Incitations for Interdisciplinarity in Life-Course Research

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Housing the Harvest

Having gone through this volume, a critical reader might come to the conclusion that interdisciplinarity can be found more easily between the contributions than within them (even though several of them address it directly, e.g., Settersten; Mortimer et al.).[1] However, the contributors share the common belief that studying humans' unfolding lives in a web of complicated interactions within their changing contexts requires the adoption of an interdisciplinary research paradigm. To be sure, the life-span / life-course research traditions stemming from disciplines such as sociology, psychology, social psychology and demography certainly have allowed scholars to answer some key questions germane to this field (Baltes, Lindenberger, & Staudinger, in press; Elder, 1998). The empirical evidence accumulated over the years contributed heavily to the validity of the enterprise represented by life-course research (Baltes, Reese, & Nesselroade, 1977). The development towards interdisciplinarity needs, however, not only solid disciplinary foundations and the shared wish to cooperate, but also hard and time-consuming work in interdisciplinary groups to progress concretely in this direction, possibly along the three lines sketched out in our introduction: constructing theoretical bridges between disciplinary approaches, building on common concepts that help describe and analyze life courses, and working on transversal substantive themes.

In this final chapter, the editors take up the four thematic groups of contributions, Agency and structure, Transitions, Biographical re-construction, and Methodological innovations, in order

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[1] Throughout this final chapter, all references to contributing authors concern their contributions to this volume.

to scan them for elements that seem instrumental for further building up interdisciplinarity in life-course research.

Individual agency within social structure, and structural agency

Defining agency as the capacity to act intentionally, planfully and reflexively in a temporal and biographical mode (Marshall, Settersten) points to the fact that the enactment of agency is, among other things, a cognitive and emotional process, informed by the social environment, and unfolding through time.[2] Following Marshall's argument, agency should be distinguished from various related concepts, such as useful resources for action, social action itself, intentions that motivate behavior, the social and physical structuring of choices, and unexplained variance.

Structure, on the other hand, is usually defined as the set of social constraints and opportunities within which individual agency plays out. Contributions to this volume show that structures and agency form a system of interrelated elements rather than a chain of distinct factors with a clear causal ordering, for instance from the macrosocial down to psychobiological levels, or inversely, from cognitive skills upward to social structures. We conclude from these contributions that social structures have agency of their own, that agency has structures of its own, and that both should be jointly looked at when studying life course issues.

To start with the first of these two combinations: social structures, in some sense, have agency, too. States, as well as firms and other institutions whose functioning has direct implications for individual life courses, are shaped by human beings, be they simple members, clients, or insti-

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[2] Let us recall Marshall's distinction between the principle of agency as an ingredient of human nature and the practical competence and possibility to act as a variable characteristic. Freire's (1972) concept of conscientization can be cited as aiming at empowering oppressed individuals in order to give them the practical capacity to actualize this latent part of their being humans.

tutional decision-makers, with purposes, goals, or agency. The latter, institutional entrepreneurs in the sense of Eisenstadt (1968), put up programs to instantiate their views about the life course of their citizens, patients or employees. The agency of institutional entrepreneurs is transformed into structures that both bound and orient the agency of other actors. A promising line of inquiry in life-course research concerns the way in which various institutional actors participate in the structuring of the life course in democratic societies. European sociology, especially in Germany (for instance, Mayer & Müller, 1986, Mayer & Schoepflin, 1989) has much emphasized the importance of the modern State (with all its agencies, including the education system and the law) and the development of the market economy in this regard, leading to trends of standardization, individualization and sexual typification of individual trajectories (Kohli, 1985, 1986; Krüger & Levy, 2001). Social historians show that these changes responded in many cases to instrumental thinking and action of political leaders, such as Bismarck in Germany, Lord Beveridge in the United Kingdom, or Roosevelt with the New Deal (Elder, 1974). Structural changes therefore are often lead by institutional agency, a fairly complex and constrained process that does not only depend, in democratic societies, on a few institutional entrepreneurs but also on various political forces, including social movements - that can themselves be analyzed in a life course perspective. Following Berger and Luckmann's line of thought (1966), institutional agency may then be objectivated, i.e., become a constraining social fact, which may later be interiorized by individuals who incorporate it when making life course plans.

On the other hand, agency has structures of its own, both psychological and social. Narratives usually have a temporal, causal and thematic coherence. Goals and motives are correlated with psychological traits (McAdams). Life insight of individuals, that is, how to act for one's own good and the good of others, is deeply intertwined with personality and cognition abilities. Agency as a cognitive process is therefore strongly shaped by psychological characteristics, such as resources of various kinds, as studies of the effects of personality on memories show

(Perrig-Chiello & Perrig). This capacity to act or react, which developmental psychologists sometimes refer to as resilience or coping whereas sociologists may rather speak of planful competence (as Settersten reminds us), displays various complementary strategies, such as the selection-optimization-compensation or SOC strategies found in relation with the aging process (Baltes & Baltes, 1990).

Agency seen as a cognitive process matters a lot for social behavior and social structures throughout the life course. For instance, as Mortimer et al. show, adolescent goals are transformed into part-time work habits which later unfold in distinct ways of entering the job market. Work on the effect of early childbearing provides similar results. Contrary to social deterministic approaches, like the statement that "The girl who has an illegitimate child at the age of 16 suddenly has 90 percent of her life's script written for her" (Campbell, 1968), Furstenberg points to the fact that non-normative events produce diverse consequences over the life course depending on mental health, cognitive skills, motivation and flexibility of individuals. Settersten provides examples from various phases of the life course (childhood and adolescence, early adulthood, old age, etc.) in which social constraints are dealt with in creative ways by individuals. Thus agency, as a cognitive process, makes a difference for individual lives.

Agency, however, is not only constrained or enhanced by psychological and macrosocial factors, but also by microsocial factors unfolding through individual time. Rather than considering agency as a black box, not to be opened in empirical analyses, some sociologists propose to see it as path-dependent in a specific sense: narratives, goals, motivations and cognitive abilities are shaped to a large extent by the actual trajectories themselves (Abbott, 1992). In this regard, the long-time experience of social psychologists in dealing with identity formation in social contexts is particularly useful.

In a second perspective (Emler), narratives, life wisdom and goals are not constructed by isolated actors: they emerge in connection with narratives, life wisdom and goals of significant

others, in social networks in which various agencies shape each other. Agency is not only an individual phenomenon but also a collective one (Settersten): Studying co-agency between connected people (especially in gendered relationships) is addressing the central issue of linked lives (Elder, 1996) in a novel and interdisciplinary way.

