with such personalities in the next generation. Similar intergenerational continuities were observed by Whitbeck and his colleagues (1992) in a study of parental rejection and the depressed mood of children. Rejection increased the risk of depressed affect among children, and this state increased the risk of a rejecting attitude toward offspring in the adult lives of the children. The behavioral continuities are noteworthy, but they are modest in size. Not all children who experience the unstable personalities and relationships of their parents become unstable or otherwise reproduce the parental behavior.

Up to this point, we have viewed linked lives as ongoing, interdependent sources of emotional support and stress. Relationships make individual stresses and rewards a shared experience to some extent. However, a supportive act experienced by a spouse may be interpreted otherwise by his or her mate, as when wives seek help from friends for a troubled marriage, an act that may be viewed as evidence of disloyalty by an unemployed husband.

The relationship histories of linked lives have consequences for ongoing relations, and so do the social transitions experienced by individuals. When a daughter has a child, her mother becomes a grandmother. This family change is known as a countertransition. Transitions of this type can be thought of as uncontrollable events (from the perspective of the mother, to use this example), which have potentially stressful consequences. One of the best examples involves the unplanned parenthood of a teenage, unmarried daughter.

Teenage childbearing precipitates a series of premature role transitions: the young girl becomes a very young mother, her mother becomes a young grandmother, and, in contemporary societies, a generation of great- and great-great-grandmothers is also formed. The disadvantages and potentially stressful consequences of accelerated childbearing thus spiral up the generational ladder, setting in motion dramatic changes across the life trajectories of an entire lineage system. The story of this systemic change is based on a Los Angeles study conducted by Linda Burton (Burton & Bengtson, 1985; Hagestad & Burton, 1986).

Burton interviewed members of 41 female lineages in multigenerational black families. Each lineage included the new mother, grandmother, and great-grandmother. Eighteen of these lineage units were defined as "early" transitions (childbirth before age 19). The other lineage units were "on time" (childbirth after age 20). Role transitions in the on-time lineages were generally welcomed by the new mothers, grandmothers, and great-grandmothers. One 22-year-old mother commented that she had become a mother "at the right time:" "I was ready, my husband was ready, my mother was ready, my father was ready, my grandmother couldn't wait!"

By contrast, the early transitions multiplied social strains within the family system, all reflecting the violation of expectations. With few exceptions, the young mothers expected their mothers to help care for their child. However, this expectation never materialized for 83% of the cases, in part because the mothers felt they were too young to become a grandmother. As one woman put it, her young-adult role set was not consistent with the "old age role of grandmotherhood." "I can't be a young momma and grandmomma at the same time. Something seems funny about that, don't you think?" A good many of the mothers had dating partners and the transition to grandmotherhood clashed with this image of self.

The refusal of mothers to become grandmothers, with their normative childcare responsibilities, led most of the young mothers to shift these duties to their grandmothers, now the baby's great-grandmother. But some of these women felt that the change made their life go by too fast. In the words of a woman beset by too many claims: "I ain't got no time for myself. I takes care of babies, grown children, and old people. I work too . . . I get so tired I don't know if I'll ever get to do something for myself." Some of these newly promoted great-grandmothers felt they had to put their lives on hold until "the older generation died or the three younger generations grew up."

The notion of interdependent lives as a convoy of support and stress is powerfully displayed across levels in this study, from the multigenerational family system to the interweave of lives in successive generations and the behavior of young women. The interdependence of lives functioned acceptably in terms of social support and caring when the young women had children at a normatively valued time, in their 20s. Stresses piled up when young children arrived too soon, when young mothers were thrust into the responsibilities of childcare, years before they expected them.

This section of the chapter has discussed basic analytic features of the life course framework, as it relates to the study of stress, its antecedents and consequences. The potential value of the framework in studies of stress can be assessed in areas of application that have little if any connection to the approach. Do life course distinctions make a difference? We try to answer this question in a concluding section by focusing on the timing of military service in men's lives, the legacy of child abuse, and the dynamics of linked lives in caregiving.

LIFE COURSE APPLICATIONS

The social organization and flow of human experience across the life course have much to do with the variable exposure and adaptation of individuals to stressful change and its meaning. Examples of this observation have been noted along the way, from worklife patterns to marriage and multiple roles. In this section, we turn to substantive domains of special relevance to social stress that are or were largely devoid of life course theory and analysis: military service in wartime, child abuse, and caregiving. What does the life course framework offer in assessing the psychosocial effects of these powerful stressors?

