CHAPTER 1

Life Course Studies

An Evolving Field

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Lives are influenced by a changing society, though little is known about how this occurs. Immigration posed such a challenge to W. I. Thomas and Florian Znaniecki (1918–1920) in their landmark study, *The Polish Peasant in Europe and America*. They provided an ethnographic–historical account of life in the old country of Poland, and of eventual settlement in urban environments of Northern Europe and America. But they did not have the methods or resources to follow immigrants to communities in the New World and to study the personal effects of this social transition. Decades later in World War II, research teams (Stouffer, Suchman, DeVinney, Star, & Williams, 1949) used cross-sectional surveys to assess the impact of wartime experience on soldiers morale. However, they could not identify sources of changing morale, because they did not observe the soldiers over time. Today *The Polish Peasant in Europe and America* and *The American Soldier* are recognized as pioneering classics of early social science, and the study of people's lives has flourished, moving well beyond these limitations for addressing questions at hand.

Ever since the 1950s, there have been extraordinary advances in studying lives over time, and they extend across disciplines in the social, behavioral, and biological sciences. The times called for new thinking about people's lives, society, and their relationship, now identified with life course concepts (Elder, Johnson, & Crosnoe, 2003). Aging populations contributed to this perspective by focusing attention on relations

between the early and later years. Most noteworthy among data collection methods is the explosive growth of longitudinal studies that follow people into new situations and across their lives. In a special issue of *Science* (Butz & Torrey, 2006), this research design has been described as the "Hubble telescope" of the social sciences and as one of the most important methodological innovations in the field (Phelps, Furstenberg, & Colby, 2002; Menard, 2008). Sequential surveys of a sample or birth cohort generate data that enable scientific observers to "look back in time and record the antecedents of current events and transitions" (Butz & Torrey, 2006, p. 1898). With this perspective, longitudinal studies have brought a greater appreciation of temporality, process, and contextual change to the study of people's lives.

This introductory chapter provides an overview of major methodological issues in life course projects by showing how all share in a new paradigm on the life course. The paradigm emerged out of the convergence of theoretical and empirical strands of research that link social change, social structure, and individual behavior. We make explicit the paradigm's core principles, especially as it has come to be understood in sociology, and describe how it developed out of empirical discoveries after 1960. We turn next to new directions in life course studies and include the methodological developments reported in this book.

Emergence of the Life Course Paradigm

How new models emerge from a time of contrary practices is often puzzling. A prime example involves the sudden appearance of "major longitudinal studies" of the life course after years of survey research. Most social research between World War II and 1960 was based on cross-sectional surveys that offered snapshots of a person's life. Studies also investigated the effects of social structure on individual behavior at a point in time, even though both factors are known to change. And, too often, people were depicted as if they lived in what Nisbet (1969) has called the "timeless realm of the abstract." In short, social research of the 1950s in the United States neglected change in people and environments, an observation that also applies to greater Europe.

This scientific climate began to change in the 1960s, when a number of developments favored longitudinal studies and a contextual life course perspective. They include the rise of new scientific questions that take advantage of the medical/life histories of people, and the perceived relevance of longitudinal designs for their study. More questions focused on the etiology of health and illness, owing in part to the postwar establishment of the National Institutes of Health (NIH)

in the United States, with emphasis on pathways to health and disability. For example, the Framingham Heart Study was launched in 1948, with over 5,000 men and women from Framingham (Massachusetts) between the ages of 30 and 62. Based on funds from the National Heart, Lung and Blood Institute of the NIH, this pioneering longitudinal and intergenerational study has been extended to the Framingham grandchildren. Similar changes in research questions in Great Britain are evident in government support for national longitudinal cohorts. Medical Research Councils in the United Kingdom have played a major role in managing and promoting national longitudinal cohorts, from 1948 to 2001 (see Ferri, Bynner, & Wadsworth, 2003, pp. 313–324).

The model for such research designs may well have been influenced by the prewar writings and initiatives of social psychologists and developmentalists in the United States. During the mid-1920s, W. I. Thomas, a social psychologist, asserted that priority should be given to the "longitudinal approach" to lives, that studies should investigate "many types of individuals with regard to their experiences and various past periods of life in different situations " (in Volkart, 1951, p. 93). Thomas appears to have had in mind a study that followed children from their earliest years to young adulthood. The first decade of life would set in motion the pathways of later life. The impact of Thomas's recommendation is unknown, although he knew that a small group of psychologists at the Institute of Human Development at Berkeley was involved in launching such studies of children with birth years at opposite ends of the 1920s (Elder, 1999). The resulting projects focused on child development, but the study participants were eventually followed through the Depression and War years to their middle years and old age (Eichorn, Clausen, Haan, Honzik, & Mussen, 1981).

Research Questions, Designs, and Contextualization

New scientific questions about the etiology of health and illness, and the proliferation of longitudinal studies were necessary but clearly not sufficient as catalysts for the development of life course models in the 1970s. For example, the Framingham Heart Study made excellent use of its longitudinal data, but the investigators did not chart the social pathways of the study members or the timing of events. The Berkeley longitudinal studies focused on issues of behavioral continuity from early childhood to the middle years. The investigators devoted no attention to the routes—whether college, the workforce, or military service—that young boys and girls followed into adulthood. The historical time and place of these studies were not part of the research. This neglect of life contexts was not unique to these studies. Lewis Terman's (1925) sam-

ple of talented Californians (born 1903–1920) entered college and the workforce during the 1930s, and over 40% of the men served in World War II (Holahan & Sears, 1995). But neither of these historical periods was of interest to the investigators; they also paid little attention to the life course of the study members.