More generally, a fruitful option for dealing with the agency-structure debate suggested by this volume is to consider both of them as variables in interaction rather than as main effects to be statistically controlled for. The concept of ambivalence (Lüscher) is especially helpful in this respect. Lüscher suggests four basic ways of experiencing and dealing with intergenerational ambivalence within family relationships, with specific couplings of agency (the subjective dimension of the model) and structure (its institutional dimension): solidarity, emancipation, captivation and atomization. At one end of the spectrum, solidarity is defined as a situation in which family members feel subjectively committed to the maintenance of institutionalized patterns of help and relationships, while, at the other end of the spectrum, atomization corresponds to cases in which family cohesiveness is neither subjectively nor institutionally assured. According to Lüscher, we may expect the various types of interaction between agency and structure to be useful for the understanding of turning points in the life course, such as the transition to parenthood, which are associated with both new constraints and new roles. Specific life stages, such as old age with its increasing tension between autonomy and dependency, may be especially conducive to ambivalence. This may be particularly true if we agree with Settersten's statement that the life course has become at a time more standardized and more destandardized in recent decades, a situation that may lead to increased ambivalence throughout the life course.

Because of the emerging acknowledgement of the intricacy of the relationship between agency and social structure as variables, there is a growing need for interdisciplinary approaches that may help to capture the interplay between agency as a cognitive process with its own set of psychological and microsocial constraints, and social structures, which are partly the result of

institutional agency. This implies a stronger partnership between life-span psychology, social psychology, social demography and life course sociology. As suggested by several contributions, sociologists and social demographers often overlook the role of personality traits and identity narratives when explaining individual trajectories, while psychologists, developmental or social, often disregard contextual factors, in particular those stemming from the historical context in which individuals are embedded. The contributions to this volume suggest some ways in which sociologists may unfold the richness and intricacies of the "homo psychologicus" and include its elements in their explanatory models of the life course. Likewise, it suggests how life-span psychologists may include more sophisticated and refined conceptualizations and measures of the social contexts in their research.

Transitions as social and psychological « analyzers »

Life courses go through and are marked by transitions. Transitions and the stages between them define each other mutually, not only in the formal sense of stages being bounded by transitions and transitions being inserted between stages, but also in a more substantive sense: most transitions are being prepared, anticipated, and influenced in many ways during the phases preceding them, and influence in turn the phases that follow. Transitions may be « normative » in psychological language or, as sociologists would prefer to say, modal or statistically predominant, they may also be socially considered to be desirable, possibly indispensable, or they may be non-normative or even deviant with respect to social norms, as in the case of the teenage mothers and divorced women discussed by Furstenberg. Some transitions belong to the « normal » course of peoples' lives and contribute to their regular « progress », while others may throw a life off its rails and become turning points, biographical accidents provoking life-course bifurcations. Some transitions are relatively smooth, making little « unrest » for the persons directly or indirectly concerned, others, even if « normative » in the above sense, may have considera-

ble and partly non-anticipated consequences (such as the transition from a cohabiting couple to a family with a first child; Widmer, Levy, Pollien, Hammer, & Gauthier, 2003b; Widmer, Kellerhals, & Levy, 2005; Moen & Han, 2001).

Even if it is somewhat reductionist, life-course transitions may be seen as moments of important change, in contrast to the periods between them that are rather marked by stability, especially if we think of social-psychological and psychological correlates. These should not be underestimated because, as we know, individuals are not only socialized actors with « internal » cultural competencies, they are also field- or context dependent in many respects (identity, self-esteem, etc.), even if these dependencies may themselves vary within (see for example Kernis & Goldman, 2003; Nesselroade, 1991) and between individuals, and also across life phases. For this reason, transitions are likely to be in many respects more critical for the person than stable periods.[3] As a person's situation changes, he or she finds him- or herself in new conditions that are different from the preceding ones not only in terms of being more or less advantageous, more or less restrictive for spontaneous initiatives, etc., but also in terms of their quality or nature. In a sociological perspective, this is reason enough to postulate a series of consequences that are not only of a sociological order but concern the levels of social-psychological and psychological analysis. The following four paragraphs are an attempt at formulating interdisciplinary hypotheses along this line.

A first highly probable corollary concerns *identity*, for oneself as well as for others, as several contributors remind us (especially Marshall and Emler): after a transition, a person will typically assume other roles, respond to other expectancies, have other rights and duties, and interact with other people on other terms than before. According to the number and importance of the

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[3] « Critical » does not necessarily mean threatening and even less unexpected – the following considerations are not limited to « non-normative » transitions or events. What is implied here is simply the idea that compared to the more or less stable periods between transitions, the latter tend to entail to a larger extent processes of change and adaptation on various levels. It goes without saying that this postulate is not meant to exclude the possibility of important processes and consequences attributable to what goes on during the phases between transitions.

role shifts implied in a transition, this change will be more unsettling or even dramatic, or less. It will affect the person's self-image, the representations others have of him or her, and also her or his actively performed self-presentation to others. Identity may appear as less settled during a transition and more put into question, open to various directions and influences, also to voluntaristic self-influence.

Second, taking up one of Kohli's (1985, 1986) theses, we may ask ourselves whether on the individual level transitions are also moments of heightened *« biographization »*, i.e., moments in which the transiting life-passengers have an increased sense of their being themselves the constructors of their life. It is, of course, also easy to figure out the contrary: transitions that rather restrict opportunities of action are more apt at eliciting sentiments of being passively channeled rather than actively piloting one's life. This means at any rate that the question of agency will be of particular relevance in transitions, as particularly well highlighted by Furstenberg's comments on the variability of the outcomes he finds for non-normative transitions, but also by the analyses of Mortimer et al. Do we know enough about variations of persons' control beliefs across major and minor biographical transitions, and about their consequences?

A third, more general hypothetical corollary can be seen as an extension of the first one: it is more than plausible that throughout the lifespan, life-long *socialization* is not continuous but rather rhythmical, being boosted by life-course transitions and slowing down during the phases in-between, because in transitions familiar contexts of reference loose relevance and are replaced by new, less well-known ones. One may extend this argument to integrate the apparently contradicting ideas about when major phases of socialization take place in a lifetime: birth and the very first years of life represent the first biographical transition of a human being, the person's first entry into a social field,[4] and this field's active and passive exploration while being

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[4] We use this term in a rather general sense, much as it was already used by Lewin (1951) in his field theory approach where he defined a field as the totality of simultaneous and interdependent features that form a situation ; however, we would insist more than he did on the systemic character of social fields (see also Bourdieu, 1984).

in a particularly fragile – and therefore subjectively highly significant, affectively « mobilizing » – situation. Consequently, the socialization taking place in these circumstances is bound to be particularly impressive and rich in consequences. In comparison, later spells of socialization, e.g., in adolescence, concern an already (at least partly) structured, i.e., socialized person and need considerable social and psychological weight to supersede or basically relativize the elements already acquired in prior socialization processes; moreover, it concerns an individual that is already "biographically constructed" and becomes, at least potentially, an active and critical participant in her/his own socialization. We may see these elements as a background to some of Furstenberg's arguments, based on the idea that earlier socialization may be part of selection processes (e.g., problematic socialization outcomes increase peoples' chances of ending up in out-of-schedule situations) that create some of the unobserved variation in results about negative consequences of non-normative transitions, leading to simplistic or at least hasty conclusions about the negative consequences of such non-normative transitions in women's or children's life courses.