Paradigmatic themes of life course theory (historical time and place, agency, social timing, and linked lives) identify useful points of departure in each area of application. The most neglected life course distinction across all three events involves *temporality*. Until recently, no one gave any thought to the age at which people entered the service, and the temporal context of family abuse and caregiving attracted little attention.

When Men Come to War

During World War II American men were mobilized into the armed forces between the ages of 18 and 38, a process that involved four out of five males who were born around 1920–1923. By comparison, the age span for induction during the Vietnam War extended from 18 to 23 years, and involved a select segment (largely blue-collar) of the relevant birth cohorts. These age differences are coupled with different rates of exposure to combat, time overseas, and a striking contrast on the homecoming experience. The terms of reentry into civilian life differed for Vietnam veterans who faced political and cultural strife over their involvement, an anemic economy, and a weakened GI Bill.

Even the social stability of fighting units varied between the wars in critical ways. During World War II, turnover in battle units was minimized to facilitate strong ties and cohesiveness. By contrast, the troop rotation system in Vietnam produced rapid turnover on the premise that it minimized combat casualties (Goodwin, 1980). By individualizing the war experience, the troop rotation system actually undermined the social support needed for combat effectiveness, that soldiers fight for their comrades. These historical patterns point to large differences in the psychosocial legacy of wartime stressors, but we also know that there are commonalities, particularly in terms of the traumatizing effect of exposure to death and dying (Fontana & Rosenheck, 1994). Among veterans of both wars, this exposure is most predictive of post-traumatic stress symptoms in the later years. Loss of a fighting mate is a core element of this trauma.

The persistence or delayed emergence of war stress symptoms into the later years continues to pose a major challenge to the life course understanding of war trauma. A substantial number of combat veterans report life-impairing stress symptoms during the later years or note that they are experiencing such symptoms for the first time (Clipp & Elder, in press). In one study, about half of the World War II veterans who were of retirement age reported nightmares and intrusive recollections of combat experiences (van der Kolk & Blitz, 1981). The reasons for this delayed onset are unclear but the precipitating event, whether a car accident or retirement, could bear some resemblance to the helpless state of war trauma.

Life course studies have identified three mechanisms that provide an interpretation of stress symptom persistence and its legacy of disadvantage (Caspi et al., 1989): interactional continuity, the situational activation of latent dispositions, and cumulative effects. *Interactional continuity* refers to the behavioral persistence that results when a veteran's pattern of interacting with others tends to recreate the same conditions over and over again. Thus a veteran's hostile or withdrawn behavior may evoke a response from others that maintains the hostility and isolation. *Situation-*

al activation is based on the similarity between the loss of personal control in war combat circumstances and situations in the later years, as in the case of forced retirement. *Cumulative effects* refer to behavioral continuity that is maintained through the progressive accumulation of the consequences of the behavior itself. For example, a veteran's explosiveness and emotional distance may threaten his marriage and thereby reinforce a cycle of irritability and ill temper. Such explosiveness could also lead to erratic work, which undermines family relations and exacerbates the veteran's combustible temper. Dispositional tendencies both affect the influence of life experiences and potentially drive the veteran's own selection of environments and experiences.

In theory, these effects vary by life stage or age at exposure. What can age at military entry tell us about the impact of wartime experience? Early entry into military service generally comes before family formation and established careers, and thus avoids the disruptive impact of later mobilization (Elder, 1986, 1987). Military benefits (such as the GI Bill) are also most available and useful for the early entrant. Among veterans of World War II and the Korean conflict, early entrants were more likely to show developmental and career gains, when compared to the later entrants (Clipp & Elder, in press). The costs of truly late entry after the age of 30 are even more substantial, and the reason has to do in part with its disorganizing effect on the life course.

