

Diversity in Late Life

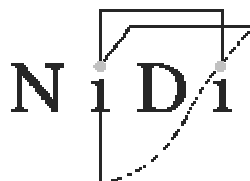
Differentiatie op latere leeftijd

<http://www.scw.vu.nl/~tilburg/dll/>

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Concise summary of the research problematic

The life-course approach, with its emphasis on the *chronology*, *multidimensionality*, *social embeddedness* and *historic-specificity* of personal biographies, offers the framework for analyzing the production and reproduction of heterogeneity in late life. Life transitions and the trajectories in which they are implanted, are analyzed. Transitions are status passages that mark socially significant points of change in people's lives. The concept of trajectories indicates that status changes follow socially structured sequences and that there are linkages between them. The first objective of the program is to describe the diversity in late-life trajectories in key multiple life domains: *marriage, the family, the household, personal relationships, health, employment and the domicile*. The second objective of the research program is to identify the mechanisms underlying the diversity in late-life trajectories, focusing on the one hand on changes in specific life domains, and on the other hand, on the interrelation of changes in a variety of domains. To this end, the life-course approach will be supplemented by domain-specific theories that focus on the selection and reorganization of life goals, given the resources to obtain them. The panel data set is derived from the NESTOR-LSN and LASA research programs (<http://ssg.scw.vu.nl/lasa/>).

The research question of the program as a whole can be summarized as: In what ways is late-life diversity in the domains of marriage, the family, the household, personal relationships, health, employment and the domicile shaped by the cumulative contingencies of the biographical past (chronology), synchronization of transitions across multiple life domains (multidimensionality), interdependencies with the lives of social network members (social embeddedness) and demographic, cultural, socioeconomic, institutional context (historic specificity) of life course trajectories?

The proposed program is comprised of five projects. *Vertical integration.* The life course is the guiding, integrative framework for the individual projects. Each project makes use of the same longitudinal data set. Dynamic analyses of health and social embeddedness form a central theme in the projects: each project considers the interplay between late-life transitions and antecedent, concurrent and subsequent health, social embeddedness and wellbeing. *Horizontal integration.* Each of these four projects focuses on problem-specific behavioral choices within the life course framework: the selection and reorganization of life goals, given the resources to obtain these. Life goals are conditioned amongst others by people's biographical pasts (emphasis on chronology), and the needs and activities of network members (emphasis on social embeddedness). Resources arise from the circumstances in the various domains of a person's life (emphasis on multidimensionality) in conjunction with the economic, institutional and social-cultural context (emphasis on historic specificity). Four projects provide an in-depth focus on the antecedents and consequences of late-life changes in a specific domain: employment (project 1), marriage (project 2), and the domicile (project 3 on residential relocation among non-institutionalized older adults and project 4 on institutionalization). The fifth 'comprehensive' project considers a wide range of late life transitions, including those in the domains that are studied in the projects 1 to 4.

Scientific relevance

Though the notion of increasing intracohort heterogeneity with age is one of the tenets of gerontology, surprisingly little research on late-life diversity and its antecedents and consequences has been carried out (Dannefer, 1996). There is a small body of studies showing increasing diversity with age on physiological (Maddox & Clark, 1992; Maddox & Douglass, 1974; Nelson & Dannefer, 1992; Thomae, 1976), psychological (Nelson & Dannefer, 1992; Riegel, Riegel & Meyer, 1967) and socioeconomic characteristics (Crystal & Shea, 1990; Dannefer & Sell, 1988). However, few of the existing studies focus on late-life diversity, and the oldest respondents are often lumped together (e.g. 60+). There is also a paucity of longitudinal research: many of the studies reporting increases in variability with increasing age are based on cross-sectional designs (Nelson & Dannefer, 1992). The mechanisms underlying the diversity of the aged and its ramifications for social inequality require attention and explanation. This lacuna forms the starting point for our research program. We propose that the life-course approach, with its emphasis on the *chronology, multidimensionality, social embeddedness* and *historic-specificity* of personal biographies (Elder, 1985, 1994), offers an inspiring and original framework for analyzing the production and reproduction of heterogeneity in late life. Two units in life-course analysis are 'transition' and 'trajectory' (Elder, 1985; George, 1993; Hagestad, 1991). The transitions are the status passages that mark socially significant points of change in people's lives. Note that these transition points do not necessarily have the character of an event (Willekens, 1999): they are not always clearly marked at a specific moment in time, with a precise pre- and a post-condition. The transition points might unfold over an extended period. The concept of the trajectory denotes that phases in life follow socially defined sequences and that there are linkages between them. Trajectories are constituted by transitions, while transitions are embedded in trajectories.

