HAS DEVELOPMENTAL RESEARCH SO FAR NEGLECTED MIDDLE?

Historically, developmental psychologists have advocated heavily on childhood and adolescence, depleting the challenges of and progressions through these life phases. That trend has changed over the past 40 to 50 years as adult development has increasingly become a topic for research. So far, however, this research has focused primarily on later life. The reorientation of the whole field of gerontology provides evidence of the importance that psychology and other disciplines have begun to understand adult development. When one looks across the life span, the gap in research on middle adulthood is apparent. Several books, however, have provided useful foundations to begin filling this gap (e.g., Lachman & James, 1997; Kell, 1996; Eby & Sehler, 1996; Shweder, 1990; Willis & Brit, 1999). To join this discussion of middle life's developmental perspective, we examine the reasons for the relative scarcity of theory and research concerning middle life.

The authors acknowledge the many valuable discussions with colleagues, such as the Max Planck Institute, The Institute of Development, and colleagues from the Netherlands Institute for Mental Development. Particular thanks to Christine Civale and Ruth Younger, Black as an ex-nurse at the University of California, Berkeley. Also, the authors are “1/48” in other publications.

"adulthood" by these respondents may provide a wide boundary for an individual's progression into the middle period. Another way to look at the period called "adulthood" by this group is that middle age is the part of life that needs no qualifier. One is neither young, nor old. Thus, this finding suggests that middle age may be the period in which one simply is an adult, and that means being in the middle of the two other more defined categories, early and late adulthood.

In two other studies, corresponding normative conceptions of the age at which middle begins and ends have been identified (Cameron, 1969; Downey, 1970). These two studies suggest that middle age is the period between 40 and 55 years, thereby encompassing parts of both periods identified in the studies reviewed earlier. Generally, one might conclude that middle begins somewhere around 40 and ends by 60 (see also MIDMAC, 1999), but that at both edges of middle there is a flexible, vague boundary. One factor affecting how people define middle is their own current age. Thus, in two of the reported studies, the respondents—who were themselves middle-aged—suggested a later ending for middle (55 or 60 instead of 50 years), and also used a higher age boundary to describe when individuals enter old age (65 instead of 60 years; Cameron, 1969; Downey, 1976).

Another factor affecting how society, and individuals, define middle is the cohort to which they belong. In fact, it is demographically changing (especially declining birth rate and increased life expectancy) that are seen as responsible for the current societal view of middle as a discrete period (in Western cultures; Guttke, 1989). Thus, given the changes in the societal and life-course structures, a definition of middle linked to chronological age most likely will differ between cohorts (see also Schütze & Volma, 1996). Taking a life-span perspective encourages a definition of middle that abstracts from chronological age. It considers the multiple contexts of middle and their related opportunities and challenges, as well as the resources available and their distribution.

Middle may be the most central period of life, which is referred to generally when aiming at adulthood without qualifying it at either "early" or "late." Its exact age is a matter, and while the view from age 40 to 60 seems to comprise middle age, the boundaries are open to interpretation. Interpretation may be affected by one's own current age, as well as the historical period. This lack of precise definition and the sense that it may not be well described by reference to chronological age but instead involve subjective perceptions of multiple paths through various domains, may have restricted the development of a clear agenda for research. The limited value of chronological age with regard to defining middle shifts our attention to the developmental tasks of middle. Again, however, not just a single task but several challenges can be identified.

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Thus, as elaborated later it may be useful to define middle using metacharacteristics.

5.4 Middle as a Life Span: Progressing Psychological Study? A second reason middle may have been understudied is a seeming lack of societal and psychological reasons to do so. In the past 50 years, psychologists have focused on the study of areas in which individuals have problems negotiating life (Seligman & Csikszentmihalyi, 2000). Thus, one reason middle was not studied was that it was not considered a particularly problem-strewn phase of life. From a societal perspective, by middle investment in socialization on average should have paid off. By this point, individuals should have been socialized into roles and are usually contributing to society. Consequently, they neither need more socialization investment (as children do) nor do they normatively require external help and care due to health or frailty issues (as old and very old adults may). They provide no problems that psychologists, and more generally society, must respond to: they are, instead, one of the pillars that maintain societal functioning. In contrast, the identification of old age as a societal problem because of the growing number of older people in Western industrial nations has contributed to increased gerontological research. Further, the perception that middle does not present particular problems to individuals may help explain why psychological research has not yet made middle a focus of attention. When our perspective, however, focuses on understanding basic developmental processes as well as the ways to support successful development, middle is rich in aspects to be explored.

Middle may be better defined by a pattern of characteristics than simply by chronological age. As such, the relation of chronological age to social psychological, and biological age may offer a way to study middle in cross-referential ways. There is no consensus that any single biological or social event constitutes the lower boundary of middle age, and retirement can be seen as an upper boundary. In some cohorts, only few men (B. Neugarten & Ditto, 1966). Some have suggested that middle age is the time between when the youngest child leaves home and when the spouse dies (Treas & Bergman, 1982). Although specific events such as these play critical roles, individuals' measure their age and life phase using a combination of sociopsychological, and biological markers that are only sometimes tied to particular events (see also Bloes & Wethington, 1999). Although no consensus exists concerning the entry and exit points of middle, there is more agreement concerning the sequence of developmental tasks that normatively occur in this period. By middle, individuals are expected to have established a family, found a clear career direction in
A view of middle development from life-span theory.

which they will peak during middle, and have taken on a responsibility with respect to their children, their own aging parents, and, sometimes, their community. These multiple roles influence the ecology of middle for each individual (Shed & Wills, 1993), as well as provide individuals with the chance to customize their own experience (Moen & Wellbring, 1999).

While middle age has been relatively understudied, research pertinent to middle agrees with our early events that are central to its definition. When considering the social, psychological, and biological experience of middle, relevant research is available in several areas. The social domain (e.g., family and parenting, membership across the life span, the psychological needs [e.g., change and continuity in self, psychosocial, and well-being], and the biological arena [e.g., changes in sexual function and bodily functions—menopause, incidence of disease]). Researchers have explored such topics as the "middle crisis" (Robert, 1976), menopause (Yoda, Dinan & Drennan, 1977), the effects of caring for both children and aging parents ("the sandwich generation"; Shir, 1983), the "empty nest" (e.g., Rubin, 1979), and the transition to retirement and leisure (Arthur, 1983).