In a sample of California men from the Lewis Terman study, Elder, Shanahan, and Clipp (1994) found that men who entered World War II after the age of 32 were at greatest risk of divorce, worklife disruption, and health decline over the later years. These men were more likely to experience a negative physical health trajectory after the war, even though they were better educated and experienced less combat than the younger entrants. With the evidence at hand, late entry seems to produce long-term health risks because it exposes late service entrants to more social and economic disruption. Mechanisms linking late entry, life course disruptions, and impaired health may include status inconsistencies, a lack of material resources, social isolation or marginality (Rabkin & Struening, 1976), loss of self-identity (Mestrovic & Glassner, 1983), and adverse change in immune functioning (Cohen & Williamson, 1991). Clearly, multilevel research is needed to better understand this process of life course disadvantage.

The consequences of combat experience and an ill-timed entry may ramify across relationships in personal networks. As returning veterans bring back recollections of war, they can become a part of the family's emotional life. Secondary traumatization occurs when war stressors and their distressful reactions are passed on through maladaptive behavior to spouses and children. Ford and associates' (1993) study of Persian Gulf veterans found elevated levels of marital distress one year after the con-

flict, and this change may have adversely affected the quality of parent behavior. Indeed Kulka and his colleagues (1990) report higher levels of PTSD in veterans' spouses, when compared to the spouses of noncombatants, along with higher rates of marital problems and more behavioral problems among the children.

Child Abuse

Stress models of the etiology and consequences of child abuse are an established part of the research literature, but they are not informed by principles of life course study. For example, Wolfner and Gelles (1993) recommend a psychosocial diathesis-stress model for the study of child abuse, a model that draws attention to contextual and personal factors in the stress process (e.g., Feldman & Downey, 1994). Yet, given the strong influences of life-span psychology (Starr, MacLean, & Keating, 1991) or developmental psychopathology (Cicchetti & Carlson, 1989; Egeland, Jacobvitz, & Papatola, 1987; Wolfe, 1987), the models are not appropriately sensitive to historical trends and contexts, to social and developmental timetables, or even to the social embeddedness of life patterns.

In a survey of the anthropological literature, Korbin (1991) observes that child abuse is less likely when children are "valued," whether for economic, cultural, or emotional reasons. It is also less likely in communities where parenting is embedded in broader social networks and in social systems that are largely stable, with little socioeconomic or socio-cultural change. Abusive parents are more socially isolated, have smaller social networks, and receive less help from friends and relatives, when compared to other families (Belsky, 1993). The embeddedness of parents inhibits violence by providing assistance for childcare tasks, options for redistributing children, and enforcement of child-rearing standards. Such insights are pursued all too infrequently in research on child abuse, except for Garbarino and Sherman (1980) and Gelles (1973).

A temporal view of family process is another life course angle on child abuse. Closely linked to attributes of the community and social change are family changes that make child abuse more probable, such as unemployment and economic distress. In terms of poverty, research documents striking variation in the economic history of families, including episodic poverty (Duncan et al., 1984). Devine Plunkett, and Wright's (1992) analysis of data (1969-1987) from the Michigan Panel Study of Income Dynamics shows that almost a fifth of the families were poor between 2 and 10 of the 19 years studied; only 1% were poor all 19 years, while 8% were poor just 1 year. Both income and welfare status data support the contention that many families are poor for a few years and then move out of poverty permanently.

These temporal patterns undermine the validity of static approaches to poverty and, most important, pose a series of questions about the

chronicity of economic deprivation. Illustrative of a dynamic approach to poverty is a recent analysis of the severity and recurrence of physical abuse as a function of poverty history (Kruttschnitt, McLeod, & Dornfeld, 1994). The authors find that length of time in poverty, as opposed to current poverty status, explains the recurrence of abuse, although this effect fades when parental criminality and spousal violence are taken into account. In exploring plausible explanations for this pattern, they note that a history of criminality and spousal abuse is "inextricably tied to both past and present experiences of economic deprivation and associated antisocial behaviors." Family violence, then, is both a consequence of and a constitutive force in economic deprivation and violence generally. In this account, the study moves away from simple causal relationships to more complex models of interlocking trajectories of the life course.

Increasingly, issues of continuity and change are addressed by studies of the intergenerational transmission of violence directed toward children. A substantial number of projects have examined the generational reproduction of child abuse (Kaufman & Zigler, 1987; Pianta, Egeland, & Erickson, 1989) and the mechanisms that might explain the process (Widom, 1989a,b; Masten, Best, & Garmezy, 1990). However, Kaufman and Zigler (1987) conclude that only 30% or so of those physically abused will abuse children, owing to social learning, internal working models that promote violence, and other factors.