A fourth corollary of transitions is related to the *management of the change* they imply. Transitions will be envisaged by the concerned persons with more apprehension than the stable periods between them, possibly also with more ambivalence (Lüscher) because they represent – to varying degrees, of course – potential risks in a person's biography. The ways actors themselves and their social environment handle these risks and the subjective insecurity they entail is an obviously important theme for life-course research; this theme can be conceptualized in terms of individual and collective adaptation or *coping*. There may be a vast array of forms and resources for coping related to diverse transitions, some of them specialized, some of them of a general nature: rituals, other forms of dramatization (including private ones), emergence of professionalized transition specialists (gate-keepers as well as transition helpers), problem-solving literature for both professionals and lay persons, repair institutions (such as hospitals,

rehabilitation clinics, training institutions for vocational reorientation, etc.), but also general resources and styles of coping that are not situation-specific.

All these arguments point to the fact that life-course transitions are not so much instantaneous moments of switching from one situation to another - Bird & Krüger warn us against a « guillotine-like perception of transitions » - but rather processes that may be of considerable duration and complexity. Transitions, if they are not triggered by unexpected events, are mostly prepared for and subject to anticipation. They may be composed of several differentiated changes, and can imprint their reality on the person's everyday life progressively. All of this does not happen in a tick, but takes biographical time. This reason is enough in itself to justify Elder's (1998) insistence on the necessity to consider each transition as a series of mini-transitions or decisional moments; Levinson's (1990) concept of transitional periods may often be more appropriate than the simple term of transition; the same holds a fortiori for the term of event.

Another important aspect is the way in which transitions are embedded in the whole trajectory of a person: what are the factors that trigger and modulate a transition to begin with, and what consequences do transitions and their outcomes have for the subsequent trajectories? How can we theorize the oft-cited cumulativity of life-course developments? Let us mention just one example. According to research in several - especially European - countries, the transition from the situation of a cohabiting couple without children (pre-child phase) to the one of a family with a pre-school child is quite systematically accompanied by a switch of the couple to a more traditionally gendered task organization, relatively egalitarian convictions of the partners notwithstanding (Li & Currie, 1992; Born, Krüger, & Lorenz-Meyer, 1996; Kalicki, Fthenakis, Peitz, & Engfer, 1998; Kalicki, Fthenakis, & Peitz, 1999; Widmer, Kellerhals, & Levy, 2003a; Widmer, Levy, Pollien, Hammer, & Gauthier, 2003b). This « retraditionalization » of the families' internal structure seems to be quite resilient in later family phases and is not strongly influenced by the female partner's degree of resuming paid work. It may well be that it is precise-

ly in analyzing closely how transitions are initiated and produced, and how they produce in turn their consequences, that we will be able to better understand how the agency-in-structure vision advocated by Settersten can be more finely modeled theoretically.

Several contributions rightly underline the variability and complexity of life courses and specific transitions (especially Furstenberg and Mortimer et al.) and of diverse factors to be uncovered behind this variability (Mortimer et al., Marshall). Bird and Krüger remind us with a powerful argumentation that matters are more complex than a merely sequential conceptualization might suggest, because the complexity of transitions is not restricted to this « linear » aspect. This is what they call "inline" transitions, which have to be completed by adding to the overall picture also "competing" and "coupled" transitions. They warn us usefully against several kinds of substantively inadequate complexity reductions that lie in wait for researchers. We have not only to take into account the fact that most transitions are not just events and that all three types of transitions may occur together, but we should also resist the simplifying « offers » suggested by some easy-going technical terms, such as formal status definitions that may not fully coincide with the practical reality of persons' lives (see their examples of being married while living alone), or technical terms like event history analysis.

An aspect that has long been at the core of life-course analysis is what has been generally called « the timing of events », including the precise timing of important events and transitions as well as the duration of the phases between them, and often also the normative schedules concerning them (age norms). Furstenberg shows convincingly that we should be much more circumspect about the social and psychological meaning of transitions being out-of-time or out-of-order. The fact that a life course does not replicate the « normative » pattern, when such a pattern exists, is ostensibly not enough in itself to diagnose a problem for the future of the non-respectful life-course passengers. Furstenberg considers a series of additional conditions that are likely to play a crucial role for such a situation to be socially and subjectively problematic -

or on the contrary enhancing, by way of mobilizing latent potentials and resources. This is certainly a research area in need of further conceptual refinement as well as interdisciplinary treatment, and touching directly on agency, for that matter.

What about transitions in a psychological or social-psychological perspective? Stage models, which would seem to be prima vista candidates for psychological equivalents of social transitions, however prominent they have been in the developmental psychologies of authors like Piaget, Kohlberg, or Erikson, are not supported by research on cognitive functioning. The topic may be more promising with respect to identity changes, in line with our above hypotheses. The weak or nonexistent empirical basis of psychological stage models is also one of the main reason for the absence of stages in Baltes' SOC model of life-span development (see next section). This situation on the side of life-span psychology contrasts strangely with many life-course sociologists' stressing the timing of life events. The idea of more or less abrupt endogenous changes is put into question in a significant part of life-span psychology in favor of a gradual view of age-related changes. In some respects similarly, life-course sociology shows a strong commitment to considering age as the basic dimension for the study of life-long development, even if it seems to have some difficulties to conceptualize its meaning (Settersten & Mayer, 1997); however, more than psychology, sociological approaches insist strongly on events or transitions. Can these views be brought together? Maybe a renewed attention to transitions and their varying (and not necessarily close) relationship with age is in order from both the psychological and the sociological side, developing a stand that is less « naturally » and immediately oriented towards age (without neglecting it) and theoretically more outspoken about what can provoke change. We shall push forward on this tread in the section about interdisciplinarity.