The task at each event-specific perspective, the self-made claim little research exists on middle may be overstated. In fact, many research areas provide useful information for understanding the multiple challenges and problems of middle development. However, middle has only recently been identified as a developmental period worth studying as a whole. One of the current challenges of the field is to integrate findings from various areas to develop a view of the important events and transitions of middle, whether these be drawn from work that is largely psychosocial, social, or biological. Life-span theory offers the opportunity to tap these multiple perspectives of aging as interconnected. From there, research designed with a lifespan on middle may examine events and transitions in terms of both problems and achievements (see also Helckhau, Chapter 1) of this volume, for a discussion of middle as a time of both vulnerability and resilience.

Middle: Is It More Than One Phase?

A final reason that middle may receive relatively little specific research attention is that it may be too heterogeneous a phase. Not only do individuals take different pathways through middle (interindividual variability; Moen & Wellbring, 1999), but it is a life phase in which one is both leaving youth and entering old age. The beginning of middle and the latter part of middle have similarities, but also have quite different demands (Goldshneider, 1986). Previous research on middle has sometimes

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pointed out at a time of crisis, sometimes as the prime of life, and sometimes as a period of stability and routine (Furkel & Rostenberg, 1981), thus making it difficult to form an integrated view from which to generate research.

Consideration of the possibility of a young-middle and a late-middle may add precision to our research endeavors. It may also make it possible to uncover seemingly contradictory findings. The first part of middle may involve more growth and building of necessary habit, and this relationship may start turning toward the end of middle (Bubel, 1993). While young-middle involves consolidating family and careers, the late-middle phase may revolve around such things as health concerns, preparing for retirement, and becoming a grandfather. When entering middle, one still feels young, and the sense that one is reaching the midpoint of life is something that must be weighted, considered, and accepted. By the time one is leaving middle, the transition is complex and the issue is no longer one of realization but of finding ways to lead a fulfilling life despite inevitable losses (e.g., R. Kusenberg & Davis, 1990). Although other usually may also want to have the benefits (but not the disadvantages) of research interest in middle, we have identified three major reasons: Middle is not easily defined in terms of chronological age, from a social and probably also individual perspective, it does not present problematic events and transitions, and it may be better conceptualized as two distinct phases. As discussed later in this chapter, these barriers to the productive study of middle are effectively eliminated when our view of middle through life-span developmental theory.

A Selective Review of Theoretical Perspectives on Middle

In this section, we provide a selective review of some theories that have either directly focused middle as wide-sail observations concerning middle as part of a larger theoretical framework. The review is not exhaustive but comprises the way the middle period of life has been conceptual-ized, especially the convergence between viewpoints. This convergence serves as a guideline to the critical themes that must be included to provide an overarching theoretical approach to middle age. The section is organized around these three themes: time orientation, the balance between work and relationships, and opportunities for growth and generativity.
structured. As opposed to early development, in which biological unfolding plays a key role in the individual's progress, adulthood is governed more by social, cultural, and environmental constraints and opportunities (Baltes, Lindenberger, & Staudinger, 1999). Thus, certain biological events may also be important (e.g., menopause, Parlee, 1981). While early childhood may be characterized as running on a biological clock, much of adulthood is governed more, or at least commonly, by a social clock (B. Neugarten et al., 1965). This notion of the clock of life, whether biological or social, brings your attention to the temporal aspect of life-span development, and particularly what it means to be "in the middle."

Neugarten's work (for a comprehensive see D. Neugarten, 1996) challenges researchers to critically examine the role of time in development by asking whether the way in which developmental psychology has studied children is also appropriate for the study of adults. While she supports research approaches that examine continuity as well as those that examine discontinuity, the most interesting contributions of her thinking about middle life come from examining discontinuities. Primarily, she argues that adults' sense of time and routines plays a role that is not seen earlier in life. One no longer measures life as time since birth, but as time left to live. For adults, the blending of past, present, and future becomes a psychological reality (e.g., Ryff, 1992). This changing view of time allows adults not only a sense of self, but a sense of self across time, that is, a sense of their own life cycle. Middle-aged individuals evaluate themselves as having shown personal growth since their younger years, and look to the future with the expectation of further personal growth (Ryff, 1992). In late middle, one may begin to contemplate the end of the life cycle. This sense of impending endings has been linked to increased sociometrical selectivity (e.g., Centcare & Turk-Charles, 1999).

B. Neugarten points out that awareness of one's own life cycle has consequences for the individual's goal choices and priorities, and it also allows for comparison with others. She argues that the individual compares his or her own progress through the life cycle with a view of the expected, or normative, societal timing of such events and transitions. When studying middle, researchers are alerted to examine not only what events are important for adaptation, but also how the on-time or off-time sequencing of major life events changes how they are experienced, or how they mean to the individual. She suggests that the "normal, expectable life cycle" that individuals carry in their heads allows them to compare themselves to their peers in terms of how they are facing both occupational and family challenges in middle life. Research has shown that individuals do indeed carry stereotypes about what one should have accomplished by middle life and use them to make judgments about others (e.g., Krueger, Heckhausen, & Hummermark, 1995).
one's temporal perspective. Birnbrauer contends that though we live in the present, we have goals that reach into the future, and we are always affected by our past. Those who merely focus on the present (e.g., children) seek largely comfort. The period of middle life brings the consideration of past and future lots into focus. This individual stage is a time when physical growth in completeness and decline has not yet really begun, middle also offers in yet unknown possibilities for self-fulfillment and accomplishment through balancing the past and the future. This potential is also reflected in Blauner's (1962) claim that self-actualization is not possible at least until one leaves the period of youth.

As individuals progress through the life cycle, both the biological and social clocks ticking away, the accumulation of experience, and the varying ways in which individuals have organized that experience, lead them to very different places. The experience of the disorganization of life (i.e., extending into the past and the future) taking center stage in middle life plays a central role in middle (see Staudinger, 1999).

As discussed in the section on life-span developmental theory, the view of life as a turning, a temporal flow in which middle is both the result of one's previous development and the staging ground for later life, is taken up in part of the proposition of life-span psychology: While life trajectories become more varied as we move through the life span, two domains—family and career, or love and work—are important for most individuals at middle age. Several researchers have focused on the normative stages that may be expected in people's attempts to achieve a balance in these two domains, and others, across middle life.