This brings us to the last application, the dynamics of caregiving, a stressful relationship that can be understood most thoroughly from a life course perspective, with its paradigmatic principles of historical context, social timing, and interdependent lives.

Caregiving Stress and the Life Course

Family caregiving has become a flourishing topic in aging research, but few studies have examined it from a life course perspective: as a segment of the life course that emerges from historical trends, as links across and within the generations, and as long-term trajectories in which personal commitments made early in life unfold over subsequent decades. In this section, we examine how the life course perspective could inform our understanding of caregiving stress, beginning with a brief review of major research themes.

Major Themes in Caregiving Research

The Costs of Caregiving Caregivers average at least twice as many psychiatric symptoms as noncaregivers (George & Gwyther, 1986; Haley et al., 1987). Increased psychiatric symptoms do not always, or even typically, signal full-blown, diagnosable mental illness. Nonetheless,

approximately 30% of caregivers of demented older adults meet the criteria for a diagnosis of clinical depression (Cohen & Eisdorfer, 1988; Gallagher et al., 1989). Research evidence concerning the effects of caregiver stress on physical health is ambiguous (Schulz, Visintainer, & Williamson, 1990; Wright, Clipp, & George, 1993). Caregiving does not typically result in new health problems, but it can exacerbate preexisting illness, and caregivers often neglect their own health.

Unlike most stress research, studies of caregiver stress have examined outcomes other than physical and mental health. Research to date suggests that other consequences of caregiver stress include social isolation (George & Gwyther, 1986), increases in family conflict (Semple, 1992), role captivity (a sense of being trapped in an unwanted role; Aneshensel, Pearlin, & Schuler, 1993), and a sense of role engulfment or loss of self (Skaff & Pearlin, 1992).

Contingencies Affecting Caregiving and Its Outcomes As is true for other stressors, social support plays an important role in caregiving. Both caregivers' subjective perceptions of the amount and quality of support available to them and the amount of instrumental assistance they receive are robustly related to caregiver well-being, especially psychological distress and other mental health problems (e.g., Clipp & George, 1990; George & Gwyther, 1986; Pruchno, Kleban, Michaels, & Dempsey, 1990). The competing demands of employment and young children do not appear to have consistent adverse effects.

Selection into Caregiving Selection of a primary caregiver typically follows a hierarchical process based on kinship and gender (Cantor, 1983; Shanas, 1979). Spouses sit at the top of the hierarchy. If the impaired older adult is married, his or her spouse will serve as primary caregiver. Gender is irrelevant to spouse caregivers; husbands and wives are equally likely to take on caregiving duties. If the impaired older adult is unmarried, an adult child will serve as primary caregiver. At this stage, gender becomes relevant. If the impaired adult has children of both sexes, a daughter is more likely than a son to become the caregiver. If there is no daughter, the son will become the official caregiver, but the son's wife is likely to perform most caregiving tasks. If an impaired older adult lacks both spouse and children, caregiving responsibilities fall on more distant relatives, again, with women more likely than men to become caregivers. As the kinship basis of caregiving becomes more distant, relatives are less willing to take on caregiving duties and will perform them for shorter periods of time (e.g., Cantor, 1983).

The Dynamics of Caregiving Like other stressors, caregiving is a process that changes over time, as the needs of the care receiver change, the

caregiver's situation changes, and/or the caregiving context changes. The majority of caregiving research is based on cross-sectional data. But longitudinal studies are increasing in number and quality, providing initial findings about the dynamics of caregiving.

Most longitudinal studies have focused on two milestones in the caregiving career: institutionalization and death of the care receiver. Although institutionalization is linked to high levels of disability among care receivers, the most potent predictors are characteristics of the caregiver. Characteristics associated with the higher risk of institutional placement include a nonspouse caregiver, a younger caregiver, an employed caregiver, the caregiver has minor children, the caregiver has high symptoms of distress, the caregiver perceives social support to be inadequate, the caregiver reports economic strains, and caregiver perceptions of role captivity (e.g., Aneshensel et al., 1993; Colerick & George, 1986). Thus, several facets of caregiver stress are strong predictors of institutionalization of the care receiver. Institutional placement relieves some, but not all, of the stress associated with caregiving (Aneshensel et al., 1993; Zarit & Whitlatch, 1992).

