*Tilmann Habermas*

# The longitudinal study of brief life narratives: Mainlife Study (2002-2019)
# Study Report

**Institution: Goethe University Frankfurt, Germany**

Project Name: MainLife

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# Contents

## Abstract

The MainLife Study is a cohort-sequential study of brief (15-20 minutes) life narratives of a total of 172 participants, covering ages 8 to 80. The four younger cohorts were 8, 12, 16, and 20 years old in 2003, and the two older cohorts, beginning in 2007, were initially on average 40 and 65 years old. Data collection took place every 4 years (2003, 2007, 2011, 2015, 2019). In 2003, two life narratives were collected two weeks apart. Life narratives of 123 participants from all cohorts ar deposited at Qualiservice, and complementary questionnaire data by 171 participants are deposited at GESIS; ratings/codings of life narratives will be uploaded at GESIS probably in 2025.

The MainLifeStudy offers a unique collection of life narratives across 16 years and across almost the entire lifespan, and link them to a variety of standardized psychological tests. The original goal had been to demonstrate that only in adolescence people learn how to narrative entire lives. Later we became interested in the relative stability of life narratives and their determinants as well as in questions of relations to well-being, symptom-load, mastering of life events, and to trait-personality.

The unique combination of life narratives with quantitative data in an age-diversified sample of over a hundred participants is open to be used by researchers from psychology, sociology, cultural anthropology, linguistics, narrative studies and other social sciences and humanities. Potential uses regard linguistic aspects of autobiographical narrating, change of autobiographical self-interpretations across the life, autobiographical remembering, subjective life course.

Due to privacy issues, access to the pseudonymized life narratives is highly restricted.

# 1 Technical Data

| | |
|---|---|
| Author: | Tilmann Habermas |
| Project Period: | 2002-2022 |
| Status: | Terminated |
| Country: | Germany |

## 1.1 Cohort-sequential design: Five waves, six measurement points, six cohorts

There were five waves of data collection, wave I with two measurements of life narratives two weeks apart. Waves are numbered with Roman numbers, measurement points with Arabic numbers. Cohorts 1-4 were first collected in Wave I. Cohorts 5 and 6 were added in Wave 2, first designed as part of a different project in collaboration with Harald Welzer, but using the identical procedure as used in cohorts 1-4. The age range in cohorts 1-4 is narrow, but much wider in cohorts 5 and 6 (see Figure 1).
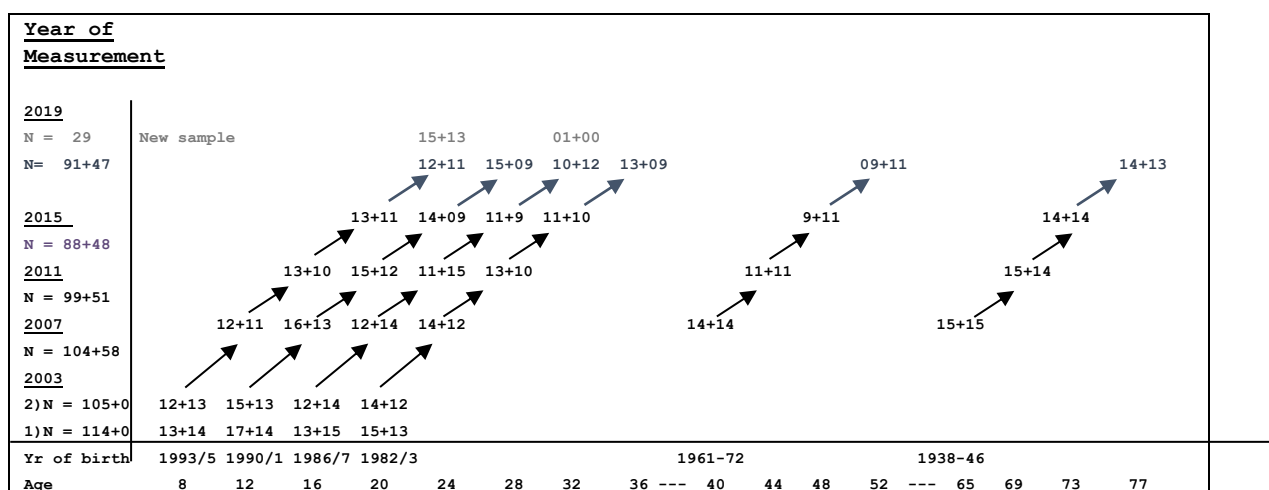
```
Year of
Measurement

2019
N =  29     New sample          15+13       01+00
N= 91+47                12+11  15+09  10+12  13+09                09+11                        14+13


2015
N = 88+48           13+11  14+09  11+9   11+10                 9+11              14+14
2011
N = 99+51        13+10  15+12  11+15  13+10                11+11              15+14
2007
N = 104+58    12+11  16+13  12+14  14+12                14+14              15+15
2003
2)N = 105+0   12+13  15+13  12+14  14+12
1)N = 114+0   13+14  17+14  13+15  15+13

Yr of birth  1993/5 1990/1 1986/7 1982/3            1961-72          1938-46
Age            8     12     16     20     24     28    32    36 --- 40  44   48   52 --- 65  69   73   77
```