Finding a Balance: Jung's and Levinson's Theories

A second theme that was presented in the section is the idea of middle life as a time when individuals are attempting to find meaning in various ways. Part of Jung's view (1933) is that middle life is a time when a whole and balanced gender identity begins to emerge that allows individuals greater autonomy over their lives. This theme is echoed in the unity, society-driven, novel orientation of the young. More recent empirical work has suggested that when individuals move toward a more androgynous identity in middle life, they may be a source of pleasure, but sometimes also cause embarrassment (Hays, 1999).

In combination with this time toward androgyny, long postulated that middle life is a time when one's level of extraversion and innovation also come into greater balance. He argued that young adulthood demands a largely extraverted orientation to meet the challenges of establishing work and family, and the middle years allow for a balancing in which individuals also begin to turn inward and explore their own subjective experience in a greater expanse. In general, Jung viewed middle life as a turning point at which one gradually comes to realize that the values and ideals developed earlier in life are not sufficient for moving meaningfully through the second half of life. He states, "We cannot live the afternoon of life according to the program of life's morning; for what was great in the morning will be little at evening, and what in the morning was true will in the evening have become a lie." (Jung, 1971, p. 17). Other theorists pick up this theme by examining the types of challenges that are specific to middle life.

Levinson's (1978) stage theory of adult development is based on his research on the similarities in the patterns of men's lives across the adult years. More generally, we see a consideration of the extent to which perception of biological and social influences affect the structure of middle. A purely biological view might paint middle life as a plateau between the growth of youth and the decline of later life. While that may be the approximate biological architecture of middle, Levinson set out to determine if there are also social patterns of development within adulthood. Thus, the theory is similar to Neugarten's, in that it is based on the idea that while biological changes may result in stages of development in childhood, social and cultural changes are just as likely to structure the life course in precipitate ways in adulthood. According to Levinson, early adulthood (about age 18–25) is concerned at a time in which work establish an adult identity and take up the challenge of settling themselves in the workforce, develop an intimate partnership, and start a family. Middle adulthood (about age 45–65) is a time when men have often acquired these earlier goals, but are striving to find meaning in life more generally. He posited the middle crises as a point for men to review their lives and reorient their priorities. How the theme of meaning reviewed in the preceding sections emerges and the crises is a need for finding one's achievements and for understanding one's meaningfulness in terms of the life lived and perceived life. In Levinson's thought, the resultant changes in priorities often involved more emphasis on relationships and less on career (see Pfeiffer, 1999).

Because of the other chronic nature of women's roles and responsibilities in middle, Levinson's theory does not describe women's experience particularly well. Although with women's increasing involvement in the labor force, some of his ideas readily are applicable. Fritz (1978) has
described the complicated scenario that greets women in middle (at least current middle) columns: Since women are usually primary caregivers to children, and sometimes also to aging parents (both their own and their husband’s), their ability to balance agency and communion is further challenged. Often, women must step out of their career path, or reduce their involvement in career, to have and raise children. In such cases, women must begin to establish a career, and then reenter the workplace once their children enter school. This provides a way that women make choices concerning trade-offs between work and family, in large part, how far they are socialized to place value on independence and affiliation (Gilgigan, 1992). More generally, gender may be an important life-stage in understanding individuals’ attitudes and feelings concerning marriage, parenting, and friendships (e.g., Hoyt, 1999; Lovett, Turner, & Chirn, 1978).

The reviewed theories converge on the notion that middle is an important time for finding balance. It has been suggested that underlying the balancing and reorienting is the importance of agency and communion in middle is a more salient change in individuals’ gender identity. Jung (1944) introduced the idea that individuals move from secondary stereotyped behavior in young adulthood to a more balanced gender profile across middle. While both men and women must balance the dual challenges of work and relationships across middle, their trajectories through middle are affected by how they balance these two domains and on societal gender-stereotyped expectations concerning their commitments to each domain. Life-stage developmental theory places these particular ways in which individuals strive for balance in middle in a larger perspective. As discussed in the section on life-span theory, the ability to achieve balance may be based on a successful matching of investment of resources and life demands in middle.

Havighurst and Erikson: Generativity in Middle Life
While much research focuses on the challenges of middle and the conflicting demands of work and family, or caring for both children and elders (not necessarily simultaneously), concepts such as “life as learning” and “generativity” put the challenges of middle in a positive light. Havighurst (1972) viewed not only middle but each life phase as a time for attempting and achieving developmental tasks. Each life phase presents the individual with a unique environment in which to meet with, and to “the human individual learns his way through life” (p. 1). The emphasis on learning and mastering tasks reflects the understandings of the theory. The course of adult development is prescribed to some extent by societal institutions (e.g., family, church, government, media, economy) and individual development occurs within that larger framework. Thus, the individual is challenged to contribute not only to the well-being of self and family but also to the larger community.

Havighurst also saw one of the general tasks of middle age at reaching, and maintaining a satisfactory career level, and maintaining positive relations—relating to one’s spouse as a person, helping teenage children prepare for the adult world, and adjusting to and assisting aging parents. These goals mirror the concerns with agency and communion seen in other theories, but additional developmental tasks are also seen as particularly important in middle. These include accepting the physiological changes of middle, achieving adult social and civic responsibility, and developing satisfying leisure-time activities. As such, Havighurst’s view of middle extends beyond the psychosocial life (career and relationships) to also include both higher (societal responsibilities) and lower (biological concern) levels of analysis. All these developmental tasks are both structured by society and chosen by the individual, and offer opportunities for the middle-aged individual to learn more about life and about the world while making a contribution to others’ well-being.

Erikson’s (e.g., 1950) view of development also puts middle in a larger context by adopting a life-span perspective in which life tasks (psychosocial crises) are generally age-grouped, but also cumulative across life, and open to reemergence depending on life circumstances. His stages of industrial, intimate, and generativity are respectively expressed in the challenges of career, marriage, and parenting. While all these remain important across adulthood, the challenge of generativity versus stagnation is specific to middle. Erikson argues that it is in this period that the natural individual has the skills and resources to give to others. He defines generativity as any activity that is motivated by concern for the next generation.“Young” and caring parenting involves generativity, though having children in itself does not resolve this psychosocial task. Through giving, or concern for the next generation, adults not only assist others to develop society, but are able to step outside their own concerns to expand their view of life beyond themselves and their own time. Erikson claimed that this new perspective results from feelings of self-centered stagnation and offers new insights into one’s own life. Thus, middle brings with it at least for some segments of the population, an opportunity for attaining responsibility and authority; and a greater sense of self-direction and self-understanding (Goldhaber, 1949). The middle years are ones in which individuals act as heads of families, organizations, and communities (Erikson & Erikson, 1950). Their engagement in these multiple roles, and through it their generativity, has been linked to later well-being (e.g., Van dewter, Ostrove, & Stewart, 1997). While generativity involves giving of
A View on Middle Development from Life-Span Theory

onself to others, particularly the next generation, individuals may also benefit in terms of well-being by feeling that they have made a meaningful contribution to society as they enter their later years (Eysenck & Eysenck, 1995).