Despite high levels of prebereavement distress, caregivers experience a demonstrable period of grief following the deaths of their loved ones (Aneshensel et al., 1993; Bass & Bowman, 1990; Mullan, 1992). However, the care receiver's death removes the stresses of caregiving, and those benefits for mental health are observed despite the grief of bereavement (Aneshensel et al., 1993; Mullan, 1992).

Two specific elements of caregiving dynamics have been examined longitudinally. First, Pearlin (1993) has shown that caregiving tends to be characterized by a process of "stress proliferation" over time. Secondary stressors that frequently emerge over the caregiving career include family conflict, employment strains, economic problems, a shrinking of social life, and threats to social-psychological resources such as self-esteem and a sense of mastery. Thus, the demands of caregiving per se are only part of the total stress of caregiving. Second, Clipp and George (1990) examined changes in social support experienced by caregivers of demented adults over a one-year period. They observed considerable change in the levels of instrumental and subjective support received by caregivers. Unfortunately, changes in the provision of support were not linked to caregivers' changing needs for support.

Some Life Course Insights

Caregiving research has been vigorous and productive, but there are several ways in which a life course model could broaden our understanding of this relationship—through placement in history, a view of multiple interlocking trajectories of responsibility, and the meaning of such care.

Caregiving in Historical Context Scientific interest in caregiving began in the late 1970s. However, this is an old institution in human society. What led to such a late "discovery" of a familial transfer of support that is centuries old? A life course study would focus attention on historical trends for answers to this question.

Increased longevity and decreased fertility over the past century have altered the length of time spent in specific family roles. Using data from census records, Watkins, Menken, and Bongaarts (1987) compared time spent in specific family roles by three simulated cohorts of women from the United States born in 1800, 1900, and 1980. They estimate that the number of years that a woman could expect to have living parents nearly tripled between 1800 and 1980. At the same time, the number of years that women in the United States spent with children in the home dropped by nearly 50%.

More recently, Moen, Robison et al. (1994) examined cohort differences in the likelihood of acquiring the caregiver role. The sample for the study consisted of 293 women from four birth cohorts who were interviewed twice, 30 years apart. At recruitment to the study, all the women were aged 23–50, were married, and had children. Cohort differences were dramatic, with the caregiving role becoming increasingly prevalent among more recent cohorts. Only 45% of the oldest cohort (born 1905–1917) were ever caregivers, compared to 64% of the most recent cohort (born 1927–1934). Note also that some women from the younger cohort would undoubtedly become caregivers in the future. Thus, the study underestimates the proportion of the younger cohort who will ever be caregivers. The average age at entry to the caregiving role also increased across cohorts.

This historical perspective tells us that caregiving has only recently become a *common and predictable* part of the life course. Other recent trends, including the increased employment of women and increased geographic mobility, highlight the potential problems of providing family caregiving, especially across generations. From this angle, the emergence of caregiver stress as a scientific and policy issue reflects the interaction of historical trends.

Caregiver Selection and Competing Demands The timing of the transition to caregiver is uncertain and variable, though families undoubtedly begin to prepare for it years in advance. Because most studies of caregiver selection are cross-sectional, we are likely to have "missed" important parts of the process that occur before caregiving is needed. For example, we lack information about: (1) the extent to which both older parents and their adult children relocate in geographic proximity prior to the need for caregiving; (2) how middle-aged married couples balance their responsibilities to two sets of parents; (3) how the quality of marital and

parent-child relationships prior to the onset of illness affect subsequent caregiving decisions; and (4) how intergenerational transfers of money and services prior to the onset of illness in the parent generation affect subsequent caregiving. Neither the selection of a primary caregiver nor the support that other family members provide to that caregiver are simple responses to current needs. Moreover, the family unit will continue after the illnesses and deaths of the oldest generation. Concerns about "life after caregiving" surely affect caregiving arrangements as well.