Personality, biographical reconstructions and the life course: towards a systemic and dynamic approach

Personality and identity across the life course: As already mentioned, the relationship between agency and structure is a central theme of the sociological approach to the life course. However, as often underlined by sociologists, psychologists tend to neglect the importance of the structural components of the life course. The inverse is also true; psychologists often consider the theories of sociologists, which usually insist on the motivation and goal orientation of the individual across the life course, as oversimplifications with respect to their disciplinary knowledge. Recent advances in the psychological and psychosocial study of the individual across the life span are illustrated by several chapters of this volume and have important implications for the development of a truly interdisciplinary approach to the life course. Putting into perspective different aspects of such developments in personality and identity theory will enable us to better articulate the different contributions of this volume.

Personality as a framework for studying individuals across time: In the framework of personality theory, there is some consensus about the important dimensions of personality that must be distinguished and related with each other. However, there are also fundamental debates, especially around two questions that have to be tackled seriously by life-course theorists. The first concerns the interplay of biology and personality and the second the question of the degree to which personality interacts with the social environment and with trajectories in different life domains.

Since the seminal work of Allport (1937), personality psychology has been broadly defined as the scientific study of the individual person, and personality development across the life span has been a central theme. Theories of personality development across the life span have been proposed on the basis of the psychodynamic tradition (Sigmund Freud and Carl Gustav Jung for example) and developed in an offspring known as life-cycle psychology (Erikson, 1963,

1968; Havighurst, 1972; Levinson, 1978, 1996; Neugarten, 1977). However, these theoretical frameworks have been repeatedly criticized for lacking empirical support to their theoretical claims.

More recently alternative systemic models (Hooker & McAdams, 2003; McAdams, 1996; McCrae & Costa, 2003; Mischel & Shoda, 1998) have emerged and offer a synthesis of empirical results and theoretical developments. The model of McCrae and Costa (2003) is known as the *Five-Factor Theory (FFT)*. This model makes the assumption that our personality is founded on *basic tendencies*, which are composed mainly by the Big Five dimensions of personality (traits of neuroticism, extraversion, openness, agreeableness, and conscientiousness), but also by sexual orientations, some cognitive abilities, and artistic talents. These basic traits appear to be fairly stable across the life course, influenced mainly by biological factors (some changes appear but are described as predictably linked to age; see Srivatava, John, Gosling, & Potter, 2003), and to influence the other two components of personality across the life course, namely the *characteristic adaptations* - personal strivings, attitudes, worldviews, strategies or processes of coping and adaptation (Baltes & Baltes, 1990; Brandtstäter, Krampen, & Heil, 1993; Heckhausen, 1999) - and the *self-concept system* (self-schemas, identity, personal myths, life narratives). Contrary to the basic tendencies, these two elements are based on learning and are subject to external influences like cultural norms and life events. Finally, we find the objective biography which represents the main observable outcome of basic personality tendencies and characteristic adaptations.

McAdams (1996 and this volume) proposes a comprehensive model of the person distinguishing three levels (traits, personal action constructs or characteristic adaptations, and the life story) that has been further elaborated in a more recent version by Hooker (2002) and Hooker & McAdams (2003). These authors' new model, named the Six-Foci Model of personality (*SFM*), is based on three structural components and three process-related components (processes pro-

ducing corresponding structure components). The three structural components correspond to the three levels of personality already described by McAdams (1996). The corresponding processes are respectively states (emotions, moods, hunger, fatigue, anxiousness), self-regulatory processes (especially primary and secondary control; see Schulz & Heckhausen, 1996), and processes of self-narrating (remembering, reminiscence and storytelling). This new systemic model of personality, in complement with the *FFT* model, allows for a heuristic description of the aging person and focuses researchers' attention on the self and its relations to contents (mainly present-oriented), goals (mainly future-oriented) and reconstructions of biography (mainly past-oriented).

Personality, identity and the social environment: Some of the main issues tackled in this volume concern, on the one hand, relationships between different areas of personality and identity, and on the other hand, how dynamics in personality and identity are related to dynamics in the social environment. The relations between the different components of the personality and identity systems are very complex; *FFT* and *SFM* models have different views in this respect. *FFT* postulates a causal chain of influence starting from biology and traits, mediated by the experiences and learning of the individual across the life span, which finally results in its biographical trajectory. Clearly, here, differences in traits between individuals are thought to influence the other dimensions of personality (identity and characteristic adaptations). Perrig-Chiello & Perrig exemplify this kind of model; they argue that the relationships between well-being and autobiographical recollection or episodic memory are indeed influenced by personality traits like extraversion, conscientiousness and neuroticism, as predicted by *FFT*. However, as in other studies, the direction and strength of this influence of traits, as well as its variability across domains of the personality structure, remains an open question (Mischel, 2004). Moreover, in order to evaluate more precisely the relationships between life trajectories and personality or identity structures and process, two additional issues need to be developed in future research. The first is the necessity to combine different methodological strategies for life-course

research (nomothetic-idiographic; qualitative-quantitative, individual versus aggregated hierarchical data, etc.), with special attention to longitudinal designs. The second is the need to articulate different levels of analysis in order to better understand the relationships between the "objective" and "subjective" biography and between the individual, relational and collective levels. In Perrig-Chiello and Perrig, for example, transitions and life events are recorded on the basis of memory, and the social context is simplified to a small number of general variables (mostly gender and education). Sociologists and social demographers would wish to include more detailed information on the social position of individuals and on the intitutionally monitored life transitions. Life trajectories cannot be assessed only with individuals' memory-based recollection as autobiographical memory, even in such areas as job history or parents' occupations (see Scott & Alwin, 1998), because they are subject to memory biases and to well-known processes of reconstruction that Perrig-Chiello and Perrig interestingly also develop in their chapter.

The chapter by Emler shows that the relationships between identity changes and life transitions are indeed complex and should be modeled more explicitly. On the basis of social-psychological research, he shows that identity development does not correspond to a general pattern of qualitatively different hierarchical stages across the life span as postulated in the Piagetian and in particular in the life-cycle tradition. His results indicate that self-categorization processes are related to the social environment in which they take place. Consequently, the content and processes related to the self are primarily associated with time and location, two central dimensions of the life-course approach (Settersten, 1999). Emler shows also that social identity is related to social relationships and locations, and that changes in social identity (related to life transitions or turning points) are often followed or anticipated by geographical moves leading to changes in the social participation of individuals.