**Figure 1** Number of participants (female + male) by measurement wave. In Wave I there were two measurement points, 2 weeks apart. One male and female participant in each cohort (#28, 29, 59, 60, 87, 88, 115, 116) plus by mistake one other participant (117) did not take part in the second measurement.
In the quantitative data set deposited at GESIS, five id-numbers are missing: three were given to participants of measurement point 1 whose material could not be used for varying reasons and who did not participate in any of the later measurements, and another one to someone who never participated; one other participant asked that their data not be published.
In waves IV and V the same female participant of cohort 2 (#31) only filled in questionnaires, but provided no life narrative.

## 1.2 Staff and Funding

PI: Tilmann Habermas. Doctoral students who led the project and collected data in each wave are listed in Table 1 together with research assistants who also collected data. In addition, in each Wave more research assistants helped transforming the narratives (transcription, dividing into segments and into propositions), entering data. In addition, starting in Wave III, students coded various aspects

of life narratives for their Master theses in Psychology, supervised by the PI and some of the project leaders.

**Table 1**   Overview over data collection waves and staff

| Wave | Exact dates | **Project leaders** (PhD students) + undergrad data collectors | **Funding agency** | **Cohorts** |
|------|-------------|-------------------------------------------------|----------------|---------|
| I | **2003** 2002/11-2003/08 | Cybèle de Silveira + Verena Diel, Martha Havenith | DFG 5322086 | 1-4 |
| II | **2007** 2006/12-2008/01 | Alexa Negele (now: Grabhorn) +Jenny Schröder, Elisa Pasch Verena Diel +Carolin Elian, Anna Weber | ----- Lotte Köhler Stiftung | 1-4 5-6 |
| III | **2011** 2011/04-2012/01 | Christin Köber (now: Camia) Anda Constantinescu | DFG 187888417 | 1-6 |
| IV | **2015** 2015/06-2016/06 | Barbara Maier (now: Redlich) Isabel Peters | ------- | 1-6 |
| V | **2019** 2019/06-2020/05 | Nina Kemper Theresa Martin | DFG 421926219 | 1-6 + new sample 1 |

## 1.3 Data processing

Life narratives were transcribed in Word files; quantitative data (questionnaires and ratings/codings of life narratives) were processed in SPSS.

# 2 Concept of the Study

## 2.1 Original Study – Wave I

The first wave was designed to study the development of the ability to construct and narrate coherent life narratives. From the observation that many cherished possessions are beloved objects because they serve as mnemonic devices (souvenirs), pointing to other people and past experiences (Habermas, 1996; Habermas & Paha, 2002) I came across the reminiscence bump of autobiographical memory, which is an oversampling of memories from adolescence and early adulthood in middle aged and older adults. This life phase is one of emergent psychosocial identity, which according to Erikson (1968), Cohler (1982), and McAdams (1985) takes on the form of the life story. The development of the life story first in adolescence seemed to be a good explanation for the reminiscence bump, because when the life story is first formed, these memories remain salient. However, the development of the life story in adolescence had never been studied systematically. Based on anecdotal evidence (e.g., Rosenthal, 1995) we expected the ability not only to narrate single events, but entire lives to develop between ages 12 and 18. In a pilot study with 12 participants aged 12, 15, and 18, Tilmann Habermas and Christine Paha (2001) developed a taxonomy of autobiographical arguments that are used in life narratives to create global life narrative coherence. Tilmann Habermas and Susan Bluck (2000) developed the theoretical rationale for this cognitive-developmental hypothesis. David C. Rubin and also Susan Bluck and Monisha Pasupathi consulted designing the study, when Paul Baltes together with Ursula Staudinger, and Ulman Lindenberger hosted me at the Max Planck Institute of Human Development, Berlin (1997-1999).

