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# Portraits of Life: Patterns of Events Over the Lifespan

**Johannes J.F. Schroots[1,2] and Marian H.J. Assink[1]**

This explorative content-analytic study completes earlier studies on the lifespan distributions of number and affect of past and future life-events, collected by means of the Life-line Interview Method (LIM), for three age groups of men and women (young, middle and late adulthood). LIM events were classified into 40 subcategories divided over 9 categories: Relations, School, Work, Health, Growth, Home, Birth, Death and Other. Compression of the full data set by age group, gender, affect, decade, and time perspective, disclosed various patterns of events underlying the human life-course, e.g., the 'bump,' 'rosy view' and 'gender phase contrast' patterns. The compressed data set provided detailed material for the composition of three written group portraits of life, reflecting the modal life story of young, middle-aged and older men and women. Patterns and portraits show a content shift of past memories and future expectations over the lifespan, supporting a more dynamic view on the human life-course.

**KEY WORDS:** autobiographical memory; life-events; content-analysis; life story; human life-course.

It is the pattern which connects

Gregory Bateson

In the last decade, the narrative approach in psychology—epitomized in the study of life stories—has become prominent in exploring the self and individual lives (McAdams, 1996). The narrative approach is based on the assumption that people construct and reconstruct their lives continuously in order to give meaning to life-events and to integrate new experiences (Kenyon, Clark, & deVries, 2001). Life-events are the building blocks of life stories (Bluck, 2001), reflecting both the (re)constructed past and anticipated future. As such, individual life stories are composed of past and future life-events. In this paper, we intend to explore the structure of life stories at the event level and to detect conceivable patterns of events over the lifespan.

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The telling of life stories implies some episodic memory function, i.e., autobiographical memory, for both retrospective and prospective information related to the self in the form of memories (past events) and expectations (future events). The classical technique for studying retrospective autobiographical memory—the so called 'prompt word' technique—originates from Galton (1879) and was modified by Crovitz and Schiffman (1974), i.e., subjects are presented with a word and asked to think of a specific memory they associate with that word. Later researchers extended this cued-memory technique by sampling memories without restrictions on time of occurrence or kind of experience (Robinson & Taylor, 1998). In contrast with (retrospective) autobiographical memory, it is only recently that some experimental researchers have shown interest in prospective memory (cf. Maylor, Darby, Logie, Della Sala, & Smith, 2002). If retrospective autobiographical memory relates to the retrieval of memories, experiences or past events in the present, then prospective autobiographical memory is concerned with the retrieval of expectations, anticipations or future events, which likewise are based on present memory functioning.

The technique for sampling past and future events has essentially its origins in the administration of a so called 'time line,' on which the individual is requested to indicate significant life-events for both past and future, and to label these events by chronological age (cf. Rappaport, Enrich, & Wilson, 1985; deVries & Watt, 1996). An important aspect of time-line studies is that the entire life course is involved. In this time-line study the Life-line Interview Method (LIM) is used as a part of the research program 'Life-course Dynamics,' which studies the dynamics of development and aging from a psychological perspective, that is, the subjective and objective organization of behavior over the course of life (Schroots, 2003).

The LIM has been developed on the basis of several studies in metaphors of aging and the individual course of life (Schroots, 1984, 1991). Well-known metaphors of life are the 'tree' (life as a branching tree, cf. Lewchanin & Zubrod, 2001) and the 'river' (the river of life, cf. Waddington, 1957). Frequently, however, individuals speak metaphorically about their lives in terms of 'journey' or 'footpath' (cf. Vischer, 1961; Schroots & ten Kate, 1989). The 'footpath' metaphor, which includes both temporal and affective dimensions of life, stands for the journey one makes from birth to death, when one alternately crosses the mountains and valleys of life. For example, when people express positive or negative feelings by saying "I'm feeling up" or "I'm really low these days," they are referring basically to the affective dimension of the 'footpath' metaphor.

From the 'footpath' metaphor to the LIM as autobiographical memory technique is only a small step as soon as one realizes that the graphical, two-dimensional representation of a footpath—with time on the horizontal dimension and affect on the vertical dimension—symbolizes the course of human life with its ups and downs of important life-events. In a typical LIM session, then, the respondent is asked (a) to place perceptions of his or her life visually in a temporal framework by drawing a life-line for both past (from birth to calendar age) and future (from calendar age to expected death), and (b) to label each peak (positive affect) and dip (negative affect), i.e., life-events, by chronological age and a brief description (for more details see Method below).

Theory formation with regard to the human life-course is a confusing mixture of developmental and aging theories (Birren & Schroots, 1996). Up to now we have reported about life-course dynamics in terms of lifespan distributions of events and affect, following an explorative, phenomenon-centered approach as advocated by Rubin (2002, p. 178), i.e., one observation at a time, without much theory to guide us, thus following a more inductive (i.e., hypotheses generating) than deductive (i.e., hypotheses testing) enterprise (cf. Keyes & Ryff, 1999). Briefly summarized, the following empirical results are obtained with the LIM in a comparative study of young, middle-aged and older adults. First, the life-span distribution of past events for older adults confirms the 'bump' pattern of disproportionally higher recall of memories from the ages 10 to 30 years, as found by Rubin, Rahhal, and Poon (1998) in quite a few autobiographical and semantic memory studies (Schroots, van Dijkum, & Assink, 2004). Second, with regard to the distribution of affect, it has been found that respondents report as many positive as negative life-events. The older people are, the more positive they feel about their past and the more negative they feel about their future. Also a 'positive affect bump' was found for middle-aged and older adults who report relatively more positive events in the period of about 10–40 years of age than in other periods of life (Assink & Schroots, 2002).

In this paper, we intend to add on our findings by reporting about the content (verbal labels) of life-events, which run—for example—as follows: 'I married my sweethart from highschool after graduation at age 17,' and 'I lost my father when I was four years old.' To this end we will analyze the LIM data set of events—in terms of number, affect, and content—by decade, age group and gender, respectively. In this way a complete, but also enormous complex picture is painted of the lives of young, middle-aged and older men and women at the event level of their life stories. In order to reduce the complexity, all patterns of events will be compressed, eventually, in conveniently arranged tables which serve the composition of simplified life stories, called 'portraits of life.' In our opinion, the resulting loss of information is outweighed by the clarity of the portraits.

In sum, the major aim of this explorative, more inductive than deductive study is to describe conceivable patterns of life-events for different age groups of men and women, and to transform these patterns into verbal compositions of prototypical life stories.

## METHOD

### Participants

For the purpose of this study 98 men and women were drawn from three age-categories: early,

middle and late adulthood. The mean ages and the age ranges for the three groups were 23.5 (18–30), 43.3 (31–55), and 67.3 (56–84) years, respectively. The youngest group included 18 men and 16 women, the middle group 17 men and 18 women and the eldest group 12 men and 17 women. The participants were Caucasians of primarily middle to higher socioeconomic status, recruited initially from educational and health organizations in two Dutch metropolitan areas and then sampled by means of the snowball method, i.e., recruited participants were asked to bring in relatives, friends or acquaintances for participation in the LIM-study.

### Life-line Interview Method

In a typical LIM session the participant/interviewee (itee) is shown a board with a blank piece of paper, A4 landscape format, on which a grid is printed. The grid consists of a bottom and top line (296 mm), connected by two solid and one dotted vertical line of equal length (180 mm) at 0, 180 and 296 mm from the origin, respectively. Next, the interviewer (iter) introduces the general plan of the session by saying that he/she is interested in the human life course with its ups and downs, rises and declines, etc., which are all completely different from one person to another. After giving three examples of life-lines, from simple to complex, iter continues in asking itee to draw his/her life-line in the blank LIM grid from birth dot (middle of solid line, 0 mm) to his/her calendar age (solid line, 180 mm). As soon as the life-line has been drawn, itee is asked to label each peak (positive affect) and each dip (negative affect) by chronological age and to tell briefly what happened at a certain moment or during an indicated period. At the same time iter makes a verbatim report of what itee sees as the most important events in his/her life. After the past life-line has been labeled and described briefly, the future is explored in the same manner. Starting from the age point where the past life-line has stopped, itee is asked to continue the line until the dotted age-line (296 mm) of expected death is reached. Then the whole procedure of labeling the peaks and dips of the future life-line is repeated. The final result is an unique series of positive and negative life-events, labeled by chronological age and a brief description, for both past and future of the individual.

