Part I

Theoretical Perspectives on Social Networks and the Life Course

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1. Together Through Time – Social Networks and the Life Course

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Introduction

The life course perspective has made important contributions to many substantive disciplines in recent decades. Indeed, the increase in life course thinking has been remarkable in its abundance and diversity, and in recent years the key principles in this work have drawn the attention of numerous scholars from several different disciplines. These observations are supported by a review of literature published in the recent edition of the *Handbook of the Life Course*, which drew upon the Thomson/Reuters *Web of Science* database of publications (Shanahan et al. 2016, pp. 2–3). The authors provided trend lines for publications using the concept of life course for three fields: sociology, psychology and epidemiology since the early 1990s, making a persuasive case for the proliferation of the term “life course” in research over the past 2–3 decades, especially in the field of epidemiology. Their data revealed very little publication activity prior to 1990, and through 1998 the activity was not substantial, but from then on, the number of publications using the “life course” topic, title or theme increased exponentially. So pervasive has the life course concept become in the social and behavioral sciences in recent years that it was recently adopted by the World Health Organization as its conceptual approach to understanding the determinants of health in older ag e (Beard et al. 2015, p. 7).

Applications of the life course concept can be seen across a wide range of disciplines and sub-disciplines, from the social sciences (economics , anthropology , sociology and political science), to the epidemiological and clinical sciences (psychology , epidemiology and the health sciences). It has been usefully applied across diverse fields, including the study of child health and development (e.g., Case et al. 2002; Braveman and Barclay 2009), health and aging (e.g., Ferraro 2011; Moen and Spencer 2006; Herd et al. 2011), health disparities across the life span (e.g., Alwin and Wray 2005; Wadsworth and Kuh 2016; Ferraro 2016), demography (e.g., Rindfus 1991; Willekens 1999), criminology (e.g., Laub and Sampson 2003; Sampson and Laub 1996; Wakefield and Apel 2016), family (e.g., Pavalko and Elder 1990; Amato and Keith 1991; Hofferth and Goldscheider 2016), education (e.g., Entwistle et al. 2003; Pallas 2003; Crosnoe and Benner 2016), public health (Halfon and Hochstein 2002; Halfon et al. 2014; Berkman et al. 2011), and epidemiology (Ben-Shlomo and Kuh 2002; Kuh and Ben-Shlomo 2004, 1997). Only recently have life course researchers begun to integrate social network concepts with the study of life course dynamics (see Cornwell and Silverstein 2015; Cornwell and Schafer 2016).

These trends in the use of the “life course” concept mentioned above raise questions about the potential for growth in understanding the dynamics of human lives and the ways in which we may

increase our knowledge about the connections between social networks and the life course. The life course perspective assumes that people's lives are uniquely shaped by the timing and sequencing of life events (both intended and unintended), and that lives are embedded in historical contexts, institutional structures and social networks. A key component of the life course perspective is that individual lives are linked both intra-generationally and inter-generationally, and distinctive birth cohort experiences are considered to reflect many of these exogenous influences (Ryder 1965; Alwin and McCammon 2003, 2007). Such social network phenomena are captured within the life course perspective via the concept of "linked lives ," which emphasizes the fact that lives are lived interdependently, within and between generations (Elder 1994). The life course framework further assumes that early life events and exposures contribute in meaningful ways to later life outcomes, and that events and transitions occurring in the life course of one individual often entail transitions for other people as well. Various strands of individual life trajectories , (such as schooling, work, military service, marriage , family, criminal histories, wealth and health) are interconnected to one another, and to the life trajectories of persons within the interpersonal contexts and micro-level settings inhabited by multiple people, hence, the concept of "linked lives" (Elder et al. 2003; Elder and O'Rand 1996; Elder and Shanahan 2006).

Our intention in this chapter is both to reinforce the broad appeal of the life course concept and life course perspectives for the study of human behavior, but also to suggest how the integration of ideas about the life course and the understanding of social networks can further the study of both. Our purpose in this chapter is to present the overarching framework within which the understanding of social networks can improve the understanding of the life course, and *vice versa*. Individuals are often the primary focus of sociologists and others, and yet individual lives are linked to one another. People inhabit a multi-layered environment, a set of uniquely nested structures, like a set of Russian Matryoshka dolls. In short, lives are lived interdependently. People inhabit what are called N + 2 systems—dyads, triads, tetrads, and larger interpersonal structures (Bronfenbrenner 1979, p. 47; Felmlee and Faris 2013). At the same time, a large portion of contemporary research on the life course relies on data and methods for studying individuals singly (Belli et al. 2009; Freedman et al. 1988), which rarely includes information on the environments they inhabit and their social networks. Social network analysis has developed into its own field, existing at the intersection of several different disciplines, and there is an important opportunity to capitalize on the developments in the field of social networks and apply these results to the study of lives (see Cornwell and Silverstein 2015). Cross-fertilization among fields, or even sub-disciplines often provides the means by which knowledge is advanced, and we see a significant increase in research that integrates life course theory and social network concepts.

At the same time, most social network studies focus on *social structure* , that is, the relationships among people in a particular group as represented by their social ties and how they produce structures of relationships. Students of social networks do not always incorporate data on individual characteristics and those of their network ties; similarly, studies of individuals typically do not include the characteristics of other persons who are in their social networks. Yet, the topics that social and behavioral scientists study, e.g., marriage, friendship , kinship , caregiving, work, organizational memberships , and neighborhood ties are all relevant to outcomes for individuals, and increasingly, sociological studies are focusing on the social network ties, or the social structures, that bind individuals together over their lives (see, e.g., Cornwell and Silverstein 2015; Cornwell and Schafer 2016; Morgan 1988; Adams 1987; Alwin et al. 1991; Wrzus et al. 2013). Still, greater integration of social network science and sociology is needed, and innovative methodological approaches (especially with respect to gathering data) are necessary to advance knowledge about the interplay of human development and social structures as mediated by social environments and cultural norms. It would be invaluable if sociological theory and methodology were to draw more upon the mathematical and other contributions of social network science (graph theory, visualization tools, block modeling, etc.) with applications to the study of people's lives examined longitudinally (Alwin et al. 2016; Alwin et al. 2006).

Within life course studies, the concept of "linked lives " appears to be less developed than other aspects of the life course perspective, at least as compared to the concepts of life transitions , trajectories , and historical change (see Deborah Carr's chapter in the present volume). Moreover, the concept of linked lives may be operationalized relatively narrowly as the connections between children and their parents , for instance, but not likely to extend to include the potentially powerful school network in which those children are located, for much of the waking hours. A social network perspective, therefore, stretches the concept of "linked lives" to include far-ranging sets of ties, such as those of the school, the neighborhood , friendships , an extended kin network, the workplace, or the institutional setting. A number of sophisticated methodological advances within the social network field are useful for life course perspectives, such as the focus on network centrality , cliques or sub-clusters, weak ties, brokerage , as well as recent exponential random graph models (ERGM).

The field of social networks also could benefit from a more serious consideration of life course concepts and research problems. Social network research often focuses narrowly on specific, methodological innovations and often fails to integrate theoretically with broader sociological approaches. It would be useful if network specialists were to further develop the ways in which their approach overlaps with general, sociological theory; the life course perspective, with its emphasis on " linked lives ," appears to be a particularly useful sociological perspective for such a task. Life course

theory offers novel avenues of investigation for network researchers. Its dynamic focus on social change, for instance, highlights the notions that the linked lives of networks will seldom remain stable over time and that historical events shape social ties, as well. The life course focus on turning points, furthermore, points to potential stages in time when people's networks are apt to change abruptly, such as when young people exit school.

The Life Course

The life course concept emerged in sociology more than 50 years ago, beginning with Leonard Cain's chapter on "life course and social structure" published in the 1964 *Handbook of Modern Sociology* (Cain 1964). He defined the life course as "those successive statuses individuals are called upon to occupy in various cultures and walks of life as a result of aging " (p. 278). It was not a new idea, as the age-grade d nature of stages of human life has been recognized for millenia. For example, Cain noted the writings of Solon, the Athenian poet and lawmaker born in the seventh century, B.C., who suggested a 10-stage life course of 7 years each, beginning with "the boy as the unripe man," and ending with "the time to depart on the ebb-tide of Death " (Cain 1964, p. 277). There are other examples (e.g. Erikson's "Eight Ages of Man," 1950).

Contemporary uses of the life course concept are in many ways more refined and complex. In order to reduce some potential confusion, we distinguish between the *life course* and the *life course perspective (s)*. The former—the life course—consists of a complex set of *interlocking trajectories* , or *pathways*, across the entire life span of an individual (from conception to death). These *pathways* occur within several domains, (e.g., region and nation, gender , race , residence, household, family, schooling, work, health (physical, mental, diet and nutrition), economic conditions, etc.) that are marked by sequences of *events*, *transitions* and *exposures* (ETXs) across (and within) the biologically- and socially-defined life stages (or phases) that comprise the human life span, *embryo* , *infancy* , childhood , *adolescence* , *adulthood* , etc. These sequences and transitions are socially defined and institutionalized (Kohli 1988, 2007). Traversing the *life stages* and moving between them, while experiencing unique sets of ETXs at every stage essentially defines an individual's life course, theoretically producing differential outcomes (Clausen 1986).

On the other hand, *life course perspectives* are disciplinary or sub-disciplinary *lenses* on the life course (as defined above), focusing on people's lives with a particular interest in either one phase of life (e.g., adolescence , or older age) or the connection between two or more phases (e.g., the transition to adulthood, e.g. Hogan 1981; Hogan and Astone 1986; McLeod and Almazan 2003), or the transition to old age (e.g., Ferraro 2001), and/or outcomes within one particular domain (e.g., health , or education ,

etc.) (e.g., Ferraro 2016). These elements may combine in such a way that the particular sub-discipline may focus on one set of outcomes during a particular life phase (e.g., chronic disease in adulthood). It is important to emphasize, however, that there is *more than one life course perspective*, each attending to different aspects of the individual's life course. For example, there is a sociological perspective on the life course (e.g., Elder 1994), an epidemiological perspective (e.g. Kuh et al. 2003; Kuh and the New Dynamics of Aging 2007), and so on. In general, life course analysis focuses on the nature and determinants of particular transitions , their timing, their links to events and exposures in earlier life stages, and their consequences for outcomes of human development, for example, health, well-being and mortality in adulthood (e.g., Blackwell et al. 2001; Case et al. 2002; Haas 2007, 2008; Hayward and Gorman 2004; Montez and Hayward 2011; Schafer et al. 2011).

The life course perspectives of today transcend the original notions of age-graded life stages (see Cain 1964). There are several recognizable and distinct life course perspectives and/or paradigms that motivate the study of human lives across many different fields. Each approach relies on its own concepts, which are often mistakenly applied inter-changeably across fields, but each makes a distinctive contribution that deserves notice in mapping this domain (Elder 2000; Alwin 2012). Life course research has made major inroads in understanding the connections between lives, time, and place, and how to handle these complexities in theory and research. Conceptually, these areas are roughly nested within one another, and extend from the species level (which establishes certain fixed parameters) down to the level of the individual life course (where lower-level concepts are nested within the one above). These substantive domains and associated life course concepts are shown in Fig. 1.1. This scheme emphasizes the biological roots of relevant domains (see Finch and Kirkwood 2000; Olshansky et al. 2002), life history perspectives (Charnov 1993; Roff 1992; Stearns 1992; Carey 2003, 2009; Lee 2003), as well as the cultural and societal contributions to understanding how lives develop (Ellis et al. 2009; Kaplan et al. 2000; Kaplan and Robson 2002; Hogan 2000; Alwin 2015; Sewell 1992), and life-span developmental perspectives (Baltes 1987, 1997; Baltes and Baltes 1980; Baltes et al. 1999; Featherman 1983; Staudinger et al. 1995; Alwin and Wray 2005). Ultimately, the relevant domains include aspects of social networks that are based in society, the family, and individual trajectories . By nesting these concepts across levels of discourse and disciplines, as in Fig. 1.1, we can achieve a much more integrated framework that amplifies meaning and creates a holistic interpretation of lives within a multidisciplinary context (Alwin 2012). Because of space limitations, we do not expand upon the distinctiveness of each of these several different approaches to the study of the life course, as they are thoroughly discussed elsewhere (see Alwin 2012, 2016).