McAdams and De St. Aubin (1992) have elaborated Erikson's view of generativity in a psychosocial model (see also McAdams, Chapter 12, this volume). Inner drives and cultural demands that we are working in tandem to influence one's concern for the next generation and belief that the human enterprise is meaningful to society. These beliefs, desires and demands lead to generative activities such as creating or maintaining things that benefit the community. One of the reasons middle is a prime time for generative acts is that this is the time when the interplay of work and family challenge individuals to make pragmatic and communal sacrifices of themselves to their doing and to the larger community. These generative achievements often become part of the individual's self-concept or a significant role for self (McAdams, Hart, & Murzana, 1990) and are often remembered when older adults look back at middle (Conway & Helmes, 1999).

Individuals may, however, enter middle with different capacities for achieving generativity. Social structure affects individuals' health and educational opportunities and thus may indirectly affect their opportunities (as generativity and well-being (McAdams et al., 1990; Ryff & Singer, 1998). What types of factors affect the extent to which people are generative in middle? Harms (1972) noted that the tasks of middle age are set by societal expectations and constraints, and Erikson's (1960) view of the individual placing them or herself in a wider temporal and historical context through generativity, are concepts that are further elaborated in contextualistic views of development, such as Bronfenbrenner's (1979) human ecology model of development.

While these theories that describe how people normatively progress through adulthood have merit, the individual life circumstances of each adult also influence development, resulting in individual trajectories through middle. The human ecology model describes influences in the immediate environment (e.g., workplace, home), the interrelations of various internal and conflicting environments (e.g., having a part-time job while raising a child), as well as the larger external environment (e.g., living in a city versus a rural home). Finally, the overarching values of one's culture and society influence life choices and development. While middle age is a time when adults with the same fundamental tasks, the exact nature of these tasks and the opportunity for mastery, and therefore for generativity, also differ somewhat from one individual to the next. Life-span theory has made such a contextualistic view of development a cornerstone (cf. Baltes et al., 1990).

A person who is in the middle years, realizing that time passed and time left to live may be equal, and facing the need to balance career and

family, is always a prime period for achievement, for giving to others, and for learning about oneself by what he or she gives to others. According to Erikson, resolution of this middle developmental task sets the stage for the development of integrity in later life.

In this section, we have reviewed several prominent and partially contradictory theories of middle with special focus on three themes: time perspective, balancing life demands, and generativity. Research on middle age has not always, or maybe even often, been guided by theory. While sometimes based within a theoretical framework, much research on middle has focused on specific life events or situations that normatively occur in middle. The life-span framework for studying adult development examines the critical events and transitions that individuals face, how they cope with these transitions, and how this results in functional and dysfunctional outcomes for different individuals (Hultsch & Pleneau, 1979).

Besides an analysis of specific events, the timing, sequencing, and accumulation of life events and transitions are also important to the trajectory that individuals face, and how they adapt to middle and aging (Lerner & Hultsch, 1985). In the following sections, we present the life-span perspective on middle development. It demonstrates how life-span theory not only incorporates many important features of past theoretical work on middle but also provides a sophisticated framework for future theory development and empirical research that may further our understanding.

A View on Middle Development from Life-Span Theory

What is life-span developmental theory? Why would we expect to learn something new about middle by taking this perspective? In the following pages, we present six central propositions of life-span theory (see also Baltes et al., 1995; Staudinger, Martin, & Baltes, 1995) that show how these relate to the central themes in existing middle research and theory, and develop the consequences that these propositions may have for the study of middle life. Table 1 summarizes the propositions as well as the underlying principles for the study of middle development.

For many people, life after young adulthood is still connected with negative stereotypes, such as the belief that middle-aged people are bitter and tired, and that old age is largely void of decline and despair. The life-span view presented here argues against such simplistic views of development. Conceptualizing development across the life span as multidimensional, multifunctional, and multistage challenges models of middle development and aging that are oriented exclusively toward decrements (Baltes, 1993; Riley & Riley, 1987; Rose & Kahn, 1991).

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### Table 1.1
Summary of Life-Span Propositions and Their Implications for the Study of Middle Development

<table>
<thead>
<tr>
<th>Concept</th>
<th>Proposition</th>
<th>Implications for the Study of Middle Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life-Span Development</td>
<td>Development is the historical change in adaptive capacity influenced by biology and culture. Early life periods have a disproportionate effect on the nature of development.</td>
<td>What are the particular characteristics of development in middle life? It is useful to study middle in isolation. Is it crucial to consider transitions and frontiers of middle.</td>
</tr>
<tr>
<td>Development as Gain-Loss Dynamic</td>
<td>Development involves net gains (growth) but also net losses (fades). With increasing age, losses outweigh gains. A multidimensional, multilevel, multilevel, and multifunctional conception of development results from this perspective.</td>
<td>Middle is characterized by a net in the relation of gains to losses. Some domains of functioning are precocious, many maintain functioning, while others have already begun to decline.</td>
</tr>
<tr>
<td>Life-Span Changes in the Dynamic between Biology and Culture</td>
<td>Biological influences on development become more and more determinate with increasing age. Cultural support of development continues and is needed more with increasing age.</td>
<td>Middle and maturity are not the same. Given the changing role of gains and losses, there may be a need to distinguish between early and late middle.</td>
</tr>
<tr>
<td>Life-Span Changes in the Allocation of Resources</td>
<td>In conjunction with the culture-biology dynamics, age-related reduction in overall resources is marked. Resources are used to serve three major functions: growth, maintenance, and recovery, and regulation of limits. As losses increase with increasing age, maintenance, recovery, and regulation of limits become more and more prominent.</td>
<td>Middle is characterized by many changes in age and resources. Thus, middle is the period of greatest effort in managing resources and skills. Though maintenance and recovery are the most prominent in middle, both growth and loss management are also important.</td>
</tr>
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(continued)