The last stages of life have received little attention in life-course research (George, 1996). Most research has looked at transitions in the early stages of the life course, such as leaving home, entering the labor force and getting married. Life-course analyses have not kept up with the demographic reality of the increase in survival at older ages, even the most advanced ages (Vaupel, 1997). With its focus on late life, and with its use of data from a panel of older adults surveyed over a period of at least seven years, our research program fills an empirical and conceptual void in life-course research. Furthermore, it addresses the

challenging question of whether 'adding years to life' also implies 'adding life to years' (RIVM, 1997; WHO, 1993).

Elaboration of the problematic

Old age is a 'socially unstructured' period of life (Hagestad & Neugarten, 1985), meaning there are few social expectations about the roles for older adults to fulfill, and few institutionalized mechanisms that impose order in life. This may be one of the reasons why there have been few studies of late-life transitions. Nevertheless, old age is definitely not 'uneventful', as attested by experiences such as becoming a grandparent or a greatgrandparent, losing a spouse, losing a child, outsurviving friends and siblings, remarrying, adult children returning to the parental home, moving house, entering a residential care facility, reentering the educational system, taking on a new paid job, and so forth.

The first objective of the program is to describe the diversity in late-life trajectories in key multiple life domains: *marriage, the family, the household, personal relationships, health, employment and the domicile*. A focus on trajectories draws attention not only to the occurrence and timing of transitions, but also to their antecedents and consequences. Of importance is that antecedents and consequences over a wide variety of life domains will be considered: e.g. the financial-economic, health, and social-relational. Moreover, objective as well as subjective antecedents and consequences will be considered, e.g. actual income versus the perceived adequacy of income, self-reported physical functioning versus physical performance assessed by tests, and personal network size versus loneliness.

The second objective of the research program is to identify the mechanisms underlying the diversity in late-life trajectories, focusing on the one hand on changes in specific life domains (projects 1 through 4), and on the other hand, on the interrelation of changes in a variety of domains (project 5). To this end, the life-course approach, which serves as the integrative framework of the program, will be supplemented by domain-specific theories tailored to the problems at hand. These theories are: rational choice theory (project 1), the theory of social production functions (project 2), exchange theory (project 3), and the theory of selective optimization with compensation (projects 4 and 5). Common to these theories is their focus on the selection and reorganization of life goals, given the resources to obtain them.

The assumption underlying late-life diversity is that patterns of diversification increase among older adults with advancing age. We are referring to, for example, differences *in* health, social embeddedness, and well-being *between* men and women, higher educated and lower educated, those from a poor and those from an advantaged social milieu, the healthy and the less healthy, singles and those who are partnered, and so forth. Note that in the previous example certain characteristics were mentioned twice (health, and being partnered as a specific form of social embeddedness), indicating that sometimes a characteristic can be considered to be the antecedent and at other times to be the consequence. Such interwovenness is of course inherent to longitudinal research. We would like to point out that determinants and outcomes are carefully delineated in the individual projects.

The life course as integrative framework

Four central life-course concepts (described in what follows) will be used to create consistency and coherence in the research questions in and across the research projects. Though the analytical importance of these life-course concepts differs across the projects –given the research questions at hand– the four concepts together form the guiding and integrative framework of the proposed research program.

Chronology emphasizes the continuing and cumulative influence of earlier advantages and disadvantages on trajectories later in life. People's biographical pasts affect their present circumstances, and present circumstances shape future directions (O'Rand, 1996). Empirical studies into the importance of earlier life experiences for late life are beginning to emerge in a variety of disciplinary fields: personality psychology (Andersson & Stevens, 1993), family studies (Dykstra, 1998), sociology (Moen, Dempster-McCalin & Williams, 1989, 1992) and epidemiology (van de Mheen, 1998). This is pioneering work on cumulative contingencies and late life, requiring further development. We propose that key constructs in this

endeavor are: acquired social resources (as embedded in relationships with family and friends), personal resources (skills, competencies), financial resources (income, wealth and assets) and health resources (functional and cognitive capacities). We should emphasize that the acquisition of these resources is determined by an interplay of institutional arrangements and individual actions over the course of a life time.