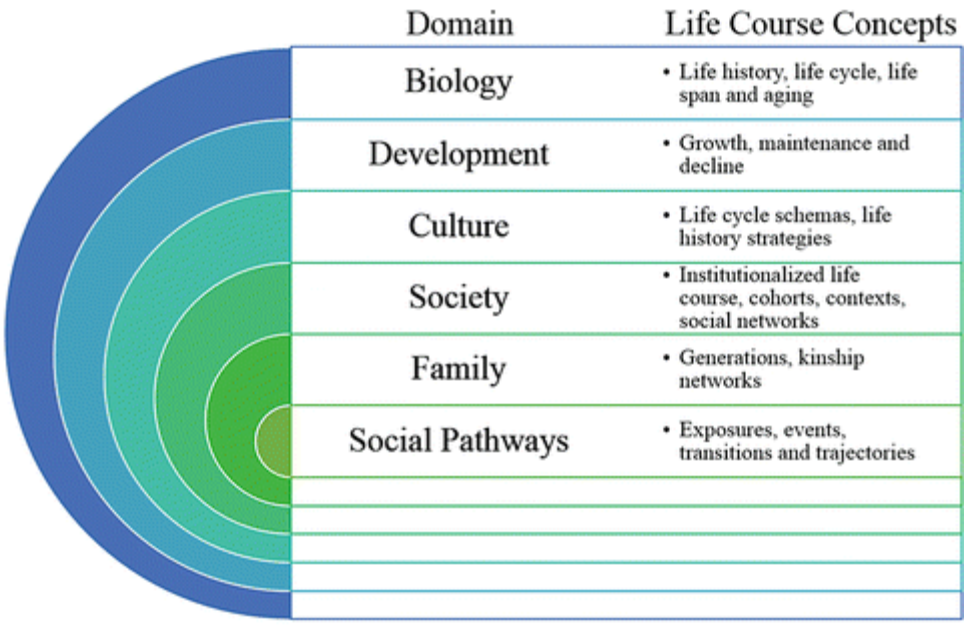

Fig. 1.1 Domains of relevance and key life course concepts

Social Networks

A social network perspective points to the interconnections among actors as a key component of social interaction, with a primary focus on the relational aspects of social processes. Network data then differs from individual surveys typical to social sciences in that there is an equal emphasis on individual attributes and the ties that connect individuals into a web of social relations. The science of networks, similar to the study of the life course, represents a multidisciplinary field that extends to multiple domains, including the social sciences, as well as the physical and biological sciences, computer science and engineering, and in some instances, the humanities.

Not unlike the life course paradigm, social network research also has experienced remarkable growth in recent years. Scholarship in the field demonstrated consistent increases over the past couple of decades, a trend noted consistently across multiple literature searches. For example, in a search of three databases, including Sociological Abstracts, Medline Advanced, and PsychINFO, Otte and Rousseau (2002) detected a largely linear growth in yearly publications on the topic of social networks over approximately a 25-year period from 1974 until 1999. A recent examination of Scopus and PsychINFO continued to document a noteworthy expansion in social network publications, with accelerated growth over the last decade (Felmlee and Sinclair, in press). In 1985, for instance, there were 628 new publications on “social networks”; there were close to three times as many in 2005 (1761), and in 2015 a search on the same topic yielded a total of 9324 novel publications, representing over 12 times as many as 10 years earlier.

Historical Roots of Network Analysis

The roots of modern network models began with the work of Jacob Moreno (1934) and Helen Jennings (1943). Early work focused on the use of sociometric analysis in conjunction with psychotherapy and psychodrama. Barnes (1954) is normally credited with the first use of the term “social network” to refer to a set of social relationships . Divergences occurred in students of networks who studied them from an “ego centric” versus a “socio centric” point of view, that is, taking the perspective of individual actors versus a “social structure” that characterizes the group of network ties. There are several comprehensive reviews of the topic of social networks that follow its development. Freeman (2004) traces the history of the development of social network analysis. Wasserman and Galaskiewicz (1994) discuss a range of substantive applications. Marsden (1990) reviews the literature on the measurement of social networks. Wasserman and Faust (1994) discuss the analytic methods.

The social network perspective shares several common characteristics with those of the life course and dovetails nicely with that approach to social life . Both have conceptual and theoretical elements and implications, for example, but each represents more of a guiding approach to scholarship than a pure theory, per se. In addition, each approach takes a fundamentally social perspective on human behavior, embedding individual actors within a larger social sphere. Both point to interconnectedness among actors as a key to understanding social life , building on the concept of a “network of ties” within the social network tradition and the life course concept of “linked lives .”

At the same time, the two approaches contrast in a number of ways. Perhaps the most major point of departure between the two traditions is that the social network approach represents not only a set of theoretical concepts and principles, but it also brings with it a distinct set of methodological procedures to examine social interaction. Network analysis involves a series of unique concepts and an array of methodological tools designed to investigate and incorporate the lack of independence among actors in an extended set of social ties. In addition, the social network perspective generally takes a narrower focus on social interaction than does that of the life course. It points to the interconnectedness of actors, as does aspects of the life course approach, but the social network approach deems this relational nature of interaction as preeminent. Relational ties represent the focus of investigation. Research on the life course might attend to “linked lives ,” in some cases, but often focuses instead on other concepts such as those of trajectories , turning points, and historical changes. On the other hand, social networks encompass a more extensive notion of actors. Actors in the life course tradition tend to be individuals, whereas those in social networks often consist of a range of alternative entities, such as larger collections

of people, including small groups, schools, organizations , and nation states. Social network actors also may entail objects of social value, including books purchased on Amazon, tweets on the social media website, Twitter, and central topics in political discussions.

Principles of a Social Network Perspective

A social network perspective emphasizes that interconnections among sets of actors need to be considered in order to better understand social processes. This approach differs from that of a more individualistic or dyadic viewpoint, because these interconnections consist of actors one step away and reach out to those connected at farther distances, that is, extended ties. Note, too, that two genres of network data exist—egocentric networks and global, or sociocentric, networks. *Ego networks* , or personal networks, are made up of a set of actors, "egos," and the ties that emanate from that set. *Global networks*, on the other hand, contain information regarding all the possible ties between a set of actors and global networks tend to be more extensive than ego networks; ego networks typically do not contain data on the ties between the various egos. The chapters in this book represent both types of network data.

According to several network scholars (e.g., Wasserman and Faust 1994; Wellman 1998), a number of propositions comprise a social network perspective. Several key principles include: (1) The relationships, or sets of ties, among actors serve as the focal point of theoretical and empirical analysis. (2) The behavior of one actor is interdependent with that of actors to whom they are connected. (3) Elements of the structure of the broader network influence actors' behavior. (4) Networks act as conduits for the spread of resources, support, information, rumors, social norms, and other types of positive and negative interchanges among actors. These principles serve as the foundation for much of social network research, pointing to the central relational and structural elements of the network perspective. These network concepts have been useful in life course research focusing on network transitions in older age , e.g., the bridging potential of social networks (Cornwell 2009a, b).

Social Network Concepts and Theories

A number of key concepts characterize a social network approach to scholarship, and we briefly describe several of these. *Degree* refers to the number of *edges*, or ties, that connect one network *node*, or actor, to another in a symmetric, or undirected network graph. In a *directed* network or graph, nodes possess both an indegree and outdegree, where *indegree* measures the number of ties leading towards a node,

and *outdegree* is the number of edges that originate with a node and lead outwards. *Network density* measures the overall level of connectedness in a graph, and in a binary network it represents the proportion of all edges that are present, out of all possible edges.

Network centrality represents one of the focal concepts for social network research and has stimulated a considerable amount of scholarship in the field. *Centrality* identifies actors who are the most prominent, influential, or the most connected to others in the network. Numerous measures of actor, network centrality exist (Freeman 1979), and here we focus on three key measures—degree centrality, closeness , and betweenness. *Degree centrality* is the simplest, and it enumerates the number of others to whom each actor is linked. *Closeness centrality* depends upon the shortest path, or *geodesic*, between all other actors, with those who are at shorter distances from others having the highest level of closeness. Actor *betweenness centrality* measures the number of times in which a node occurs as a bridge along the geodesic connecting other nodes (Freeman 1979). Each of these centrality measures taps into a different conceptualization of node prominence, or importance. Network centrality relates significantly to numerous positive and negative outcomes, including job perceptions (e.g., Ibarra and Andrews 1993), performance of individuals and groups (Sparrowe et al. 2001), adolescent drinking (Kreager et al. 2011), school victimization (e.g., Felmlee and Faris 2016), and student satisfaction and performance (e.g., Baldwin et al. 1997).

A focus on network centrality emphasizes strong interconnections in a graph. Granovetter (1973), however, argues that it is the weak ties, rather than those that are strong, that play a crucial role in social networks, where w*eak ties* refer to *network bridge* s that provide a link between otherwise disconnected nodes. Because strong ties, such as family and friendship connections, tend to possess similar types of information, novel forms of communication and influence are apt to originate from contacts that are weak and distant (e.g., Ellison et al. 2007; Kreager and Haynie 2011).

Burt's (1992) theory of *structural holes* extends the notion of weak connections to a focus on the actors that serve as bridges, or gatekeepers, in a work organization . A *structural hole* refers to a gap between people in an ego network , and it is individuals that bridge these holes that occupy advantageous positions in firms. Such brokers can transfer or gate keep useful information between groups, or combine information in innovative ways. *Structural constraint*, on the other hand, measures the degree to which a manager's connections are located within a single group of interconnected colleagues, that is, they possess no ability to broker structural holes . The degree to which managers were social brokers in a firm corresponded directly to their level of wages, valued ideas, performance evaluations, and the likelihood of promotion (Burt 2004).

These various network concepts and theories can be combined with a life course perspective in intriguing ways. The notion of “linked lives ” can be extended, for example, to note that certain connected lives are more central and influential than others, and that the locus of centrality no doubt shifts considerably over the life course. In addition, people’s lives can be influenced by their ties to third parties, not only by direct family and friends, and that such extended ties are worthy of attention. Links between individuals also likely vary in strength, and perhaps surprisingly, it may be their weak, rather than strong, ties that substantially shape life transitions and trajectories over time. Furthermore, having many, deeply interconnected, linked lives may constrain, rather than enhance, peoples’ opportunities and innovativeness as they progress through life’s stages.

This should not be interpreted to mean that life course researchers have ignored social network concepts. There have been several applications of social network concepts in the study of life course and aging . Due to the importance of social network change in older age , gerontological research has been interested in the extent to which network structure and composition differences in older age impact upon the individual in suboptimal ways (see Ferraro 2001), contributing to the long standing interest of social gerontologists in phenomena relating to health, family, community and other domains in which it offers a fruitful set of avenues for research (Cornwell and Silverstein 2015). There has been considerable research on the social integration of older adults, suggesting that with age there is a decline in access to social support , community involvement and network connectedness (see Alwin et al. 1985; Morgan 1988; Cornwell 2011a, 2012; Cornwell et al. 2008). These results are consistent with other findings, which suggest that both core and peripheral networks decline with age , although some more recent results suggest that family networks are stable in size from adolescence through old age (Wrzus et al. 2013). These results have stimulated more dialogue between social network researchers and social gerontologists , and has focused on older adults’ bridging prospects, and while age is unrelated to bridging, some of the phenomena that accompany old age reduce bridging potential . Individual’s cognitive and physical health play an important role in social network bridging, making it less likely for those of poorer health to span structural holes (Cornwell 2009a, b). This work raises important questions about the relational advantages that women and men have in older age , contradicting to some extent the traditional stereotypes about women having more close-knit kin -centered networks than men (Cornwell 2011b).

At the same time, the life course perspective nudges social network research in a number of critical directions, one of which is to attend to variation over time. Although recent network methodological advances, and the availability of longitudinal network data sets, enable the study of changing networks, the bulk of work in the field has focused on network structure at one point in time. Furthermore, life

transitions , such as shifts between levels of schooling, transitions in and out of marriage, and geographic mobility, often portend considerable fluctuations in one's social network. Life transitions, thus, are also network transitions (Roberts and Dunbar 2015). Moreover, social life is not only embedded within a distinctive social network, according to the life course approach, it is located within a particular cultural and historical framework that, too, fundamentally shapes personal outcomes.

Organization of This Volume

The volume is organized into nine parts, extending from theoretical perspectives to practical applications of social networks and life course perspectives to prevention and social amelioration. The volume begins with theoretical perspectives—life course perspectives on social networks and social network perspectives on the life course. Lives do not exist independently, because they are linked and relationships are formed, developed and are dissolved in the context of those linkages or social networks. In Chap. 2 and 3, writing from the point of view of life course researchers, Richard Settersten and Deborah Carr review the issues that social relations and social networks pose to life course researchers. Settersten's chapter addresses the question of the effects of social relationships on life course transitions and trajectories . His discussion takes a unique approach, in that the tendency in the life course literature is to view this set of issues from the standpoint of life course events and pathways affecting the nature of social ties. By focusing on the reasons social relationships matter for life course events and transitions , Settersten reverses the typical linkage to consider ways in which human lives are constructed socially and "permeate and punctuate" the life course.

Deborah Carr's chapter focuses on the ways in which the concept of "linked lives " has been operationalized in research. A great deal of research on health and chronic disease by epidemiologists, sociologists, psychologists and others has relied on life course concepts. This chapter provides an overview of several integrative themes that have developed within the sociological perspective on the life course: (a) lives are embedded in and shaped by historical context; (b) the meaning and impact of a life transition is contingent on when it occurs; (c) individuals construct their own lives through their choices and actions, yet within the constraints of historical and social circumstances, and (d) lives are "linked" through social relationships – the theme that is most focal to this volume. Her chapter reviews developments in data collection and analytic methods that involve dyadic, family-level and network data, and focuses specifically on one core substantive area—the impact of marriage and marital transitions on health and well-being—that has employed social network concepts in the study of lives.

Social Network Perspectives on the Life Course

The foregoing contributions are complemented by two chapters that take another view, namely the ways in which life course concepts can be used to study network characteristics of individuals. In Part II, there are two chapters written from the perspective of social network specialists employing life course concepts. The chapter by Ronald Burt addresses how the life courses of individuals working within the leadership of organizational units can be understood to interact with participation in organizational activities. The focus of his chapter is anchored on the well-known phenomenon of *network advantage*, and explores how a life-course perspective enriches what is known about this phenomenon. His disquisition builds upon his concept of *structural holes* and the bridging potential of social networks by incorporating ideas of life cycle (or age) into the study of the returns to network advantage with groups of managers. His results show that the benefits of network advantage are age contingent, and his discussion of these ideas leads to a number of interesting questions for future research.