The essential influence to consider is the rise of "contextualization," which had its beginning in the late 1950s. Social history began to flourish at this time, with emphasis on the lives of people, their families and communities, instead of Kings and Queens (Thernstrom, 1964). In the field of historical demography, manuscript census files have been used to generate individual-based data files. Steven Ruggles (2002) at the University of Minnesota has pioneered the development of public use microsample files of federal census reports, extending all the way back to 1850. In preparation of the files, his team has provided data in a standardized format that enables intercensal comparisons. Each census file is based on at least a 1% sample of the national population. The files enable investigations of life course patterns over historical time in population subgroups defined by race and ethnicity, immigrant status, and age and sex. Though individuals cannot be tracked across successive censuses, Hogan and Goldsheider (2003, p. 684) point out that individual persons in households can be used to track the aggregate life course in carefully defined birth cohorts over time.

In the 1970s, life course specialists began to collaborate with social historians on historical studies of the life course, as in the Essex County–1880 study in Massachusetts (Hareven, 1978). Historians launched social histories of the life course, with a focus on adolescence (e.g., Modell, 1989) and on decline in the textile industry, expressed through the lives and families of workers (Hareven, 1982). A good many developmentalists also shifted their interests in the direction of studying children's lives and families in context (Eccles & Midgely, 1989). Schools, neighborhoods, and communities were investigated as childhood contexts with potential effects on development.

Perhaps influenced by a new awareness of the connection between life patterns and social change, significant theoretical work emerged in the 1960s on this link, highlighted by Norman Ryder's seminal essay, "The Cohort as a Concept in the Study of Social Change" (1965). He stressed the notion of life stage in his account of cohort differences in the life course. As each birth cohort encounters a historical event, it "is distinctively marked by the career stage it occupies" (p. 846). In the early 1970s, Matilda Riley and her colleagues wrote about the dual functions of age (Riley, Johnson, & Foner, 1972). Age distinctions order social roles, and they also order people according to birth cohort (the year of birth). Children's life chances are influenced by the economy's health at

the time of their birth. For example, Americans born at opposite ends of the 1920s (1920–1921 vs. 1928–1929) experienced different life chances through the Depression and war years (Elder, 1999). Boys in the older cohort, unlike the younger cohort, were not wholly dependent on their families during hard times, but they were recruited to military duty early in World War II, whereas the younger cohorts of males were too young to be drafted for service in this war.

In the field of sociology, investigators applied newly formed interests in the life course to the recasting of unused data archives (see Elder & Taylor, Chapter 5, this volume). For example, Robert Sampson and John Laub (1993) injected new vitality and purpose into Sheldon and Eleanor Glueck's archive (1950) of data on 1,000 men who had grown up in a low-income area of Boston, 1924–1932. This study employed a matched control design with 500 young males who had a delinquent record and 500 who did not. The authors recoded the available data to measure life pathways and adaptations up to the young adult years. In a subsequent volume, Laub and Sampson (2003) analyzed crime and death statistics on the men, and succeeded in collecting new interviews from a small number of them in late life. Divergent life lines emerged from the shared origins of this disadvantaged sample.

To set up these studies, the authors used an age-graded theory of informal social control that has since been modified to include historical context and human agency. The meaning of age in lives, developed initially and most extensively by Bernice Neugarten (1996) in the 1950s and 1960s, was used in constructing an age-grade perspective. This included the social definitions of age status, normative divisions of the life course (e.g., adolescence and young adulthood), and age norms, as expressed in expectations regarding the timing of life transitions. "According to theory, age expectations define appropriate times for major life events and transitions. In moving through the age structure, individuals are made cognizant of being early, on time, or late in role performance" (Elder, 1975, p. 175). A second aspect of this theory involves ties to significant others and the constraints of role relationships. Both social embeddedness through relationships and age became primary components of a developing life course perspective. For Sampson and Laub (1993), age as birth year located their study members in history as young men during World War II, and a large percentage entered the military at that time.

Life Course versus Child Psychology/Life Span Studies

In theory, a longitudinal life course perspective refers to multiple levels—from aggregate, institutionalized pathways to the lived experience

of people working out their life course. Life course studies (see Elder & Shanahan, 2006) tend to relate the lived experience of individuals to their developmental processes. Life span developmental psychology, established at the end of the 1960s by Paul Baltes and Warner Schaie, also claims this field of investigation with a commitment to the study of contextual effects (Nesselroade & Baltes, 1974). However, there is an important difference between the two perspectives.

Developmental psychology models, including some in the life span field, frequently focus on individual development in a "typical life course" (see Hetherington & Baltes, 1988). This might be the typical pathway from early childhood into adolescence or into adulthood. From this perspective, life course variation is not recognized as a potential source of behavioral change (but see Heckhausen, 1999). By contrast, such variation is of primary interest to the life course specialist, along with variation by cohorts and historical context. This interest is being expressed among investigators of child development studies that have been continued into the young adult and middle-age years (see Magnusson, 1988). We hope that the future will bring more fruitful cross-fertilization in the years to come.

Longitudinal Data Collection

Longitudinal projects launched in the contextual world of the 1960s and 1970s accelerated the application and advance of life course research, often by adopting conceptual distinctions, such as the timing of a change in status (a transition) and duration in a state, trajectories, and turning points. In this regard, Hogan and Goldscheider (2003) refer to the formative early 1970s, a time when demographic study became heavily dependent on secondary data files based on national samples, such as the Panel Study of Income Dynamics and the National Longitudinal Surveys:

> These studies served multiple purposes, with a design that was driven by the broad community of researchers (by means of national advisory panels). Once the life course perspective was adopted by a few leading demographers on these advisory panels, it quickly became the standard by which national surveys was judged. Thus, data necessary for life course research were quickly available to all demographers. (p. 682)

In fact, all users have benefited from this change. Mayer (2009) refers to the widespread dissemination across the social sciences of "a longitudinal life course perspective," and that longitudinal data collections have increased in dramatic fashion and have become the current "gold-standard" of quantitative social science.