Multidimensionality of the life course implies that a person's biography is not one-dimensional, but made up of various life domains. Status changes in one life domain may preclude, delay, enable or accelerate status changes in other life domains. Insofar life-course studies on the last stages of life exist, their focus tends to be restricted to single life domains. For example, there has been a flux of studies on determinants of retirement (e.g. Gendell, 1998; Henkens & Siegers, 1991a; Kohli, Rein, Guillemard & van Gunsteren, 1991; Leonesio, 1996; Lindeboom, 1996) but they have mostly paid attention to finances and health, overlooking the interrelations between the exit from the labor force and other life domains. In a similar vein, studies on widowhood (e.g. Lopata, 1987; Nieboer, 1997; Stevens, 1989; van Baarsen, Smit, Snijders & Knipscheer, 1999) have had little regard for interrelationships with retirement and the domicile. As a result, little is known about the sequencing and spacing of late-life transitions across domains. As yet, there are no answers to questions such as how common it is for widowhood to precede retirement, or how common it is that people move after the death of their spouse. Moreover, the empirical and theoretical separation of these issues has limited the understanding of the nexus of late-life transitions. Thus, there is limited knowledge about questions such as whether the decision to retire early is governed by family considerations, or about whether the decision to move is sparked by retirement or widowhood, what the consequences of widowhood are for participation in the labor market or in volunteer work, and so forth. In the proposed research program, the concepts of the 'triggering' and 'conditioning' roles of life trajectories (Mulder & Hooimeijer, 1999) will be applied in analyzing the interlinkages among life domains. A status change in one domain (e.g. serious physical impairment) can trigger a change in another domain (e.g. the decision to look for a new home). Whether the older adult actually moves is conditioned by the circumstances in the various domains of his or her life (e.g. finances, parenthood) and by institutional circumstances (e.g. housing market, transportation facilities). To examine the consequences of late-life transitions, the distinction between 'primary' and 'secondary' stressors (Pearlin & Skaff, 1996) is useful. Proliferation of stressors can occur, meaning that a deleterious event in a particular life domain (the primary stressor) is converted into other and more enduring hardships in other life domains (secondary stressors). For example, a hip fracture may lead to financial strains, and both stressors then contribute to negative outcomes.

Social embeddedness emphasizes that people's lives are typically linked through personal relationships with family and friends. Hagestad (1986) speaks about 'interwoven lives' to describe the ways in which people's life goals are bound by the needs, dictates and supports of others whose lives run close to their own. So-called 'counterpoint' transitions (Riley & Waring, 1976) are an example: a decision taken voluntarily by one family member may have unwanted or unintended consequences for other family members. Divorce not only affects the bond between the divorcing couple and their children, but also that between the divorcees and their respective parents, and that between grandparents and grandchildren (Hagestad, 1984; Johnson, 1988). In the proposed research program, attention will be paid to the various ways in which the turns older adults' lives take are shaped by events happening to and supports provided by, and considerations of the circumstances of personal network members.

Historic-specificity emphasizes the interplay between people's lives and historical times. The demographic, cultural, socioeconomic and institutional circumstances of a particular period in time shape the life course by providing opportunities and constraints for reaching valued goals (Mayer, 1986; Mayer & Müller, 1986). Historical effects have the form of a 'cohort' effect when social change differentiates the life chances of successive cohorts. They take the form of a 'period' effect when their influence is relatively uniform across birth cohorts. In the proposed research program, we will not only look at the effects of 'grand external events' (Hareven, 1982) such as the Great Depression or the Second World War on

the timing and patterning of life transitions, but also at diachronic changes in legislation, policy, and the ideological climate.