Peter Marsden's chapter on life course events and network composition takes the orientation of looking at how life course events produce outcomes that measure social relationships . This chapter examines social survey data with respect to several, life-course transitions of adults in the general, U.S. population. It proposes that life course events influence individuals' social networks and examines patterns between events and networks using both cross-sectional and longitudinal data from the General Social Survey. The main argument is that changes in the life course affect social networks through a process of creating new opportunities for network interaction and eliminating others. Results suggest that various life course stages and events help to shape network composition and the types of activities involving social networks. Marital status, entry into the paid labor force, and residential mobility, for example, are all associated with network outcomes. Modest gender differences support the argument that the life course experiences of men and women differ, especially concerning family-related events, such as marriage. These findings are borne out by the chapters in Part V (see below).

Marriage and Family Networks

The section of marriage and family networks – Part III – that we propose as a critical part of Together Through Time contains three chapters dealing with essential considerations in conceptualizing how the most fundamental social networks, namely networks connected to marriage and family, affect the individual. The chapter by Shira Offer and Claude Fischer takes advantage of data from the first wave of Fischer's UCNets project, a longitudinal study of personal networks. The study investigates the variability in the availability, accessibility, and mobilization of close kin . The focus of this paper is on

the relationships of “close kin” (relationships with parents and their adult children). In many ways the paper is about social support , and is unique in its focus on what are essentially “lifelong connections.”

By focusing on just one narrow slice of kinship ties that may involve lifelong connections, the paper by Paul Amato and Spencer James examines the changes in spousal relationships over the marital life course. This chapter addresses an important topic, given that a large proportion of the population is married at any given time. Their analysis of changes in marital happiness is innovative and nicely framed for the volume. The pattern that is documented by which a number of marriages are able to maintain and secure satisfying and rewarding bonds over an extended period of time is indeed surprising, notable, and likely to stimulate further research. The results also have noteworthy ramifications for theories of marital quality and functioning.

Childhood and Adolescent Social Networks

Following the chapters on marriage, in Part IV we turn to the periods of the life course where many social relationships are formed, namely childhood and adolescence . The chapter by Diane Felmlee and colleagues addresses two key questions about adolescent friendship networks: first, what is the nature of change in youth friendship networks, specifically in the nature of popularity and centrality , over a period of 6 years? And second, what changes in social network dimensions (e.g. centrality) are linked to transitions in the institutionalized life course, specifically, the transition from elementary to middle school , as well as leaving middle school to attend high school? This is a very unique set of issues, presented by network specialists interested in the life course. This chapter describes the results from the Promoting School-Community Partnerships to Enhance Resilience (PROSPER) study, which contains a unique set of measures within the context of a powerful study design—data from some 13,200 students who attended middle and/or high schools within one of 28 small public school districts participating in the study. Following a detailed analysis of network characteristics, the authors conclude that the friendship structure of young people often shifts during the years from middle to high school, resulting in substantial , detrimental effects on social networks, particularly network centrality .

Complementing this chapter on the origins of friendship networks in adolescence is the related chapter by Robert Faris and Diane Felmlee, which focuses on an important set of issues regarding adolescent friendship networks , specifically: how much do friendship networks change over significant periods of time, and what are the consequences of stability vs. change for outcomes of interest? This chapter fits perfectly with several other central themes of the proposed volume, as it addresses key questions related to social networks and time for one critical life stage, the period of adolescence . They find that most adolescents experience high rates of turnover in their friendships, with nearly one-third

changing their friendship ties every 6 months. They conclude that maintaining high quality friendship ties and letting go of problematic ones is one of the key challenges for adolescents, and this observation is reinforced by their central finding that friendship consistency is critical for the investment in future life goals.

The final paper in this section by Rob Crosnoe and colleagues suggests that social networks at school and relationships at home both contribute to the well-being of adolescents. The authors examine the correlations between adolescents' parental warmth (i.e., "Most of the time your mother [father] is warm and loving toward you."), fitting in at school, and sociometric nominations (indegree and outdegree). They posited that problems at home will transfer to problems at school, either due to socioemotional or neurological deficits. Using data from Add Health saturated schools (i.e., those where network data were collected in Waves 1 and 2), they first predicted feelings of fitting in at school and found that, net of the lagged outcome variable, adolescents who reported less parental warmth reported lower perceptions of school integration. With SIENA analyses of networks in two large schools, they found no associations between negative parent relationships and friendship formation. They conclude that relationships with parents were not consistently implicated in peer dynamics at school, but, when relationships in the home and school were connected, they often pointed to social risks for adolescents with problems at home.

Gender and Social Networks

We have included three chapters that address issues of gender, which all point to the acknowledged premise that the life course is gendered and should be understood as such. Using a large and highly unique study of married and cohabiting couples, Michael Rosenfeld's "Who wants the breakup?" focuses on the question of gender differentials in who initiated a divorce or breakup . Using a sophisticated set of analytic tools, he finds that most divorces were wanted by the wife, whereas for most non-marital heterosexual couples , a breakup was gender neutral. Further analyses involving "competing risks" suggest that power differentials between men and women with regard to education and income do not account for women's preference for a divorce. Findings show, too, that there is a gender gap in marital satisfaction that remains constant over the adult age distribution, and that it has remained relatively stable over the period from 1973 to 2014. Rosenfeld concludes that the findings are consistent with the argument that marriage is a "gender factory," in which traditional gender roles are reproduced.

Markus Schafer's chapter looks at the linkages between a key life course event that occurs in older age, namely driving cessation, and its implications for social network ties. He finds that the processes involved interact with gender. With respect to social networks, the paper focuses on network size , added ties over time, and the bridging potential of social networks. The paper extends the existing literature by

focusing specifically on aspects of social networks that tie into themes of autonomy and empowerment in later life. Driving cessation (DC) is an important issue in older age , and especially so in a “car dependent” society. There is a literature on DC in gerontology ; but for the most part it is not studied within a life course framework, nor using longitudinal data. While understanding the link between DC and social networks is critical, the paper makes the important observation, as others have, that life course transitions occur in a gendered context; men and women experience life differently, with distinct life trajectories , and these may occur at different ages. The gendered life course is directly applicable to DC transitions in later life, given that driving may have different meaning and role implications for men and women, e.g. women are more likely to be passengers than drivers. Few population-based studies have examined these processes, and Schafer’s relies on data from the National Social Life, Health, and Aging Project (NSHAP) to address these issues. Little research has given attention to the different psychological and social implications of DC for men and women, and Schafer’s chapter suggests that engagement in social networks may provide a key mediating link to well-being in future research, due to the fact that social networks are key to providing rides (for medical appointments, recreational performances, church, etc.) among other kinds of social support .

Jill Suitor and her colleagues touch on two subthemes of the volume—social support and inter-generational relations. Building on the time-worn observation that social support and psychological well-being are interconnected, they argue there are “costs of caring,” a theme developed in the early feminist literature on the family (e.g. in the early work of Jessie Bernard [1972], and in the 1980s by Nel Noddings [1984]). The paper is also linked to the literature, developed in earlier decades, on “role overload” and “role conflict,” in which role enactment is conceived of in terms of both its costs and benefits. And, while role burdens of this sort have been studied in inter-generational relationships, the present research focuses on the potential consequences of enacting multiple roles within the same social status, that is, with the same role partner. The authors find that there is an association between performing a multitude of roles for one’s mother and depressive symptoms.

Race and the Life Course

Part VI contains two chapters on race and the life course. Duane Alwin and his colleagues investigate the potential linkage between race/ethnicity and social networks within the framework of the “racialized life course.” They point out that recent theorizing about present-day racial inequalities minimizes the importance of racial animus, and instead points to major differences among racial/ethnic groups in structural barriers and their access to key social networks. These accounts emphasize family and neighborhood social networks —processes that are historically tied to slavery and the subsequent de-jure

period of Jim Crow segregation. Employing the recent work of Daria Roithmayr (2014), they suggest that racial inequalities reflect the "locked in" nature of historically-based institutional racism, according to this argument, not the racist attitudes of protagonists in the contemporary social system. These views are compatible with other theorizing in the social science of race, wherein it is argued that even after centuries of change, associational ties (including marital relationships) of African-Americans in the post-slavery era, are in many ways reproductive of the social connections of institutionalized structures that impoverished them centuries earlier, especially African-American men (Patterson 1998). Using this as a strong theoretical basis for their investigation, they take as problematic differences among racial-ethnic groups in their social networks and associational ties (see McPherson et al. 2001). Using data from the GSS, they examine black-white differences in social network ties in addition to aspects of social participation , and social connections generally. They develop a theoretical discussion of how these network integration measures are tied to the life course. Their results reinforce Patterson (1998) conclusions that in the GSS network data African-Americans register significantly smaller social "core discussion" networks, they have fewer kin in those networks, and (if married) are less likely to include their spouse in their network. The results of their analysis go further in suggesting some of the key black-white differences, not only in the extent of network contacts, but with respect to social participation more generally. While blacks may not have large social networks, they are more likely to activate those they have, resulting in higher social participation levels than whites.

The chapter in Part VI by David Schaefer and his colleagues focuses on racial/ethnic friendship segregation among adolescents . Extracurricular activities (ECAs) within high schools offer the capacity to bring diverse adolescents together and promote friendships that reduce outgroup prejudices. Despite their promise, only a few researchers have tested the effects of ECAs on racial/ethnic friendship segregation. Using data from 108 schools in the National Longitudinal Study of Adolescent Health (AddHealth), they consider two prominent theories that offer insight into the processes by which ECAs might affect intergroup friendship—focus theory contends that activities attract relatively homogenous subsets of the student body, thereby promoting friendship homophily (e.g., racial friendship segregation), whereas intergroup contact theory suggests ECAs can decrease homophily by offering opportunities for familiarization and engagement with peers who are dissimilar. In this chapter, they examine these seemingly contradictory processes and explain how, in fact, they can occur in tandem. At the macro level, ECAs can promote homophily by homogenizing the pool of available friends, whereas at the micro level, ECAs can decrease the relative salience of attributes such as race/ethnicity during

friend selection. With a few notable exceptions, ECAs did not predict preferences for homophily, but ECAs did predict the frequency of cross-group friendships, and thus, may provide many of the desired benefits of integration despite not producing short-term changes in friendship preferences.

Tracking Social Networks Through Time

One idea that emerged from many of the papers in this volume is that the nature of social connections varies across the life span, and that life course events tend to concentrate at different life stages. Part VII, explicating a fundamental theme of the book, focuses on the issue of tracking social networks through time. Benjamin Cornwell and Edward Laumann consider older age , examining the question of how social networks are shaped by the experience of the death or other loss of a close network member. Using data on egocentric networks from the National Social Life , Health, and Aging Project (NSHAP) (see Cornwell et al. 2009), covering the period 2005/6 to 2010/11, they find that the loss of confidants due to any cause more than doubles the likelihood that a confidant will be added to one's network. This effect is apparent especially if it involves confidant mortality. Network recruitment in old age is a topic of interest to specialists in aging and gerontology , and this chapter provides a basis for further research into this topic.

The chapter by Yoosik Youm and his colleagues explicitly addresses the question of the changing nature of network composition over the life span, from early adulthood through older age . They approach this topic in a novel way and present a very clever application of latent class models to available measures of network ties using the GSS 2002 network module data. Their chapter develops a latent class model for seven indicators of social network ties, and uses the latent classes of this model to overlay (or cross-classify with) several age groups in order to infer the nature of changes in social network composition over the life span, from early to late adulthood. The key idea behind this paper is that the nature of social connections, or network composition, varies across the life span. Life course events tend to concentrate at different life stages, resulting in an inevitable change in the composition of networks. The content of the paper fits well with the themes of this volume, and one of the few papers that truly focuses on the nature of changes in social networks over a lifetime, and it does so without longitudinal data, but relies simply on a one-off study of social networks. They also take the analysis further by analyzing how various types of network classes are related to a criterion variable, happiness ; and how this relationship differs by life stage/age group . Finally, an important part of this paper is its focus on happiness as a criterion to assess the predictive validity of the several "types" of network

composition , as assessed in this study. Their goal in this regard is to use personal network composition to relate to overall happiness, and to use the features of “types” of network composition to reason about their effects on happiness.

Inter-generational Social Networks

The two chapters in Part VIII focus on inter-generational social networks . The chapter by Jennifer Doty and Jeylan Mortimer use data from thelongitudinal Minnesota Youth Development Study to examine trajectories of levels of closeness from a child towards a mother during adolescence to adulthood (ages 15–36/38). Based on a growth mixture model latent trajectory, they identify three key trajectories of patterns of change in mother-child closeness: high/dynamic, average/decreased, and low/increased. Those in the average/decreased trajectory and those in the low-increased trajectory experienced significantly greater depressed mood than did those in the high/dynamic trajectory . The individuals in the average/decreased trajectory also reported lower self-esteem than those who were classified in the high/dynamic trajectory. Neither past levels of depression or self-esteem, nor negative life events , accounted for the trajectory effects.