Empirical applications of these studies include the National Longitudinal Study of Mature Women (Moen, Dempster-McClain, & Williams, 1992), the National Longitudinal Surveys (NLS; Pavalko & Smith, 1999), and the Panel Study of Income Dynamics (PSID; Duncan & Morgan, 1985). Economists played an important role on the advisory committees of the NLS and the PSID. The PSID became a model for longitudinal studies in other countries, ranging from the United Kingdom and Germany to Canada and Sweden, among others. The British National Cohort studies (1946, 1958, 1970, and 2001) represent an impressive standard of longitudinal data collection for the study of changes in society and in lives (see Ferri et al., 2003). Finally, the well-known Stockholm Longitudinal Study was established by developmentalist David Magnusson (1988).

In addition to prospective studies, a retrospective method for collecting life history data in a reliable form, with an age–event matrix, began to take shape in the late 1960s (see Brückner & Mayer, 1998; Scott & Alwin, 1998). This matrix facilitates accurate memory through comparison of events in a particular year, and events across the life span. The method represents a giant advance over the retrospective interview dating back to the early years of the 20th century. It maximizes accuracy in self-reports (except for emotional responses, subjective accounts). Also, the retrospective method enables researchers to conduct life course studies in places that lack prospective data archives, such as Germany after World War II. Overall, the impressive array of prospective and retrospective studies has launched generations of potential investigators into a study of human lives and development across the life course. These studies have encouraged research on pathways through a sequence of life stages and increased the need for models of lifelong development and aging.

Advances in life course models and sequential data collection have placed a premium on essential techniques of data analysis, such as event-history models for age-graded life events (Mayer & Tuma, 1990; Blossfeld, Gotsch, & Rohwer, 2007); trajectory analysis with latent growth curve and latent class models (Laub & Sampson, 2003); and the analysis of multiple levels with hierarchical linear models, as in studies of neighborhood- and family-level effects on children (Singer & Willett, 2003). Each of these techniques of analysis deserves more detailed elaboration, and we do so in George's masterly account of trajectory research in Chapter 8 (this volume) and in Doherty, Laub, and Sampson's (Chapter 9, this volume) account of group-based trajectory analysis. More longitudinal life course studies are combining both quantitative and qualitative data.

Elements of the Life Course Paradigm

As coeditors of this volume, we bring different intellectual and research histories to this introductory chapter, but we also acknowledge a convergence in what we consider the common elements of the life course paradigm. Elder first encountered longitudinal studies in the early 1960s, when he arrived at the Institute of Human Development to work with sociologist John Clausen, then director of the Institute. His task was to design interview codes for the Oakland Longitudinal Study members, born in 1920–1921. Though Elder approached this research project with an interest in the effects of social structure on people, life records in the data archive directed his attention to the challenge of studying lives in a changing world. The data revealed much change in lives and relationships across the 1930s. A good many study members could say that they had been well off at one time but were now "quite poor."

These observations focused Elder's attention on ways of thinking about social change, life transitions, and trajectories as modes of behavioral continuity and change. Transitions, such as entry into first grade and graduation, are part of a life trajectory that gives them meaning. The multiple pathways of individuals and their developmental implications became key elements of the life course in Elder's *Children of the Great Depression*, published in 1974, followed by an enlarged 25th anniversary edition in 1999. This edition compared the Oakland young people up to the middle years with Berkeley study members, who were much younger during the Depression era (born 1928–1929). This younger life stage placed the Berkeley children at greater risk of economic hardship, especially the boys. The two birth cohorts of young men were also compared on experiences during World War II.

From the time of Giele's graduate studies at Harvard under Parsons, Homans, Inkeles, and Stouffer, she has been most keenly interested in the question of how social system requirements become articulated with individual motives and goals through links between individuals and the social structure. She asks not only how the environment shapes the person but also how, in turn, people intentionally try to change their own situation, as well as the larger society. She began her research career with a doctoral dissertation on the 19th-century American women's movement that contrasted the lives of women's temperance and suffrage leaders. Later, she turned her research to a comparison of the lives of women college alumnae from different eras to pinpoint the differences in the life course that preceded the rise of the new women's movement and steady growth of married women's labor force participation.

This work generated questions about innovations in women's lives—how they change their roles and initiate efforts to change the larger

institutions of work and family. Life course change and feminist activity are bidirectional in Giele's research, a perspective shaped by her studies of Wellesley College graduates and other college alumnae groups in the 1970s and 1980s. She discovered a shift toward multiple roles among women born since 1930. Additional comparisons of data from Germany and the United States identified changes in jobs, family life, and education that had begun in the 1940s and 1950s, and contributed to the rise of feminism in the 1970s.

Emergence of the Fourfold Paradigm

From the accumulated findings of his work on children of the Depression, Elder (1994, 1998a) identified four paradigmatic factors that affect the diverse ways the life course and human development are influenced: *historical and geographical location*, *social ties* to others, *human agency* in the construction of one's life course, and *variations in timing* of events and social roles. Each factor applies to the full life span, consistent with the principle of life span development—that human development and aging are lifelong processes. This principle of aging as a continuous dynamic (see Riley et al., 1972) reflects a general shift from "age-specific" studies to research that extends across long segments of life. Human development and aging cannot be explained fully by restricting analysis to a specific life stage in question. According to this perspective, the early years of childhood are relevant to understanding social adaptations in later life, not just in the adolescent years and young adulthood.

Historical and Geographical Context

The biographies of people are located in specific communities and historical times. To address these matters, investigators began to draw upon the insights of a deeper knowledge of the meanings of age. Ryder (1965) and Riley et al. (1972), among others, developed the historical meaning of age as birth year. People born in a certain year are members of a birth cohort, with a particular historical experience and range of life opportunities that depend on geographic location. The life course principle of historical time and place is derived from this research.