### Construction of Coding List

In order to analyze the content of the verbal labels (brief descriptions), a coding list has been constructed in five successive steps (Smith, 2000). First, the life event was identified as the basic unit of analysis, (i.e. coding- or recording unit). Second, a catchword was attached to the verbal label of each life event. Third, the resulting set of catchwords, which together make a thesaurus, were classified into nine categories (Relations, School, Work, Health, Growth, Home, Birth, Death, Other), representing the most important themes and domains of life and borrowed wholly or partly from Birren and Hedlund (1987), Sugarman (1986), deVries and Watt (1996) and Zautra, Affleck, and Tennen (1994). Four, the nine categories were subdivided systematically into 40 subcategories in all, so as to produce the most evenly frequency distribution of life-events over categories and subcategories. Finally, a coding list has been compiled with typical examples of LIM life-events (Table I). The inter-rater agreement on coding life-events (40 subcategories, two raters, random sample of 24 interviews) amounted to 86 percent.

### Analysis

Basically, there are two mutually exclusive ways of presenting and analyzing categorical data: (a) as number of *events* per (sub)category (cf. Elnick, Margrett, Fitzgerald, & Labouvie-Vief, 1999), or (b) as number of *persons* per (sub)category (cf. deVries & Watt, 1996). Both methods have their pros and cons, but in view of the emphasis in similar studies on the frequency distributions of life-events for specific groups (age, gender), we decided in favor of the number of events per (sub)category (Jansari & Parkin, 1996; Martin & Smyer, 1990; Rubin, 2002). An obvious disadvantage of this forced choice is that event distributions do not always reflect (sub)sample size correctly, i.e., one respondent may report more than one life event per (sub)category. Also, outliers may affect the relative frequency distributions of events disproportionately as the percentages of events across categories are mutually dependent; for instance, a statistically high percentage of events in one category results inevitably in lower percentages for other categories. From a comparative point of view, however, 'number of events per (sub)category' is of great advantage as percentages

**Table I.** Coding List of (Sub)Categories with Typical Examples of LIM Life-events

| (Sub)Category | Examples |
|---|---|
| *Relations* | |
| Begin | Meeting partner, in love |
| Commitment | Marriage, family life |
| End | Divorce |
| Problems | Relational problems |
| Others | Marriage problems children |
| Rest | Close friendship |
| *School* | |
| Starting | School, college |
| Finishing | Graduating, diploma |
| Problems | Flunking, program problems |
| Others | Graduation (grand)child, partner |
| Rest | Student life, boarding school |
| *Work* | |
| Beginning | First job |
| Changing | Other job, promotion |
| Stopping | Retirement, family care |
| Problems | Layoff, bankruptcy |
| Others | Disability partner |
| Rest | Unemployment, job hopping |
| *Health* | |
| Physical | Illness, disease, surgery |
| Mental | Depression, nervous breakdown |
| Others | Illness partner |
| Rest | Menopause, pregnancy |
| *Growth* | |
| Individual | Self-development, self-management |
| Problems | Identity problems, midlife crisis |
| Others | Growth (problems) others |
| Rest | Happy childhood |
| *Home* | |
| Moving | Relocation |
| Leaving | (Go and) live on one's own |
| Others | Leaving home others |
| Rest | Second home |
| *Birth* | |
| Child | Child(ren) |
| Grandchild | Grandchild(ren) |
| Family | Brother/sister |
| Rest | Birth others |
| *Death* | |
| Parents | Father, mother |
| Partner | Partner, spouse |
| Family | Brother/sister, child, grandparents |
| Rest | Death others |
| *Other* | |
| War | War, liberation |
| Travel | Travel, trip, journey |
| Rest | Finances, leisure |

of events across (sub)categories, which total 100 percent, can be added and subtracted without any problem.

## RESULTS

### Number of Events

Initial examination of the data was in terms of the total number of life-events identified by 98 respondents for both past and future. A 2 (Gender) $\times$ 3 (Age Group) $\times$ 2 (Event Time: Past and Future) analysis of variance was conducted with repeated measures on the last factor and with the number of past and future events as the dependent variable. The total sum of events was 689 meaning that, overall, individuals specified an average of 7.03 events (range 3–14). No main effect for gender and age group was revealed. However, a main effect was found for the repeated measures variable, $F(1, 92) = 142.283$, $p < .001$; this means that the LIM data can be characterized by a greater number of past ($M = 4.96$, $SD = 2.46$) than future events ($M = 2.07$, $SD = 1.30$). This main effect for event time (past and future), however, was qualified by its interaction with the age group variable, $F(2, 92) = 18.429$, $p < .001$. The older the group, the greater the number of past events: $M$ (old) $= 6.24$, $SD = 2.65$; $M$ (middle) $= 5.06$, $SD = 2.15$; $M$ (young) $= 3.76$, $SD = 2.03$. In contrast, the younger the group, the greater the number of future events: $M$ (young) $= 2.71$, $SD = 1.38$; $M$ (middle) $= 2.00$, $SD = 1.11$; $M$ (old) $= 1.41$, $SD = 1.09$.

### Event Distribution over (Sub)Categories

In Table II the percentages of events per (sub)category are presented, both for the total group and for the past and future of younger, middle-aged and older men and women. The total number of events per subgroup (column) over all categories was set on 100 percent, while the sum percentage of subcategories within a category equals the percentage of events per category (italics). In other words, both the sum of events (percents) across categories (italics) and subcategories (regular) totals at 100 percent per subgroup.

In order to examine the effects of age, gender and event time (past and future) on the event distribution over categories, a 2 (Gender) $\times$ 3 (Age group) $\times$ 2 (Event time) $\times$ 9 (Category) repeated measures ANOVA was conducted after logarithmic transformation [ln (number + 1)] of the highly skewed event distribution per category. First of all, a main effect of Category was found [$F(8, 85) = 12.301$, $p < .001$], meaning that the distribution of events over categories is irregular; for example, most events

**Table II.** Percent of Events per (Sub)Category for the Total Group and for Past (P) and Future (F) of Young, Middle-aged and Older Men and Women