The second paper in Part VIII by Merril Silverstein and Vern L. Bengtson investigates the extent to which the family as an institution provides cross-generational continuity. Silverstein and Bengtson focus on religion , arguing that family differences in religion resist social change, and thus, religiosity tends to run in families. The authors frame the intergenerational transmission of religiosity within the context of profound changes in the religious makeup of contemporary society and the changes reflected therein, and argue that religiosity is a trait deeply embedded within families and transmitted across generations. Using longitudinal data from the Longitudinal Study of Generations, a four decade study of multi-generational families, the authors estimate a three-level hierarchical linear model, in which level-1 grandchild-specific variables predict grandchildren ’s religiosity within parent and within grandparent units; level-2 expresses effects on parental religiosity; and level-3 predicts grandparent’s religiosity. This is a good example of how multilevel models can be applied to inter-generational data, especially when children are clustered within parents, and parents within grandparents. In addition, they include an interaction for parental marital history, which augments the model, and again, this is a nice application of multilevel interaction effects. The authors note that grandparents have been little considered in social science research on intergenerational transmission of beliefs and attitudes, and their results attest to the fact that this could be a promising avenue for inter-generational research.

The Potential of Social Networks as Mechanisms for Prevention

Part IX contains two papers that explore the potential of social networks as mechanisms for prevention and social amelioration. Derek Kreager and his colleagues point out the life course transitions commonly found related to criminal desistance, including marriage, military service, parenthood, and steady employment, have proven difficult to translate into policy or miss the most at-risk population in need of change. However, the control capacity of prison provides a unique context for introducing positive peer influence for behavioral change. They discuss how therapeutic community substance abuse treatment programs (within prison settings) rely on peer influence mechanisms to alter inmates' substance use trajectories . Dynamic social network data and methods provide tools for testing the peer influence mechanisms thought to underlie the treatment program and understand how it can become a turning point in addicts' substance use trajectories. The following chapter by Rulison and her colleagues makes a similar case about the potential role of social network analyses for the implementation of substance use and delinquency prevention programs in secondary schools. They argue that a consideration of the dynamic peer contexts of school-based friendship networks helps policy-makers understand how interventions diffuse through the social system. From a life course perspective, a network approach prioritizes between-person interdependence and peer influence to understand how an intervention can create a turning point in adolescents ' behavioral trajectories .

Conclusions

There is much to be gained for both life course and social network research to investigate areas where the two fields intersect—a focus on how social relationships matter for the development of lives and how events and transitions in life shape the nature of one's social relationships . The chapters in this volume will be of interest to researchers who study social networks, the life course, or both. This is a large audience, and the appeal is clear—life course researchers are looking for guidance from social networks experts about how to include network concepts and measures in new research, and social network researchers desire a greater understanding of life course concepts and processes in order to more realistically apply their ideas to sociological and behavioral problems. The typical life course researcher has very little understanding of social network concepts and mathematical tools for understanding relational characteristics, and how to best model their effects. There is substantial knowledge to be gained by life course researchers from social network approaches in order to move beyond the universal observation that lives are lived interdependently. This volume can help introduce life course researchers to the theories, concepts, and methods used by social network analysts. At the same time, we envision

there is a subset of network analysts who will view the life course framework as a useful paradigm within which to study social structure and transitions of social networks. Moreover, this volume introduces substantive topics in the life course perspective where social network methodologists may apply their mathematical techniques. Both bodies of researchers are the targets of the present volume, as this will hopefully speak to the cross-disciplinary aspirations of the afore-mentioned scholars.

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2. Nine Ways That Social Relationships Matter for the Life Course

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Human life is social. Indeed, an individual's life course is hardly their own because it is so enmeshed with other people. A key tenet of a life course perspective – 'linked lives ,' first put forward by Glen Elder in 1994 as one of its four 'paradigmatic principles' – reflects these interdependencies by underscoring the fact that an individual's life affects and is affected by others (see also Carr, Chap. 3, this volume).

And yet, analytically, much research on the life course is focused on individuals and operates as if individuals exist in isolation of others. As outlined in Chap. 1, the 'life course' is typically conceptualized as a set of interlocking trajectories that span the life *of an individual* – through domains such as family , education , and work, and marked by particular events, transitions , and other exposures.

But those ‘individual’ trajectories are intimately interwoven with other people, and most ‘personal’ experiences are actually *interpersonal* (Hagestad and Settersten 2017). One could even argue that there is no such thing as an ‘individual’ life course.

To say that lives are ‘linked’ does not reveal how they are linked, for how long, for what purposes, or with what consequences. In this chapter, I briefly sketch nine ways that social relationships matter for the life course. It is my hope to offer some fruitful ideas to not only advance theory and research on the *social* aspects of the life course, but to offer bridges between the study of the life course and the study of social networks , as this book aims to do.

Relationships Permeate and Punctuate the Life Course

We are literally born to other people and, until the moment we die, our lives are stories of ‘we’ and ‘us,’ entangled with others. The most intimate of these are family relationships – parents and children (see also Offer and Fischer, Chap. 6; Doty and Mortimer, Chap. 18), spouses and partners (see also Amato and James, Chap. 7; Rosenfeld, Chap. 11), and grandparents (see also Silverstein and Bengtson, Chap. 19).

Chief among life’s major turning points are changes in relationship statuses – forming a partnership or marriage , becoming a parent, getting divorced , being widowed. Even the statuses of ‘single’ and ‘childless’ signal times when people are without or not yet in relationships that are culturally or statistically normative. The departure of children from home and the death of parents also trigger movement into new life phases. Ultimately, all major milestones in life occur alongside others, or result from contributions or actions of others – whether graduating from high school , pursuing higher education , leaving home, being promoted or demoted, experiencing unemployment , or retiring .

Some transitions even require actions on the part of other people before we, in turn, move into a new status – what has been called ‘counterpoint transitions’ (Riley et al. 1988) or ‘countertransitions’ (Hagestad 1981) throughout the family matrix. Marriages and partnerships create ‘in-law’ relationships; divorces and separations create ‘ex’ relationships. Parenting prompts transitions into grandparenthood or great-grandparenthood, and turns sisters and brothers into aunts and uncles. Many other life transitions – changes in employment or schools , in residence, or in faith or political party – require us, and the people attached to us, to form new relationships and be incorporated into new networks.

We mark the passage of time through relationships. Anniversaries reflect the duration of time since a relationship’s beginning, or of time since its end, and involve social celebrations or acknowledgments. But the passage of time is also marked through relationships in smaller ways – how long it has been since we had that argument or took that trip; or in the life transitions of others – how long it has been

since a daughter graduated or son married. Additionally, relationships have their *own* turning points, as they reach new states that are qualitatively different – when, for better or worse, we are no longer what we once were and there may be no going back. For example, some couples and families may emerge from difficult periods with stronger and deeper relationships, while others may end up with more fragile or severed relationships – say, in the case of infidelity or the death of a child orsibling.

Other People Are Sources of Life Course Decisions and Expectations

If a relationship is central to our lives, we have probably worked hard to maintain it and have been significantly affected by it. There is a 'we' that ultimately drives the organization of *our* lives – plural. The most intimate of relationships, especially a spouse or partner, demand that lives are 'in synch' so that they might unfold *together* as smoothly as possible. Big decisions are generally made jointly, not singly: where to live, learn, and work; whether or when to marry or parent; how many children to have, and how to space them; how much to work when children are young; how to manage care of parents when they are old. These and other decisions are often carefully negotiated, and supported or compromised, within the context of multiple relationships, especially couple relationships.

When individuals' lives are 'out of synch,' friction must be resolved if relationships are to be sustained and healthy . Couples may separate in the face of new desires or goals related to education , work, or leisure; or due to romantic entanglements with others. Couples may experience crisis amid the departure of children or the arrival of a retirement. The care needs of a parent or child may strain or make it necessary to release other obligations or meaningful activities. The demands of family or work responsibilities may undermine the quality of a marriage.

Other people can regulate relationships, attempting to hasten or prevent them. Parents, for example, may try to influence the relationships of their children – and their children's life chances – through the neighborhoods and schools they choose, the teachers their children are assigned, the families they befriend, and the friendships and activities they encourage children to take up or release. As children grow older, parents may persuade or dissuade children from dating or marrying particular people, and even attempt to influence the number and timing of grandchildren . Of course, the reverse is also true: Children may try to influence the relationships of parents, especially amid marital strife, divorce, or the new relationships a parent might form thereafter.

We are generally unaware of how long a relationship will last, and we probably misjudge its durability and permanence. After all, 'until death do us part' continues to be repeated in marital vows, even though the likelihood of divorce is high. In high-longevity contexts, or in cultures like the United States where it is difficult to discuss finitude, individuals seem likely to overestimate the length of life or

inadequately prepare for its end. Nonetheless, our ages and those of others may prompt us to think in more conscious ways of how much time might be left. The declining health of aging parents, for example, may lead children, who are themselves middle-aged or older, to an awareness that their visits are numbered. Couples also imagine their own ends: Who will go first? How will the survivor manage? Children, too, wonder these things about their parents: If mom dies before dad, or dad before mom, how will each fare without the other? What care needs might result and how will those needs be met? Would one be more likely to remarry than the other? Similarly, parents of adolescents may be acutely aware that time with children *as children* is quickly diminishing. In each of the situations, the anticipation of the future, and of limited time left, may prompt people to change their behavior now.

When a relationship is understood to be time-bound, its duration may affect how much effort or emotion is put into it – whether we give it our all while we have it, or hold back knowing that it will leave us. For example, a short-term relocation may lead a worker and her co-workers to not invest deeply in each other. Encounters with life threatening illnesses may leave people acutely aware that their relationship is running out of time, that time gotten is a kind of ‘grace time,’ or that death may take it away before they are ready.

Inheritance is an interesting case for demonstrating how projected time left might enter a relationship. Parents may demand things of children in connection to an inheritance, even specifying conditions in a will, in an effort to control their children before or after they die. Similarly, the possibility of inheritance may lead children to do things they might not otherwise do for fear of losing these resources. The likelihood of inheritance may also depend on relationship ‘chains,’ as the death of one person versus another in a couple may completely alter the flow and priority of resources across families and generations , dramatically improving or reducing one’s life circumstances. These resources may be especially threatened when there are remarriages and stepchildren.

How much time is left in one relationship may also alter what is done in another relationship. For example, couples may move more quickly into marriage or parenthood so that a parent or grandparent can be part of the process and experience these roles. The needs of a dying parent may in turn require a caregiver to be less responsive to the needs of spouses and children, with the understanding that time in these other relationships can be reclaimed later. Promises made to loved ones on their death beds also often involve caring and looking out for others.

Relationships Help Judge Progress in Life

Human beings understand their experiences in relation to a variety of other people. We judge ourselves relative to our age peers , such as when we feel surpassed by those who have completed degrees, secured

jobs, found partners, or become parents. These kinds of comparisons are inevitable among close friends and siblings. But these judgments also occur among peers in social institutions (such as graduation classes in schools or hiring classes in workplaces), and with respect to perceptions of larger cohort patterns (e.g., “Compared to most people my age, I …”).

We evaluate ourselves relative to parents, who are natural personal and historical anchors. For example, in evaluating my life, I cannot help but remember what my parents were like when they were my age . I use my father, especially, as a yardstick for measuring my aging . As I near the onset ages of my parents’ illness episodes or diagnoses, I sense that I, too, am entering a period of increased vulnerability.

We judge ourselves relative to how old we are or will be when we experience something in a relationship – as when a man becomes a father, or a woman a mother, at an early or late age ; or how old a woman or man might be upon divorce or widowhood, or upon a child’s entry into kindergarten or graduation from high school or college. We may also judge ourselves in terms of relationship duration – for example, in feeling shame or embarrassment if a marital relationship is short-lived, or in taking pride in one that is long-lived.

We also evaluate ourselves in terms of how others attached to us are doing. For example, parents judge their own success on the basis of children’s outcomes (e.g., grades in school, colleges attended, degrees achieved, professions entered, partners married). Recently, my mother said, “At this age , I don’t worry about myself, I worry about everyone else. I just want all of you kids to get along and be happy !” Just as parents evaluate their success on the basis of the achievements of their children, children are judged on the basis of the perceived success of their parents. Cultural markers of social status – where a child lives or goes to school, or the degrees, occupations, and financial resources of parents – affect how kids see and sort themselves, and are seen and sorted by others, into peer groups and cliques.

Relationships Are Drivers of Ambition, Persistence, and Achievement

Relationships can help us think and live in new ways, offering support or an example for doing or being things we might not otherwise attempt. For example, a high school teacher might encourage a non-college bound student to college, or a college professor might inspire a student to pursue a graduate degree. First-generation college students sometimes speak of striving in college because their parents did not have the opportunity to go or dropped out; they say that they are doing it *for* their parents. A highly accomplished scientist I know often recalls a professor who called her “stupid” and said she would never

amount to anything; 50 years after receiving her Ph.D., his voice is still in the back of her head, propelling her forward. Parents might coach each other or strategize with other parents in an effort to become better mothers or fathers. Social movements and front-line activists can also forge new models of life, and new civil rights and legal protections, for groups of people who have been marginalized or invisible, such as African-Americans , women, LGBT people , and immigrants.