### Table 1.1 Continued

<table>
<thead>
<tr>
<th>Concept</th>
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<th>Implications for the Study of Middle Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life-Span Development to Maturity</td>
<td>Throughout life, development demonstrates plasticity. The range and limits of development can be altered by life-span research.</td>
<td>Even though the range of plasticity is reduced by middle, there is still a possibility for change. Examining the range and limits of plasticity in middle can be useful in assessing stability.</td>
</tr>
<tr>
<td>Diachronic and Historical Evolution</td>
<td>The influences of gates and culture follow clear life stages. Growth, history, and growth.</td>
<td>The characteristics of middle are cohort-specific and may depend on the cultural-historical context.</td>
</tr>
</tbody>
</table>

DEFINING LIFE-SPAN DEVELOPMENT

The first proposition of life-span theory is that ontogenetic development is the lifelong selective change in adaptive capacity as it is influenced by the interaction between biology and culture. No age period holds supremacy in regulating development. The central feature of developmental process is "transactional adaptation" (Kohlberg, 1968, 1965, 1944, 1949) or "person-environment interaction" (e.g., Magnussen, 1967). Development is not simply the passive unfolding of biological constraints, including nested changes in the genome and historical transformations of society. The individual is actively selecting developmental contexts; can change contexts, and is essentially changed by contexts. Such ideas have been perfectly expressed in the concept of developmental tasks introduced by Erikson and Erikson.

This notion implies that biological models that view development as being limited to the first half of life and in being followed by aging in the second half are inadequate to describe human development from a psychological perspective. All developmental tasks implies concurrent and consecutive gains and losses, which can be either dependent on or independent of each other (see also Lifton & Perlmuter, 1969).

The notion of lifespan development thus implies that when studying middle, a first task is to investigate what development is in middle-age. It is no longer either that middle development is either only growth or only decline. Instead, its own unique characteristics must be identified. Second, when considering development as extending from conception until death, we are not interested in looking at one life phase by itself and in isolation. The particularity of any given life phase need some points of comparison to be identified. Thus, it does not seem useful to exclusively study middle-aged adults; young and old comparison groups should be included as well.

Young and old comparison groups are essential when determining the procedures and the consequences of middle. Examining young and older comparison groups, however, is still rarely done as can be seen when reviewing the literature on middle-age for an example, see e.g., Lutchen & Vojceh (1988). Most studies that focus middle in terms of their theoretical interest also focus exclusively on middle in terms of samples (e.g., Kline, Vondracek, & Young, 1996). When comparison age groups are included, most often younger ages leading up to middle are studied, and rarely old age following middle (e.g., Hulon & Blumenthal, 1995). Vondracek et al. (1991), including young, middle-aged, and old adults in a...
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Werner & Silver, 1993) in middle age. These are other life-span contexts where issues of discontinuity take center stage. Furthermore, health and functional changes that arise as a consequence of biological aging, such as decreases in sensory functioning, can serve as sources for developmental innovation and/or disruption in middle (Mortel & Verbrugge, 1995). As such, middle life can be characterized as both continuous and discontinuous depending on the domain of functioning being considered and the particular life events faced by individuals.

Development as a GAIN-LOSS Dynamic

Development not only implies growth (gains) but also implies decrements (losses). Life-span development includes the full range of directional possibilities: gains, stability, and loss. The process of development should not solely be described as a continued progression to higher levels of functioning, nor as a constant decline.

Contrary to widely held beliefs about childhood as a period of universal progressivism, losses occur even early in life. Piaget (1985), for example, described some cognitive libraries that increase with age and others that decrease with age. He credited this was in visual accuracy to advancement in cognitive stage, in this case the development of conceptual schemas. Similarly, in contrast to widely held beliefs about the pervasive neural decline with aging, there continue to be gains in later life. In language development, individuals may continue to modify and expand their verbal knowledge through middle adulthood and even into old age (e.g., Horn & Hofer, 1992). In a similar vein, there is evidence that middle-aged adults demonstrate peak or high performances (compared with young and old adults) in such areas as everyday problem solving, lifetime eating, and work-related expertise (e.g., Denney, 1995; Ericsson & Smith, 1991; Stadlinger & Baltes, 1994). Even in the field of memory, which is sometimes for the age-related decline, there are facets such as implicit memory (i.e., unintentional memory; Graf, 1990; Harwood, 1991) or autobiographical memory (e.g., Black, Levin, & Launoie, 1999; Cohen, 1991), which enhance stability and some increase across the life span. In terms of self- and emotion-related regulation, research has demonstrated that middle-aged adults are more aware of their emotions and more able to regulate them (e.g., Liberman-Yafet, DeVoe, & Bulka, 1999; Labouvie-Vief, Holm-Larsen, & Huber, 1987). Certainly, to define what constitutes a loss and what constitutes a gain is highly complex and dependent on age-graded, history-graded, and idiographic (reflexivity for a more extended discussion of this topic, see Baltes et al., 1994).

The life-span perspective considers development as a system of changes that encompasses positive and negative directions and consequences (Baltes, 1997; Heintz, 1994). When considering the overall balance between gains and losses across domains, a generally positive or negative picture may emerge, but with increasing age, the balance between gains and losses becomes increasingly negative.

When reviewing research on middle-age development, it seems that middle age is characterized by a rise in the relative of gains and losses. Some domains will show progress or stability, while others have already begun to show decline. In some respects, "middle-aged" looks like young adults and in other respects they look like older adults. This tie between gains and losses can be illustrated as follows:

Figure 4.7: Gains and Losses Across Domains
be related to some quite different life-span trajectories. Figure 1.1 shows theoretically derived developmental trajectories illustrating the many different ways that middle can be situated in the middle of the life span.

Middle age can be indistinguishable from youth and old age (trajectory c). Middle age can also be unique—either better or worse than both youth and old age (trajectories d and e). The "true" middle position is illustrated by trajectories a and b. Middle age can be better than youth and worse than old age (trajectory a). Or the other way around, middle age can be worse than youth but still better than old age (trajectory b). Middle-aged adults may be found to be like young adults (trajectories a and b), but they may also be found to be like old adults (trajectories c and d) depending on the domains under study.