Innovative nature of the research proposal

The proposed research program's topic is new: late-life diversity is poorly articulated and empirical evidence is sparse both within aging and life-course studies. The program's approach is innovative and original: with its combination of retrospective and prospective life history data, and its use of central life-course concepts together with domain-specific theories to identify the mechanisms underlying late-life diversity, the program brings a dynamic (with its emphasis on the cumulative contingencies of biographical and historical pasts), multilevel (with its emphasis on social embeddedness and historical specificity) and multifaceted (with its emphasis on the multidimensionality of biographies) perspective to the question of late-life diversity. The comprehensiveness of the program's focus is new: the consideration of both antecedents and consequences of a wide range of key late-life transitions is novel and unique. The program will shed new light on 'old' questions of social inequality (Walker, 1983). One contribution lies in the program's consideration of *intragenerational* inequalities (i.e. over the course of a life time). Previous research has primarily looked at the persistence and magnitude of *intergenerational* inequalities (i.e. from parent to child; de Graaf & Luijkx, 1995). A second contribution lies in the consideration of a wider range of sources of social inequality. Existing studies have largely focused on participation in the educational and occupational spheres of life, whereas this program also looks at the role of marriage, family ties and health. A third contribution lies in the diachronic analysis of social inequality. Previous research has typically considered status determinants as permanent (i.e. not subject to change) characteristics of individuals and populations.

The issues addressed in the proposed program are prominent and timely questions on the international research agenda (Dannefer & Uhlenberg, 1999; Hagestad, 1998; Marshall, 1996). Little is known about the antecedents, consequences and range of diversity in late life. As yet there are no satisfactory answers to the question of the ways in which late life diversity is shaped by social institutions, the significant others who surround each individual throughout a long lifetime (Kahn, 1979; Kahn & Antonucci, 1980), and individual behavior. The NESTOR-LSN and LASA data sets are uniquely qualified for the examination of these issues. If the proposed program of research is carried out, it will put Dutch research on late life diversity among the international vanguard. The unique combination of features in LSN and LASA involves (a) the focus on older adults, (b) the relatively large sample size, (c) the panel character of the data, i.e. the repeated measures over time, and (d) the extensive inventory of life histories. This unique combination of features is not found elsewhere. Though there are several large scale surveys focusing on older age, Aging in Manitoba (AIM), the Duke Longitudinal Studies of Aging (Duke I & II), the U.S. Established Populations for the Epidemiologic Study of the Elderly (EPESE), the U.S. Longitudinal Study of Aging (LSOA), the UK Cambridge over 75 Cohort (CC75C), the French Personnes Agées QUID (PAQUID), and the Swedish LUND 80+ study, their substantive focus tends to be on health, care and cognitive functioning – not on the life course. Existing panel studies with detailed information on individual life histories, the U.S. National Survey of Families and Households (NSFH), the British Household Panel Survey (BHPS), the Panel Study on Belgian Households (PSBH), and the German Life History Studies (GLHS), have relatively small numbers of older adults in their samples. The Berlin Aging Study (BASE) has extensive life history data, but a relatively small sample size, while its focus is on the very old (70+).

Methods

The proposed research program will make use of a panel data set derived from two research programs, NESTOR-LSN and LASA (see below). At the start of the project, a database with status changes will be composed. Status changes are characterized as 'significant' if they (i) occur to a considerable proportion of older adults, (ii) decisively determine the course of later life, (iii) have a major impact on late-life wellbeing, or (iv) reflect changes in institutional arrangements. Within the projects 1 through 4, research questions focus on a single status change and its determinants. The occurrence of transitions will be analyzed by means of lo-

gistic regression and survival analysis as available in SPSS. In case a specific status change occurred several times, e.g. multiple changes in marital status (project 2) and multiple residential relocations (project 3), or several status changes of a different kind are studied (project 5 in particular), the following research strategies will be applied. If the focus is on a sequence of status changes and its timing, event history analysis and sequence analysis (Dijkstra, 1999; Dijkstra & Taris, 1995) are appropriate. These analyses might result in the development of a typology describing the occurrence and timing of multiple status changes. The analysis of a categorical dependent variable requires techniques such as logit loglinear analysis as available in SPSS or latent class analysis (LEM; Vermunt, 1997). Additionally, multilevel logistic regression analysis (MLN; Rasbash et al., 2000), in which the events and their characteristics are nested within respondents, will be applied to discover antecedents of the events.