| | Young | | | | Middle | | | | Older | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Men | | Women | | Men | | Women | | Men | | Women | | |
| (Sub)category | P | F | P | F | P | F | P | F | P | F | P | F | Total |
| *Relations* | *27.3* | *12.8* | *9.7* | *13.3* | *21.3* | *9.1* | *27.8* | *5.4* | *12.2* | *13.3* | *23.4* | — | *17.6* |
| Begin | 9.1 | — | 1.6 | — | 6.3 | — | 8.2 | 2.7 | 2.7 | — | 2.8 | — | 3.8 |
| Commitment | 1.5 | 8.5 | 4.8 | 13.3 | 8.8 | 3.0 | 8.2 | — | 8.1 | — | 8.4 | — | 6.5 |
| End | 4.5 | 2.1 | 1.6 | — | 5.0 | — | 6.2 | — | 1.4 | — | 1.9 | — | 2.6 |
| Problems | 3.0 | 2.1 | — | — | 1.3 | 3.0 | 4.1 | — | — | — | 4.7 | — | 2.0 |
| Others | 7.6 | — | 1.6 | — | — | 3.0 | 1.0 | 2.7 | — | 13.3 | 3.7 | — | 2.2 |
| Rest | 1.5 | — | — | — | — | — | — | — | — | — | 1.9 | — | 0.4 |
| *School* | *16.7* | *17.0* | *22.6* | *20.0* | *22.5* | *3.0* | *15.5* | *2.7* | *13.5* | — | *4.7* | *7.7* | *13.6* |
| Starting | 10.6 | — | 8.1 | — | 17.5 | — | 6.2 | — | 5.4 | — | 3.7 | — | 5.8 |
| Finishing | 3.0 | 14.9 | 6.5 | 20.0 | 1.3 | 3.0 | 5.2 | 2.7 | 6.8 | — | — | — | 5.1 |
| Problems | 1.5 | — | — | — | 1.3 | — | 3.1 | — | 1.4 | — | 0.9 | — | 1.0 |
| Others | — | 2.1 | — | — | — | — | — | — | — | — | — | 7.7 | 0.4 |
| Rest | 1.5 | — | 8.1 | — | 2.5 | — | 1.0 | — | — | — | — | — | 1.3 |
| *Work* | *3.0* | *19.1* | *3.2* | *13.3* | *20.0* | *36.4* | *4.1* | *21.6* | *21.6* | *6.7* | *12.1* | *11.5* | *13.4* |
| Beginning | 1.5 | 10.6 | 1.6 | 6.7 | 5.0 | — | — | — | 4.1 | — | 4.7 | — | 3.2 |
| Changing | — | 2.1 | — | — | 6.3 | 15.2 | — | 5.4 | 12.2 | — | 1.9 | — | 3.5 |
| Stopping | — | 4.3 | — | 2.2 | — | 18.2 | 1.0 | 10.8 | 2.7 | 6.7 | 0.9 | 7.7 | 2.9 |
| Problems | — | — | 1.6 | — | 5.0 | — | 1.0 | 2.7 | — | — | 1.9 | — | 1.3 |
| Others | — | — | — | — | 1.3 | — | 1.0 | 2.7 | — | — | 0.9 | 3.8 | 0.7 |
| Rest | 1.5 | 2.1 | — | 4.4 | 2.5 | 3.0 | 1.0 | — | 2.7 | — | 1.9 | — | 1.7 |
| *Health* | *13.6* | *4.3* | *11.3* | *13.3* | *3.8* | *12.1* | *10.3* | *27.0* | *13.5* | *26.7* | *16.8* | *42.3* | *13.6* |
| Physical | 12.1 | — | 3.2 | 2.2 | 1.3 | 9.1 | 3.1 | 18.9 | 10.8 | 26.7 | 5.6 | 30.8 | 7.4 |
| Mental | — | — | 6.5 | 4.4 | 1.3 | — | 3.1 | — | 2.7 | — | 3.7 | — | 2.3 |
| Others | 1.5 | 2.1 | 1.6 | — | 1.3 | — | 3.1 | 2.7 | — | — | 6.5 | 11.5 | 2.6 |
| Rest | — | 2.1 | — | 6.7 | — | 3.0 | 1.0 | 5.4 | — | — | 0.9 | — | 1.3 |
| *Growth* | *16.7* | *14.9* | *22.6* | *2.2* | *12.5* | *12.1* | *11.3* | *16.2* | *6.8* | — | *6.5* | — | *11.0* |
| Individual | 4.5 | 4.3 | 8.1 | 2.2 | 6.3 | 9.1 | 5.2 | 5.4 | 2.7 | — | 1.9 | — | 4.4 |
| Problems | 7.6 | 6.4 | 9.7 | — | 3.8 | 3.0 | 3.1 | — | 1.4 | — | 3.7 | — | 3.8 |
| Others | — | 2.1 | — | — | — | — | — | 8.1 | — | — | — | — | 0.6 |
| Rest | 4.5 | 2.1 | 4.8 | — | 2.5 | — | 3.1 | 2.7 | 2.7 | — | 0.9 | — | 2.3 |
| *Home* | *16.7* | — | *17.7* | *8.9* | *3.8* | *3.0* | *11.3* | *5.4* | *8.1* | — | *5.6* | *7.7* | *8.3* |
| Moving | 12.1 | — | 12.9 | 2.2 | 2.5 | — | 7.2 | — | 5.4 | — | 4.7 | 3.8 | 5.2 |
| Leaving | 4.5 | — | 4.8 | — | 1.3 | — | 3.1 | — | 1.4 | — | 0.9 | — | 1.7 |
| Others | — | — | — | 6.7 | — | 3.0 | 1.0 | 5.4 | — | — | — | — | 1.0 |
| Rest | — | — | — | — | — | — | — | — | 1.4 | — | — | 3.8 | 0.3 |
| *Birth* | — | *10.6* | *3.2* | *20.0* | *7.5* | *9.1* | *6.2* | *8.1* | *1.4* | *6.7* | *14.0* | *11.5* | *7.8* |
| Child | — | 10.6 | — | 17.8 | 7.5 | 6.1 | 6.2 | — | 1.4 | — | 12.1 | — | 6.0 |
| Grandchild | — | — | — | 2.2 | — | 3.0 | — | 8.1 | — | 6.7 | — | 11.5 | 1.3 |
| Family | — | — | 3.2 | — | — | — | — | — | — | — | 1.9 | — | 0.6 |
| Rest | — | — | — | — | — | — | — | — | — | — | — | — | — |
| *Death* | *1.5* | *17.0* | *3.2* | *8.9* | *7.5* | *9.1* | *11.3* | *13.5* | *9.5* | *40.0* | *5.6* | *11.5* | *9.0* |
| Parents | — | 14.9 | 1.6 | — | 5.0 | 9.1 | 5.2 | 2.7 | 6.8 | 6.7 | 0.9 | — | 4.1 |
| Partner | — | — | — | 4.4 | — | — | 1.0 | 8.1 | 2.7 | 20.0 | 0.9 | 7.7 | 2.0 |
| Family | 1.5 | 2.1 | 1.6 | — | — | — | 4.1 | — | — | 6.7 | 3.7 | — | 1.7 |
| Rest | — | — | — | 4.4 | 2.5 | — | 1.0 | 2.7 | — | 6.7 | — | 3.8 | 1.2 |
| *Other* | *4.5* | *4.3* | *6.5* | — | *1.3* | *6.1* | *2.1* | — | *13.5* | *6.7* | *11.2* | *7.7* | *5.7* |
| War | — | 2.1 | — | — | — | 3.0 | — | — | 10.8 | — | 10.3 | — | 3.0 |
| Travel | 1.5 | 2.1 | 3.2 | — | — | 3.0 | 2.1 | — | — | — | — | — | 1.0 |
| Rest | 3.0 | — | 3.2 | — | 1.3 | — | — | — | 2.7 | 6.7 | 0.9 | 7.7 | 1.6 |

are reported in the category Relations (17.6%) and fewest in the categories Birth (7.8%) and Other (5.7%).

The main effect for Category, however, was qualified by its interaction with Gender [$F(8, 85) = 2.391$, $p < .05$]. Inspection of Table II shows, for instance, that men reported more events in the category Work while women reported more events in the categories Health and Birth. There was also an interaction effect of Category and Age group [$F(16, 170) = 3.176$, $p < .001$]. The young age group reported more events in the categories School and Growth than the old age group and fewer events in the categories Work and Health. The older age group, on the other hand, identified more events in the category Other than the young and middle-aged groups. Next, an interaction effect of Event time and Category was found [$F(8, 85) = 7.400$, $p < .001$], e.g., events in the categories Relations, School, Growth, Home and Other were mentioned more often for the past (P) than for the future (F), while events in the categories Work, Health, Birth and Death were mentioned as often in the past as in the future. Finally, an interaction effect of Event time, Category and Age group was found [$F(16, 172) = 3.350$, $p < .001$). Not surprisingly, the middle and older age groups mention fewer events in the category School in the future than the younger age group. The older group mentions more events in the category Work in the past than the younger group, and finally, the older group mentions more events in the category Birth in the past than the younger group while the younger group mentions Birth more in the future.

### Affect Distribution over (Sub)Categories

Table III shows the mean affect of events per subcategory, both for the total group and for the past and future of young, middle-aged and older men and women. Events were rated on a 5-point Likert scale, varying from very negative (−2), negative (−1) and neutral (0) to positive (+1) and very positive (+2) affect. The inter-rater agreement on the affect of events (5-point rating scale, 2 raters, random sample of 24 interviews) amounted to 66 percent. After conversion of the affect ratings to a 3-point scale (negative, neutral, positive), the inter-rater agreement increased to 86 percent (cf. Tables V–VII).

Generally, the following events were reported as most positive: Birth Grandchild, Individual Growth, Birth Child, Leaving Home, Commitment, Beginning Work and Changing Work. Most negative events were: Problems Work, Health Others, Problems Growth, Death Parents, Death Family and End Relations. It should be noted that Table III does not show the mean affect of events per category, as the affect ratings per subcategory, which are predominantly positive or negative, tend to cancel each other out and consequently contaminate the mean affect score per category.

### Composition of Portraits

In order to get a more detailed picture of the various subgroups, data were examined in seven successive steps. First, the distribution of events over categories was studied per decade. To this end, the number of events per decade over all categories was set on 100 percent, both for the total group and for the past and future of younger, middle-aged and older men and women. This step resulted in 10 tables (not shown), one for each decade.

Second, in order to compress the huge data set in a conveniently arranged table, the most frequent categories per decade were selected, meeting two criteria of inclusion: (a) 20 percent or more of all events per decade, and (b) at least two reported events. Table IV shows the main categories (percents) per decade for the total group and by age group (young, middle, old), gender and event time. Past and future of the various subgroups are marked by a dotted line. For example, the main category of events, reported by younger men for the first decade (past), is Growth (33.3 percent of all events in Decade I: 0–10 year). All in all, Table IV presents a global picture of life in which childhood is characterized by School and Home, young adulthood by Relations, middle adulthood by Work, and late adulthood by Health and Death.

