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Longitudinal perspectives on midlife development: stability and change

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Midlife has emerged as a normative developmental period in the life course only during the twentieth century (Moen and Wethington 1999). The emergence of midlife as a life stage is associated with two demographic trends: the increase in human longevity and the decline in fertility. All Western societies are experiencing a rectangularization of the age distribution, such that there is a greater proportion of individuals in middle and old age than in childhood, as would be the case in the traditional pyramid age structure. There is growing concern within Western societies regarding the societal and health care demands that will arise when those currently in middle age reach *old age* (Eggebeen and Sturgeon 2006). However, optimal physical and psychological development in late life will depend largely on the experiences of individuals during *middle age*. A major contribution of the articles in this special section is in providing further understanding of the changes occurring *within* midlife and how these change may affect the experience of old age.

These demographic trends in combination with transformations in the economy and career paths are altering the more traditional conceptualizations of midlife as defined by certain roles or a stage of parenthood or of marriage (Kohli and Kunemund 2005; Stewart and Torges 2006). Traditionally,

middle age has involved the middle years of parenting and of career “peaking,” with the later phase of midlife being a time of relinquishing the employment role and the parenting of children. However, given recent economic downturns, many middle agers are reconsidering and delaying the anticipated retirement age (Czaja 2006), and adult children are reentering the empty nest. Thus, given individual, gender, social class variations, and period effects in the type and timing of role transitions, it is difficult to set precise ages when midlife begins or ends (Farrell and Rosenberg 1981). The age/cohort boundaries of midlife are “fluid,” and are likely to continue to evolve with further demographic, economic, and social/health policy changes. The diversity in the age span of subjects in research studies focused on midlife is illustrated by the articles in this special issue. In the Allemand et al. study sample, the age range defined as midlife spans two decades (40–60 years), while midlife in the Deeg and Huisman sample spans approximately 10 years, and the Zimprich and Mascherek and Jopp and Schmitt studies span approximately 2 years.

An important design feature of all articles in this special series is the study of developmental change utilizing data sets from longitudinal studies including midlife samples. The Allemand et al. and Zimprich and Mascherek articles involve the study of longitudinal change over a decade or more, while the research of Deeg and Huisman and Jopp and Schmitt examine change over 3–4 years. There has been a notable paucity in studies focusing specifically on the midlife period. The vast majority of studies including a midlife sample have been cross-sectional in design (Dixon et al. 2001). The paucity of longitudinal data specifically targeting middle age is due, in part, to the limitations in the design of many past aging studies (Hertzog 2008). The extreme age group comparative design (young vs older

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adults) has resulted in serious design limitations for building a lifespan perspective of adult development. Comparison of only two age groups implies the assumption of a linear trajectory of change with performance in midlife assumed to fall midway between young and old age. Given only two data points, nonlinear forms of developmental trajectories could not be tested. Moreover, cohort comparisons of midlife adults when at the same chronological age may be particularly important. Lifespan theorists (Baltes 1987; Schaie 1984; Staudinger and Bluck 2001) have proposed that midlife is the period most heavily impacted by sociocultural events, rather than biological events, given that puberty is past and the biological decline of old age is only at an early stage.

Current midlife developmental research using longitudinal approaches is entering a new phase because for the first time true lifespan developmental data spanning midlife and old age are available on key resources for lifelong development such as brain plasticity, cognition, personality, health and subjective representations, and self-related evaluations (Widaman 2008). Modern statistical software and analytical tools exist to model intraindividual development nested within populations and to relate midlife developmental changes and stability to late life developmental changes and stability. In addition, datasets are increasingly made accessible to be used for comparative purposes (e.g., Integrative Analysis of Longitudinal Studies on Aging; Hofer and Alwin 2008). In this context, it becomes apparent that a better understanding of midlife development and its functional meaning for late life development requires us to move beyond the traditional mean-oriented age norms of development and the assumption of midlife as a phase characterized by stability (Willis and Martin 2005). Rather, future research needs to (a) distinguish between several phases within midlife, (b) distinguish important aspects of change (mean, rank order, differential stability, intraindividual variability), (c) demonstrate active orchestration of stability, and (d) indicate how critically low-cognitive resources in midlife might foreshadow decline and dementia decades later.

All of the articles in this special issue question the validity of the traditional view of middle age as a time of relative stability in many areas of life. Prior longitudinal findings (Hultsch et al. 1998; Schaie 2005) that have characterized midlife as relatively stable have focused primarily on a normative or mean-level description of development and have been rooted in trait theories of cognition or personality which have assumed developmental stability after young adulthood and before the decline of old age. A major focus of all of the current articles is an examination of interindividual differences in intraindividual change in midlife, whether studying cognition, personality, or mastery. The Zimprich and Mascherek

article makes the most cogent case for the multiple types of stability that should be examined with regard to any developmental phenomenon. Five types of stability or change are set forth and examined in the Zimprich and Mascherek article: structural stability/change, differential stability/change, stability/change of divergence, mean-level stability/change, and generality of stability/change. The remaining articles examine one or more of these forms of stability. For example, Deeg and Huisman examine mean-level and differential stability with respect to mastery, while Allemand et al. examine structural, differential and mean-level stability with regard to personality. While across domains (e.g., cognition, personality), there appears to be considerable structural stability and differential stability (i.e., rank order), the articles differ in their findings with regard to mean-level stability across middle age and the degree of generality of stability. While most of the articles examine these various forms of stability with regard to a single birth cohort, Deeg and Huisman contribute further understanding to the study of midlife stability, by examining two birth cohorts at the same chronological age range.