Relationships can reveal what we do not want to do or be. For example, couples talk about the marital and parenting styles of their parents, and about what they do not want to reproduce. High school students from working-class families may aspire to college in an effort to have middle-class jobs and greater career options. Students in Ph.D. or M.D. programs might drop out after witnessing their mentors' professional lives and struggles to balance work and family.

Relationships Are Sources of Stability and Disruption, Protection and Risk

Relationships have both light and dark sides. At the end of the day, and of life, relationships are often the most important sources of personal meaning; but they can also drain life of its meaning. Relationships keep us 'grounded' and 'anchored'; but they also curtail freedom, create disruption and unpredictability, and even lead us to relinquish life goals and plans. Relationships are essential to human welfare because of the many types of support they provide; but they can also put us at risk and place our welfare in jeopardy. Particular relationships connect individuals to larger social networks , which are gateways to opportunity and resources; but they can also block opportunities and deplete resources. Indeed, interpersonal processes – such as tracking in schools and workplaces, assigning negative or positive social labels to individuals and groups, or discriminating in explicit or subtle ways – are key mechanisms for the accumulation of advantage and disadvantage across the life course, and for the transmission of inequality across generations (Dannefer 2003).

Many relationships are chosen, but some of the most central are not. We are born into complex, multigenerational family structures which, for most of us, comprise the longest-running relationships we will ever have. We not only have no control over our families of origin, but we often do not ask for the experiences we have as family members make decisions about where to live, when to move, and whether and when to divorce or remarry.

Relationships Are Conditioned by Local Environments …

To a great extent, the relationships we form stem from local environments. Children's friendships are based in the neighborhoods , and therefore schools, that parents choose from the options they have. As adults, too, relationships are most often formed in the colleges, workplaces, churches, and communities we seek or find ourselves.

These settings not only offer possibilities of both supportive and destructive relationships, they also regulate relationships – especially when relationships are hierarchical, such as between teachers and students, or between supervisors and workers. The policies and practices of schools or workplaces may determine which types of relationships are permissible, or monitor how they are experienced – such as boundaries related to sex and intimacy, the abuse of power, or separation of professional and private life. Legal rights and obligations concerning dependency also come to mind, whether in accessing children or children's information at school or in making decisions for spouses or parents as part of medical directives in healthcare institutions.

The social composition of a locale – in terms of age , sex, race and ethnicity, education , or income – determines the kinds of people with whom we come into contact and potentially form relationships. A good example is the 'marriage market' and 'pool of eligibles' in a city or region, such as unmarried men with good jobs, or being one of a few old men among many old women in a community or senior environment. The strongest job opportunities through university career centers are often local or regional; the decision about where to attend college may therefore channel the subsequent life course by sending graduates into nearby markets as they secure housing, find mates, and form families.

… and Relationships Are Conditioned by Distal Environments

In contemplating the significance of social relationships in the life course, it is natural to focus on the most intimate of relationships and on immediate and known networks in proximal environments. But distal environments are also powerful, but more often invisible, in conditioning the availability and nature of relationships: history and social change, demography, and social policies.

Relationships must be understood within the context of their historical times. In the last half century alone, the life course has been radically transformed by dramatic changes in family formation , gender roles, access to higher education , the nature of work, and civil rights, among other things. The digital world has also brought new modes of finding and maintaining relationships, both locally and at great distance. Some of these changes are about relationships – such as co-residence with parents, increasing rates of cohabitation or divorce, or legal recognition of LGBT couples and families. Other changes, such as women's greater educational attainment and labor force participation, or men's more precarious work or greater investments in fathering, mean that relationships are being navigated or revised in turn. And as

Glen Elder's long line of research has shown, beginning with *Children of the Great Depression* (1974), the family is the sphere through which the effects of macro-level changes, like economic recessions or depressions, are mediated – and experienced and given meaning by its members.

When a society experiences rapid change, existing social systems are strained – including relationships. A key question is how individuals create, maintain, or terminate relationships amid the uncertainty of their social environments. For example, in the last decade, many people around the globe have experienced upheaval in political and economic systems, or war and violence, which have serious implications for relationships. Widespread patterns of migration and immigration affect families as they are united or separated by long distances. The abuse of women and children around the world, too, fractures human relationships. On one hand, climates of uncertainty may breed more temporary, instrumental, and self-interested relationships and create inauthentic attachments, loyalties, and commitments. On the other hand, these climates may also bring and bind people together in deep ways.

Revolutionary demographic changes in mortality and morbidity have altered the very terms of life, illness, and death . For example, the longevity of individual lives has made relationships long-lived too. People experience each other at new ages and in new life periods for which there are not always clear scripts for how relationships are supposed to look or feel – as young adult children with middle-aged parents, as middle-aged children with old parents, or as old children with very old parents. Family relationships carry the potential to be significant and positive because there are fewer relationships in which to invest, they are of longer duration, and they exist across many generations – thereby creating conditions that might strengthen the stability of family relationships and deepen attachment. New parenting styles and investments in relationships with children and grandchildren have also reinforced intergenerational connections .

And yet, it is possible that family relationships in these demographic conditions may become *less* important, active, and intense, or may result in "long-term lousy relationships," to use Vern Bengtson's (2001) phrase. Because the presence of ties can be counted on for many decades, individuals may *disinvest* in relationships at certain times under the assumption that they be activated as needed, making them more sporadic. When relationships go awry, individuals may (mistakenly) assume that there is still time for the relationship to come back or be fixed. High levels of divorce may also offset some of the potential relationship gains that come with greater longevity . One could even argue that longevity has made it more likely that marriages will eventually sour.

Finally, social policies also condition the kinds of relationships that are or are not legally recognized or protected (e.g., gay and lesbian couples and families, unmarried heterosexual partners, widows or widowers), ensured (e.g., state laws that require children to care for aging parents, or grandparents to

care for the children of teen mothers), monitored (e.g., custody, visitation, alimony), or credited (e.g., rules related to duration of marriage, who counts as a dependent).

Relationships Are Core to Human Identities

As George Herbert Mead (1934), and John Dewey (1916) before him, argued, the self is not 'ready-made' but arises out of social experience and action. We have multiple selves that stem from multiple relationships—even, it could be argued, as many selves as people we know. Indeed, many of life's big themes relate to the aggregates of people to whom we are connected: nations, regions, states, cities or towns, and neighborhoods ; or social categories like gender, race and ethnicity. These "people like me" shape how we see ourselves. As identities are formed and reshaped over time, individuals wrestle with similarities and differences between themselves and these peoples. Similarities can be points of pride, and differences can be points of struggle and crisis. These connections determine the people with whom individuals associate, the aspirations they set, and the people they reject or disregard.

Much of one's sense of self, however, is connected to genes inherited and/or socialization received from parents: personality traits and characteristics, values and attitudes, health symptoms or conditions, demeanor and physical appearance. We see our parents in ourselves, and ourselves in our children. These dynamics may lead children to consciously embrace or attempt to transcend certain things in themselves that were transmitted from parents, or to lead parents to consciously attempt to transmit, or prevent the transmission of, things about them to their children.

In my own case, I am the spitting image of my father. I literally see *him* when I look in the mirror! Two decades ahead of me, his aging is a window into mine. How I see myself is not only about how he sees me, but how I see him – a twist on Charles Horton Cooley's (1902) 'looking glass self.' One of my earliest memories is of sitting on his lap as a young child and, from across my grandmother's kitchen table, having relatives comment on how much I look like him. This has been a common occurrence in my life, and it has reinforced the fact that I am 'Richard's son.' I am also a 'Jr.,' so my formal name literally signals that I am his son. The common practice of namesakes symbolically connects descendants to past generations and honors special others who came before.

The language and presentation of kinship nicely illustrates how central these relationships are to identity. Just as I am a 'Richard and Diann's son,' I am known and define myself as a brother, partner, father, uncle, nephew, cousin, and an 'in-law' to a long list of particular people. I was also once a grandson and great-grandson to generations that have now passed. Particularly as a result of divorce ('ex-

’), remarriage (‘step-’), and unmarried relationships, there are not always easy ways to explain or label how we are related to others – as Matilda White Riley (Riley and Riley 1996) noted long before the complexity and diversity we know today.

All of these relationships have origin stories: of how people found each other or were put together, of what they mean to each other. Think, for example, of the tales couples tell about when they first met or saw one another. There is power in telling and retelling the story, in embellishing or refining it, and in how each partner has their own variation of it. The experience is shared, the stories are often a little different, but what counts is that it is the story of *us*.

As relationships start and unfold, they are subject to social rituals and reinforcements. They are recognized, or perhaps renewed, through commitments and ceremonies. In the classic anthropological account, Arnold van Gennep (1908) described *rites de passage* associated with major life transitions . These rites involve a process of ‘ceasings and becomings’ that involve an individual’s separation from an earlier status and an initiation into, and eventually the full incorporation of, a new status. A key feature of these rites of passage is that they are communal. When these thresholds are crossed, it is not just that individuals think of themselves differently; it is that others think of them differently too. Marriages and childbirth are good examples of rites of passage that create new statuses through the linking of lives. Of course, relationships can also be socially contested or negatively sanctioned – especially those that are deemed to be non-normative, such as those that cross social boundaries related to age , race, gender, and social class.

Just as there can be rites of passage that mark entry into social roles, there can be rites that mark *exits* from social roles – what Zena Smith Blau (1973) called *rites of separation* . These changes also affect social relationships . Legally, divorce is an obvious example of a formal rite of separation. It is meant to *unlink* lives. While these relationships may be severed or regulated legally, they generally do not vanish socially. The ‘ex’ label will live on in the identity of the people who were once attached, even long after the relationship is dissolved. There is much to be learned about the dissolution of relationships by choice or by circumstance – and the messy business of managing endings and unlinking lives. Some of our biggest points of embarrassment, shame, and regret are in how poorly we managed relationship conflicts and endings in family, work, school, and community environments.

New life phases and transitions can significantly alter social networks and reference groups (see also Burt, Chap. 4; Mardsen, Chap. 5), separating us from people and groups who were once important and incorporating new ones. For example, long-term couple friends may back away from a new widow or widower, who may have to recruit new members into the social network (see also Cornwell and Laumann, Chap. 16). Individuals with life-threatening illnesses at an early age may feel disconnected

from the lifestyles and preoccupations of their age peers. Staying single when friends are marrying, or getting married before others do, may put individuals in different social networks. Upwardly mobile individuals feel caught between the social worlds from which they came and the social worlds they are joining.

Similarly, transitions can reinforce or alter ideas about what a good relationship is. For example, individuals who become seriously ill may find that, out of concern, some central relationships are deepened and some peripheral relationships move to the center, while discomfort may move others to the periphery. Individuals who are divorced may likewise find themselves estranged from people to whom they once felt very close. Experiences like these can teach difficult lessons about the impermanence of relationships and the tenuousness of their quality .

Perhaps the most poignant example of the significance of social relationships to identity is the obituary, which is at its core a story of lives both tightly and loosely bound together – of fellow travelers in time, of relationships left behind, and of accomplishments that rested on collaboration with or support from others. Wakes, too, are communal experiences that involve shared stories that affirm the life and the loss.

When we lose longstanding relationships, especially through death , we lose people who are the ‘library of our lives’ (Neugarten 1995) and cannot be replaced. These people are no longer present to corroborate our existence or memories, and their losses are felt acutely. This kind of identity loss occurs with the death of parents or older family members, as we are pushed up the family ladder and, once at the top, become orphans in time.

Relationships Are Essential to Human Experience and Emotion

Long ago, William James (1920) said that the “deepest principle in human nature is the craving to be appreciated” – a craving that is satisfied by others. In fact, most core human experiences and emotions have social roots in that they stem from or occur in interaction with others: Love, attachment, attraction, jealousy, revenge, shame, forgiveness, loneliness, purpose, mattering, longing, belonging, joy, sorrow, suffering.

Social relationships also play into one of the most cherished cultural values in the United States: independence. This value is to a great extent discrepant with the reality that *inter*dependence, not independence, is the key hallmark of human life – as this essay has repeatedly demonstrated. Despite this fact, a U-shaped curve of dependence is nonetheless implicit in family conversations, public and political discourse, and research in human development: the first decade and a half of life is assumed to be a period of complete dependence on others; followed by a period of increasing independence early

into the third decade, at which point individuals are assumed to be completely independent until old age , when failing health may make it necessary to depend on others. Even then, the need to rely on care from others is sometimes described as ‘burden’ because being in a state of dependence violates a cultural value. For this reason, the prospect of young adult children living with parents, and of old parents living with children, can prompt shame or embarrassment.

It is an illusion to believe that those who are no longer young but not yet old are completely independent. Adult life is composed of many decades that are heavily constrained by social relationships, in which one’s own welfare is inextricably dependent on the choices, behaviors, and resources of others, and in which the welfare of others is inextricably dependent on one’s own choices, behaviors, and resources. This is especially apparent in family life. It is also especially apparent in the United States, where the government and the public place a high premium on personal responsibility and self-reliance. The irony is that the relatively limited supports of ‘liberal market’ welfare states, such as the United States, do not promote independence as much as they result in greater *inter*dependence among people (Hagestad and Dykstra 2016; Settersten 2007). That is, individuals and their families must shoulder responsibility for and rely on each other to solve problems that arise as they navigate markets for education , jobs, partners, or care using whatever knowledge and resources they have acquired or can access.