Social Embeddedness

The principle of *social ties* to others is derived from a role change and relationship-based approach to lives. Lives change as relationships and social roles change. The concept of life cycle focused this perspective on intergenerational relationships and change—as a reproductive sequence

of parenthood stages over the life course, from the birth of children through their departure to their own childbearing. This process is commonly known as a "family cycle" (Hill & Foote, 1970). Typically, the stages are not defined by age, and they follow a prescribed sequence of marriage, childbearing, and survival to old age, an increasingly atypical pattern in contemporary society. Nevertheless, the life cycle processes of intergenerational relations and reproduction depict an important functional domain of linked lives. Social ties to significant others establish forms of socialization and control in channeling individual actions and decisions.

Agency and Personal Control

The "principle of agency" refers to the process by which people select themselves into roles and situations. In doing so, they construct their own life course within given constraints. People are planful and make choices that give them a chance to control their lives (Clausen, 1993). Elements of agency have been prominent in life history research (Thomas & Znaniecki, 1918–1920) and are central to life course studies that relate individuals to broader social contexts.

The inclusion of people and social structures in models of the life course establishes the potential for what might be termed "loose coupling" between the age-graded life course and lives as lived by individuals. "Age-grades and loose coupling exemplify two sides of the life course—its social regulation and the actor's behavior within conventional boundaries, and even outside of them" (Elder & O'Rand, 1995, p. 457).

Timing

Here the question of interest is *when* an event or transition occurs in a person's life, whether early or late relative to other people and normative expectations. Neugarten (1996), a social psychologist, broke new ground by developing the normative and subjective meanings of age in the late 1950s. Social or normative expectations determine in part whether a role transition, such as marriage or promotion to supervisor, is early or late. The principle of timing is based on this research literature.

To Giele, these four principles appear to be a variant that can be independently derived from Talcott Parsons's (1966) four-function model of the social system (the familiar AGIL in reverse—Latent pattern maintenance, Integration, Goal attainment, and Adaptation) as applied

to social change and the life course (see Figure 1.1). In her book, *Two Paths to Women's Equality*, Giele (1995, pp. 18–23) used four elements—cultural background, social membership, individual goal orientation, and strategic adaptation—to describe the ways in which the historical women's temperance and suffrage movements carried the life course change of leaders into the broader social structure. In her recent work on variations in men's and women's roles, she has used the same schema to characterize differences between traditional homemakers and married women with careers (Giele, 2004, 2008).

How is it that basic elements of the Elder and Giele paradigms correspond with each other? Elder's core principles of the life course are filtered through the individual, whereas the corresponding dimensions identified by Giele are focused on relations between the individual and the surrounding social structure. Linking the two frameworks is useful for tracing the interplay of person and setting, and of dynamic change

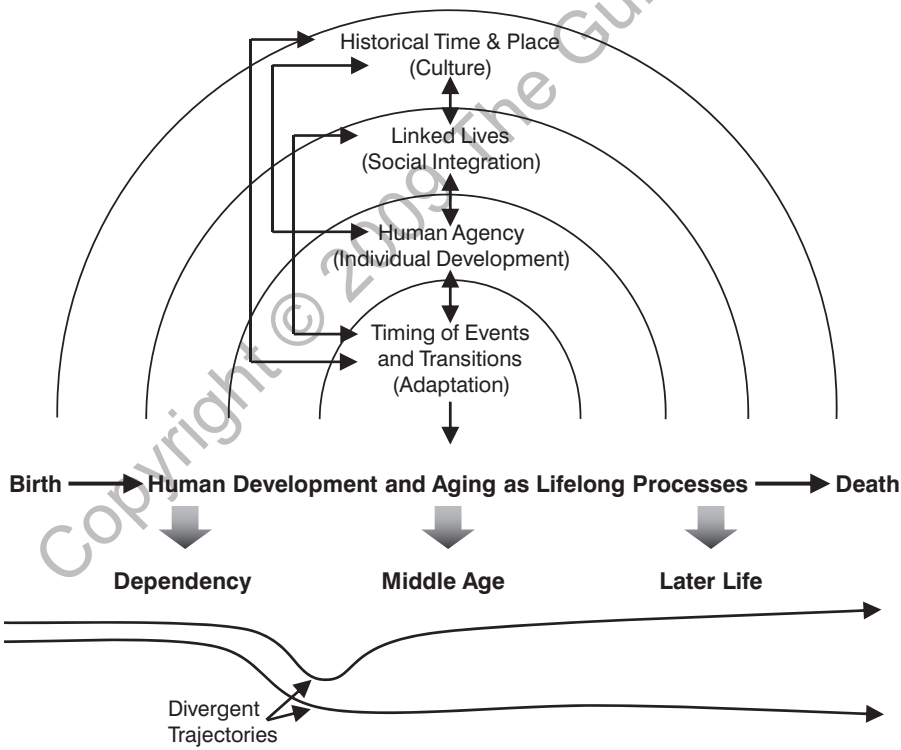

FIGURE 1.1. Elements of the life course paradigm.

by the individual in a context of social leads and lags, as spelled out in the following paragraphs. Moreover, in linking the life course paradigm with a more general theory of action (which has long been a major project of leading theorists), the life course approach is greatly expanded, and explanations and models of analysis can be integrated and applied across an ever-wider set of problems and disciplines (Giele, 2002b).

Historical Time and Place (Cultural Background)

This principle underscores the multiple layers of human experience; the social hierarchies, cultural and spatial variations; and the social/biological attributes of individuals. Children who grew up in the Great Depression encountered hardship at different times in their lives, and their experiences may have varied across urban and rural places as well. Indeed, all historical events are likely to have different meanings across geographic areas and individual life stages. In the case of early feminist leaders, their regional and historical backgrounds set them apart from the general population of women. To establish a new order, they developed an ideology that would promote new cultural patterns.

One of the most dramatic illustrations of historical and spatial change in a birth cohort comes from a longitudinal study that followed 12th-grade students (1983–1985) from 15 regions of the former Soviet Union up to 1999 and beyond (Titma & Tuma, 1995). Called Paths of a Generation, the study assessed the life aspirations, achievements and cultural backgrounds of young people before the Soviet Union disintegrated circa 1990, then traced their lives into a period of exceptional change and instability. One region retained the command economy of the old Soviet Union (Belarus), whereas others adopted a market economy (e.g., Estonia) or returned to a more primitive rural exchange system (e.g., Tajikistan).