For the study of the consequences of the transition under investigation within project 1 through 4, the social embeddedness, health and wellbeing before and after the occurrence of the transition will be compared. For these analyses, (multilevel) regression analysis and linear structural modeling with multiple dependent variables combined with multi-sample analysis (LISREL; Jöreskog & Sörbom, 1981) are appropriate techniques. Multilevel regression analysis will be applied when there are multiple indicators for a specific outcome, such as participation in different types of organizations and the support exchanged within different (types of) relationships. Multilevel regression analysis will also be applied within project 5, if the focus is on the interlinkages of trajectories of status changes across the life course and trajectories of late-life changes in social embeddedness, health and wellbeing. Selective mortality effects (Clark, Maddox & Steinhauser, 1993) will explicitly be considered in all analyses.

Multidisciplinary collaboration

The participants in the proposed research program bring together expertise from a wide range of disciplines: sociology, gerontology, epidemiology, demography, statistics, psychology and research methods. They form a multidisciplinary team of researchers. The program uses an interdisciplinary framework, the life-course approach. The intellectual roots of the life course stem from a variety of disciplines (Hareven, 1982), and it offers a conceptual framework that links and integrates insights from a variety of social scientific disciplines (Dykstra & van Wissen, 1999). The life-course approach draws on the concept of the cohort as developed by *demographers*. The emphasis on biography and individual development is adopted from *psychology*. The idea of expected and socially shared transitions and trajectories is derived from the *sociology* of age differentiation. The notion that status transitions entail a complex set of changes in people's social identities is borrowed from the *anthropological* work on age grading. Finally, the focus on the diachronic changes that have an impact on the timing and patterning of life transitions is typical of a *historical* perspective.

Societal relevance

Many older adults living today never expected to reach their current age. The changes in survival patterns have been so rapid that they have created 'surprised survivors' (Hagestad, 1998). Our society is characterized by a 'structural lag' (Riley & Riley, 1989, 1994): there is a mismatch between the strengths and capacities of increasing numbers of older adults and the lack of role opportunities for them. Findings from the proposed research program will provide current and future generations of older adults with guidelines on how to plan their lives. They will also increase policy makers' and service providers' awareness of the need for changes to better accommodate older adults' lives, and show ways in which to develop and implement programs –at work, in education, in the family, in recreation and leisure, in housing, in health care services and institutions– to meet older adults capabilities and needs. Creating role opportunities for older adults has repercussions for people of every age. For example, providing older adults with employment or other opportunities for meaningful participation can provide free time for middle-aged adults caught in the time bind (Hochschild, 1997) of work and family.

International links

At present, members of the research team actively participate in the following networks e.g. the International Network of Research on Elder Care (INREC), the International Association of Gerontology (IAG), the International Association for the Study of Social and Personal Relationships (ISSPR), the International Network for Social Network Analysis (INSNA), and the Network for Integrated European Population Studies (NIEPS).

Within both the NESTOR-LSN and LASA research program, intensive contacts with researchers from other countries were established and maintained, resulting in a team of internationally acknowledged experts, who can be called upon for consultation, guidance and advice. Since 1993 five international workshops have been organized to discuss a variety of substantive, methodological, study design and organizational issues. The proposed program of research will be carried out in close consultation with these and other international colleagues. In addition to bilateral contacts, a workshop will be organized in 2002 in order to discuss the proposed program, preliminary results from the first year of the program and the outline for the remaining three years.