Because the ability to narrate life narratives hinges on the ability to connect narratives and chronicles of single events in the context of an entire life and to connect them with the development of personality, and because there were no prior attempts to operationalize these characteristics, we needed to develop a host of new measures of well-formedness of life narratives between 1998 and 2005, described below.

Thus, for Wave I we chose four equidistant age groups. The youngest group was only 8 years old, and we needed it to demonstrate that at this age children lack the ability to coherently narrate lives. We chose the oldest age group because we assumed that by then the ability to narrate lives had evolved. The developmental hypotheses regarding global coherence of life narratives were successfully demonstrated cross-sectionally (Habermas & de Silveira, 2008; Habermas et al., 2009).

In addition, we tested with two extra tasks participants' knowledge of age norms and of the biographical salience of different event types, which are two elements of the cultural concept of biography (Habermas & Bluck, 2000; cf. cultural life script, Rubin & Berntsen, 2004), to show that integrating normative age-graded life transitions in life narratives helped render them coherent (Habermas, 2007).

## 2.2 Wave II – adding cohorts 5 and 6

Harald Welzer, Johannes Schröder, and Tilmann Habermas planned to bring together three datasets to compare age effects across samples: A Volkswagenstiftung- funded study of emotional memories from across life by Hans Jörg Markowitsch and Harald Welzer, the Heidelberg ILSE-study of life narratives of Johannes Schröder, and Wave 1 of the MainLife study. Because the VW-study had age groups 16, 20, 40 and 65, and the ILSE study included only older adults, we decided to collect a sample of 40 and 65-year-olds with the MainLife procedure to make samples more comparable. These are cohorts 5 and 6, first studied in Wave II. Also, to be able to compare the single memories of the VW-study with life narratives, we divided life narratives into thematic segments, roughly comparable to narratives of single memories. We then rated/coded these life narrative segments and memory narratives on a variety of measures to answer the question whether in older age adults start narrating memories less as episodic and more as semantic memories also in the context of life narratives, and whether this might be explained merely as an effect of older adults creating more meaning and interpreting memories more than younger adults (Habermas et al., 2013). For logistic reasons, a comparison with the ILSE-data did not succeed.

In parallel, we went back to cohorts 1 to 4 to collect life narratives again after four years, basically to substantiate the cross-sectional findings longitudinally, thereby demonstrating that the differences between age groups reflected individual developmental trajectories and not merely group differences. Because we failed to secure funding for this wave, we only succeeded in collecting and transcribing the narratives, but not in coding/rating them.

## 2.3 Wave III – the longitudinal development of the life story

For this wave we received funding for two positions, so that we were able to code and rate anew all narratives from the first three waves in order to secure consistency across waves. In addition, we coded whether life narrative segments were told again in all subsequent waves so as to measure the stability of life narratives across time. We also included a measure of explicit reasons for not telling specific events again, that had been told in an earlier wave. We were able for the first time to have only doctoral students as interviewers to secure more older interviewers and a more professional

interviewing. Also, for the first time we added measures of well-being and several questionnaires for a variety of psychological symptoms.

## 2.4 Wave IV -the life story and motives

We did not secure any funding for this wave so that we were only able to collect the data without coding and rating them. The aim of this wave was to study in depth the motivational aspects of life narratives by coding the semantic content, by measuring implicit motives separately, and by asking for goals. In addition, in this wave we also asked for four different specific event narratives, namely regarding an event that had helped form or change a value, that had been a turning point in the life story, as well as one intergenerational narrative each from the father and the mother to explore relations between the two different methodologies, that is asking for entire life narratives and asking for specific event narratives. The quality of the additional tests (implicit motives) turned out not to be too good, because we had overstretched participants endurance by potentially too long data collection sessions of up to three hours, with one break in between. Because these new additional tests were added after repeatedly used measures from earlier waves, the latter were not affected. We did code the implicit motives, but results made no sense whatsoever.