The socioeconomic lives of young men and women tended to resemble the changes of their respective regions of the old Soviet Union. For example, the Estonian cohort ranked at the top on prosperity, whereas downward trajectories were common among youth from Belarus. Despite such regional variations and economic instability, the future of this cohort to date was written in large part by members' personal accomplishments, self-appraisals, and goals during high school. Academic success and high aspirations were more predictive of high occupational status and income than family background. The young men who had become entrepreneurs with hired personnel were most distinguished by their ambition in high school and positive appraisal of personal skills in managing people.

Linked Lives (Social Integration)

The life of a person is interwoven with the lives of significant others. In the Great Depression, economic hardship changed decision making, the division of labor, and emotional ties among deprived families in ways that were not experienced by the nondeprived children. This difference forced boys and girls from hard-pressed families into assuming household responsibilities. In Giele's study of feminist leaders, family, religious and educational networks played an important role in channeling the women toward the role of reformer, an influence that differed for women who focused on charitable work rather than on changing the laws. Such relationships can be thought of as a context for development and aging. Antonucci and Aikyama (1995) refer to this moving social network as a "social convoy."

New relationships can lead to a change in the composition of friends, as in the case of marriage. Wellman, Wong, Tindall, and Nazer (1997) report that a new marriage typically leads to a turnover in the friends of the husband. Similarly, Sampson and Laub (1993) found that the marriage of young men with a history of crime leads to a turnover in their friends and a decline in the likelihood of more criminal activities. By contrast, shared military experience tends to establish enduring social ties that extend beyond the temporal boundaries of a war. Among veterans of World War II and the Korean conflict, exposure to combat and loss of comrades increased the likelihood of enduring social ties through visits, letters, and phone calls (Elder & Clipp, 1988).

Human Agency (Individual Goal Orientation)

Elements of human agency and structural constraints are central to any effort to relate individual lives to broader social contexts. People's motives to satisfy personal needs result in decision making that organizes their lives around goals within the options and pressures of their situations. Thus Giele (2008) found that feminist leaders who had experienced some personal loss were more likely to be interested in temperance and charitable work. However, women who had been denied higher education, opportunities for work, and/or a political voice because they were women tended to support the suffrage movement.

In the Great Depression, girls from economically deprived families grew up seeking traditional homemaker roles, whereas nondeprived girls were likely to obtain more education and gratification from the combination of paid work and family life. Although some girls with deprived backgrounds moved beyond homemaking to education and

employment, the future of girls from more privileged backgrounds depended on their intellectual ability and resourcefulness.

Social constraints restrict and channel the expression of agency. Consider, for example, a planful view of one's future in the 1930s to 1940s (Shanahan & Elder, 2002). Events beyond one's control were prominent in these decades, and an uncontrollable environment was characteristic of the lives of older men in the Stanford–Terman study, who were born between 1903 and 1911. Most had completed college before the Stock Market Crash; consequently, they entered a labor market that soon became stagnant in the economic crisis of the 1930s. Their dismal chances in the labor market kept them in school, acquiring advanced degrees. Nevertheless, a significant number of these men eventually rose to positions of high accomplishment. By contrast, younger men (born between 1911 and 1920) remained in some form of schooling throughout the 1930s, long enough to find attractive jobs as the economy improved because of World War II.

Timing of Lives (Strategic Adaptation)

To accomplish their ends, people and groups (e.g., families) coordinate responses to the timing of external events, such as loss of employment, to undertake actions that use available resources most effectively. In this manner, the timing of life events can be understood as both passive and active adaptations for attaining individual and collective goals. How and when a person acquires wealth or education, enters a new job, or starts a family illustrates potential strategies. Among early feminists, a number of women were interested in temperance early in their careers, then graduated to the suffrage movement, a pattern that was reflected in feminism as a whole. Temperance became the most popular women's reform movement in 1890, whereas suffrage soon dominated the succeeding decades.

In the dependency years, a girl's relatively early transition (e.g., physical maturation) can significantly increase developmental risks, such as a premature exposure to older boys and sexual pressures. In the field of criminology, studies show that the earlier the age at first arrest, the greater the risk of subsequent incarceration. In the well-known Dunedin Longitudinal Study, Moffitt, Caspi, Harrington, and Milne (2002) followed the males up to their 26th year, an age that still proceeds the median age at first marriage in New Zealand. In a comparison of two groups on age at onset of antisocial behavior (childhood vs. adolescence), investigators found that the childhood group displayed the most elevated pattern of psychopathic personality traits, violent and

drug-related crime, problems of mental health, substance abuse, and economic–work problems.

Figure 1.1 depicts all of these principles and theoretical elements coming together through the funnel of life course timing to influence life trajectories. Whatever a person's cultural heritage and social location, friendships and networks, or personal motivation, they are experienced through the individual's adaptations to concrete situations and events. As we show later in this volume, historical time and social timing give structure to the life course.

New Directions and Challenges in the 21st Century

As the preceding pages indicate, a great many advances in theory and method have distinguished the evolving field of life course studies over the past half-century. Especially noteworthy from a methodology standpoint is the spectacular growth of longitudinal studies, both prospective and retrospective. In thinking back to the 1950s, when the social survey reigned supreme, no one could have imagined how prominent this longitudinal design would become in social science research by the 21st century, and in promotion of a new field of study and thinking known as the life course.

The small cluster of pioneering longitudinal studies, launched before World War II, began to pose challenging questions by linking childhood to the adult years and late life as study participants grew up and entered their middle years. Child-based models were also challenged theoretically by the question of how to think about the organization of human lives and their development over the life span. Because these longitudinal studies found subjects in changing environments, investigators confronted the question of how to think about the relation of development to an ever-changing society (Elder, 1998b). What theories would be helpful in connecting lives to changing contexts? The answer at the time called for fresh thinking in the direction of the life course paradigm, because longitudinal studies at that time paid virtually no attention to the pathways of lives, or to their historical context and place.