Horizontal and vertical integration

The proposed program is comprised of five projects. *Vertical integration.* The life course is the guiding, integrative framework for the individual projects. Each project makes use of the same longitudinal data set. Dynamic analyses of health and social embeddedness form a central theme in the projects: each project considers the interplay between late-life transitions and antecedent, concurrent and subsequent health, social embeddedness and wellbeing. *Horizontal integration.* Each of these four projects focuses on problem-specific behavioral choices within the life course framework: the selection and reorganization of life goals, given the resources to obtain these. Life goals are conditioned amongst others by people's biographical pasts (emphasis on chronology), and the needs and activities of network members (emphasis on social embeddedness). Resources arise from the circumstances in the various domains of a person's life (emphasis on multidimensionality) in conjunction with the economic, institutional and social-cultural context (emphasis on historic specificity). Four projects provide an in-depth focus on the antecedents and consequences of late-life changes in a specific domain: employment (project 1), marriage (project 2), and the domicile (project 3 on residential relocation among non-institutionalized older adults and project 4 on institutionalization). These domains were selected because they tend to be associated with 'old age'. However, recent decades have witnessed significant changes in the likelihood and timing of their occurrence (O'Rand & Campbell, 1999; Liefbroer & Dykstra, 2000). The fifth 'comprehensive' project considers a wide range of late life transitions, including those in the domains that are studied in the projects 1 to 4. Changes in physical and cognitive health will be analyzed in greater detail than is the case in the other projects in an attempt to uncover the multiplexity of health and other life changes. More or less 'sudden' health changes will be studied along with more gradual changes. Changes in health will be analytically distinguished as either 'triggers' or 'conditioners' (Mulder & Hooimeijer, 1999) of demographic and social life changes. The project's focus on social embeddedness is also shared with the other projects. An important difference is, however, that late-life *trajectories* of social embeddedness will be examined, whereas the other projects view social embeddedness at specified points in time, namely only as an antecedent or as the consequence of the transition under investigation. In project 5 both socially-normative status changes (e.g. exit from the labor force, empty nest, grantparenthood) and socially non-normative status changes (e.g. a new partner, reentry into the labor force, the loss of adult children) will be considered. There is little knowledge about the ways in which different late-life transitions, such as widowhood and residential relocation, or the birth of grandchildren and changes in social participation are linked. Though these interlinkages are considered in projects 1 through 4, they are not treated in the overarching context of a series of status changes in different life domains. The application of the life course perspective with its emphasis on multidimensional *trajectories* will provide a characterization of late life that does not have the limitations of traditional approaches in which isolated events have been studied.

The next table provides an overview of the vertical and horizontal integration. It describes the linkages between the research questions (RQ) of the five projects and the four life-course concepts that form the guiding and integrative framework of the research program (see above). More information on the projects' significance and position in the program is provided within the respective project proposals.

<i>Vertical integration</i>	<i>Horizontal integration</i>				
	Late life changes in a specific domain				Comprehensive Project 5
	Project 1 Retirement	Project 2 Marriage	Project 3 Relocation	Project 4 Institutionalization	
Chronology	RQ 1 & 3	RQ 1 & 2	RQ 4	RQ 1 & 3	RQ 1 & 2
Multidimensionality	RQ 1 & 3	RQ 2	RQ 1	RQ 1 & 3	RQ 1 & 2
Social embeddedness	RQ 2	RQ 2 & 3 & 4	RQ 2 & 3	RQ 4	RQ 2
Historic-specific	RQ 4	RQ 1	RQ 4b	RQ 2	RQ 2 & 3

Organization of the program

Program seminars will be organized on a regular basis. Meetings will be aimed at monitoring the progress within the projects, and the exchange of expertise – in particular with regard to the practical implementation of the projects (e.g. construction of life history files, analysis of life history data, analysis of multilevel longitudinal data) and the elaboration of conceptual frameworks. Joint publications of researchers from the participating institutes (the Department of Sociology & Social Gerontology of the Vrije Universiteit Amsterdam and the Netherlands Interdisciplinary Demographic Institute) will strengthen cohesion within the program.

Data sources relevant to the program

The proposed research program will make use of data from two research programs initiated by the Vrije Universiteit Amsterdam: Living arrangements and Social Networks of older adults (NESTOR-LSN, in cooperation with the Netherlands Interdisciplinary Demographic Institute in The Hague) and the Longitudinal Aging Study Amsterdam (LASA). The available database of LSN and LASA data follows a panel study design. In the LSN main study (Broese van Groenou, van Tilburg, de Leeuw & Liefbroer, 1995; van Tilburg, Dykstra, Liefbroer & Broese van Groenou, 1995), face-to-face interviews were conducted in 1992 (T1) with 4494 men and women born in 1903 through 1937. The stratified sample was randomly taken from the population registers of eleven municipalities, varying in population size, in three regions in the Netherlands. Respondents born in 1908 through 1937 were part of three follow-ups by LASA (Smit & Comijs, 2000; Smit & de Vries, 1994; Smit, de Vries & Poppelaars, 1998) with observations in 1992-1993 (T2; N=3107), 1995-1996 (T3; N=2302) and 1998-1999 (T4; N= 2076). About 39% has been deceased (N=4494). A fourth follow-up (T5) will be conducted in 2001-2002. A new cohort will be added (precisely which years of birth will be added to the sample has not yet been decided by the LASA-directorship). LASA collected data, among others, by means of two face-to-face interviews and a written questionnaire within each observation.