Conclusion

I have sketched nine ways that social relationships matter for the life course:

1. Relationships permeate and punctuate the life course
2. Other people are sources of life course decisions and expectations
3. Relationships help judge progress in life
4. Relationships are drivers of ambition, persistence, and achievement
5. Relationships are sources of stability and disruption, protection and risk
6. Relationships are conditioned by local environments
7. Relationships are conditioned by distal environments
8. Relationships are core to human identities
9. Relationships are essential to human experience and emotion

There are surely others. But these nine underscore the fact that the life course is a *social* entity: it is significantly driven by relationships with shared histories and identities, relationships formed and dissolved in social settings and institutions. The ‘individual’ life course is a misnomer in that it is

experienced and co-constructed with other people – over 35 years ago, Bertaux (1981) emphasized the significance of “co-biographers”; Plath (1980) called them “consociates”; Kahn and Antonucci (1980) spoke of “convoys.” Advances in theories and methods are needed to better reflect the inherently *social* nature of the life course, probing the full spectrum of social relationships from dyads to cohorts, and the full complement of social forces that affect them (see also Dannefer et al. 2016; Levy and Bühlmann 2016; Settersten 2017). Where couples are concerned, deVries and colleagues’ (2017) ‘relationship timeline method’ offers an important strategy for studying shared experiences in relational contexts.

Many examples raised in this chapter have illustrated that there is a great need to bring *time* into relationships. Relationships have histories of their own – beginnings, middles, and ends that can be described ‘objectively’ as well as in the mind (Settersten 2015). There is much to learn about what brings and keeps people together, how they create and navigate a shared life course, and how they adapt to changing needs and circumstances.

Many examples also reveal the need to enter the realms of meaning and inter-subjectivity, and of motivation, goal setting, and decision-making, to get deeper into the lived experience of relationships. So, too, is there a need to look underneath the major life course events that are the focus of research and social accounting (e.g., residential, educational , occupational, and family statuses) and instead toward the everyday interactions and emotions on which these events are based. Researchers too often mark the life course with big moments, but these big moments are built upon minutes, hours, days, weeks, and years of social experiences in the many settings of daily life.

Finally, the study of the life course is in need of a more dedicated examination of chance encounters. Social science is predicated on the idea that there are patterns to human life that can be understood, predicted, and intervened into if necessary or desired. And yet, in looking back on life, we are so often conscious of the role of chance encounters – that there were key junctures where, if we had not been connected to a particular person or group, or had not had a particular opportunity, or had not made a particular decision, pathways through life would have been dramatically different. We would not have had *this* spouse, or *these* children, friends, and mentors, or be in *this* community, workplace, or job.

From my vantage point, the study of human development and the life course is *under-socialized*. Individuals are too often studied as if they exist in isolation of others, and available methods further fracture whole people into tiny variables and control away the complexity of the social world. Theories and research do not adequately capture the richness of human social relationships, and the deep reality of human attachment and connection, whether in daily life or over decades.

The coupling of a life course perspective and a social networks perspective offers a powerful window into linked lives that neither perspective can gain on its own (for strategies, see Kreager,

Felmlee, and Alwin, Chap. 22). A life course perspective can reveal the kinds of dynamics I have offered in this chapter. But the contributions of a social network perspective are similarly unique because it emphasizes network structure and the individual's position within it – and concepts such as social network size , composition and 'internal wiring,' density, centrality , and 'bridging' positions that close the gap between people who would otherwise not be connected (for applications in gerontology , see Cornwell et al. 2015, and in Cornwell and Shafer 2016). Dually combined, these two perspectives can provide a more rigorous understanding of linked lives.

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3. The Linked Lives Principle in Life Course Studies: Classic Approaches and Contemporary Advances

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Social relationships are essential to our emotional, social , physical, and economic well-being at every stage of the life course (House et al. 1988). National surveys consistently show that more than 95 percent of persons in the United States rate their families as “very” or “extremely” important to them, and more than three-quarters rate their friendships as such (Moore 2003). Yet even our most personal and intimate relationships are powerfully shaped by social structures, including historical and cultural contexts, and the social institutions in which we are embedded. That social contexts shape human relationships is a core theme of sociological perspectives on the life course (Elder 1994, 2000). This framework rests on four foundational concepts: historical context; personal timing; agency versus structure; and social relationships (i.e., linked lives). The latter theme is essential to the study of contemporary research on social networks , which uses state of the art methods to understand the complex role that social ties play in shaping attitudes, behaviors, health , and well-being over the life course.

In this chapter, I provide an overview of four integrative themes widely used by sociologists working in the life course tradition, and offer examples of classic and contemporary studies exemplifying these themes. Second, I describe recent developments in data collection and analytic methods that enable

researchers to more effectively study linked lives over the life course, with particular attention to the use of dyadic, family -level, and network data. Third, I focus on one core substantive area in linked lives research – the impact of marriage and marital transitions on health and well-being – to illustrate how our understanding of linked lives is advanced by adopting dyadic and family-level perspectives. I conclude by showing how attention to linked lives can redirect and challenge conventional wisdom regarding social relationships and health.

Sociological Perspectives on the Life Course: An Overview

Life course sociologists have developed sophisticated theoretical frameworks for examining human lives and the social contexts and relationships that shape these lives (Alwin 2012; Elder 1994). Sociological perspectives on the life course share commonalities with yet diverge in significant ways from psychological models of the life span, which generally conceptualize human development as a function of biological and genetic influences and behavioral adaptation (see Mayer 2003, for review). Sociological approaches to the life course, by contrast, emphasize the influence of social institutions, structures, and public policies on individual lives (Kohli 2007).

Sociologists have adopted a variety of conceptual frames for studying the life course, although Elder's articulation of the life course paradigm is arguably the most influential and widely cited (Alwin 2012). Conceptually, four key assumptions guide this research: (a) lives are embedded in and shaped by historical context; (b) the meaning and impact of a life transition is contingent on when it occurs; (c) individuals construct their own lives through their choices and actions, yet within the constraints of historical and social circumstances, and (d) lives are "linked" through social relationships – the theme that is most central to this volume.

Life course scholars also rely on rigorous research methods and data sources – including national censuses, sample surveys, in-depth interviews, and historical records – to document continuity and change in human lives. Because a key question of life course research is "how do historical time and place shape lives?" researchers often compare data obtained at different points in time, from different birth cohorts, and from different national and cultural contexts. Researchers also rely heavily on longitudinal data , or data obtained from the same person at multiple points in time, so they can track continuity, change, and maturation within a single life. Until relatively recently, however, most studies conducted in the life course tradition relied on data from a single reporter – even when researchers were focused on inherently social phenomena, such as the individual's personal relationships and integration within social networks . This single individual would report on persons belonging to their social networks, or would rate the quality of relationships with family members and friends, yet studies rarely

if ever incorporated data directly from those other actors. Much of this chapter will focus on the ways that methodological, data collection, and theoretical advances have enabled life course researchers to truly capture linked lives and social networks in their work. Before delving more fully into these important advances, I provide a brief synopsis and historical overview of the core themes, concepts, and methods of the life course paradigm (Elder 2000).

Historical Time and Place

The life course of individuals is embedded in and shaped by the historical times and places they inhabit. Socioeconomic prospects and trajectories including the choice of one's occupation (Signer and Saldana 2001), the financial wherewithal to purchase a home (U.S. Census Bureau 2015), and whether one's schooling is interrupted by war or a financial crisis are shaped by macroeconomic and political factors (Elder 1994). Social relationship structures and processes also are shaped by sociocultural norms and historical contexts. For example, when and whether to marry and have children (Manning et al. 2014); the social acceptability of divorce , cohabitation, life-long singlehood, and same-sex relations (Baunach 2012; Thornton and Young-Demarco 2001); the balance of power and division of household labor among spouses (Cunningham 2007); and cultural expectations for providing care to aging relatives have changed dramatically over the 20th and 21st centuries (Brody et al. 1983).

The notion that human lives are shaped by social and historical context dates back to the writings of C. Wright Mills. In *The Sociological Imagination*, Mills (1959) asserted that to understand human social life , scholars must consider both one's "biography" and "history." Mills observed that "the sociological imagination enables its possessor to understand the larger historical scene in terms of its meaning for the inner life and external career of a variety of individuals" (Mills 1959: 7).

The impact of history on individual lives is most evident during periods of rapid social change. Adjacent birth cohorts may experience very different historical contexts during their formative years, which lead to a generational divergence in values, beliefs, and life chances (Mannheim 1928/1952). For example, during the latter half of the twentieth century, women's social roles changed dramatically, as educational and occupational opportunities expanded in the wake of the Women's Movement. White middle-class women who were stay-at-home mothers in the 1950s witnessed their Baby Boom and Generation X cohort daughters grow up to have successful professional careers that historically were considered men's domain. Although mothers and daughters share many similarities, including genetic background, ethnicity, religion , and (often) social class, historical changes created a seismic divide in the life choices made by these two generations of women (Carr 2004a). Theoretical writings underscore the importance and complexity of generations for understanding the life course. Alwin and McCammon (

2007) clarify that “generation” encompasses three related yet distinct concepts: (1) position in family lineages (e.g., mothers and daughters); (2) birth cohort (e.g., Greatest Generation versus Baby Boom cohort); and (3) an indicator of historical participation (e.g., exposure to flourishing versus restricted opportunities for women).

The impact of history on life course trajectories varies based on one’s age when a major historical trend unfolds. Young people who were in elementary school when the internet explosion occurred can’t remember life before e-mail, and prefer to maintain social ties with terse text messages. Older adults, by contrast, prefer the more personal connection conveyed with a telephone call or face-to-face visit (Smith 2011; Teo et al. 2015). The effects of specific historical events also vary based on one’s age when the event occurred. Elder (1974) showed that World War II affected soldiers differently, based on their age during the war years. Young enlistees had no family or work responsibilities when they shipped off to Japan or Europe, whereas older soldiers were leaving behind jobs and marriages when they headed overseas. While the young soldiers returned home to new opportunities in work, family, and education (due in part to the educational benefits provided by the G.I. Bill), the older soldiers often came home to find their marriages were strained, or their former jobs were no longer available (MacLean and Elder 2007).

Place also affects how individual lives unfold. Place can be defined as broadly as one’s nation, or as narrowly as one’s neighborhood or city block. Nation-level characteristics, such as the level of economic development can profoundly influence its citizens’ attitudes, values, gender roles, childbearing behavior, educational opportunities, health, and even personality (Inkeles and Levinson 1969). One’s local social context also matters. Neighborhood characteristics like the social cohesiveness and integration of a city block and or the level of instability, poverty, and crime in one’s neighborhood can affect residents’ educational prospects, physical and mental health , occupational opportunities, and life span (Sampson et al. 2002). Social networks are tightly tied to place as well; both classic (Cantor 1975) and contemporary (Clarke et al. 2014) research shows that older adults’ mobility, health, social integration , and capacity to access instrumental and expressive support is linked to characteristics of the neighborhoods in which they live. Although geography and history are hardly destiny they do play essential roles in shaping one’ s social networks, interpersonal relations, and life trajectories .

Timing in Lives

The developmental impact of a personal transition or historical event is contingent on when it occurs in a person’s life. For example, marrying at age 17 may mean that a young person is especially likely to drop out of high school , divorce, have many children, and hold a poorly paying job that does not require a

high school diploma. By contrast, persons who marry for the first time at age 35 likely have already completed their education , perhaps earning a graduate degree, and having spent many years in the paid work force prior to marrying. Yet marrying at age 35 may mean that one will have only one or two children, given that the likelihood of conceiving a child declines steadily for women after age 35 (e.g., Bumpass 1990). Family size and generation length, in turn, can affect socioemotional aspects of intergenerational and sibling relations (Seltzer and Bianchi 2013).

These examples illustrate the importance of social timing which refers to the ways that age shapes whether, when, how, and to what end one experiences important social roles and transitions between roles (George 1993). The timing of life transitions reflects a broad range of biological, social, and political forces. For example, the age at which a woman can physically bear children is contingent upon the biological transition to menarche. Social norms also provide guidelines for the culturally appropriate time for making transitions . Life course sociologist Bernice Neugarten (Neugarten et al. 1965) observed that people are expected to comply with a "social clock ." This refers to "age norms and age expectations [that] operate as prods and brakes upon behavior, in some instances hastening behavior and in some instances delaying it" (Neugarten et al. 1965: 710).

Neugarten and colleagues conducted surveys showing that Americans generally agree that there is a "right" age to marry, start a job, and set up one's own home (Settersten and Hägestad 1996). Norms dictating the "right" age for life transitions change over historical time, however. For example, marrying at age 19 and having one's first child at 20 was normal and even desirable for women in the late 1950s. By contrast, few college students in the twenty-first century would endorse marrying at such a young age (Settersten and Hägestad 1996). "Mistimed" transitions – or transitions that occur earlier or later than one's peers may create psychological stress, personal challenges, and social disapproval. For example, Carlson (2012) found that persons who married for the first time at an age much younger or older than they desired went on to experience poorer emotional health than those marrying at the normative age .