Third, for a more detailed picture of life, Step I of the analysis was repeated at the level of subcategories, i.e., the number of events per decade over all subcategories was set on 100 percent, both for the total group and for the past and future of young, middle-aged and older men and women. Fourth, the main subcategories per decade were selected, meeting two criteria of inclusion: (a) 10 percent or more of all events per decade and subgroup, and (b) at least two reported events. Fifth, the affect ratings of selected main subcategories per decade and subgroup were converted to a 3-point scale (negative, neutral, positive). Sixth, Tables V–VII show the main

**Table III.** Mean Affect of Events per Subcategory for the Total Group and for Past (P) and Future (F) of Young, Middle-aged and Older Men and Women (Range Affect: −2 to +2)

| | Young | | | | Middle | | | | Older | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Men | | Women | | Men | | Women | | Men | | Women | | |
| (Sub)Category | P | F | P | F | P | F | P | F | P | F | P | F | Total |
| *Relations* | | | | | | | | | | | | | |
| Begin | 0.8 | — | 1.0 | — | 1.0 | — | 0.6 | −1.0 | 1.5 | — | 0.3 | — | 0.7 |
| Commitment | −1.0 | 1.0 | 1.3 | 0.8 | 1.0 | 1.0 | 0.8 | — | 0.7 | — | 0.6 | — | 0.8 |
| End | −1.0 | 1.0 | −2.0 | — | −1.8 | — | −1.3 | — | −1.0 | — | −1.0 | — | −1.2 |
| Problems | −1.0 | −1.0 | — | — | −1.0 | −1.0 | −1.0 | — | — | — | −1.4 | — | −1.1 |
| Others | −1.0 | — | −2.0 | — | — | 0.0 | −1.0 | 1.0 | — | 0.5 | −0.5 | — | −0.5 |
| Rest | −1.0 | — | — | — | — | — | — | — | — | — | 0.0 | — | −0.3 |
| *School* | | | | | | | | | | — | | | |
| Starting | 0.4 | — | 0.6 | — | 0.6 | — | 0.0 | — | 1.0 | — | 1.0 | — | 0.6 |
| Finishing | 1.0 | −0.1 | 1.3 | 0.7 | 1.0 | 1.0 | 0.8 | 1.0 | 1.0 | — | — | — | 0.7 |
| Problems | −1.0 | — | — | — | −1.0 | — | −1.7 | — | 1.0 | — | −1.0 | — | −1.0 |
| Others | — | 1.0 | — | — | — | — | — | — | — | — | — | 1.0 | 1.0 |
| Rest | −2.0 | — | −0.2 | — | 0.0 | — | −2.0 | — | — | — | — | — | −0.6 |
| *Work* | | | | | | | | | | | | | |
| Beginning | 1.0 | 0.6 | −1.0 | 1.3 | 0.8 | — | — | — | 1.0 | — | 0.8 | — | 0.8 |
| Changing | — | 1.0 | — | — | 0.4 | 1.0 | — | 1.0 | 0.6 | — | 1.5 | — | 0.8 |
| Stopping | — | 0.5 | — | 0.0 | — | 0.2 | 1.0 | 0.5 | 0.0 | 0.0 | −1.0 | 0.0 | 0.2 |
| Problems | — | — | −2.0 | — | −1.3 | — | −2.0 | −1.0 | — | — | −1.5 | — | −1.4 |
| Others | — | — | — | — | 1.0 | — | −1.0 | −1.0 | — | — | 1.0 | 0.0 | 0.0 |
| Rest | −1.0 | 1.0 | — | 0.5 | −1.0 | 1.0 | 2.0 | — | 1.0 | — | 1.5 | — | 0.6 |
| *Health* | | | | | | | | | | | | | |
| Physical | −0.8 | — | −1.0 | −1.0 | −1.0 | −1.0 | −1.7 | −1.0 | −0.4 | −0.8 | −1.0 | −0.4 | −0.8 |
| Mental | — | — | −1.0 | 0.0 | −2.0 | — | −1.0 | — | −0.5 | — | −1.5 | — | −1.0 |
| Others | −2.0 | −1.0 | −2.0 | — | −1.0 | — | −2.0 | −1.0 | — | — | −1.4 | −0.7 | −1.4 |
| Rest | — | −1.0 | — | −1.0 | — | −2.0 | −1.0 | −1.0 | — | — | 2.0 | — | −0.8 |
| *Growth* | | | | | | | | | | | | | |
| Individual | 0.3 | 1.0 | 0.8 | 1.0 | 1.4 | 1.0 | 1.2 | 1.0 | 1.5 | — | 1.5 | — | 1.1 |
| Problems | −1.4 | −1.3 | −1.3 | — | −1.0 | −1.0 | −1.3 | — | −2.0 | — | −1.0 | — | −1.3 |
| Others | — | 2.0 | — | — | — | — | — | −0.3 | — | — | — | — | 0.3 |
| Rest | 1.0 | 1.0 | 1.3 | — | 1.0 | — | 1.3 | 0.0 | 0.5 | — | 1.0 | — | 1.0 |
| *Home* | | | | | | | | | | | | | |
| Moving | −0.4 | — | 0.3 | 1.0 | −1.0 | — | 0.7 | — | −0.5 | — | −0.4 | 2.0 | 0.0 |
| Leaving | 1.0 | — | 1.3 | — | 1.0 | — | 0.3 | — | 2.0 | — | 0.0 | — | 0.9 |
| Others | — | — | — | −1.0 | — | 1.0 | −1.0 | 0.0 | — | — | — | — | −0.4 |
| Rest | — | — | — | — | — | — | — | — | 1.0 | — | — | 1.0 | 1.0 |
| *Birth* | | | | | | | | | | | | | |
| Child | — | 1.4 | — | 1.1 | 0.3 | 0.0 | 1.0 | — | 1.0 | — | 1.0 | — | 0.9 |
| Grandchild | — | — | — | 1.0 | — | 1.0 | — | 1.0 | — | 1.0 | — | 1.3 | 1.1 |
| Family | — | — | 0.0 | — | — | — | — | — | — | — | 0.0 | — | 0.0 |
| Rest | — | — | — | — | — | — | — | — | — | — | — | — | — |
| *Death* | | | | | | | | | | | | | |
| Parents | — | −1.4 | −2.0 | — | −1.5 | −1.3 | −1.4 | −1.0 | −1.0 | −1.0 | 0.0 | — | −1.3 |
| Partner | — | — | — | 0.0 | — | — | −1.0 | −1.0 | −1.5 | −1.0 | −1.0 | −1.5 | −1.0 |
| Family | −2.0 | −1.0 | −1.0 | — | — | — | −1.5 | — | — | −2.0 | −1.0 | — | −1.3 |
| Rest | — | — | — | −1.5 | −0.5 | — | −1.0 | −1.0 | — | −1.0 | — | −2.0 | −1.1 |
| *Other* | | | | | | | | — | | | | | |
| War | — | −2.0 | — | — | — | −1.0 | — | — | −0.9 | — | −0.9 | — | −1.0 |
| Travel | 1.0 | 1.0 | 1.0 | — | — | 1.0 | 0.0 | — | — | — | — | — | 0.7 |
| Rest | 1.0 | — | −2.0 | — | 0.0 | — | — | — | 1.0 | −1.0 | −1.0 | 1.0 | 0.0 |