But the influence process did not merely flow from longitudinal studies to theoretical orientations on the life course. As life course concepts began to take the form of a theoretical perspective, this framework played a role in shaping decisions made by senior social scientists concerning the design of survey instruments for national longitudinal studies in the United States (the National Longitudinal Survey, etc.) and perhaps elsewhere. Hogan and Goldscheider (2003) tell this impor-

tant story, and we have drawn extensively from their essay in representing the evolving perspective on the life course, with its trajectories and transitions (Elder, 1985b; Mortimer & Shanahan, 2003). Life course dynamics evolve over a lengthy period of time, within a trajectory of work or marriage, and over a short span of time, such as leaving one job and entering another.

By following a birth cohort of young people into adulthood and the middle years, longitudinal studies have collected data from lengthy sequences of survey waves. Given sequenced data on key outcomes, such as emotional health, the measurement and analysis task has centered on trajectories, with emphases on both level and rate of change. A case in point is the Monitoring the Future sample, which has followed seniors out of high school and into adult pursuits. The longitudinal component of this sample has more than 10 data waves on topics such as work values. For example, Johnson (2002) used latent growth curve analysis to identify work–value trajectories of stability and change from adolescence to the young adult years. She found a pronounced growth of realism toward jobs as study participants progressed toward the later years of young adulthood. In this volume, George (Chapter 8) and Doherty et al. (Chapter 9) discuss the strengths and limitations of individual- and group-based analyses of life course trajectories.

Up to the present, a small number of longitudinal samples have followed their study participants across multiple stages of the life course. This has led to research that links socioeconomic disadvantage to cardiovascular disease in later life (Kuh & Ben-Schlomo, 1997/2004; O'Rand & Hamil-Luker, 2005) and to mortality (Hayward & Gorman, 2004). These studies and others add compelling empirical documentation to the principle that human development and aging are lifelong processes. But even in this fruitful research domain, few longitudinal studies have actually investigated the interplay between developmental/aging processes and the socially patterned life course (see Mayer, 2009).

Longitudinal studies that extend across most of the life span remain exceedingly rare. This limitation may change as studies add follow-ups, but analysts are also using available data to extend the scope of their inquiry, for example, by pairing strategically related longitudinal samples for each half of the life course. Brown (2008), for example, has paired the National Longitudinal Survey of Youth sample (late adolescence to mid-40s) with the Health and Retirement Survey (ages 50+) to investigate the wealth and health trajectories of African Americans and European Americans. Birth cohorts in the two studies are not identical; thus, potential historical effects require some caution, but this strategy at least enables the investigator to apply the insights gained from young adult experience to an understanding of late-life trajectories.

With these issues in mind, we turn briefly to four themes that identify new directions for theoretical work and method on the life course: (1) the contextualization of lives, (2) analogies to cumulative advantage–disadvantage, (3) stress and the life course, and (4) the life course as social interventions.

Placing Human Lives in Context

The analytic task of placing lives in context refers to an extended temporal process in long-term longitudinal studies. With the extension of active longitudinal studies, lengthy prospective histories can link changing times to lives. The longest running study, the Terman Project, illustrates the potential of such research. This project followed a sample of Californians from birth in the first decade of the 20th century to 1992. Over 40% of the men served in World War II (Elder, Shanahan, & Clipp, 1997), and their overseas duty increased the risk of poor health in late life.

Today with the availability of geocodes and coordinates to map households in national data sets, investigators have the information to locate people in context. These data and spatial techniques of analysis enable researchers to take major steps toward contextualizing lives in neighborhoods. Crowder and South (2008, p. 792) note that in the field of migration "prior work tends to treat neighborhoods as isolated islands, largely divorced from their broader social, geographic, and economic context." The authors based their project on the view that neighborhoods are "embedded in a larger mosaic of urban communities" and conclude that the "conditions of nearby neighborhoods influence the behaviors of individuals in a given neighborhood" (p. 809). Likewise, Sampson, Morenoff, and Earls (1999) observed that studies of spatial dynamics indicate that the crime rate and collective efficacy of youth in neighborhoods affect these outcomes among youth in adjacent neighborhoods.

Beyond Cumulative Advantage and Disadvantage

The concept of cumulative advantage and disadvantage that is used to measure inequality has some analogues in the domains of education, health, and stress. In a seminal essay, published in 1960, Howard Becker proposed a theoretical account of a process by which people become committed to a line of action through their acquired ties to others and their social control. In life course terminology, the process involves duration dependence. The concept of "duration" refers to the waiting times between changes in a person's status. The duration of a person's

job indicates the stability of employment, and duration of residence in a particular neighborhood indicates a person's residential stability. Strong local ties discourage residential change.

This perspective provides a useful way of thinking about the cumulative dynamic of social ties—enduring, weak, or broken. Change in social ties can affect health and well-being. In *Crime in the Making* (1993), Sampson and Laub proposed an age-graded theory of informal social control in which the individual with weak conventional ties is especially vulnerable to the temptations of crime and deviance. With a longitudinal sample of 500 delinquent males from low-income areas of Boston (birth year, 1924–1932), they found that young men who desisted from a life of crime were most likely to have entered new sets of conventional relationships during the transition to adulthood, primarily in jobs, marriage, and military service (Laub & Sampson, 2003). As turning points in the life course, these transitions pulled men away from deviant friends, while involving them in strong, competing relationships.