A major finding in all of the articles is the salience of individual differences in change in midlife. Allemand et al. state “what is most striking for this period is the wide variability in the nature and course of midlife ... people may demonstrate unique patterns of change at the individual level, whereas at the overall sample level, personality traits show considerable stability.” Three of the articles are concerned with identifying and examining the factors associated with interindividual differences in change. The search for factors associated with individual differences in change is based on recognition of the plurality and diversity of life experiences and health experienced by different individuals. For Deeg and Huisman, the question is the effect of individual differences in health and comorbidity on longitudinal change in one’s sense of mastery. Furthermore, Deeg and Huisman examine whether cohort differences in health and comorbidity lead to cohort differences in mastery. In the Allemand et al. study, the impact of seven types of turning points on midlife change in personality is considered. The Jopp and Schmitt article considers the role of resources, coping strategies, and control beliefs in adaptation to negative life events.

These articles illustrate the importance of studying midlife within a biopsychosocial framework (Baltes 1987; Lachman 2004; Widaman 2008). In middle age, most individuals are at one of the most active phases of the lifespan and involved in multiple pursuits (work, family, friendships). Moreover, while most individuals in midlife enjoy relatively good health, there is increasing vulnerability to onset of chronic disease and decreasing physical capacity. It becomes increasingly important to integrate

multiple domains of development into the study of midlife. Thus, Deeg and Huisman examine the impact of disease on changes in the psychological phenomenon of sense of mastery. Allemand et al. study turning points in the diverse domains of family, friendship and self in the study of change in personality. Jopp and Schmitt consider the impact of cognitive and health resources in adaptation to negative life events in a variety of domains (job, health, housing, family).

Traditionally, midlife adults are considered to be the “decision makers” in society and to have greater control or responsibility in their own lives and in society, compared to young adults or older adults (Wahl and Kruse 2005; Hertzog and Dixon 2005). Neugarten (1968) wrote of the “executive stage” attained by some individuals in midlife. Given these expectations in midlife of control or mastery, loss or threat of loss of control or mastery due to health problems or negative life events can have a major effect on well being and sense of self efficacy. Both the Deeg and Huisman and Jopp and Schmitt study findings illustrate the salience of internal control or sense of mastery in midlife in dealing with health concerns or other negative events. In the Jopp and Schmitt article, higher internal control beliefs were associated with more effective coping and subsequently in dealing with negative life events. Deeg and Huisman considered whether there were cohort differences in level of mastery and whether higher mastery better equipped individuals to deal with health problems. Moreover, in both studies control or mastery was closely related to cognition or educational level. Higher educational level accounted for increases in mastery (Deeg and Huisman 2010), while cognitive resources were related to fewer negative life events and to higher levels of control and coping (Jopp and Schmitt 2010). Maintenance of cognitive capacity may ensure that the individual has the problem solving skills needed to deal with and adapt to the challenges of new health challenges and the ambiguities of negative life events (Crimmins 2004). An increasing societal emphasis on personal empowerment and greater participation in health care decision making by the consumer may reinforce the need for a high sense of mastery or control.

Lifespan theory focuses on the salience of balancing contrary forces in midlife (Baltes et al. 1999; Staudinger and Bluck 2001). Indeed, the relative stability that appears to characterize midlife may be a reflection of this “balance” of contrary forces in development. A major proposition of lifespan theory is that development at all life stages involves both gains and losses. A unique feature of midlife may be that it is the developmental period characterized by the balance of gains and losses. As was illustrated in articles on cognition (Zimprich and Mascherek 2010) and personality (Allemand et al. 2010) in this issue, some

domains of functioning are still increasing (e.g., vocabulary), many domains are being maintained (i.e., stability in personality), and others are beginning to decline (e.g., speed). This tie in gains and losses in midlife is said to be associated with a balance in the impact of biology and culture. While age-related decline in biological functioning may begin to occur, the complexity and sophistication of cultural structures to support development may peak in middle age. Early midlife may be the peak time to reap the cultural assets of education, career, relationships, and family. It is well established that middle age is impacted to a greater extent by sociocultural factors than either the earlier or later periods in the lifespan.

Related to the gain-loss ratio and to the biology culture, dynamics is the proposition dealing with allocation of resources across the life span. In early life, resources are allocated to growth, whereas in old age resources are allocated to regulation of loss. Staudinger and Bluck (2001) suggest that in midlife, resources are allocated primarily to maintenance and recovery. Thus, midlife may be a unique developmental phase in which allocation of resources is more distributed or balanced, including growth, maintenance and regulation of loss.

Given that in midlife the biological substrate is fairly intact and societal influences may be at a maximum, the midlife period may be a particularly important period for studying the range of plasticity in adulthood (Willis et al. 2009). The research agenda for the future might benefit by shifting the focus in the literature from normal or usual functioning. Rather our goal should be to focus on pathways to optimal biopsychosocial functioning during midlife. Midlife is likely to be a critical period for development of cognitive reserve which may delay or offset early physical or cognitive decline in old age. The studies in this special issue offer important findings on areas of development in which plasticity may occur and the mechanisms salient in the study of plasticity.

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