**Table IV.** Main Categories (Percents) per Decade for the Total Group and by Age Group (Young, Middle, Old) Gender, Past and Future (*dotted line*)[a]

| | Young | | Middle | | Older | | | |
|---|---|---|---|---|---|---|---|---|
| Decade | Male | Female | Male | Female | Male | Female | Total | Decade |
| I: 0–10 | Growth (33) | Home (42) | School (50)<br>Home (25) | School (40)<br>Home (30)<br>Growth (20) | Other (38) | Other (23) | School (21)<br>Home (21) | I: 0–10 |
| II: 11–20 | Relations (21)<br>School (21)<br>Home (21) | School (31)<br>Growth (23) | School (42)<br>Growth (23) | School (26)<br>Relations (23) | School (36)<br>Other (29) | Other (26)<br>Relations (22) | School (27) | II: 11–20 |
| III: 21–30 | Relations (33)<br>School (27)<br>Work (23.3) | School (26) | Relations (44) | Relations (54) | Relations (29) | Birth (31)<br>Relations (27) | Relations (33) | III: 21–30 |
| IV: 31–40 | Growth (42) | Birth (43)<br>School (29) | Work (35)<br>Relations (24)<br>Birth (24) | Relations (27) | Work (40)<br>Health (20)<br>Home (20) | Relations (28)<br>Birth (20) | Relations (22) | IV: 31–40 |
| V: 41–50 | Birth (29)<br>Death (29) | — | Work (37)<br>Growth (26) | Health (31)<br>Death (25) | Work (56) | Relations (33)<br>Health (33)<br>Work (22) | Work (30) | V: 41–50 |
| VI: 51–60 | Death (43)<br>Health (29) | Health (40)<br>Home (40) | Work (25) | Growth (40)<br>Work (20) | Work (50)<br>Death (33) | Work (33)<br>Health (33) | Work (24) | VI: 51–60 |
| VII: 61–70 | — | Death (50) | Work (50)<br>Health (25) | Health (40)<br>Work (20) | Relations (33)<br>Work (33) | Health (39) | Health (32)<br>Work (25) | VII: 61–70 |
| VIII: 71–80 | — | — | — | Death (75) | Health (44)<br>Death (44) | Health (67) | Health (43)<br>Death (43) | VIII: 71–80 |
| IX: 81–90 | — | — | — | — | — | Health (67) | Health (50) | IX: 81–90 |
| X: 91–100 | — | — | — | — | — | — | Health (67) | X: 91–100 |

[a]Shaded area refers to the 'bump' period of life.

subcategories (percents) per decade with affect and typical examples of life-events per subcategory for past and future (dotted line) of young, middle-aged and older men and women.

Finally, on the basis of Tables V–VII three written portraits of life have been composed for young, middle-aged and older adults, respectively. To this end, typical life-events from Tables V–VII were chronologically ordered by one (or more) decades for men and women apart and elaborated in the form of written statements about past and future of young, middle-aged and older adults. The chronological composition of these statements into group portraits of life produce and reflect the modal life story of young, middle-aged and older men and women.

## Portrait of Young Adults

### *Past*

From their childhood, young men mainly remember various problems (moving, divorce parents); young women are somewhat more positive and they are more focused on family life (moving, birth of brother or sister). Adolescence is remembered by young women as consisting of both good and difficult times (puberty problems and starting college), while young men have a lot of problems with their physical health (accidents). It is remarkable that in adolescence young men report relational events (falling in love) more often than young women.

### *Future*

In the near future, graduating is an important milestone for this age group of mainly students; graduating is important for women in a positive sense while men have more ambivalent feelings, as this also means the end of their free life. Next, young women are looking forward to marry and to have children. Young men expect these life-events to happen about 10 years later than women; they first want to experiment with relations and they are more focused on finding a job and on developing themselves. It is striking that young women expect almost no events in the period of 41–50 years of age; obviously, they

**Table V.** Main Subcategories (Percents) with Affect (Positive, Neutral, Negative) and Examples (Catchwords) per Decade for Past and future (*dotted line*) of Young Men and Women (Mean Age = 23.5 years)

| | Young | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Men | | | | Women | | | |
| Dcade | Subcategory | % | Affect | Example | Subcategory | % | Affect | Example |
| I: 0–10 | Relations Others | 17 | – | *Divorce parents* | Moving | 42 | + | *Moved a lot* |
| | Physical Health | 17 | – | *Hospitalization* | Physical Health | 17 | – | *Getting epilepsy* |
| | Growth Problems | 17 | – | *Being ragged* | Birth Family | 17 | 0 | *Birth of sister* |
| | Growth Rest | 17 | + | *Happy childhood* | | | | |
| | Moving | 17 | – | *Relocation* | | | | |
| II: 11–20 | Physical Health | 14 | – | *Accident* | School Rest | 13 | 0 | *Good school time* |
| | Moving | 14 | 0 | *Relocation* | Growth Problems | 13 | – | *Puberty problems* |
| | Begin Relations | 12 | + | *Falling in love* | Starting School | 10 | + | *Starting college* |
| | Starting School | 12 | 0 | *Starting college* | | | | |
| III: 21–30 | Finishing School | 23 | 0 | *Graduating* | Finishing School | 23 | + | *Graduating* |
| | Beginning Work | 20 | + | *Find a job* | Commitment | 17 | + | *Living together* |
| | Commitment | 10 | 0 | *Living together* | Mental Health | 14 | – | *Depression* |
| | End Relations | 10 | – | *Splitting up* | Birth Child | 14 | + | *Having a baby* |
| IV: 31–40 | Commitment | 17 | + | *Marriage* | Birth Child | 43 | + | *Birth of children* |
| | Individual Growth | 17 | + | *Peace of mind* | Finishing School | 29 | + | *Graduating* |
| | Growth Problems | 17 | – | *Deep crisis* | | | | |
| | Birth Child | 17 | + | *Start a family* | | | | |
| V: 41–50 | Birth Child | 29 | + | *Birth of children* | xxx | xx | x | xxx |
| | Death Parents | 29 | – | *Death of parent* | | | | |
| VI: 51–60 | Death Parents | 43 | – | *Death of parent* | Health Rest | 40 | – | *Physical decline* |
| | | | | | Home Others | 40 | – | *Children leaving* |
| VII: 61–70 | xxx | xx | x | xxx | xxx | xx | x | xxx |
| VIII: 71–80 | xxx | xx | x | xxx | xxx | xx | x | xxx |

have difficulties forming an idea of this period. In the far future, women are more focused on their own family (empty nest) and on their health (problems with getting older). Young men, on the other hand, mention relatively often the death of (one of) their parents which would be a great dip in their lives. The future perspective of the young age group does not extend the age of 60 years.

## Portrait of Middle-Aged Adults

### *Past*

Childhood of the middle-aged group is mainly dominated by events concerning education and relocation, with women, in contrast to men, having merely negative memories of their elementary school period. Adolescence is remembered as a positive period by both men and women. As noted before, young men seem to be more occupied with relations in adolescence than young women; for the middle-aged group, however, it is the other way around, middle-aged women report more memories concerning relations from adolescence than middle-aged men, who for their part report memories from the domains School and Work. Middle-aged women have experienced adolescence as a period of personal growth. When they are in their 20s, women get married, but for some of them the relationship ends in a divorce. Middle-aged men also start a family life in this period, but when they are in their 30s, work issues are emerging (problems in the work situation, getting another job). Some of these middle-aged men have recently experienced the death of one of their parents, which had a great impact, as anticipated when they were younger.

### *Future*

Thinking about their future, middle-aged men report mainly work-related events (getting another job, retirement). In the near future both middle-aged men and women expect a change in the work domain. Some men expect to get divorced in this period which is about 10 years after women mention this event. Middle-aged men don't have any idea yet about how life will look after retirement. Women have a broader perspective and mention events in different domains

**Table VI.** Main Subcategories (Percents) with Affect (Positive, Neutral, Negative) and Examples (Catchwords) per Decade for past and Future (*dotted line*) of Middle-aged Men and Women (Mean Age = 43.3 years)[a]

| | Middle | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Men | | | | Women | | | |
| Decade | Subcategory | % | Affect | Example | Subcategory | % | Affect | Example |
| I: 0–10 | Starting School | 50 | + | *Elementary school* | Moving | 30 | + | *Relocation* |
| | Moving | 25 | − | *Relocation* | Starting School | 20 | − | *Primary school* |
| | | | | | Problems School | 20 | − | *Bad school time* |
| II: 11–20 | Starting School | 35 | + | *Secondary school* | Begin Relations | 16 | + | *Courting* |
| | Beginning Work | 12 | + | *Into nursing* | Individual Growth | 13 | + | *Feeling accepted* |
| III: 21–30 | Commitment | 19 | + | *Marriage* | Commitment | 27 | + | *Marriage* |
| | Begin Relations | 15 | + | *Meeting wife* | End Relations | 12 | − | *Divorce* |
| | Birth Child | 15 | + | *Birth children* | | | | |
| IV: 31–40 | Birth Child | 24 | 0 | *Becoming father* | End Relations | 14 | − | *Splitting up* |
| | Work Problems | 18 | − | *Layoff* | Birth Child | 14 | + | *Birth daughter* |
| | Commitment | 12 | + | *Steady relationship* | | | | |
| | Changing Work | 12 | + | *Starting own business* | | | | |
| | Death Parents | 12 | − | *Death of father* | | | | |
| V: 41–50 | Changing Work | 26 | + | *Other job* | Changing Work | 13 | + | *Other job* |
| | Individual Growth | 21 | + | *Overcoming problems* | Health Rest | 13 | − | *Menopause* |
| | Death Parents | 16 | − | *Death mother* | | | | |
| | End Relations | 11 | − | *Divorce* | | | | |
| | Physical Health | 11 | − | *Physical complaints* | | | | |
| VI: 51–60 | Stopping Work | 25 | 0 | *Early retirement* | Growth Others | 30 | 0 | *Puberty children* |
| | | | | | Stopping Work | 20 | 0 | *Early retirement* |
| VII: 61–70 | Stopping Work | 50 | 0 | *Retirement* | Physical Health | 33 | − | *Disabilities* |
| | | | | | Stopping Work | 13 | + | *Retirement* |
| | | | | | Individual Growth | 13 | + | *Reflect on life* |
| VIII: 71–80 | xxx | xx | x | xxx | Death Partner | 50 | − | *Husband dies* |