Cultural norms informally prescribe thetiming of life course transitions , yet public policies mandate the timing of many important transitions (Leisering 2003). Although state laws vary in the U.S., the law typically dictates that children must stay in school until age 16, and cannot marry until age18 unless they obtain parental permission. Likewise, the age at which one can vote, drive, drink legally, serve in the military, retire with full Social Security benefits, or become President of the United States is dictated by federal or state law (Kohli 2007). Laws, like social norms, also change over historical time. While children labored on farms and in factories in past centuries, child labor was banned in the United States by the Fair Labor Act of 1938, and strict rules now mandate the age at which children can work for pay (Moehling 1999).

Life course scholars recognize that legal, biological, and social time tables may be out of sync with one another; these asynchronies may cause difficulties as individuals negotiate their life choices and relationships. For instance, boys and girls may be physically able to bear a child at age 13, yet they may not be emotionally prepared to enter the role of parent . Public polices encourage (and in some cases, mandate) workers to retire at age 65, although most older employees are healthy, cognitively sharp and willing to remain in the work force for another decade (Leisering 2003). Thus, the life course paradigm reveals the importance of both personal and historical time.

Importance of Agency and Constraint

Individuals construct their own life course through their choices and actions, within the opportunities and constraints of historical and social circumstances. Sociological perspectives on the life course emphasize that life chances are a function of both personal agency and structural constraint. Individuals select social roles and opportunities that are consistent with their own personal preferences, traits, resources, and even genetic predispositions (e.g., Landecker and Panofsky 2013; Scarr and McCartney 1983) – yet freedom of choice is not distributed evenly throughout the population. Persons with fewer economic resources have fewer opportunities to seek out and pursue desirable options, while characteristics such as age , race , gender, physical ability status, sexual orientation and religion may create obstacles for some individuals – at least at certain points in history.

John Clausen's (1993) classic book *American Lives* provides a compelling example of the ways that agency and structure influence life course trajectories . Clausen tracked a cohort of men and women who were born in the early twentieth century, and followed them for more than 60 years. A cluster of traits he labeled "planful competence" increased one's chances of successful careers, stable marriages, rewarding interpersonal relationships, and good health more than five decades after the adolescents had graduated from high school . Planful competence encompasses self-confidence, intellectual investment, and dependability. These attributes, in turn, are associated with superior academic performance in school, well-developed plans for post-secondary schooling, and focus when selecting one's career. Planful competence encompasses one's own ambition, aspirations for the future, and conscientiousness in pursuing one's goals. Yet these traits are shaped by structural constraints. Children from more advantaged social and economic backgrounds were more likely than their less well-off peers to enjoy high levels of competence (Clausen 1993). In sum, human lives are shaped by the complex interplay between individual-level preferences, traits and aptitudes and macrolevel economic, political, and social structures (Elder 1994).

Linked Lives

The life course theme of linked lives is most germane to and unifies the chapters in this edited volume. This integrative theme proposes that lives are experienced interdependently in the context of social networks , and social and historical influences are expressed through this network of shared relationships. The linked lives principle specifies the ways that one's life is embedded in a large network of social relationships – with parents, children, siblings, friends, coworkers, in-laws, romantic partners, and others. The notion that social relationships matter dates back to Émile Durkheim's (1951: 1897) classic writings on social integration in *Suicide*. Durkheim found that persons with tight-knit social networks had lower rates of suicide than those with weaker social ties. Married persons had lower suicide rates than the unmarried, Catholics fared better than Protestants, and parents revealed lower suicide rates than childless persons. Since the publication of Durkheim's work, social scientists have continued to explore why and how social relationships affect the life course.

The concept of linked lives also refers to the ways that generations are linked to one another (Alwin 2012). A focal area of life course research is intergenerational transmission; parents pass on their values, attitudes, and socioeconomic and intellectual resources to their offspring (Furstenberg et al. 1987; Sewell and Hauser 1975). Although classic studies of socialization revealed how children became like their parents, researchers also have focused on identifying why and how children turn out differently from their parents – highlighting many other social relationships and social contexts that a child experiences (Glass et al. 1986). For example, James Coleman's (1961) *Adolescent Society* shows how high schools students socialize their peers to hold values that are in opposition to the values held by their parents, while the Bennington College study (Alwin et al. 1991) traced the process through which young women, largely from politically conservative families, became more politically liberal after studying at Bennington. These attitudinal shifts were most pronounced among women who established close social ties to older students and faculty members who strongly endorsed liberal ideals.

Life course sociologists also recognize that life domains are linked. Even within a single individual, work and family choices affect one another; working full-time may preclude one from being a stay-at-home parent, or intensive parenting demands may prevent one from working as many hours as one would like (Bianchi and Milkie 2010). Likewise, economic standing and physical health are mutually influential; poverty exposes people to health risks such as poor nutrition and limited access to care, yet poor health compromises one's ability to work full-time (Goldman 1994). Moreover, life course influences can occur both cross-person and cross-domain. A spouse's work strain may affect one's own psychological health (Hammer et al. 1997), while a parent's job loss may affect a child's health and educational attainment (Levine 2011).

The emerging subfield of life course epidemiology provides a powerful example of cross-generation, cross-domain linkages. In general, this work delineates how social and economic characteristics of one's parents may have long-term influences on an offspring's physical and emotional health (Wadsworth and Kuh 2016). Longitudinal studies consistently show that socioeconomic disadvantage during childhood is associated with higher rates of functional limitation at midlife and more rapid declines in physical function at older ages (Haas 2008); heightened risk of mid- and later-life diseases including cancer (Morton et al. 2012), heart attack (O'Rand and Hamil-Luker 2005), and hypertension (Stein et al. 2010); and ultimately earlier death (Hayward and Gorman 2004).

Linked Lives over the Life Course: Methodological Advances

Sociological research on the life course is distinguished by its conceptual richness, with deep attention to continuity and change, agency and structure, macro- and micro-social intersections, biography and history, a focus on complex intersections across life domains, and recognition of the importance of dyadic, family-level, school, neighborhood , and workplace relationships for individual-level experiences. Methodologically, however, most life course research has focused on a single individual as its unit of analysis – until recently. Even in studies of social relationships and health, relationships traditionally were assessed by asking only one person – such as one spouse, one parent, or one child – to appraise the levels of love, support, strain, influence, instrumental and expressive support, and financial resources exchanged. As Carr and Springer (2010: 755) observed, "one of the most ironic limitations of studies on 'families' and health is that most studies focus on one individual within the larger family network. This limitation is due, in part, to traditional models of data collection where one person answers survey questions on his or her own union, parental status, relationship quality , and own health as well as the health of one's spouse or a randomly selected child." As elaborated below, this single-reporter approach offers an incomplete and potentially misleading portrayal of both the nature of one's relationships and the implications of these relationships for health and well-being. However, over the past two decades social science data and analytic techniques have expanded dramatically, offering tools to better explore the complexities of linked lives.

Data Resources

Multi-generation, multi-reporter data resources have flourished in recent years (Institute of Medicine 2014; National Research Council 2013, 2014). In the U.S., these new data resources or expansions to long-standing data sets span the life course, focusing primarily on *childhood and adolescence* (National Longitudinal Study of Adolescent Health [Add Health]) ; *adulthood* (Midlife Development in the United

States [MIDUS]), *later life* (Changing Lives of Older Couples [CLOC] ; Disability and Use of Time [DUST] ; Health and Retirement Study [HRS] ; National Social Life, Health and Aging Project [NSHAP]); or *extended observation periods spanning several life course stages* (Longitudinal Study of Generations [LSOG] ; National Longitudinal Studies of Youth [NLSY] ; Panel Study of Income Dynamics [PSID] ; Wisconsin Longitudinal Study [WLS]). An important exception to these longitudinal data resources is the General Social Survey [GSS] , a repeated cross-sectional survey started in 1972, which uses a name generator method to obtain egocentric network data on respondents. A brief summary of selected data resources is presented in Appendix A. This list is not intended to be inclusive, but rather highlights widely used population-based data sets for studying social networks and their influence on health over the life course, including several data sets featured in other chapters in this volume.

In general, these data resources can be grouped into four main categories: (a) husband and wife reports (e.g., CLOC, DUST, HRS, NSHAP, WLS); (b) sibling and/or twin reports (MIDUS, WLS); (c) intergenerational studies, typically with reports from parents and children, although some extend to as many as four generations (LSOG, NLSY, PSID); and (d) data sets which enable linkages between the focal respondent and social network members, such as high school classmates or friends (Add Health, WLS). These data sets typically obtain parallel interviews from two persons, such as husbands and wives, and also ask respondents to provide their own assessments of partner traits such as health and personality. Others ask study participants to name network members, enabling researchers to link an individual's response with the survey responses of his or her named friends and classmates, provided that those persons are in the study's sample.

Data from multiple reporters in one's interpersonal networks enable researchers to explore a range of innovative questions, as the empirical chapters in this edited volume reveal. Substantive advances fostered by these data resources include assessments of concordance and discrepancy in the reports made by network members as well as the implications of such (mis)matches in perceptions for health and well-being (e.g., Carr and Boerner 2009 [CLOC]); investigations of cross-over and "contagion" effects (e.g., Carr et al. 2014a, b, 2015 [DUST]; Larson and Almeida 1999); explorations of within-family differences in parent transfers to and treatment of children (e.g., Behrman and Rosenzweig 2004 [PSID]; Davey et al. 2009 [MIDUS]); similarities and differences in the consequences of early social and economic resources for sibling outcomes (e.g., Hauser et al. 1999[WLS]); the impact of social network members' attitudes and health behaviors on one's own health and well-being (e.g., Cohen-Cole and Fletcher 2008 [Add Health]; Falba and Sindelar 2008 [HRS]); and factors linked with changes in the composition and nature of one's social ties over the life course (e.g., Cornwell et al. 2014 [NSHAP]). The sections below

provide further detail on how these relational data resources, used with appropriate analytic tools, have expanded our understanding of the ways social relationships shape physical and emotional health over the life course.

Dyadic Data Analytic Techniques

One of the most important advances in the study of linked lives is the development of dyadic data analysis techniques. These methods enable researchers to use data from multiple reporters, such as husbands' and wives' reports of marital quality, to estimate how much each person's outcome is associated with both own (i.e., actor) and partner characteristics. The most widely used statistical approach is actor-partner interdependence models (APIM; Cook and Kenny 2005). These models are increasingly widely used because they enable researchers to simultaneously estimate the effect of a person's own variable (i.e., "actor effect") and the effect of the same variable provided from the partner (i.e., "partner" effect) on some outcome measure. For instance, in a study examining the impact of one partner's health on the other partner's psychological well-being, a researcher would not only want to examine whether a wife's psychological well-being is affected by her husband's physical health (i.e., partner effect) but would simultaneously explore whether the wife's own physical health affects her own psychological well-being, given well-documented correlations between husbands' and wives' health due to factors like shared social environment and (un)healthy lifestyle (Kenny, Kashy and Cook 2006).

Social Network Methods

The design, collection, and use of social networks data to understand life course processes will be elaborated in subsequent chapters. I provide a brief summary here, to show how these techniques enable researchers to rigorously examine the role of linked lives in shaping health over the life course. A social network is a collection of relationships – referred to as "edges" – connecting individuals, or aggregations of individuals (e.g., schools or workplaces) – called "nodes." Contemporary social network research has been informed by life course scholarship, with researchers using sophisticated data to show how social ties shift as one ages. For example, a recent analysis of NSHAP data traced changes in the social networks of older adults over a five-year period, and found that 80 percent added at least one person to their social circle and more than half acquired new confidantes with whom they could share their private thoughts and feelings (Cornwell and Laumann 2015). Surprisingly, a higher proportion of NSHAP participants reported a net gain (38 percent) versus a net loss (27 percent) in the size of their social networks. This longitudinal research challenges earlier cross-sectional studies showing that the mean number of ties reported by retirement age persons was lower than persons of working age, and that persons in their upper 70s had fewer ties than those in slightly younger age groups (Morgan 1988).

Methodological advances including the use of Exponential Random Graph Models (ERGMs) and Stochastic Actor-Based Models (SABMS) such as SIENA enable researchers to model dynamic aspects of networks over time, and to document links between micro-level processes and macro-level outcomes (Snijders et al. 2006; Snijders et al. 2010). Researchers can then explore how multiple aspects of these relationships affect individual-level outcomes over the life course. For example, Cornwell and Laumann (2015) found that older adults who added new confidantes to their social circles went on to show improvements in physical health, physical and cognitive functioning, and psychological well-being, whereas those whose social networks constricted experienced a slight decline in physical (but not emotional) health.

Network data on younger adults allow researchers to explore questions of peer influence in more sophisticated ways than ever before. For example, the Add Health, a study of adolescents and young adults in the United States, allowed participants to name up to five female and five male friends at the baseline interview. These data have been widely used to examine prospectively how young adults' health , health behaviors, and sexual activity are shaped by the behaviors of their friends, romantic partners, friends-of-friends, and friends-of-romantic partners. Analyses of these data also show that the strength of peer influences is conditional upon a particular peer's place in the social network – such as how popular he or she is, or how tightly-knit or diffuse the social network is. For instance, Kreager and Haynie (2011) examined 449 dating couples in the Add Health and found that one's romantic partner connected the teenager to new peer contexts that, in turn, triggered changes in drinking behavior. By using network data and APIM models, they could document the unique effects of a romantic partner's drinking, friends' drinking, and friend-of-partner's drinking on teen's own future binge drinking and drinking frequency. Surprisingly, they found that friends-of-partners' drinking had stronger effects than own friends' drinking. This study powerfully shows how methodological advances are enabling researchers to specify precisely how social network members can have complex and often surprising effects on youth as they make the transition to adulthood.