This systemic relationship between social identity (defined and constructed through interaction with relevant others in different settings and types of relationships), and personality on the one

hand and the social and cultural context on the other is also at the heart of McAdams and colleagues' work, as illustrated in their research about generativity in midlife. Generativity is a central theme of identity, which is in turn related to a wide range of engagements within society. It is in direct interaction with the social environment, in which individuals continuously reformulate their identity stories. The life-stories orientation reminds us of an essential element in the way individuals and life stories are related: meanings must not be ignored when considering how the individuals interact with their social environment. It is through meanings that individuals are related to their social networks, to their engagements in different life spheres and to their life trajectories (past, present and future). It is also through shared meanings or social representations that individuals are related to ideologies and their socio-cultural context (see for example the observations of Marshall on how different institutions may create different stories and ideologies about death and dying; see also Chryssochoou, 2003). As such, the two socialized components of personality (characteristic adaptations and identity) are in constant interaction with the social environment and biography. If individuals are indeed active in the construction of the meaning they attribute to their life, one conclusion of the chapters discussed here is that the social context participates directly in the definition of the personality development of individuals by way of communication processes (socialization, social influence, conformity) and through the effects of non-normative events that induce specific social-psychological processes of adaptation and coping (e.g., in the sphere of health, Taylor & Brown, 1988; Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000). In this regard, social psychologists in some way depict a more complex individual life course than the motivated actor often seemingly referred to by sociologists.

To sum up, personality and social psychologists have developed models like *FFT* and *SFM* that share the idea that three components should be considered in any global comprehension of personal development. These include, at the structural level, personality traits (relatively stable and structured early in the life course), psychosocial regulations (goals, secondary control, coping

processes, etc.), and identity (life story, self-categorization processes, etc.). The relationships among these three components (and their associated processes), and especially their relationships with the social structure and the structure of the life course, are still in question. However, personality psychology and social psychology have now developed a comprehensive model that should be useful for the interdisciplinary life-course perspective.

Methodological and data-analytical approaches

Collection of life-course data: Following Scott and Alwin (1998), we may distinguish two important issues regarding the question of life-history data. The first is about what should be measured, i.e., what kind of data to collect, while the second is about how to do these measurements; it refers to data design.

Concerning the first, Scott and Alwin distinguish between three kinds of measures in life-course research: events, experiences, and meanings. The term of *event* refers to the collection of event data in different life domains (e.g., family, professional career) with the aim to analyze chronologies, sequences or interactions between life events. This corresponds to the definition of a life history given by Elder (1992): "a lifetime chronology of events and activities that typically and variably combine data records on education, work-life, family and residence" (p. 1122). Events are typically investigated by demographers (Billari; Oris and Ritschard), to some extent also by sociologists. The second approach measures cumulated *experiences* during an individual's past in order to analyze his/her present situation or his/her expectations about the future. For example, the work experience of an adolescent is considered as a predictor of the transition to the labor market or to high school, as shown by Mortimer et al. The third kind of measure focuses on the *meaning* or the evaluation a person attributes to her/his past trajectory. This past can be contrasted with the present situation or future expectations. The approach to

narrative identity proposed by McAdams exemplifies research collecting meanings of life courses.

Some contributions to this volume, and more generally most examples in the literature, suggest that a fourth type of measurement in the life-course approach has to be considered, referring to the *context* or the institutionalization of life courses. Data on context can be succinct information used as a complement to life-event data and helps to depict the structure of constraints and opportunities in persons' social environment. This kind of information is illustrated by Bird and Krüger by their taking into account the legislation on motherhood leaves in Germany that influences the duration of career interruptions. Context data include also interviews of life course agents, i.e., persons who are present or give support at a specific stage or transition in the life course, as developed by Marshall's analysis of the transition to death. One methodological difficulty is the integration of these contextual informations and life course histories.

Concerning the second issue, two types of data collection design are currently used in life course research. The first one is the collection of cross-sectional retrospective data. The reconstruction of individual life courses with archive or administrative data forms a first subtype of retrospective data. For historians interested in somewhat remote periods, this is practically the only possible strategy; its main disadvantage is that these data were not originally collected for research purposes (Oris & Ritschard); researchers using them have no other choice than to accept them – and their limitations - as "given" (Billari).

The second subtype of retrospective data is generated by surveys in which persons are interviewed about events or experiences in their past. The quality of data collected in retrospective surveys depends strongly on the memory of respondents. Tools like Life event history calendars minimize the potential biases (Freedman, Thornton, Camburn, Alwin, & Young-DeMarco, 1988, Belli, 1998). Retrospective data are often interesting to collect in order to analyze the influence of a historical event or of a specific historical period (economic crisis, war, etc.) on

life courses. However, various studies on the impact of a historical event on trajectories show generally that this impact varies according to the situation or the stage in the life course where persons are interviewed. A range of samples allowing to compare the impact of such a historical event on trajectories in different generations, i.e., of people born at different dates can be used in order to analyze this impact in terms of cohort effects (Ryder, 1965). This strategy of combining the choice of design and of sample characteristics is also appealing to analyze the effects of contextual changes (Bird and Krüger). However, retrospective data present several limitations, the main one being that only factual data can be collected. This implies that only information on events and experiences can be analyzed.

The other longitudinal design is the collection of repeated prospective data. In psychology, this type of methodology is usually referred to as longitudinal design, in other disciplines of the social sciences as panel design. In this case, the same measures are applied to the same sample of persons at various points in time. This kind of data collection allows taking into account current experiences as well as intentions about the future. This enables life-course researchers to confront intentions with their realization in subsequent waves of the survey, or to investigate how expectations evolve across the life course (Nurmi & Salmela-Aro, 2000). Panel surveys are especially interesting for research centered on agency. Several defaults of the panel design have also been underlined, especially the attrition of cases across succesive vawes of the panel or the risk to break time series if questions or experimental modalities are changed underway (MacArdle).

What might then be the best strategy for data collection in interdisciplinary research? As mentioned above, events are the research topic favored by demographers, historians, and, to a lesser extent, sociologists. Experience is a topic common to all social science disciplines, but it is probably most prominent in sociology and psychology. Meanings are a research topic of particular interest to social psychology, but also to sociology. The necessity to collect context data is

more often invoked by demographers or sociologists than by psychologists. A preliminary condition of interdisciplinarity is then to *combine* measures of events, experiences, meanings and context. Moreover, a panel design allows to take into account each topic, especially when it is completed by a qualitative survey. This type of panel design is also especially interesting to analyze micro-mechanisms during a transition or a change in the life course. It should be noted that retrospective surveys allow also doing interdisciplinary work.

Analysis of life-course data: Recently, certain data-analytical tools have come to play a critical role in advancing knowledge about the life course. If integrated and combined, these tools promise further interesting applications. We can identify four general families of such tools that we consider especially helpful to study the life course in an interdisciplinary perspective. While some of these techniques have developed in parallel in different disciplines, others did so mainly within a given discipline and may hence be less known by scholars of other research fields. Life-course scientists have a vital interest to get familiarized with these methods even though some of them may seem rather exotic at first sight. Some of them are directly treated by the contributions in this volume, others are only hinted at, so it may be helpful to give a structured overview of this rapidly evolving array.