[a]Shaded area refers to the 'bump' period of life.

(Work, Health, Growth, Death). Their future time perspective extends that of men and they are afraid to loose their partner.

## Portrait of Older Adults

### *Past*

For the oldest group, childhood and adolescence are mainly dominated by the war. Besides, women have more memories of events concerning family life (parents are fighting, birth of brother or sister). A clear difference between men and women is the fact that men mention more education-related events. These men belong to a generation that worked its way up by following all kinds of courses, while this was not the usual thing to do for women in those days. As is the case with younger and middle-aged men, also older men report the death of a parent, in contrast to women. From the age of 20 years, the life of older women is mainly dominated by family affairs. For older men, marriage is experienced as an important event but from the age of 30 years, work holds a prominent place. Events like the birth of children are mentioned relatively rare and are overshadowed by work-related events. Not surprisingly, the end of the working life is mainly experienced as a negative event by older men. For older women, life looks less rosy after the age of 40 years. They are confronted with problems in different domains (relational problems, illness of parents and partner, and problems with their own health). The birth of a grandchild is a peak experience in the life of these women.

### *Future*

The future perspective of older men and women touches a few, mainly negative life-events (health, death). It is remarkable that men expect relatively

**Table VII.** Main Subcategories (percents) with Affect (Positive, Neutral, Negative) and Examples (Catchwords) per Decade for Past and Future (*dotted line*) of Older Men and Women (Mean Age = 67.3 yreas)[a]

| | Older | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Men | | | | Women | | | |
| Decade | Subcategory | % | Affect | Example | Subcategory | % | Affect | Example |
| I: 0–10 | Other Rest | 25 | + | *Getting a special present* | War | 23 | – | *Outbreak of the war* |
| | | | | | Relations Others | 15 | – | *Parents are fighting* |
| | | | | | Starting School | 15 | + | *Primary school* |
| | | | | | Birth Family | 15 | 0 | *Birth of sister* |
| II: 11–20 | War | 29 | – | *Japanese camp* | War | 22 | – | *War* |
| | Starting School | 14 | + | *Studying* | Beginning Work | 17 | + | *First job* |
| | Finishing School | 14 | + | *Leaving school* | | | | |
| | Death Parents | 14 | – | *Mother died* | | | | |
| III: 21–30 | Commitment | 25 | + | *Marriage* | Birth Child | 31 | + | *Having a baby* |
| | Physical Health | 17 | – | *Serious disease* | Commitment | 23 | + | *Marriage* |
| | Finishing School | 13 | + | *Diploma* | War | 12 | – | *End of the war* |
| | War | 13 | 0 | *Liberation* | | | | |
| IV: 31–40 | Changing Work | 20 | + | *Promotion* | Birth Child | 20 | + | *Getting children* |
| | | | | | Moving | 12 | + | *Relocation* |
| V: 41–50 | Changing Work | 44 | + | *Becoming director* | Problems Relations | 22 | – | *Bad marriage* |
| | | | | | Health Others | 22 | – | *Illness parents* |
| VI: 51–60 | Changing Work | 33 | – | *Merger of companies* | Health Others | 22 | – | *Illness husband* |
| VII: 61–70 | Stopping Work | 33 | – | *Retirement* | Health Others | 22 | – | *Illness husband* |
| | | | | | Physical Health | 17 | – | *Very ill* |
| | | | | | Birth Grandchild | 17 | + | *Getting grandchild* |
| | | | | | Stopping Work | 11 | 0 | *Retirement* |
| VIII: 71–80 | Physical Health | 44 | – | *Requiring help* | Physical Health | 67 | 0 | *Getting ill* |
| | Death Partner | 33 | – | *Death of wife* | | | | |

[a]Shaded area refers to the 'bump' period of life.

often the death of their wife before their own death.

## DISCUSSION

This paper is a sequel to earlier studies in the field of life-course dynamics, in particular to the study of autobiographical memory by means of the Life-line Interview Method (Schroots, 2003). Reports of these studies describe essentially the lifespan distributions of *number* and *affect* of past and future *life-events* for a group of 98 respondents, about equally divided over age and gender (Assink & Schroots, 2002; Schroots et al., 2004). In this paper, we have analyzed the *content* of life stories at the event level, starting from the same group of respondents, in order to detect patterns of life-events and to transform these patterns into 'portraits of life,' i.e., verbal compositions of prototypical life stories. Before discussing the results of this study, we first want to draw attention to some methodological issues, hidden in the formation and analysis of the complex data set.

### Methodological Issues

The procedure of the present content analysis can be summarized in three steps. The first step consists of the *construction* of individual life stories by collecting LIM data. Next, the data set of individual life stories was *deconstructed* at the event level by age, gender, number, affect, content and time (perspective). Third, starting from the deconstructed data set, life stories ('portraits of life') have been *reconstructed* (composed) at the aggregate level of age group, gender, decade and time (perspective). Obviously, this inductive procedure, combined with the stratification of the sample, has the disadvantage of small numbers of respondents and events, which oppose statistical tests at some levels of analysis. However, this disadvantage is outweighed by the advantages of the inductive enterprise in terms of theory formation and transparency. Hypotheses formed on the basis of this study can be tested in follow-up studies on larger samples, and researchers can improve the procedures of the present content analysis, which—to

our knowledge—have never been presented in such detail.

A well-considered comparison of the research findings with the results from similar studies meets easily with some technical difficulties. First of all, the substantial difference in number of events between the LIM (average of 7.03 events) and other studies (cf. the Time-line study of deVries & Watt, 1996; average of 19.17 events) has to do with differences in the methods used, rather than with differences between respondents. The LIM method asks from participants to report events spontaneously in a short period of time, without much thinking (the drawing and labeling of past and future life-line don't take more than a few minutes). The administration of the questionnaire-type Time line, however, takes about 90–120 min with ample time for recall of past and future events. At face value, a longer administration time seems advantageously as more events are generated, but then one should realize that more time for thinking also means that more social desirable events are likely to be recalled. We are under the impression that LIM interview events are generally closer to the self and the personal truth than questionnaire type of events. In all probability, there is a trade-off between method (administration and recall time) and the number of 'true' events. Some evidence for this viewpoint has been presented in an earlier study of affect over the lifespan (Assink & Schroots, 2002). One of the main findings was that LIM respondents report as many positive events as negative events for the past. This is a remarkable finding as most research on autobiographical memory suggests that people recall more pleasant events than unpleasant events (Berntsen & Rubin, 2002). Apparently, the special LIM technique of interviewing loosens the repression mechanism for negative events.

There are two more reasons why a comparative content-analysis is faced with difficulties. The first touches the use of coding lists in terms of number and type of (sub)categories. Coding lists vary widely from one study to another and make a sound comparison of results virtually impossible. The second reason has been discussed under Method and concerns the analysis of categorical data as either number of events or number of persons per (sub)category. It is one or the other and studies vary widely also in this respect. Nevertheless, the discussion of our findings makes sense if one looks at the patterns of events, because "It is the pattern which connects" (Bateson, 1979).