LSN and LASA provide extensive information on, among others: Demographic aspects, such as partner, household, employment and residential history; other demographic characteristics such as current marital and partner status, household and family composition, socioeconomic status and employment. Estimate of income, evaluation of the income and expected change in income. Housing characteristics, such as type of current residence, ownership of the house, facilities and adaptations, expectations towards a move, type of home one wants to move to, reason for moving, and evaluation of the neighborhood. Social participation in voluntary organizations (clubs, organizations, recreation, hobbies, classes) and volunteer work. Personal network size and composition, characteristics of the relationships with the members of the personal network such as household members, the partner, children and siblings and in laws, other kin, neighbors, friends, contacts within organizations and acquaintances (van Tilburg, 1995; van Tilburg, Broese van Groenou & Thomése, 1995); informal and formal support obtained (self care and instrumental); filial responsibility expectations (Brody, Johnson, Fulcomer & Lang, 1983; Hamon & Blieszner, 1990). Physical functioning:

objective measurements of physical performance, i.e. tests for the measurement of dexterity, strength and endurance, using time needed for each of four physical tests (NCHS, 1990; Magaziner, 1991), subjective measurements of functional limitations (ADL capacity), chronic conditions (CNLSD, CVD, CVA, diabetes, cancer, arthritis, incontinence; Statistics Netherlands, 1989; Van der Lende et al., 1975; Rose, 1962) as reported by the respondent and by the general practitioner, self-reported health, health compared to age peers, present and future health perception (Brook et al., 1979; Anderson et al., 1990), hearing, vision and speech (Van Sonsbeek, 1988). Cognitive functioning: cognitive impairment (MMSE; Folstein, Folstein & McHugh, 1975), everyday memory (Wilson et al., 1985; Forbes, 1992), fluid intelligence (Raven, 1984), information processing speed (Rabbitt, 1991), memory and learning ability (Rey, 1964; Heslinga et al., 1983). Wellbeing: global wellbeing (Statistics Netherlands, 1990), loneliness (de Jong Gierveld & Kamphuis, 1985), anxiety (Zigmond & Snaith, 1983), depressive symptoms (Beekman, 1996; Radloff, 1977), and mortality and causes of death (derived from municipalities and Statistics Netherlands). Life style, such as drinking and smoking behavior. Psychological aspects: perceived self-efficacy (Sherer et al., 1982; Bosscher, 1991), mastery (Pearlin & Schooler, 1978; Ormel et al., 1992), physical perceived self-efficacy (Ryckman et al., 1982; Bosscher, 1991), neuroticism, social inadequacy (Luteijn et al., 1985) and self-esteem (Tempelman, 1987). Detailed information is available at <http://ssg.scw.vu.nl/lasa/> and in numerous publications by LSN and LASA researchers (references available at the website).

Description of the research design for the entire period

Joint and parallel activities of researchers are described. Note that due to the different duration and design of the projects parallel research activities are not always scheduled in the same year. With respect to the explanation of the occurrence of events, the researchers will identify a number of relevant antecedents. Another parallel activity is the description of differences in, if relevant, social embeddedness, health, wellbeing and mortality for those who have and have not experienced the specific event central in the projects 1 to 4. A joint task of the researchers involved in the program will be the identification of major (multidimensional) chronological trajectories in the several domains, to start with T1 and related to pre T1 trajectories. Both theoretical and empirical aspects will be considered. Researchers involved in the projects 1 to 4 will contribute to the description of the central events and its relation to other late life events and life course trajectories. The program leaders and the researchers involved in project 5 will coordinate these tasks. In close cooperation with the researchers involved in the projects 1 to 4, the researchers involved in project 5 study intercohort differences in multidimensional trajectories in late life. Furthermore, all researchers will discuss the modification of the association between distinguished multidimensional patterns of change in late life on the one hand and the characteristics of social embeddedness, wellbeing and mortality on the other hand for different cohorts. Finally, all researchers will contribute to the preparation of the international workshop, where draft reports are discussed, and will participate in the workshop.

Publication plan

Within each of the projects 1 to 4 four reports will be written. At the end of the first year a first report will be ready to submit to an international journal. The comprehensive project 5 has a deviating publication plan. The final volume reporting the results of the program will be composed in 2005.