## 2.5 Wave V – the life story and well-being

Wave five aimed at testing how the life story is related to well-being including the impact of recent critical life events. Because relevant measures of well-being had only been added in waves III and IV, we needed another wave to study this relationship longitudinally. Because paper and pencil measures of critical life events in the earlier waves could not be coded satisfactorily, we included a brief interview regarding the number and timing of the experience of critical life events. In addition, we included an interview in which we asked participants to re-narrate two events they had narrated eight years earlier (see below). This was intended as a test of the quality of self-knowledge, which would be attainable by comparing the original narrative from wave three with the narrative from wave 5. However, to date we have not been able to code this part. We had applied for funding for collecting data on a new sample from the same birth cohorts in order to test the effects of repeated testing across 16 years. However, funding was not sufficient to do this, so that we only collected an additional sample from cohort 1. Luckily, most of the data collection could be done before the Corona pandemic broke out. Only few participants were still interviewed in June and July 2020.

# 3 Sampling

## 3.1 Sampling

Cohort 1 was sampled from the top of the three classes of an elementary school in Frankfurt am Main, since in Germany children are sent to different levels of school at age 10, Gymnasium being the top level. Children were recommended by the class teachers on the basis of their standing (however, it turned out that cohort 1 tended to be more intelligent than the three older ones, reflecting that the selection for higher-level schools in Germany is strongly based on social criteria, not only on achievement). Cohorts 2 and 3 were each sampled from three parallel classes of an average Frankfurt secondary school, Gymnasium, comparable in the mixed social composition of its students to the elementary school, with predominantly middle class, but also a substantial proportion of working class background. Individual parental education or SES were not ascertained. Cohort 4 was sampled from former students of the same Gymnasium.

The three younger groups were approached via their parents. We presented the study at the parents' reunions of each of the three classes in each age group, with each class comprising between 24 and 32 students. Parents willing to participate returned written informed consent by mail. The addresses of the oldest group were taken from published 'graduation journals' of the school, and former students were approached by mail. About 38% of participants had at least one parent with a migrant background, ranging from East Asia to the Americas, Southern and Eastern Europe and the Near East, distributed about equally between the four younger cohorts. All participants spoke German fluently.

Cohorts 5 and 6 were recruited via flyers in the area surrounding the university and among continuing education university students.

Age-ranges: Cohorts 1 to 4 each comprised roughly a range of birth dates of about 1.5 years, whereas cohorts 5 and 6 for pragmatic reasons comprised a larger range of 8 to 10 years.

Participants were paid € 20 in Wave 1, € 40 in Waves II and III, and € 60 in Waves IV and V

## 3.2 Ethics

In all waves, participants and, if underaged, also their parents signed an informed consent. After the Fachbereich für Psychologie und Sportwissenschaften of the Goethe University Frankfurt had established an IRB (Ethikkommission) in 2008, waves III to V were approved by this IRB.

## 3.3 Selection of data deposited at Qualiservice and at GESIS

The data set deposited at GESIS in 2022 contains numerical data based on questionnaires and, in a later follow-up deposition, also codings and ratings based on the narratives. It comprises almost all participants.

The data set deposited at Qualiservice contains seven most important memories with dates, life narratives, duration and number of words of life narratives, additional narratives from wave IV, age, gender, migration background (self or either parent), and level of highest educational degree obtained. Informed consent for the deposition of narratives at Qualiservice was obtained after wave V had finished, in 2022. Of the original N = 172 participants, we contacted  N = 142 who had participated in Waves IV or V (because informed consent to recontact was only available for participants of these last two waves). Of these, N = 123 gave their informed consent for data deposition, 12 declined consent, and 7 did not reply.

# 4 Procedure and Material

## 4.1 Procedure

In follow-up waves, we **contacted participants** up to three times by letter, then via email, phone, and social media. In Wave I, participants of cohorts 1-3 were **tested individually in a quiet room** in their schools. Participants of cohort 4 were interviewed individually in a university office. In Waves II to V, participants were interviewed individually in an office room of the university. If elderly participants required this, we also tested at home, but this was an exception. In cases in which participants had moved to other cities or countries, we tried to wait until they came to Frankfurt visiting family, in a few cases the interviewer travelled within Germany to do the interview in a quiet space, and in one case of wave IV the interview with an individual living on a different continent was done via Skype as well as with five participants during the initial phase of the COVID-19 pandemic.