## Age-Period-Cohort

The emerging concept of a basic pattern underlying the human life-course, reflects in the last resort the memories and expectations of three different age groups (cohorts), interviewed about their past and future in the same period of time. As such, the objective time parameters Age and Cohort are seriously confounded [cf. Schaie's (1965) general developmental model with three interdependent, objective time parameters A(ge), P(eriod) and C(ohort)]. Unfortunately, the cross-sectional design of the study interferes with the separation of age and cohort effects. For example, 'Moving in childhood or adolescence' is remembered mainly by young and middle-aged respondents. It is not clear whether this is an age effect or cohort effect. It is quite possible that younger people had to move more often in their youth than older people—because of their parent's career, for instance, but an alternative explanation would be that the effect of moving fades in time as people grow older. Nevertheless, some cohort effects emerge clearly in the older age group, i.e., memories of the second World War for both men and women, and the memory of education-related events such as taking extra training courses and classes by self-made men who hardly finished 'junior' high.

## Human Life-Course

Complex patterns of information, as embedded in the statistics of Table II, are not easily brought to light. Sometimes it is necessary to use a few little tricks in order to reveal the hidden patterns. Following the usual procedure in autobiographical memory research, we selected *per decade* the main categories (percents) for the total group and for the past and future of young, middle-aged and older men and women (Table IV). It should be noted that the selection of *main categories* is based on the clinical rule of thumb that minor percentages (<20% of all events for at least two events per decade) are not reported. The outcome of this double selection process revealed what might be called the basic structure or pattern of the human life-course, i.e., 10 periods of 10 years, in which each period is characterized by one or more dominant life theme(s). For the total group, this means that childhood and adolescence is characterized by School & Home, young adulthood by Relations, middle adulthood

by Work, and older adulthood by Health and Death.

## Gender

For a more focused picture of life by gender, we explored conceivable patterns of events in further detail. Following about the same selection procedure as for categories, we selected per decade the *main subcategories*, including affect and typical examples, for the past and future of young, middle-aged and older men and women (Tables V–VII). It should be noted that the refined selection of main subcategories is based on the lenient rule of thumb, that too small percentages of events (<10% of all events for at least two events per decade) are not reported.

The first pattern of events that emerges from the data confirms the general finding of other studies that men are more oriented towards Work and that women are more concerned with Health and Birth (see Settersten, 2003, for an overview). Middle-aged men, for instance, don't have the faintest idea of how life will look after retirement, while middle-aged women have a much broader perspective and mention events from various domains such as Work, Health, Growth and Death. Our findings, stereotypic as it may seem, are consistent with recent lifespan models of male adult development with Work at the center of the model, while models of women's development are more varied (Sterns & Huyck, 2001).

It is remarkable that in adolescence—contrary to standard expectations—young men report relational events, such as falling in love, more often than young women. With regard to the future of young adults, it is striking that young women expect almost no events in the period of 41–50 years of age; obviously they have difficulties forming an idea of this period. It should also be noted that young men—contrary to young women—expect the death of their parents.

In middle age, adolescence is generally remembered as a positive period, but—contrary to young adults—middle-aged women report more memories concerning relations from adolescence than middle-aged men. Some of these men have recently experienced the death of one of their parents, which had a great impact, as anticipated when they were younger (see above).

As is the case with younger and middle-aged men, older men report the death of a parent, in contrast to women. For older women, life looks less rosy after the age of 40 years, as somehow anticipated when they were younger (see above). They are confronted with problems in various domains of life such as relational problems, illness of parents and partner, and problems with their own health. With regard to the future of older men, it is remarkable that they expect their partners to die earlier than themselves. This is a paradoxical finding, not only because married women or female partners are generally younger than their husband or partner, but also because women have a higher life expectancy. Whatever the case may be, the data show clearly that the death of parents or partner is a much bigger issue for men than for women.

The last gender pattern we would like to mention concerns the future time perspective by age group. The time horizon of young people (mean age = 23.5 years) doesn't extend the 6th (men) or 7th (women) decade; middle-aged adults (mean age = 43.3 years) reach to the 7th (men) or 8th (women) decade, and older adults (mean age = 67.3 years) expect to live till the 8th (men) or 9th (women) decade. Obviously, women are one decade ahead of men from young adulthood. Presumably, the female advantage is connected with the higher life expectancy of women.

## Affect

Some gender patterns don't come as a surprise, and neither does the affect of some life-events. For example, life-events which refer to some beginning or personal development (Beginning Work, Birth Child) are generally evaluated as more positive than problems or endings in life (Problems Growth, Death Family). The affect ratings of the life-events 'Moving' and 'Stopping Work,' however, are remarkable. The patterns of both events show a dichotomy, i.e., people have either negative (−) or positive (+) feelings about Moving and Stopping with Work. For example:

*Ad Moving* (+): "When we returned to The Netherlands, I went to a new school and made new friends, a very exciting period." Moving (−): "My father accepted a new position in another city and we all had to move. I missed my old school badly and needed quite some time for adaptation to the new environment."

*Ad Stopping Work* (+): "At the age of 55 I went into well-deserved retirement. After all, I worked for more than forty years." Stopping Work (−): "At

age 59 we got a new manager, who didn't like me. So, I was forced to take early retirement."

### Rosy View

Another remarkable pattern is the 'rosy view' phenomenon; that is, memories and expectations are evaluated as more positive in the present than at the moment that they were actually experienced (Mitchell, Thompson, Peterson, & Cronk, 1997). For example, middle-aged respondents are less positive about Work than younger and older people. Similarly, the birth of a child evokes more positive feelings with younger and older respondents than with middle-aged individuals who experience also the negative aspects of having children.

### Bump

The final pattern to be discussed concerns the 'bump' phenomenon of disproportionally higher recall of memories for the period of 10–30 years, as observed systematically in individuals older than about 35 years. It's the period from which peoples' favorite films, music, and books come and the period from which they report the most important life-events to have happened (Conway & Pleydell-Pearce, 2000; Rubin et al., 1998). In an earlier study, we have presented convincing evidence that the autobiographical memory 'bump' also occurs in the event distributions of the present group of middle-aged and older respondents (Schroots et al., 2004). Schroots and van Dijkum (2004), then, have shown that the bump is the outcome of more intensive encoding of information during the period of 10–30 years of age. Consequently, information will be retrieved more easily from this period of life than from other periods. From this evidence and the distribution of main categories per decade (see shaded area of Table IV), we may roughly conclude that the bump pattern of respondents older than about 35 years is dominated by memories of School (2nd decade) and Relations (3rd decade).

The refined analysis of our data at the level of subcategories yields a more detailed bump pattern of almost exclusively positive memories for middle-aged adults, and almost equally positive and negative memories for older adults. It should be noted that the negative memories are mainly due to the cohort effect of the second World War. By and large, these findings corroborate the results from an earlier study of affect on the same group of middle-aged and older respondents (Assink & Schroots, 2002), i.e., LIM respondents remember as many positive events as negative events from the past, but they recall more positive than negative memories from the memory bump period. Recently, Berntsen and Rubin (2002) reached a similar conclusion, "For older respondents there was a clear bump in the 20s for the most important and happiest memories" (p. 636). The shaded areas of Table VI and VII show that the bump-memories of middle-aged and older adults refer primarily to life-events, which denote the beginning or end of the event, e.g., starting and finishing school, begin and end relations, birth child, end war, death of parents, marriage, etc.

### Double Portrait

In the foregoing, we have discussed the patterns of events for three age groups: young, middle-aged and old. The three group portraits of life resulting from these patterns might be viewed—one by one—as double portrait, painted on the same panel. The front of the painting depicts the past of the group, and the back represents the future. The distinction between past and future portrait of life bears some resemblance with the conceptual differences between life narrative (past) and life script (future), as expounded by Berntsen and Rubin (2002), i.e., "Life script is generic (it deals with cultural norms and expectations to the content and order of a typical life course), whereas a life narrative is concrete (it deals with the individual life as actually lived, reconstructed, and narrated by a concrete individual) (. . .) Life script deals with cultural expectations, whereas life narrative deals with personal memories." (p. 640). The data, presented in this study, endorse the notion of life narrative as personal memories, but point also to a broadening of the notion of life script as cultural expectations, i.e., the future perspective of young, middle-aged and older people moves slowly from positive affect to negative affect with age, and from culture (School, Relations, Work) to nature (Health, Death). In the final analysis, the three portraits of life reflect the modal life course of men and women, their lives interpreted as both life lived and life left.