The principle of linked lives alerts us to competing demands that extend beyond the caregiving situation. Employed caregivers have jobs, but their job histories, the meanings they attach to work, and the opportunities and constraints that characterize their jobs vary greatly. As family members negotiate the transition to primary caregiver, employment issues extend beyond the number of hours that one can comfortably work given new responsibilities for personal care of family members. Within the family, responsibilities for minor children are undoubtedly an important issue. But caregiving changes relationships for all members of the caregiver's family, including that of the spouse, grown children, siblings, and, in the four-generation families common today, grandchildren. Moreover, most American families no longer consist of a continuously married couple and their children. Divorce, single parenthood, remarriage, and step-parenting are common and they undoubtedly affect decisions about caregiving responsibilities.

A recent study by Moen, Robison and colleagues (1994) provides the best example to date of a study of caregiving and the competing demands in life course context. Recall that the sample for this study consisted of 293 women who were interviewed twice, 30 years apart. Extensive life history data also were collected about major roles and commitments during the 30 years between interviews. Moen et al. found no evidence that employment affected acquisition or duration of the caregiver role. Half of the women who were ever employed reported a period in which they worked and had caregiving responsibilities. Very few women reported leaving work to provide caregiving, and almost all of them left work at retirement age. Indeed, most women retained their jobs while caregiving and, overall, they were more likely to exit the caregiving role than to stop working. Cohort differences were observed as well. Women from younger cohorts were more likely to work than women from older cohorts. Given their higher participation in caregiving, younger women were especially likely to report simultaneously working and providing care to an impaired older relative.

Moen et al.'s study represents an important contribution to the understanding of caregiving as a stressor because it examines long-term trajectories of work and caregiving. The most surprising findings are the lack of evidence that (1) employment interfered with caregiving or (2) that

caregiving resulted in a departure from the labor force. Moen et al. did not examine caregiver stress—thus, it is likely that the combination of employment and caregiving was associated with perceptions of stress, as has been found in other studies. The study's results are compatible, however, with research on caregiver stress that fails to find differences in health between employed and nonemployed caregivers. Their results also suggest that employed women are more likely to exit caregiver roles than work roles—decisions that surely rest in part on the stressfulness of those roles.

The Meaning of Caregiving If caregiving has become an integral part of family life in the twentieth century, we should understand more than its prevalence and its effects on health. We also need to understand its cultural meaning. Life course perspectives remind us that meaning is attached not just to the "here and now," but also to the unfolding of long-term commitments and choices. It is unlikely that the meaning of caregiving to its role occupants is based solely on the exigencies of situational demands. Caregivers find the meaning of caregiving in its relation to their whole lives, not just in the rewards and stresses of the moment.

The meaning of caregiving has received little attention to date, but the fragments of available data are intriguing. In an effort to balance the overwhelming view of caregiving as stress, a few authors have asked caregivers about the satisfactions and rewards associated with providing care to an impaired loved one (Farran et al., 1991; Kinney & Stephens, 1989; Montenko, 1989). Caregiving appears to have four primary rewards, although few caregivers report all of them: (1) the satisfaction of demonstrating love through care; (2) the structure that caregiving duties imposes on life (reported most often by retired husbands caring for their wives); (3) the sense that caregiving is, for at least the short term, one's "calling" or purpose in life; and (4) increased family closeness resulting from caregiving.

In two studies, examination of the meaning of caregiving moved beyond a cataloging of costs and rewards. In a sense, both investigators attempted to find out why caregiving is "stressful," not in terms of objective demands, but at a deeper level. Brody (1985) focused on intergenerational caregiving provided by children to their parents. Interviews with caregivers led her to posit that caregiving is an important vehicle by which adult children come to terms with their parents' weaknesses and mortality, with truly becoming the generation "in charge," with bringing closure to unresolved issues while there is still time to do so, and with trying to repay parents for all that they received from them. George (1986) began by examining family conflict and cooperation among both spouse and adult child caregivers of demented older adults. Interview data revealed a deeper set of issues revolving around the meaning of the family itself: Are concerns about equity legitimate in the family context?

To what extent is self-protection appropriate if family members need more than can be given without putting oneself at risk? Although these studies provide clues to the meaning of caregiving, more effort is needed.

Caregiving is a stressor that ends, but it never has a happy ending. As George (1986) notes, what distinguishes caregiving from other forms of social support is the fact that it signals a permanent change in family relationships: care recipients never return to more normal family roles. Skaff and Pearlin (1992) discuss the role engulfment experienced by caregivers, a valid point. But role engulfment is even more total and permanent for care recipients: spouses are no longer spouses, but patients; parents are no longer parents, but dependents. To more fully understand caregiving, we must understand the meanings on which this newly prevalent and predictable life course transition rests.