The first set of data analytical tools we would like to mention falls under the label of *structural equation modeling* (SEM) and has been adopted especially in psychological research. This set of techniques aims at explaining the interrelationships observed among a set of chosen variables, usually by the means of a correlation matrix. One of the major advantages of SEM is that the researcher has complete freedom as to how to represent the structure of the data. The researcher adopting SEM must define what the underlying structure accounting for the interrelationships within the data might be and translate that hypothesis (or series of hypotheses if several alternative specifications are formulated) into a testable and rejectable model, to be tested against the data at hand. This set of techniques further has the desirable property of partitioning

the variance of single variables or indicators into a portion said to be common among the chosen variables, hence representing latent constructs that cannot be observed nor measured directly, but are thought to influence the measurable properties of the variables, and a portion said to be unique to each variable. Hence, measurement problems may often be circumvented with the application of SEM. Some promising advanced applications of SEM to the study of the life course are illustrated by McArdle's contribution. There, changes between adjacent repeated measures of a set of variables assessed on the same individuals are defined as latent differences, so that occasion-specific measurement threats may be isolated and eliminated from the important information gathered on the individuals. One may then test the existence of variance in latent difference scores, which translates into interindividual differences in change. Once differential change is established, correlates and antecedents of change may be tested, one of the major goals of longitudinal research (Baltes & Nesselroade, 1979).

A second set of techniques is that of *event history or survival analysis* (EHA), adopted most heavily in demography (Billari and Ritschard & Oris). The basic question motivating the application of EHA is what affects the probability of the occurrence at a given time of a specific event (e.g., marriage, birth of the first child, onset of a disease, death). Unlike SEM, a so-called survival model does not have to be specified by the researcher. The most popular example of EHA indeed is Cox' proportional hazards model, in which a semi-parametric hazard function provides very reasonable estimates of the influences exerted by chosen covariates on the occurrence of the event scrutinized. Particularly appealing is the test of time constancy of each predictor (in practice unfortunately often overlooked). By introducing in the model not only chosen predictors, but also their interactions with the underlying time dimension, it is possible to test whether the potential effect of a predictor holds across time or is manifested only at certain time periods. Hence, what is believed to be an important predictor of the occurrence of an event can be tested for its temporal relevance, much in the vein of what Bird and Krüger remind us,

namely that life-course scholars ought to pay close attention to the time dimension. Moreover, the regularity of time-ordered events may also be assessed with this set of techniques.

A third set of techniques is that of *multilevel models* (MLM), also known as random-effects, mixed effects, and hierarchical linear models. This set of techniques more than any other recognizes the possibility that the data under inspection are structured according to either predefined (and usually hierarchical) organizations (such as households within neighborhoods and family members within households) or to configurations that were not planned, but nevertheless resulted because of empirical research contingencies (e.g., multistage sampling). Such situations do not meet the basic assumption validating results from ordinary linear regression that the units of observation are independent of each other, and ignoring this structure of the data usually results in biased standard errors of the parameters (Goldstein, 1987). MLM can hence be conceived as regression equations with not one source of variance (usually referred to as the errors, or the residuals), but several sources of variance, the sources themselves being organized according to the structure of the data (e.g., a first error may be associated with members within a household and a second with households within a neighborhood). Hence, variables at the individual and at the contextual levels can be modeled together, making sure their distinctions are properly respected and not artificially removed[5]. This approach is particularly promising for enriching the "agency and structure" discussion previously presented. Indeed, variables measured at the individual (i.e., agentic) level can be analyzed in concomitance with variables assessed at the contextual (i.e., structural) level. Moreover, so called cross-level interactions may be defined that allow for the estimation not only of main effects at the individual and contextual levels, but also of their interaction. It is this interaction between agentic and structural variables that most often motivates life-course scholars.

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[5] Two methodological problems that may be avoided by properly applying MLMs are the *atomistic* and the *ecological* fallacies, which incorrectly assign group effects at the individual level or, vice versa, individual effects at the group level, respectively.

A fourth promising analytical approach is represented by exploratory analyses of repeated measures data. These techniques are newer but are quickly gaining popularity in life-course research thanks to their capacity to address not only quantitatively but also qualitatively motivated questions. Ritschard and Oris discuss *Markov transition models* and *longitudinal data mining*. Both techniques are concerned with sequences of events that do not need to follow specific assumptions. Mathematical rules can be established to explain the probability of switching from one event to another and the effect exerted by chosen covariates on these switches. While Markov models are parametric, data mining is non-parametric and aims at deriving association rules among the most typical sequences and their frequencies. A typical practical application is that of online bookstores, where customers purchasing item A are notified of similar items bought by preceding customers who also purchased item A. Another promising longitudinal exploratory technique is that of *optimal matching* (Abbott, 1995), of which Bird and Krüger remind us in their contribution. This technique, unlike EHA, is not focused on a specific event, but aims instead at producing typical sequences, i.e., in the case of life-courses, longitudinal constellations of states, allowing to study whole trajectories. The assumptions of the states are minimal, so that their complexity may drive the synthesis (Widmer, Levy, Pollien, Hammer, & Gauthier, 2003b). Through pairwise comparisons this inductive method computes the minimal distance separating each pair of individual trajectories available in the sample according to predefined « costs » needed to transform one trajectory into another. The resulting distance matrix may then be fed into a clustering procedure to obtain groups as a function of their shared types of trajectories.

These four families of techniques[6] have developed separately, with little or no links between them. In recent years, however, methodological advances have allowed to combine appealing

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[6] A fifth, particularly promising set of techniques that life-course scholars have an interest to adopt is that of *linear and non-linear dynamical systems* (e.g., Kaplan & Glass, 1995; in this volume, it has only been alluded to by McArdle). In this large set of techniques, the outcome of interest is not the value of a variable at a given time point, but the change in that variable over time. These methods presuppose that the human organism can be con-

features of these methods to benefit further from their applications (Billari, Ritschard & Oris, and McArdle). Examples include the combination of EHA and MLM (Ritschard & Oris) that allow for conditioning the probability of the occurrence of an event on information at different levels of the data organization. Similarly, the recent addition of SEM latent variables in EHA refines the measurement properties of predictors, so that their effects are less attenuated by un-related variance such as error. SEM and MLM have also recently been combined to provide for another methodological synergy (Ghisletta & Lindenberger, 2004; Rovine & Molenaar, 2000). Here, the advantages of SEM with respect to measurement properties are joined with the power of MLM to disentangle effects stemming from different, hierarchically organized sources of variance.