## SUMMARY AND CONCLUSION

This content-analytic study completes earlier studies on the lifespan distributions of number and

affect of past and future life-events, collected by means of the Life-line Interview Method (LIM), for three groups of adult persons (young, middle and late adulthood). LIM events were classified into 40 subcategories divided over 9 categories: Relations, School, Work, Health, Growth, Home, Birth, Death and Other. Further content-analysis resulted in an extremely complex picture of the lives of young, middle-aged and older men and women at the event level of their life stories.

Following the dictum of Kluckhohn and Murray (1953, p. 53) that "Every man is in certain respects (a) like all other men, (b) like some other men, (c) like no other man," we then reduced the huge data set at the individual event level (c) to the group level (b). Reduction and compression of the full data set by age (group), gender, affect, content, decade, and time (perspective), disclosed various patterns of events underlying the human life-course.

Typical patterns are (a) the 'bump' phenomenon of disproportionally higher recall of memories from the ages 10–30 years; (b) the 'rosy view' pattern of positive evaluation in the present of former negative experiences and (c) the 'gender phase contrast' pattern of women who—as regards personal growth from young adulthood—are about one decade ahead of men.

The compressed data set provided detailed material for the composition of three written group portraits of life, reflecting the modal life story of young, middle-aged and older men and women.

In conclusion, we can say that patterns and portraits show an age-dependent content shift of past memories and future expectations over the lifespan, supporting a more dynamic view on the human life-course.

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## REFERENCES

Assink, M. H. J., & Schroots, J. J. F. (2002). The distribution of affect over the lifespan. *Hallym International Journal of Aging*, *4,* 99–117.

Bateson, G. (1979). *Mind and nature.* New York, NY: Dutton.

Berntsen, D., & Rubin, D. C. (2002). Emotionally charged autobiographical memories across the life span: The recall of happy, sad, traumatic, and involuntary memories. *Psychology and Aging*, *17,* 636–652.

Birren, J. E., & Hedlund, B. (1987). Contribution of autobiography to developmental psychology. In N. Eisenberg (Ed.), *Contemporary topics in developmental psychology* (pp. 394–415). New York, NY: Wiley.

Birren, J. E., & Schroots, J. J. F. (1996). History, concepts, and theory in the psychology of aging. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the psychology of aging* (4th ed.) (pp. 3–23). San Diego: Academic Press.

Bluck, S. (2001). Extending the study of autobiographical memory: Thinking back about life across the life span. *Review of General Psychology*, *5,* 135–147.

Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological Review*, *107,* 261–288.

Crovitz, H. F., & Schiffman, H. (1974). Frequency of episodic memories as a function of their age. *Bulletin of the Psychonomic Society*, *4,* 517–518.

Elnick, A. B., Margrett, J. A., Fitzgerald, J. M., & Labouvie-Vief, G. (1999). Benchmark memories in adulthood: Central domains and predictors of their frequency. *Journal of Adult Development*, *6,* 45–59.

Galton, F. (1879). Psychometric experiments. *Brain*, *2,* 149–162.

Jansari, A., & Parkin, A. J. (1996). Things that go bump in your life: Explaining the reminiscence bump in autobiographical memory. *Psychology and Aging*, *11,* 85–91.

Kenyon, G., Clark, P., & deVries, B. (Eds.). (2001). *Narrative gerontology: Theory, research and practice*. New York, NY: Springer.

Keyes, C. L. M., & Ryff, C. D. (1999). Psychological well-being in midlife. In S. L. Willis & J. D. Reid (Eds.), *Life in the middle* (pp. 161–180). San Diego: Academic Press.

Kluckhohn, C., & Murray, H. A. (1953). Personality formation: The determinants. In C. Kluckhohn, H. A. Murray, & D. Schneider (Eds.), *Personality in nature, society and culture*. New York, NY: Knopf.

Lewchanin, S., & Zubrod, L. A. (2001). Choices in life: A clinical tool for facilitating midlife review. *Journal of Adult Development*, *8,* 193–196.

Martin, P., & Smyer, M. A. (1990). The experience of micro- and macroevents: A life-span analysis. *Research on Aging*, *12,* 294–310.

Maylor, E. A., Darby, R. J., Logie, R. H., Della Sala, S., & Smith, G. (2002). Prospective memory across the lifespan. In P. Graf & N. Ohta (Eds.), *Lifespan development of human memory* (pp. 235–256). Cambridge (USA): The MIT Press.

McAdams, D. P. (1996). Narrating the self in adulthood. In J. E. Birren, G. M. Kenyon, J.-E. Ruth, J. J. F. Schroots, & T. Svensson (Eds.), *Aging and biography: Explorations in adult development* (pp. 131–148). New York, NY: Springer.

Mitchell, T. R., Thompson, L., Peterson, E., & Cronk, R. (1997). Temporal adjustments in the evaluation of events: The "Rosy View." *Journal of Experimental Social Psychology*, *33,* 421–448.

Rappaport, H., Enrich, K., & Wilson, A. (1985). Relation between ego identity and temporal perspective. *Journal of Personality and Social Psychology*, *48,* 1609–1620.

Robinson, J. A., & Taylor, L. R. (1998). Autobiographical memories and self-narratives: A tale of two stories. In C. P. Thompson, D. G. Herrmann, D. Bruce, J. Don Read, D. G. Payne, & M. P. Toglia (Eds.), *Autobiographical memory: Theoretical and applied perspectives* (pp. 125–143). London: Lawrence Erlbaum.

Rubin, D. C. (2002). Autobiographical memory across the lifespan. In P. Graf & N. Ohta (Eds.), *Lifespan development of human memory* (pp. 159–184). Cambridge (USA): The MIT Press.

Rubin, D. C., Rahhal, T. A., & Poon, L. W. (1998). Things learned in early adulthood are remembered best. *Memory and Cognition*, *26,* 3–19.

Schaie, K. W. (1965). A general model for the study of developmental problems. *Psychological Bulletin*, *64,* 91–107.

Schroots, J. J. F. (1984). The affective consequences of technological change for older persons. In P. K. Robinson, J. Livingston, & J. E. Birren (Eds.), *Aging and technological advances* (pp. 237–247). New York, NY: Plenum Press.

Schroots, J. J. F. (1991). Metaphors of aging and complexity. In G. M. Kenyon, J. E. Birren, & J. J. F. Schroots (Eds.), *Metaphors of aging in science and the humanities* (pp. 219–243). New York, NY: Springer.

Schroots, J. J. F. (2003). Life-course dynamics: A research program in progress from The Netherlands. *European Psychologist*, *8,* 192–199.

Schroots, J. J. F., & ten Kate, C. A. (1989). Metaphors, aging and the Life-line Interview Method. In D. Unruh & G. Livings (Eds.), *Current perspectives on aging and the life cycle. Volume 3: Personal history through the life course* (pp. 281–298). London: JAI Press.

Schroots, J. J. F., & van Dijkum, C. (2004). Autobiographical memory bump: A dynamic lifespan model. *Dynamical Psychology*, http://www.goertzel.org/dynapsyc/2004/autobio.htm

Schroots, J. J. F., van Dijkum, C., & Assink, M. H. J. (2004). Autobiographical memory across the lifespan. *International Journal of Aging and Human Development*, *58,* 99–115.

Settersten, R. A. (Ed.). (2003). *Invitation to the life course. Toward new understandings of later life*. New York, NY: Baywood Publishing Company.

Smith, C. P. (2000). Content analysis and narrative analysis. In: H. T. Reis & C. M. Judd (Eds.), *Handbook of research: Methods in social and personality psychology* (pp. 313–335). Cambridge, UK: Cambridge University Press.

Sterns, H. L., & Huyck, M. H. (2001). The role of work in midlife. In M. E. Lachman (Ed.), *Handbook of midlife development* (pp. 447–486). New York: Wiley.

Sugarman, L. (1986). *Life-span development: Concepts, theories and interventions*. London: Methuen.

deVries, B., & Watt, D. (1996). A lifetime of events: Age and gender variations in the life story. *International Journal of Aging and Human Development*, *42,* 81–102.

Vischer, A. L. (1961). *Seelische Wandlungen beim alternden Menschen* (Psychological changes in older people). Bazel/ Stuttgart: Benno Schwabe.

Waddington, C. H. (1957). *The strategy of the genes.* London: Allen & Unwin.

Zautra, A. J., Affleck, G., & Tennen, H. (1994). Assessing life events among older adults. In M. P. Lawton & J. A. Teresi (Eds.), *Annual Review of Gerontology and Geriatrics*, *14*, 324–352. New York, NY: Springer.