Given these multiple trajectories, a useful contribution to the literature would be completion of a meta-analytic study that systematically reviews available evidence on middle development by sorting results into these categories to gain a better understanding of overall middle development. Empirical examples can be found for all these trajectories. However, the relative frequency of each trajectory across available studies still is un-cl

The frequency distribution of these trajectories may help researchers to form a picture of what it feels like from the inside to be in the middle. Do individuals in middle primarily experience themselves as operating at lower levels than before, including the prospect of stability for the years to come (trajectory c)? Or do they more commonly experience increased levels of functioning and an expected continuation of this increase in the future (trajectory d)? These trajectories are not only interesting in terms of subjective experiences of middle development but also important in understanding the developmental processes of middle such as stability, growth, and decline.

Based on a cross-sectional comparison, it was found that growth aspects of personality (e.g., self-acceptance, environmental mastery) follow as many as five different trajectories (R.C. G., p. Figure 1.1: Ryff & Singer, 1999). In the case of internal control beliefs in central life domains, such as marriage, work, finances, or health, four trajectories were identified (a), (c), (e), and (f) (Lachman & Weaver, 1999). So far, the curvilinear trajectories (d) and (e) seem to be underrepresented, though some evidence is also available for them in a study on the life-time development of attitude change. In this study, it was demonstrated that susceptibility to attitude change in middle (trajectory e) fitting very well with Noigartner's characterization of m.istels as moving from being cautious to being a socializer. The finding of attitude stability is complemented by evidence showing that at the same time attitude stability and certainty are at their highest in middle (trajectory d: Visser & Koomans, 1986). When moving to the domain of cognitive development, the Seattle longitudinal study provides evidence for almost all the depicted trajectories. Perceptual speed follows trajectory b; development of verbal ability and verbal memory reflects trajectory b; (logistical and spatial) reasoning follow trajectory d; and finally, the development of numerical reasoning follows trajectory f.

Within the same individuals, at the same moment in time, some functions may be increasing while others are decreasing or remaining stable. Normal development in adulthood, for example, includes increases in physical competence that are concurrent with decreases in the ability to acquire additional languages. Normal middle development includes normative biological losses (e.g., Finch, 1990), and some losses in some areas of intellectual functioning, while other domains of intellectual functioning and personality functioning may show stability and even increase (e.g., Rehfeldt, 1989).

According to the life-span perspective, development across middle (as development in other life phases) is characterized by the simultaneous as well as successive occurrence of increases (gains), decreases (losses), and maintenance (stability) in transactional-adaptive capacity. Thus development is multidirectional; it encompasses the increase, maintenance, and decrease of functioning across different domains. This implies that development is multidimensional rather than unidimensional (e.g., intellectual functioning involves distinct categories such as fluid versus crystallized intelligence; or personality is composed of five different dimensions).

Thus, when middle development is approached from a life-span perspective, it is important to distinguish between the overall balance of development gains and losses across domains as well as the domain-specific trajectories for particular functions. Such a point of view is consistent with a multifaceted or systemic approach to development (Ford, 1987). Development unfolds in many different domains of functioning. There is no unified developmental process that affects all dimensions of an individual in the same way. Although changes in some domains of functioning in an individual will tend to be correlated, it is possible for individuals to experience changes in some areas that are independent of changes in others. In the psychological sphere, personality functioning in adulthood seems to develop rather independently of physical functioning (e.g., Rehfeldt, 1990; Smith & Baltes, 1993). When studying development, it is often useful to be more meaningful to speak of domain-specific trajectories for particular functions (e.g., Karrir-RiceSmith, 1992). The "overall development" of a person would represent some complex admixture of development along specific dimensions. From a life-span perspective, therefore, middle is neither synonymous with stability nor with decline. With increasing age, however, the overall balance of gains to losses in level of functioning and availability across the different domains of development becomes less positive. Middle may mark the break-even point in the overall relation of gains to losses.
Log-Linear Changes in the Dynamic Between Biology and Culture

What may be underlying this change in the gain-loss ratio as individuals move through life? Bühler (e.g., 1989; 1993) has argued that it is both age-related decline in levels of biological functioning, and age-related increase in the need for a complex infrastructure of social support. Culture here refers to the entirety of psychological, social, material, and symbolic (knowledge-based) resources that humans have developed over millennia and that are transmitted across generations (e.g., Cole, 1991; Shweder, 1992). After biological maturity, the expressions and mechanisms of the genome decline in functional quality with age. Our body is biologically well-equipped until the end of the reproductive and parenting phase. Thereafter, evolution has not had much of a chance to optimize our biology (yet) because evolutionary selection primarily works through the mechanisms of reproduction and parenting (see a more extended discussion of these issues, see Bühler et al., 1999). At the same time, humankind has successfully developed culture in such a way that it is more and more capable of compensating for biological decline, at least to a certain degree. Without doubt, humans have in need of culture from the very start of their existence, but with increasing age, the need for and sophistication of cultural structures supporting human development increases.

The two main influences on human development, biology and culture, follow a certain life-span path. For midlife development, this implies that the bias between gains and losses could be grounded in a biological decline that is only at its beginning, and a cultural "infra-structure" that challenges as well as supports development during midlife. Pursuing this line of argument a bit further, however, may make it necessary—as mentioned in distinguishing two phases of midlife (early [40–50 yrs] and late [51–60 yrs])—that midlife. Some of the theories of midlife development described earlier, such as Levinson’s, also suggest that such a subdivision should be meaningful.

Early midlife (on average) may still be dominated by the assets culture provides. We reap the harvest of our efforts in education, career, parenthood, and biology is predominantly still on our side. Whereas toward the later phase of middle age (or even earlier) the loss of the biological decline and the social (societal) challenges start to outweigh assets. Examples of social-cultural challenges are the empty-nest situations (when children leave home) in the career realm, the first indicators of approaching retirement may become noticeable and intimate relationships may need to be redefined. With regard to biological declines, the literature supports the view that after age 50 biological declines become more prominent. Biological losses are described that only come to the fore around age 50 (e.g., decrease in muscle strength, decrease in

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sensory functioning, increase in cardiovascular diseases). Such bodily changes reach a noticeable level around age 50 (Morrill & Hesebrge, 1999).