CONCLUSION

Psychosocial stress has much to do with the human life course, its social organization, dynamics, and historical context. Empirical support for this observation has accumulated over the past half century, bringing fresh insights to old problems, though life course ideas are only beginning to influence approaches to psychosocial stress.

The first edition of *Psychosocial Stress* (Kaplan, 1983), published slightly more than a decade ago, made no use of the life course as theory or concept. At the time, role theory and its relation to self-identity processes prevailed as a sociological framework and it remains prominent among contemporary theories. Life course theory builds upon role theory in a number of ways, and in this chapter we explicitly emphasize important extensions through an understanding of age and temporality. Role transitions occur at different times in life and with differing consequences. The death of a child and grandparent illustrate this point, as do the psychological and social effects of unemployment. The meaning of role exits, such as divorce with its dramatic upswing in modern societies, also varies by historical time.

The late arrival of life course concepts in stress research is partly due to their recent emergence in a theoretical approach and paradigm. The term life course was not part of social science vocabulary at midcentury. Instead, we find life history models dating back to the early studies of Thomas and Znaniecki, which were organized around role theoretical distinctions. Social relationships in this approach centered around family roles and the generations, and simple notions of role sequence (as in "lines of genesis") provided a temporal account of personal and social change from generation to generation, as in concepts of the life cycle. The principle of "interdependent or linked lives," a central theme of life course theory, comes from this research tradition.

Concepts of temporality and human agency were introduced in the 1960s by the new sociology of age and the life course, with its emphasis on the relation between people as actors and social roles. In this perspective, the life course refers to age-graded events and role sequences that are not necessarily experienced at the same time by members of an age cohort. The enactment of social roles varies in timing. This approach soon converged with the relationship tradition of life history analysis to form what we now recognize as the life course paradigm with its four major conceptual themes: (1) the interplay between human lives and their changing times and places, a perspective on the historical and geographical worlds of the life course; (2) the timing of human lives, social, cultural, and biological; (3) linked lives, their life course dynamic and connection to the changing historical world; and (4) human agency amidst social constraints or social structure.

In retrospect, two approaches to psychosocial stress—the Holmes/Rahe focus on life change and the social role/structure perspective—appear circumscribed in important ways by not attending to the insights of life course analysis. Life changes clearly matter for psychosocial stress and health, but whether and how they matter depend on when they occur in the life course. The weighting commonly ascribed to life events assumes that a particular event has the same meaning or significance across the life course, a point solidly refuted by empirical research. The meanings of life events vary across the life course and so do the primary causal influences. Drawing insights from Meyer's (1951) life chart, Holmes and Rahe evolved a theory of life change that was uninformed by knowledge of the social life course. This knowledge and theory has something to contribute to assessments of the psychological effect of structural strains. Worklife stresses have different meanings and implications for people in their 20s and 50s.

Many challenges lie ahead for studies of psychosocial stress, but one of the more promising concerns linkages among stressors, health behaviors, and the life course, its social organization, pathways of change, and meanings. Cumulative forms of advantage and disadvantage, social, physical, and psychological, are an important part of the untold story, along with knowledge of constructive turning points, sources of life management, and the reorganization of life styles. Whether as context or research focus, the life course has become an essential part of the territory in studies of psychosocial stress.

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V

Methodology of Psychosocial Stress Research

Previous chapters have focused on the more substantive aspects of the psychosocial stress process rather than on the methodological implications of investigations of psychosocial stress. However, each of these chapters has noted some implications of substantive orientations for methodological approaches, and the constraining or facilitating effects of available methodologies on the study of psychosocial stress. For example, Wheaton (Chapter 2) wrote of the need to model both the main effects of contextual features as stressors in addition to the interaction of these circumstances with other putative stressors. Elder and his associates (Chapter 7) noted the facilitative influence of increasingly sophisticated statistical methods. Certainly, advances in structural equation modeling, hierarchical linear modeling, and event history analysis permit addressing questions regarding the psychosocial stress process in ways that could not be accomplished in the absence of these techniques. In Part V, the focus is on the methodology of