At present, little is known about the cumulative dynamic of social relationships, even though it is a vital component of health, broadly considered, and of cumulative advantage and disadvantage (see O'Rand, Chapter 6, this volume). In their analysis of social convoys, Moen and Hernandez (Chapter 12, this volume) emphasize the obvious but often neglected point that all individual lives are linked lives. They show that much is lost in understanding dual-career couples when only one career is studied in terms of work that spills over into marital life. Consistent with their recommendations, data collection from multiple respondents (e.g., partners, siblings) has become more common during the past decade, and one of the best illustrations comes from Hauser's discussion of the Wisconsin Longitudinal Study (Chapter 2, this volume) in which data were collected from not only the primary respondents but also family members and others. Nevertheless, much unfinished business remains in terms of network studies of family and/or close friends over the life course.

Stress and the Life Course

Up to the 1990s, studies of stress and the life course were largely carried out in splendid isolation, with researchers barely acknowledging each other. Today this separation is hard to imagine: Stressors affect people's lives, and life transitions often entail stressful adaptations. Even by the mid-1990s, sociologists noted a continuing neglect of life course models and methodology in "studies of stressful life events and judged research on stress and well-being to be still largely uninformed by knowledge

of how lives are socially organized and regulated by age norms, demographic patterns, and social structures" (Elder, George, & Shanahan, 1996, p. 248; also see Pearlin & Skaff, 1996). However, much change has occurred since then. Indeed, Leonard Pearlin, a leading sociologist in the study of stress, spoke about the affinities between stress and life course models in his Matilda White Riley lecture at the 2008 American Sociological Association meeting. These affinities are well expressed in *The Handbook of the Life Course* (Mortimer & Shanahan, 2003) and by Almeida and Wong in this volume (Chapter 7) in their discussion of life transitions and daily stress. More generally, dynamics of the stress process have become essential elements of the sequence of events and adaptations that link the early life course to health and illness in late life.

This research model addresses the "black box" characterization of longitudinal studies on the antecedents of health and illness, in which the mediational mechanisms and contexts are ignored. In the field of epidemiology, Kuh and Ben-Shlomo (1997/2004) also regard the life course approach as a notable advance beyond such limitations, with emphasis on the etiology of chronic disease. As they make clear in an anthology of this empirical work, a temporal and multilevel life course approach generates "knowledge of how past events have shaped the risk of subsequent exposure, the responsiveness of physiological systems, and behavioural patterns" (p. 459). The life course perspective gained prominence in epidemiology during the 1990s, when an increasing body of longitudinal evidence documented the link between childhood adversities and the risk of disease in later life. Life course epidemiology emerged from this research as a recognized field of epidemiological inquiry.

The Life Course as Social Intervention

The status passage of young people into and through the young adult years is marked in distinctive ways by departures from multiple social roles and entry into new roles, such as leaving home and establishing an independent residence. Within the framework of life course analysis, this period of role transitions provides an opportunity for youth and for social institutions to change the course of young lives toward a better future. In their study of this transition among delinquent Boston youth (born 1924–1932) from low-income areas, Sampson and Laub (1993) refer to these transitions as *turning points*. Stable employment, marriage, and military service altered the life trajectories of a significant proportion of these young people. In 21st-century America, the all-volunteer military provides potential access to higher education for disadvantaged

youth (Segal & Segal, 2004), and a variety of social interventions aim to promote a more constructive direction in the lives of these young people.

An example of the life course as a social intervention comes from the Miami Youth Development Project (Kurtines et al., 2008), a community outreach program that has been in operation through alternative schools in the Miami–Dade County System for nearly two decades. A key component of this community program is known as the Changing Lives Project, which offers, through alternative schools, counseling services that employ a participatory learning and transformative approach to empower troubled youth. The counselors address the presenting problems through psychoeducational and individual counseling, as well as group sessions on topics such as substance abuse, anger management, and troubled families. Approximately 250 students participate in these counseling sessions each year. The overall strategy, then, consistent with the life course perspective, focuses on developmental gains that assist youth in changing circumstances that adversely affect their lives. In this manner, these young people become agents of their own life courses.

These are only a few of the new directions and challenges we have observed in life course research up to 2009. A much broader sample is provided by the chapters of this book.

Plan of the Book

We begin with a focus on data collection (Part I), led by Hauser's description of the Wisconsin Longitudinal Study (WLS) and its development over four decades (Chapter 2). This is an appropriate beginning, given the important role of longitudinal research in the evolution of life course studies. The WLS was launched before the crystallization of life course models that eventually shaped its theoretical framework on aging. As the project became a longer-term longitudinal study, it gradually assembled life stories of members of its Wisconsin cohort. Across the life stages of this cohort, data collection foci and practices tended to reflect the intellectual currents of the time. For example, the role of biology in life course development and aging did not become a major research theme until the late 1990s, with the advance of data collection technology. The WLS has since collected biomarker data and buccal saliva samples for genotyping.

Hogan and Spearin (Chapter 3) detail the process of gaining access to marriage, divorce, birth, and crime records, and the research opportunities that are experienced by merging these records with a primary data archive. Sometimes a "discovery" research strategy is needed to

understand life experience; a method that calls for ethnographic study. In Chapter 4, Burton, Purvin, and Garrett-Peters show that this method of data collection is well suited to uncovering hidden behaviors in lives that typically are not detected in quantitative studies. Research questions typically guide the collection of data and the use of data archives, but as Elder and Taylor note in Chapter 5, longitudinal studies tend to outlive their original questions. As a result, investigators must ask new questions of old data and maximize the goodness of fit. To achieve a better fit, life records may be merged with the data at hand. As a whole, these chapters bring to mind the advantage of mixed methods of data collection in research on lives.

Data collection can be thought of as the foundation of life course research, providing appropriate data to address investigators' questions. Though much is known about methods of data collection, this is not the case in the formulation of thoughtful research questions. Robert Merton (1959, p. ix) has noted that posing research questions might seem to present no difficulty "and yet, the experience of scientists is summed up in the adage that it is often more difficult to find and to formulate a problem than to solve it." As readers, you may bring research questions to these chapters on data collection and find better ways of formulating them, or even develop different questions. This is the process of matching research questions and data.