According to our knowledge of the literature on middle development, studies including such a differentiation between early and late midlife are not yet broadly available (e.g., Hooker & Kanu, 1984; Lastman & Weaver, 1998; Some studies do exclusively focus on the early phases of midlife, between age 40 and 50 (e.g., Stutzer & McClellan, 1994; Holon & Klohnen, 1998; Vanderwee, et al., 1997). Should such a cut-point find empirical support after further investigations of the multi-phonomenons of middle development, it would seem useful to divide samples into groups of early midlifers ranging from 40 to 50 years and late midlifers ranging from 51 to 60 years of age.

Life-Span Changes in the Allocation of Resources

Related to the notion of the gain-loss ratio, and the forensic underlying changes in the ratio is the observation that organisms have limited resources and that these resources change in their range and flexibility across the life span (Bühler & Bühler, 1980). The gains/losses argument goes beyond the simple observation of multidirectionality in one- or more-developmental domains. Developmental domains are not independent of each other. A dynamic interplay ensues between gains and losses. Thus, a first limitation on resources results from investment into a specific path of development. No individual can do all things; there must be a selection of courses of action from the broader universe of possible plans. This idea has a long history in developmental science, and is similar to Waddington’s idea of canalization (Edeleman, 1987; Waddington, 1957). Under the assumption of limited adaptive resources, every selection at a developmental path necessarily implies that other possibilities have not been chosen, the selection of one developmental alternative (even if it has been "preselected", e.g., by the genome) necessarily implies the loss of potential to engage in many other developmental courses. In this sense, all development, including alternatives we would traditionally classify as exemplifying progresive growth, are complemented by an element of loss. One example is the negative side effects of professional specialization. With increasing proficiency in a particular career during midlife, one loses some potential to invest in proficiency in other careers. Similarly, by choosing a job, one gains security and attachment, but at the same time—loves the freedom and variation—related to changing patterns.

A second limitation on resources and their development ensues from age-related changes in the overall level and variability of resources. Across the life span, the totality of resources available for development decreases. Midlife stages present the individual with many competing developmental task domains such as those involving career, children, and aging parents.
Although an individual in middle usually has a high level of internal and external resources, the sheer number of demands can present a risk situation by exceeding those available resources (e.g., Bron, 1972). This suggests that the gain-loss dynamic shows configurations specific to age and life period. These should be considered when evaluating life-span scenarios for developmental optimization, protection against losses (maintenance of functioning), and recovery from dysfunctions in middle.

Three adaptive tasks differ in prevalence across the life span and require differing resource allocation: growth, maintenance, and recovery (or healing), and regulation of loss. The adaptive task of growth refers to behaviors that aim at reaching higher levels of functioning or adaptive capacity. Under the heading of maintenance and/or recovery are behaviors that refer to the stability of functioning in the face of challenge or the return to previous levels after a loss. The task of regulation of loss involves behaviors that organize adequate functioning at lower levels when maintenance or recovery is no longer possible.

In previous work, we have suggested that there is a systematic pattern to these life-span changes in the relative allocation of resources (Staudinger et al., 1995). In childhood, and up until young adulthood, the primary allocation of resources is oriented toward growth, and in old age resources are increasingly needed to regulate losses. Figure 1.2 illustrates that middle, according to this logic, should be characterized by a predominance of maintenance and recovery. Yet considerable resources are still allocated to growth (especially in early middle), while some resources are already needed for investment in the regulation of loss (more so in late middle).

Figure 1.2: The allocation of resource capacity to the three functional categories (growth, maintenance, and recovery) varies over the life span. Proportionately, resources in middle are primarily invested in maintenance and recovery but also growth (especially in early-middle) and regulation of losses (especially in late middle) play a role. The management of resource investment emerges as an important developmental task.

When it comes to the allocation of resources, millennials again take a middle position between the young old and the old. In some domains of life, they are using their resources for growth as do young adults and in others they invest in maintenance, repair, and also probably some management of loss. This is reflected in findings such as that women in middle begin investment in a career after having raised children. They invest in their professional growth (e.g., Meeus & Nettlethong, 1999). It is also reported, however, that a number of challenges to normal functioning arise during middle, such as changing in intimate relationship, changes in body functions and body image that require resources to achieve maintenance, and sometimes also recovery, of normal functioning (e.g., Kubisch et al., 1994).

One of the resource losses of middle often cited in the recent literature is the notion of the sandwich generation (e.g., Davis, 1981). This term refers to middle-aged persons who have to care for aging parents as well as for their adolescent children. The empirical “truth” however, is that the sandwich position is not very prevalent among 40- to 60-year-olds. It is certainly not a mass phenomenon in middle. Once the aging parents become in need of care, the (average) milnder’s children are already out of the house and leading independent lives. However, the sandwich position is not a myth when it comes to managing the responsibilities at work, at home, and toward aged parents (e.g., Baltes, 1994, Marks, 1998). This sandwich position particularly concerns women, who still are most commonly the primary caregivers of older parents. Demos concerning this management of conflicting responsibilities also demonstrate how one domain of life, such as work, can provide for the replenishing of resources as well as its exhaustion. Social interactions at work or even the need to think about other things than the family can be a resource to deal with the competing task toward aging parents (e.g., Laplaus, 1994, Marks, 1999).

The changing pattern of resource investment across middle offers a metaphor for viewing developmental tasks in this phase. The extent to which resources are expended on growth, maintenance, recovery, and loss may change even from early to late middle. At a general level, being able to match resources and life demands may be predictive of developmental success in middle.

Life-Span Development is Modular

Another central feature of life-span theory, related to the notion of resources, is a strong concern with the plasticity of development. Plasticity of development refers to the fact that any given developmental outcome is but one of numerous possible outcomes. The search for the target and limits of human plasticity, including its age-related changes, is fundamental and unique to the study of life-span development (e.g., Baltes et al., 1990).
Lerner, 1984. Magnusson, 1996. Plasticity denotes the range of latent re- sponse of functioning. It encompasses both the reserves currently available and those that may become available in the future. Not only will an indi- vidual differ in developmental status across different domains, but the same individual may also differ within one domain at different assess- ments across a day, a week, or a month (Nesselroade, 1975). For example, a one-time assessment of intellectual functioning ignores that an individu- al's scores on intelligence tests can change depending on factors such as anxiety, fatigue, perceived reality, and level of baseline per- formance (Cornelius, 1986; G.V. Labouvie, Mayer, Baltes, & Baltes, 1976). Individuals can also improve their performance substantially as a simple function of practice ("warming up") -- the degree to which currently avail- able reserve capacity is activated. This applies across adulthood; in old age, however, the range of reserve capacity is increasingly limited (e.g., Baltes, 1995).