Contemporary Linked Lives Research: Have We Learned Anything New About Marriage and Health?

Research dating back to Durkheim (1951: 1897) shows that married persons enjoy better health than their unmarried counterparts. Empirical studies in the United States, Europe, and most wealthy nations consistently document protective effects of marriage on health outcomes including disability, morbidity, mortality, and self-assessed mental and physical health. By contrast, never married persons and persons

whose marriages ended either via divorce or widowhood have poorer physical and mental health than their married counterparts (see Carr et al. 2014b for review). Yet researchers have recently documented that marriage is not uniformly protective; rather, the "marriage benefit" is limited to those who enjoy supportive, high quality unions (Proulx et al. 2007). For example, mounting research suggests that unmarried persons report better mental health than married persons in unhappy or high-conflict marriages (Williams 2003).

High quality marriage is protective because it provides emotional support that enhances mental health , and instrumental support that may directly bolster physical health or buffer against the health-depleting effects of stress (Carr and Pudrovska 2015). Happily married persons also enjoy more satisfying sexual relations, which provide physical and emotional health benefits (Waite et al. 2015). High quality marriages are considered a particularly effective source of social control (Umberson 1992). Spouses who love and care for one another will encourage the adoption of healthy behaviors and the loss of unhealthy ones. Husbands and wives may encourage each other to eat nutritious meals, take their daily medications, eschew or limit their smoking and alcohol consumption, and exercise together. By contrast, persons in poor quality marriages exhibit poor eating habits, erratic sleep patterns, and higher rates of smoking, alcohol use, and nonmedical use of prescription medications (Miller et al. 2013).

Yet much of what we know about marriage and health is based on only one partner's self-reported behaviors and marital assessments, raising questions about the processes through which marital dynamics affect health (Carr and Springer 2010). Further, most studies of marriage and health fail to consider that spouses are embedded in extended social networks , such that relationships with children, friends, and other relatives may condition the associations among marriage and health. The following sections briefly highlight contemporary studies using innovative data and methods to challenge taken-for-granted assumptions about marriage and health, thus advancing our understanding of linked lives over the life course.

Marital Quality and Well-Being: His, Hers, and Ours?

An implicit assumption underlying most research on marital quality and well-being is that one partner's perception of the marriage provides an accurate snapshot of the couple's life together. However, mounting research spanning multiple data sets including the CLOC, DUST, and HRS shows that spouses' marital quality appraisals are modestly correlated ($r = 0.30$ to 0.50), even in long-married couples (Bulanda 2011; Carr and Boerner 2009; Carr et al. 2014a, b, 2016). Thus, researchers are increasingly interested in exploring whether the well-documented association between marital quality and well-being (e.g., Proulx et al. 2007; Robles et al. 2014) differs based on whether one's own or one's

partner's appraisals are considered, and whether the effects of marital quality are amplified when both spouses offer similar appraisals. These analyses are motivated by the recognition that marital quality is a fluid, dynamic, and mutually constructed component of a relationship. For example, if one partner is dissatisfied with the marriage, he or she could act negatively toward the spouse by criticizing or withdrawing affection. Conversely, happily married persons may be motivated to provide support and encouragement to their partner, thereby enhancing their partner's health and happiness. Thus, one partner's marital (dis)satisfaction may be linked to the well-being of the other, even independent of their own appraisal (Carr et al. 2014a, b).

Recent studies using dyadic data and APIM methods find strong evidence of both actor and partner effects, occasionally revealing counterintuitive results. For example, Choi et al. (2016) examined changes in marital quality and health among couples in the HRS and found that increases in positive aspects of marriage, such as feeling loved and supported by one's partner, led to declines in disability and functional limitations of the other partner. Yet very different patterns result when researchers explore linkages between marital quality and emotional, rather than physical health. In an analysis of couple-level data from the DUST, Carr et al. (2016) found that when wives report high levels of marital support, their husbands report higher levels of frustration, perhaps because the help they received undermines their feelings of autonomy or competence.

Other studies find that one spouse's marital quality appraisal may buffer or amplify the effects of the other's appraisal. Birditt et al. (2015) tracked married couples in the HRS and found that negative relationship quality predicted increases in both husband's and wife's blood pressure when *both* members of the couple reported strained relations. Carr and colleagues (2014a, b) found evidence of amplification for men only; in an analysis of dyadic data in the DUST, the effect of men's marital quality appraisals on his own life satisfaction is contingent on his wife's marital appraisals. A man who views his marriage very unfavorably may still enjoy relatively high levels of life satisfaction if his wife views the marriage favorably. A happily married woman may be highly motivated to provide care and practical support to her spouse, such that even an unhappily married man may receive practical benefits that enhance his overall well-being. Women also tend to engage partners in marital issues, whether a happily married woman praising positive aspects, or an unhappily married woman criticizing her husband. Men tend to take a more passive approach, where their feelings toward the marriage may not be conveyed to their spouse and thus may not compound their wives' marital dissatisfaction to affect her overall well-being. These complexities would not have been detected in studies using only one spouse's appraisal of the relationship.

Marriage and Health: Whose Health Behaviors Matter?

Marriage is considered protective for health because spouses, especially wives, exert social control over one another's health behaviors (Umberson 1992). An underlying assumption is that spouses encourage healthy behaviors and dissuade unhealthy ones. The "marriage as social control" perspective has been challenged and extended in recent years by dyadic studies examining the health behaviors of both spouses. In general, this work shows that a spouse with an unhealthy lifestyle may increase unhealthy behaviors in their partner, thus undermining the protective effects of marriage on health (Meyler et al. 2007).

For example, Falba and Sindelar (2008) analyzed multiwave dyadic data from the HRS and found that one spouse's changes in smoking, drinking, exercising, cholesterol screening, and obtaining a flu shot triggered comparable changes in the other partner's behaviors; these strong patterns persisted even when sociodemographic and shared environment factors were controlled. Further challenging the assumption that marriage is uniformly protective, Margolis and Wright (2016) found that being married to a smoker was more deleterious to one's well-being than not being married at all. Using multiwave data from the HRS, they found that persons married to smokers and those whose spouses had quit but then relapsed back into smoking were less likely than their unpartnered counterparts to quit smoking and adhere to smoking cessation themselves. By contrast, partners of non-smokers or quitters fared better than their unmarried counterparts with respect to their own health behaviors, revealing that individuals may be "better alone than with a smoker" (Margolis and Wright 2016).

Another nuanced study explored the extent to which health behaviors change following transitions in and out of marriage, uncovering the complex ways that marital status, gender, and a partner's health behavior shape one's own health behaviors. Analyzing multiwave data from the HRS, Reczek et al. (2016) found that spouses' drinking converges over the course of a marriage, albeit in different ways for men and women. Wives' heavy alcohol use is associated with decreases in husbands' alcohol use, whereas husbands' heavy drinking is associated with increases in wives' heavy drinking (Reczek et al. 2016). Taken together, these studies suggest that being married does not necessarily promote healthy behaviors; rather, spouses may also adopt one another's (un)healthy behaviors, underscoring the complex influence of linked lives on marriage.

Beyond the Dyad: The Role of Other Linked Lives in Marriage and Health Research

Even the most interdependent married couple maintains relationships with friends, siblings, parents, and children, and these relationships may shape both the nature of one's marriage and the ways that marriage and marital dissolution affect health and well-being.

Mounting research suggests that marriage and marital transitions are linked with other social relationships in complex ways (see Wrzus et al. 2013 for review). For example, conventional wisdom would suggest that friendships heighten the protective effects of marriage, where more support is generally better for individuals. However, one recent analysis of network data from the NSHAP suggests otherwise. Cornwell and Laumann (2011) explore how social integration beyond the marital dyad affects one particular health outcome: men's risk of erectile dysfunction (ED). Paradoxically, they find that one presumably positive aspect of the marital relationship, the couple's level of social integration, actually threatens men's sexual health. Wives who talk frequently to her husband's confidants pose a threat to the husband's sense of masculinity and consequently, his risk of ED.

Emerging research underscores the importance of social networks as both a resource and liability as one experiences marital transitions . Although transitions like widowhood and divorce historically were considered stressful events with uniformly deleterious consequences, more recent work suggests that marital transitions may trigger changes in one's other social relations, and these changes, in turn may buffer against or exacerbate the distressing consequences of marital dissolution. For instance, Kaljimn (Kalmijn 2012) analyzed 12 years of data from the Swiss Household Panel (SHP) and found that friendship ties tend to grow weaker and less important when one marries, yet those ties re-emerge as an important source of support and integration after a divorce or spousal loss, especially for women.

Non-marital social ties also moderate the effects of marital status changes on health and well-being, revealing that some ties are more protective than others. Bookwala et al. (2014) tracked marital histories of participants in the WLS, and examined whether the health-related consequences of divorce and widowhood were moderated by one's other social ties. The effect of widowhood on depressive symptoms, sick days and poor self-rated health was buffered for those who had a friend confidante , yet having a confidante in the family provided no benefit. These findings challenge the assumption that social support is uniformly protective, instead revealing that particular social ties confer benefits in particular social circumstances, whereas other ties may provide no help or even undermine one's adaptation to stress (Rook 1984).

Mounting research on marital transitions also explicitly recognizes that these transitions are embedded in and shaped by one's larger social networks . For example, studies generally show that upon the death of a spouse , older adults grow increasingly dependent on and close with their adult children (Ha et al. 2006), yet recent studies have found that these patterns are conditional upon the quality of the

late marriage. Analyzing multiwave data from the CLOC, Carr and Boerner (2013a, b) found that bereaved spouses who had enjoyed high levels of marital warmth went on to receive higher levels of support from children post-loss, whereas those with strained marriages subsequently received less emotional support from and were less dependent on their children; these effects persisted net of the bereaved person's personality and depressive symptoms.

Similarly, a bereaved spouse's pursuit of new romantic relationships is powerfully shaped by their larger social networks . In general, widowers are more likely than widows to both seek out and establish new romantic relationships (Carr 2004b), however these patterns vary based on one's ties with children and friends. Older widowers with high levels of social support from friends are less likely than their counterparts with weaker social ties to seek out new romantic relationships, suggesting that friendships may be a substitute for at least some of the benefits of marriage in later life (Carr 2004b). By contrast, widowers who have strained relationships with their children are more likely to seek out and pursue new romantic relationships, perhaps to meet emotional and social needs that are not fulfilled by their immediate family (Carr and Boerner 2013a, b). Taken together, contemporary research reveals that marital relationships are deeply embedded in and mutually influenced by one's larger network of familial and friendship ties. Common assumptions regarding the health-enhancing benefits of marriage (especially high-quality marriages) and the distressing effects of marital dissolution have been contested and expanded by recent studies drawing on dyadic- and family-level data over the life course.

Conclusion

This chapter has described the importance of sociological perspectives on the life course for understanding human connections and their consequences for health and well-being. Our knowledge of the complex ways that relationships shape health has been advanced in the past two decades, due in part to investments in multi-generation, multi-reporter longitudinal data sets and the development of analytic tools that enable researchers to move beyond the individual as the unit of analysis, and explore the intricate and often surprising ways that social ties within and beyond the family shape individual lives. Contemporary research reveals that two individuals in a single relationship may experience that relationship very differently, with perceptions often shaped by cohort-specific gendered dynamics and expectations (e.g., Carr et al. 2014a, b; 2016). The perceptions of both partners, however, may have multiplicative effects on the health and well-being of one or more partner, where the harmful effects of strain are amplified when both partners offer negative appraisals of the relationship (e.g., Birditt et al. 2015) or buffered when only one rates the relationship as problematic. Experiences within a marital dyad also are intricately linked to one's other social ties, with children, friends and other relatives. As such,

transitions out of marriage – historically considered a uniformly distressing event – may be less difficult for those with high levels of support (Bookwala et al. 2014), whereas transitions into new romantic relationships are more or less desirable depending on the level of support or strain experienced in one's other social ties (Carr 2004b; Carr and Boerner 2013a, b).

Despite these advances and challenges to what we know about relationships and health, the study of linked lives and their implications for health and well-being is still in its nascent stages. Future generations of researchers face the challenge of adopting a broader and more expansive view of what constitutes meaningful social ties. Emerging family structures and processes over the past five decades include: non-marital cohabitation; non-coresidential romantic partnerships (i.e., living apart together [LATs]); same-sex marital and non-marital unions; higher order marriages; presence of step-parents, step-children and step-siblings in families; enduring social and economic ties with former spouses and partners; and "skip-generation" families (i.e., grandparent -grandchild households where middle generation is absent). Each of these social ties, in turn, is embedded in their own networks of neighbors, coworkers, friendships, social networking site (SNS) ties, and so on. As such, researchers will need to cast a wider net in conceptualizing and measuring social relationships, and in theorizing the ways that these diverse relationships – permanent versus fleeting, "real" versus virtual, coresidential versus physically distant, collegial versus conflicted, legally recognized versus socially recognized – will shape social, emotional, physical and economic well-being over the life course.

Appendix A: Selected Resources for Investigating Link Lives over the Life Course: Dyadic, Multigenerational, and Network Data Sets

Table

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