The varieties of data collection surveyed in Part I provide empirical documentation of changing lives across the life span and historical times, with related challenges for conceptualization, measurement, and analysis. These challenges involve ways of thinking about changing lives, personalities, and contexts, along with the development of useful measures and techniques of analysis. Three concepts and their measurements are especially prominent in current studies of life course dynamics: cumulative processes of advantage and disadvantage, life transitions, and life course trajectories. All three represent new directions as the focal point of chapters in Part II.

Changing lives and personalities pose questions concerning relevant mechanisms, such as the cumulation of advantages or adversities. For many years, cross-sectional studies documented an association between socioeconomic status and health, with no attention to the potential cumulative dynamic of this effect into the later years. However, the rapid growth of long-term longitudinal studies has shifted research efforts to the cumulative process of socioeconomic disparities in health and well-being. O'Rand (Chapter 6) provides a guided tour of this line of work, its accomplishments, and unfinished business. Stress is a likely mechanism in this process. Almeida and Wong (Chapter 7) survey empirical evidence on the daily stresses of life transitions and

provide a "backstage" introduction to the measurement and analysis of relevant stressors.

The concepts of trajectory and transition represent the long and the short perspective on life course change and continuity. Life course dynamics, for example, a trajectory of education or work, occur over a lengthy period of time, and they also evolve within a short time span marked by specific events, such as leaving or entering a job. Transitions are always embedded within a trajectory, such as job changes in a work career. In Chapter 8, George distinguishes between social and developmental trajectories, and notes that not all trajectories evolve from a sequence of transitions based on categorical data. Some are measured by continuous data, as in the case of sequential reports of emotional distress.

A life trajectory is often regarded as either an independent or a dependent variable. However, both types of trajectories are frequently measured and analyzed in the same study. To introduce the reader to the measurement of trajectories (using the methods of latent growth curve and latent class analysis), George has sequenced selected studies according to the number of trajectories they employ and their function. Doherty, Laub, and Sampson (Chapter 9) supplement the breadth of George's survey by focusing on group-based trajectories, as applied to a central problem in the field of criminology—age variations in the desistance from crime. Why do some men stop their criminal ways at the end of adolescence, while others continue this life a decade or more into adulthood? The authors used latent class analysis to identify an optimal number of groups of men defined by similar desistance patterns. In measurement and analysis, trajectories identify diverse life course patterns.

Variations in the life course reflect a broad set of influences. In Part III, we examine four influences and their particular strategies for investigating explanatory factors—genetic dispositions, differences in personality and behavioral adaptation, interdependent lives, and institutional–cultural variations by country. Over the years, studies have shown that exposure to a particular event does not affect all members of a population in the same way. As Shanahan and Boardman indicate in Chapter 10, this is so, in part, because people bring differing genetic tendencies to the event. Unlike most work in this field, the authors argue that genetic influences must be investigated across the life course, not just at a particular point in time. Gene expression takes place over time and is subject to modification through environmental changes. The interplay of genes and environment provides an opportunity to investigate genetic dispositions in the self-selection of people into life transitions

and pathways (Caspi, 2004). Selection is a vital process of life course development, though we still know very little about it.

A recurring puzzle in longitudinal studies of the life course centers on the lives of people who do not follow the "continuity or conventional script" from social origin to their destination in later life. Contrary to predictions based on social origin, some people do much better than expected in life, whereas others do much worse. What are the personal qualities and experiences that help to explain these different life paths? In many cases, the investigator draws upon survey data, collected at different points in life, to address this question. But such data typically fail to provide an understanding of motives, goals, and strategies of people who followed these different life paths.

Giele (Chapter 11) faced this limitation in understanding motives in the feminine role by turning to the life story method to achieve a deeper understanding of women's lives. This method used retrospective interviews with open-ended questions to obtain an explanation for why college-educated mothers of similar age, both white and black, had become homemakers or career women. Distinctive themes differentiated the women by role outcome. She discovered their personal views of life and accounts of how things had evolved in their lives. An important part of this view concerns the people to whom they are linked, as Moen and Hernandez show in (Chapter 12). Giele concludes by reviewing the theoretical and methodological principles of the life story method, as applied in her own studies of differences in women's lives by race and gender.

Though most life course projects focus on the lives of individuals, Moen and Hernandez (Chapter 12) persuasively show how incomplete such research can be in understanding the transitions and trajectories of people's lives. The social convoys of life include family, friends, and coworkers, among others. The successes and failures of children in establishing their adult lives beyond the family of origin have enduring consequences for the lives of parents, as do the problems of the older generation in the later years of life. Moen and Hernandez highlight such interdependencies within and across the generations.

Most longitudinal studies are based on samples from a single society, but the phenomenal diffusion of such studies across developmental societies during the past half-century offers hosts of new possibilities for cross-national research, as surveyed in Blossfeld's pioneering chapter. In the early days of cohort studies of the life course, analysts became increasingly aware of the perils of assuming that one could generalize findings based on a single cohort to an entire population. Since then, studies have shown that life patterns vary across successive cohorts. Like-

wise, Blossfeld emphasizes the strategic values of cross-national comparisons of life course longitudinal analyses for the purpose of determining the generalization boundaries for empirical findings. The same social institution, such as education or the family, often assumes different forms and functions across societies. For example, Blossfeld's comparative research shows that the contingent lives of couples (see Moen and Hernandez, Chapter 12) assumes different forms in relation to the partners' resources by region of Europe and country. In the Mediterranean countries, the family system is malecentric and few wives are gainfully employed.

The new directions for life course studies that are so prominent across the chapters of this volume represent major challenges that promise to stretch our minds, talents, and external resources. Among other things, we are urged to study people over their lives and times, and to do so in multiple societies; to collect life record data on social networks or linked lives over time; and to bring biology into the study of health and the life course. This is an exciting time for life course research, and we hope this book proves to be useful to our readers.