Assuming that development is characterized by plasticity provides an interactive and dynamic view of the gene-environment interaction. The focus on plasticity brings to the foreground that "humans have a capacity for change across the life span from birth to death ... and that the con- sequences of the events of early childhood are continually transformed by later experiences, making the continuation of development more open than many have believed" (Brim & Kiger, 1980, p. 1). The notion of pla- sticity also opens vistas on intervention-oriented research that explores the possibilities of optimizing midlife development.

The implication of the notion of plasticity for the understanding and study of midlife development is that any finding so far reported about what midlife is like does not have the character of a natural law but is open to modification given the provision of appropriate circumstances. Finally, changes can be influenced to a certain degree by lifestyle features and health behavior (M невель & Verbrugge, 1993). Levels of intellectual func- tioning are open to improvement given the right training intervention. So far, however, midlife has not been the focal point of such intervention efforts as cognitive decline during midlife (Schaie, 1990). Range and limits of plasticity in midlife are still open to systematic investigation. The sand- box metaphor (pic. with case of older parents) that many women are facing in midlife would be an ideal circumstance for exploring the plasticity of func- tioning in middle. Questions such as "What, and for which individuals does this situation result in stress?" or "How is this stress experienced and how can it be reduced?" could guide such explorations. Thus, the life-span development of "life" in plasticity has helped to trace through midlife and frame a focus not only to develop interventions for those who have problems in midlife, but also to take a developmental approach, with a focus on optimizing the middle experience (Strandberg et al., 1995).

ONTOPHAGISTIC AND HISTORICAL CONTEXTUALISMS OF CHARACTERIZED LIFE-SPAN DEVELOPMENT

When development is described as the outcome of ongoing processes of transactional adaptation in selected domains, analytic attention must shift to the question: What intra- and extra-personal conditions are triggering the process of development (e.g., Ono- ton & Rosen, 1973) that development is always the simultaneous and com- plex outcome of forces of nature and nurture, of genes and environments of intra- and extra-personal influences. To better understand the fabric of developmental contexts, these logics organizing environmental and biological influences as their interaction must be considered: the norma- tive age graded, the normative history graded, and the nonnormative logic (Baltes & Baltes, 1980). This three-pronged system of biological and contextual influence serves important functions in understanding interpersonal and intercultural similarities as well as differences in developmental trajectories (e.g., Baltes & Nesselroade, 1984; Darerlger, 1986). Age graded, history graded, and nonnormative influences combine to produce similarities and differences in developmental challenges and opportunities. The age- graded logic refers to developmental conditions of a biological or societal nature that are nonnormative linked to chronological age, such as menopause or retirement. The nonnormative logic refers to developmental circum- stances that are closely linked to the life circumstances of a particular indi- vidual. In the following, however, we pay particular attention to the role of historical influences on development.

Cultural and historical influences represent, in effect, one area or one level of the broader set of contextual influences that affect development (e.g., Lerner & von Eye, 1992). In the development of life-span theory and research, they have always obtained special attention. Historical periods and cultural changes condition and shape the opportunity structures to which individuals have access. Social structures are constantly evolving, and vary across cultures and socioeconomic groups. Major historical events (e.g., war, economic depression, migrations) and historical changes in technology (e.g., introduction of antibiotics, increasing availability of food, the growing role of the computer in society) affect the level and di- rection of psychological development (e.g., Baltes, 1968; Carpi, 1997; Eiler, 1985; Eiler, 1972; Eiley, 1964). Older showed that the Great Depression had long-term effects on the psychological adjustment of Amer- ican men. That effect, however, was moderated by age during the Depres- sion, and prior family socialization practices. It was found that during times of economic hardship people marry earlier, try to enter the workforce
least a certain degree—these women did not have any large family in young adulthood because of gender stereotypes and self-cultivation conditions at that time. Consequently, it will be interesting to see whether coming generations of women who indeed have held more freedom to make life choices as young adults will feel the same amount of strain when they reach middle age.

The very notion of middle age life phase has been claimed to be subject to historical variability (e.g., Hays & Washington, 1999). We would not set far for arguing that middle age is only an invention of modern times, but it makes intuitive sense that prolonged life expectancy as well as advancements in medical treatment, nutrition, and lifestyle have set the milestones of middle age at higher ages. In earlier times, a 60-year-old man and woman have been thought of as middle-aged and a 30-year-old in being old. Nowadays, we observe a prolongation of younger adulthood as well as of middle adulthood. What was called old age is more and more likely to be categorized as middle age even. So opens the discussion whether the age definition should be reconsidered only by looking at historical trends (but at least partly negative aging stereotypes—people are not used to be considered old if they are still fit to look life phases, particularly middle, to a certain constriction of developmental resources and challenges than is known for early adulthood and old age as well). Regardless of how we label them, it is more likely fruitful to look life phases, particularly middle, to a certain constriction of developmental resources and challenges than is known for early adulthood and old age as well. Regardless of how we label them, it is more likely fruitful to look life phases, particularly middle, to a certain constriction of developmental resources and challenges than is known for early adulthood and old age as well. 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30 Handbooks of Development


Life-span developmental theory provides a framework for understanding human aging. The main purpose of theory in the study of aging is to provide a context for describing and explaining the regular transformations that occur with time to representative organisms living under representative conditions. Theories in general aid the process of articulating meaningful patterns from observations that would otherwise be disconnected pieces of a puzzle and less meaningful. In the study of aging, theories serve as frameworks for organizing research findings as well as general observations or intuitions. THE DEFINITIVE RESOURCE ON MIDLIFE DEVELOPMENT Edited by Margie Lachman, a leader in the field, Handbook of Midlife Development provides an up-to-date portrayal of human development during the middle years of the life span. Featuring contributions from well-established, highly regarded experts, this exhaustive reference fills the gap for a compilation of research on this increasingly important topic. Divided into four comprehensive sections, the book addresses the theoretical, biomedical, psychological, and social aspects of midlife development. Handbook of Midlife Development is an indispensable resource for professionals and practitioners who work with adults and for researchers and students who study adult development and related topics. 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. Staudinger UM, Bluck S (2001) A view of midlife development from life-span theory. In: Lachman ME (ed) Handbook of midlife development.