Methodological refinements have contributed much to the advancement of not only empirical but also theoretical knowledge about the life course. At the same time, the methodological and data analytical techniques have advanced themselves, geared as they have become to address further theoretical questions raised by life-course scholars. The combination of now well-established techniques and the quickly evolving field of linear and nonlinear dynamical systems will further contribute to paving the road of life-course research. We believe that a fundamental ingredient for successful life-course research is the presence of continued synergetic communication between the different disciplines concerned. Good data-analytical tools have emerged in each discipline, and we are confident that yet better tools will be developed by combining discipline-specific existing techniques. These ameliorations are instrumental to acquire deeper knowledge of life-course phenomena.

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ceived as an open living system, continuously fluctuating, achieving a dynamic equilibrium through self-organizing structures tending towards homeostasis (not limited to its physiological meaning). These techniques provide a way to characterize many of the basic phenomena of development, including change, stability, variability, stages, continuity, and the combination of quantitative and qualitative change as well as the emergence of new forms of structure and function.

Interdisciplinarity

After having sifted through the four sections of this volume with a view to common or interacting themes between its contributions, let us take up the three axes we propose for developing interdisciplinarity in life course research, common concepts, theoretical bridges, and transversal themes – what elements can this volume contribute to each of these?

We have to realize that common concepts and transversal themes are closer to each other than both are to theoretical bridges, since we almost inevitably use concepts to refer to themes. This allows us to treat both aspects together. *Common concepts* have to develop from interdisciplinary work on transversal themes – they need not be identical from the outset, otherwise interdisciplinarity would be restricted to the rare instances where the same concept is used in more than one discipline (examples could be socialization or coping), and even if the words were not the same, interdisciplinary connections would boil down in such cases to simple terminological translation (as in the case of "lifespan" and "life course," or of the different names used for some data-analytical methods). Conceptual comparison and elaboration become interesting if concepts are not the same between two or more disciplines, but substantively close enough to favor interdisciplinary exchange and elaboration, which is most likely to be fruitful when starting from common themes.

Among the candidates for becoming common or *transversal themes* that have emerged in this volume, let us single out socialization, age, identity change and life-course transitions, agency, coping, and gender. In varying configurations, each of these substantive areas promises for interdisciplinary collaboration to bring about mutual enrichment, greater strength of analytical grip, and more complete understanding of life-course phenomena, especially if we start from the principle to look first at interdependencies rather than causal chains because the latter would fix a priori hierarchies of causation between the disciplines. *Socialization* is perhaps the most traditionally common area, at least between psychology, social psychology, and sociolo-

gy, because the three disciplines consider it to be one of the most basic processes of personal development; the particular perspectives developed by each of them is a crucial source of complementarity.

The situation is different for *age,* the analytical status of which is clearly less obvious and more controversial. But then, interdisciplinary discussion of this situation should lead to spell out more explicitly the discipline-specific perspectives and assumptions, facilitating to arrive at a more encompassing and articulate conceptualization of the phenomena concerning age and the related processes. As an illustration, let us elaborate somewhat further on this theme. In psychology, the influential article by Wohlwill (1970) pinpointed this problem. The author characterized the status of age as a convenient descriptive and data-organizing tool that lacked however theoretical meaning. He urged scholars to investigate the aspects of behavior that might be lawfully related to age. Among the few examples embracing this deeper analysis of the variable of age we can cite the search for markers of biological age (or biomarkers; e.g., Anstey, Lord, & Smith, 1996), the opposition of chronological age to other time definitions that are theoretically better justified in the light of the phenomenon under analysis (e.g., time left to the onset of preclinical dementia when studying memory performance in older adults; Sliwinski, Hofer, Hall, & Buschke, 2003), and, from a more analytical point of view, transformations of age in relation to the variable considered in order to better understand the age-related mechanisms (e.g., McArdle, 1986). In much the same vein, sociologists Settersten & Mayer (1997) have advised, "chronological age itself is an 'empty' variable ... it is whatever age presumably indexes that is thought to be important." The major difference between psychological and sociological uses of age in the life-course / life-span field is probably that in developmental psychology, it indicates changes implied in forms of physical and cognitive maturation and physical or physiological aging, i.e., biological age, whereas sociologists think in terms of social age, again with several specific meanings that are not always clearly distinguished, especially in the sense of age norms vs. the more structural sense of specific roles or role sets that define the way indi-

viduals are embedded in the social world. In sum, life course scholars more than others are urged to move the age variable from the right side to the left side of the equation: age should not be used to explain behavior, but should itself become subject to analysis. A further hint at a sociological contribution to the substantive interpretation of age can be seen in Kohli's (1985) discovery of biographical chronologization as a rather recent historical process, related to what Weber already analyzed as the growing bureaucratization and rationalization of modern societies. According to Kohli, the sequencing and temporal ordering of modern life courses that has taken place in the last 2-3 centuries is explained mainly by the structural changes brought about by modernization, reliance on age for the legal and procedural attribution of a series of rights and duties corresponding to what Weber called bureaucratical rationality (among such institutional innovations, let us mention the implementation of compulsory scolarization of all children along with the prohibition of children's employment, the fixation of a series of legal age thresholds, and various welfare-state regulations with life-course incidences, be they age-related or not). Seen from this vantage point, the more or less regular timing of some crucial events in modern life courses, especially « normative transitions », no longer appears as a definitional element of life courses as such, but as one of the various ways in which they may be socially institutionalized and standardized. Facing this empirical situation, we turn out to be rather poor in theoretical tools permitting to conceptualize such findings - take the pure timing dimension away and see what remains in terms of life-course analytical tools! Not much, at least in the conceptual traditions we mentioned up to now; we shall come back to this question with respect to conceptual bridges.

For *identity change and life-course transitions,* we have proposed some hypotheses in an interdisciplinary perspective; this may be somewhat of a test area for our postulate of a priori symmetry between the disciplines – sociologists as well as demographers will certainly have a tendency to assume that social regulations trigger identity changes rather than the other way round, but a more agentic and also a (social-) psychological perspective will want to consider

with equal interest the possibilities of active individual construction of transitions. Again, the various disciplines can only gain at working together in this area because they have developed different and potentially complementary conceptions of an issue they share, but that goes beyond their specific horizon.

Let us pass more summarily on the remaining examples of transversal themes. *Agency* as a theme is almost per definition a meeting place for psychological, social-psychological and sociological aspects, including cognitive, affective, cultural, behavioral, and interactional dimensions; *coping* may be less common a topic for demography and sociology than for the other two disciplines considered here, but its importance has long been acknowledged there, too. Finally, *gender* may need less insistence on the fruitfulness of an interdisciplinary approach than any of the other themes, but it should be underscored that probably few other perspectives than the study of life courses are equally apt at highlighting processes of gendering, and notably not only on the level of interindividual doing gender, but also on an institutional level – provided, of course, research is done in a gender-sensitive way (Eichler, 1988).

What about *theoretical bridges?* We may distinguish between two levels of theorizing, a Merton-like level of middle-range theorizing that corresponds to the concepts used in subject areas like those we have just mentioned, and a more metatheoretical or abstract level of general conceptual thinking. One track of interdisciplinary development on this second level is indicated by the recent FFT and SFM models in social psychology mentioned above. They provide explicit entry points for interactions with the person's social environment as conceptualized, e.g., by sociological approaches – an aspect they share with Bronfenbrenner's principle of ecological psychology or Erikson's opening for social aspects entering into the stage-defining dilemmas of epigenesis he postulates, but their advantage can be seen in their firmer grounding in empirical research.

This theoretical "offer" from personality psychology may be seen as a major anchor point for building conceptual bridges between psychology and sociology – let us try to develop, as a counterpart, a sociological anchor point, taking up the question of how and in which ways the link between specific role sets and their corresponding ages is socially constructed, especially on the level of macro- and mesosocial institutions. There is a promising track in sociological thinking, indicated for example by Kerckhoff (1993, p. 13) in a passage where he thinks about concepts for analyzing professional careers: « ... we need to chart the movement ... of individuals over time as they pass through a number of stages in the life course and occupy positions within hierarchically structured social organizations. At each stage, we need to be able to identify a set of locations that are hierarchically ordered, and we need to measure the personal characteristics of the individuals occupying those locations. ... Charting the flow of individuals between structural locations across stages in the life course constitutes describing the 'careers' of those individuals, (i.e.,) ... the pathway (they follow) ... between positions in the social structure occupied at different points in the life course. » [7]

In a more general stance, we can define this structural part of the life course as a *movement through social space*. Taking into account the basic understanding that social space is generally organized in relatively well-defined and well-delimited social fields (Lewin, 1935, Bourdieu, 1980) and that – due to multiple participation – our social participation is generally definable by status/role sets or profiles rather than by single statuses and roles, we can reformulate this heuristic definition of the life course as a *sequence of participation profiles* (Levy, 1977, 1991).[8] The linking to age of specific features of such sequences, especially of specific transitions between subsequent participation profiles, for instance on the basis of cultural age norms (Neugarten, Moore, & Lowe, 1965; Settersten, 1997) some of which may be more officially

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[7] Similar ideas can be found in the thinking of Rosow (1976).
[8] Without neglecting the fact that participation in a social field implies also holding a position in the field's internal structure and assuming the correspond role. All these aspects have multiple implications that may be of importance when analyzing life-course sequences, but cannot be spelled out here.

institutionalized (Kohli's chronologization), is but one of the multiple ways of life-course standardization. The sequential ordering of a series of institutional participations (Krüger, 2001, Bird & Krüger) is another one. It is, however, important to stress that life-course standardization is not a necessary ingredient of this analytical vision, it is one of its variable dimensions. Analyzing life courses as sequences of participation profiles, e.g., in a social structural perspective, enables us to more fully characterize the mechanisms that relate biographically changing social participation to ongoing time without allowing the social structural aspects to go unobserved or to remain poorly defined (Settersten, 2005).

Turning back to articulating the sociological and psychological perspectives, we may then ask to what extent psychological development and aging (cognitive, emotional, moral, identity), besides its ontogenetic « push factors », can also be shown to develop according to a threshold rather than gradual model that would, however, not express endogenous stages, but materialize in relation with transitions in participation profiles, and more specifically to what extent some changes of participation profiles, rarely studied in sociology, could have a psychological impact, e.g., profile extensions or restrictions in the sense that the number of simultaneous participations before and after a transition grows larger or smaller.[9]

Another substantive theoretical axis that may help articulate or integrate conceptual contributions of different disciplines can be seen in the distinction of various sys*tem levels*, once different usages of some terms are spelled out and possibly agreed upon (e.g., what constitutes micro- and macro-level phenomena differs dramatically between psychologists and sociologists). It would certainly be simplistic to assign to each discipline its proper system level, thus restraining it to the level in question (as Devereux, 1967, once proposed with his "complementaristic" conception of ethnopsychoanalysis). One discipline can legitimately study several such

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[9] Among the rare studies of this aspect, let us cite Thoits (1986) and Moen, Dempster-McCain, & Williams (1989, 1992) who show beneficial effects of multiple role occupancy on women's health. In this perspective, retirement corresponds to a major profile-narrowing.

levels, some of which are also focused by other disciplines. This is especially evident for the subject matters shared by social psychology and psychology on the one hand, and sociology and social psychology on the other, but also and probably even more so of sociology and social demography. In this perspective, Settersten's formulation of agency within structure is not only a formula to overcome the artificial opposition of these complementary aspects of social reality, but to integrate more generally individual-level and social-level explanations. Even if the classical distinction between structure and agency may have a singular ideological and political interest, it can be seen as a special case of this more general dimension of system-level differentiation. Spelling out and studying the mechanisms that relate different system levels with each other remains one of the lesser studied and poorly conceptualized areas in all concerned disciplines, and calls intrinsically for interdisciplinarity (Diewald, 2001). Saying this, we should also note that this volume (and probably most similar ones) does not cover all the possible system types and levels that are relevant for life course research. The social sciences certainly have to develop more explicit and integrative theoretical and methodological interfaces towards the biological system and its processes of ontogenesis on one hand (Shanahan, Hofer, & Shanahan, 2003) and, on the other, towards historical and cultural processes as well as actual processes of institutional framing that intervene heavily on the life course (see Elder, 1974; Heinz, 1992, Krüger & Levy, 2001).

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Let us end this volume with a very general statement about interdisciplinarity. Once we are convinced of interdisciplinary work as a superior way to study life courses, we have to define the ways we want to « mix » the conceptual tools our various disciplines can bring to bear on the topic. One basic principle has already been stated, it is what we could call the principle of a priori disciplinary symmetry. A second basic principle should inform our attempts, we could call it an articulation principle: the various disciplines can not and should not be simply melted

into some unifying theoretical mold, given that they focus on complementary aspects of the same phenomena as well as on different and complementary levels of the systemic organization of reality. For that reason, to develop its potential, their scientific synergy needs explicit articulations, not fusion, and even less conceptual vagueness. The way leading to this goal is certainly difficult and laborious; we hope that this volume is more dynamic than the proverbial signpost that points to a direction without going there itself, i.e., that we have not only been able to point out some promising tracks, but also to undertake some real steps in that direction.

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