All interviewers were female. Never was a participant interviewed twice by the same person, nor did interviewers know earlier life narratives to ensure that participants always narrated their lives in its entirety and to someone with no prior knowledge of them. Narratives were audio-recorded.

## 4.2 Life narratives (deposited at Qualiservice)

This task was always the first task in all waves.

### 4.2.1 Seven most important Memories

Life narratives were elicited in two steps. To render the task easier for the younger participants as well as to invite participants to integrate specific events into the life narratives, we first asked for the seven most important specific memories.

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**English** "First, I'd like to ask you to think about the seven most important events which happened in your life. These may be events that just happened or they may have happened a long time ago. Then please write your seven most important memories on these seven cards. Please name only memories of very specific events. (If no specific event is named, probe: "If events lasting longer than a day come to your mind, you can write them on the card, but in addition please think of a specific event in that time period and add it on the card") Please take an index card for each event and write the event on it. --- Now please arrange these cards in the order in which they have happened on the table in front of you."

**German** „Ich möchte Sie als erstes bitten, dass Sie sich die sieben für Sie wichtigsten Erlebnisse aus Ihrem Leben überlegen. Diese Erlebnisse können gerade erst passiert sein oder schon lang zurückliegen. Schreiben Sie dann bitte auf diese sieben Karten Ihre wichtigsten Lebenserinnerungen auf. Bitte nennen Sie nur Erinnerungen an ganz bestimmte Erlebnisse aus einem spezifische Zeitraum heraus.".
(Wenn eine Zeitperiode genannt wird, um ganz bestimmtes Erlebnis aus diesem längeren Zeitraum bitten: „Wenn Ihnen länger dauernde Erlebnisse einfallen, können Sie das auf die Karte schreiben, aber zusätzlich sollten Sie sich auch an ein ganz bestimmtes Erlebnis aus diesem längeren Zeitraum erinnern und dieses dazu schreiben".)
„Nehmen Sie jetzt bitte für jedes Erlebnis eine eigene Karte und schreiben Sie es darauf".
"Ordnen Sie jetzt die Erinnerungskarten in ihrer zeitlichen Reihenfolge (so wie sie passiert sind) und lege Sie sie vor sich auf den Tisch, und zwar so, dass Sie alle Karten gut sehen".

---

Memories were dated on the cards after the life narratives had been told.

## 4.2.2 Short life narratives

While the seven cards lay on the table in front of participants, they were given the following life narrative instruction.

**English:** "Next, I'd like you to tell me a story involving your whole life. Please think about all the events that have happened in your life since you were born. Please integrate the seven events into your story. For example, you can tell me about the most important events in your life and the biggest changes. You can tell me things which someone like me, who doesn't know you, might like to know about you. You can also tell me how what you have experienced is still important to you today and how it has influenced what kind of person you are today. Please take about 15 minutes time to tell your story. I will not interrupt you. After 10 minutes I will tell you that you still have another five minutes. There are no right or wrong answers. Just to be on the safe side, I would like you to tell me in your own words what I would like you to do." --- "You can start now. I will listen to you and not interrupt you"

**German:** Als Nächstes möchte ich Sie bitten, mir eine Geschichte über Ihr ganzes Leben zu erzählen. Überlegen Sie bitte, was seit Ihrer Geburt in Ihrem Leben alles passiert ist. Bitte fügen Sie die sieben wichtigen Lebensereignisse von den Karten in Ihre Erzählung mit ein. Sie können mir zum Beispiel die wichtigsten Ereignisse und die größten Veränderungen in Ihrem Leben beschreiben. Sie können Dinge erzählen, die jemand, wie ich zum Beispiel, der sie nicht kennt, vielleicht über Sie wissen möchte. Sie können auch erzählen, wie das, was Sie erlebt haben, heute noch wichtig für Sie ist und wie es beeinflusst hat, was für eine Person (Mensch) Sie heute sind. Dies ist also Ihre Aufgabe. Ich bitte Sie, sich für Ihre Erzählung ungefähr 15 Min. Zeit zu nehmen. Ich werde Sie nicht unterbrechen. Nach 10 Minuten werde ich Ihnen sagen, dass Sie noch ungefähr 5 Minuten Zeit haben. Bei dieser Aufgabe gibt es keine richtige oder falsche Lösung. Nur um sicher zu sein, dass Sie die Aufgabe richtig verstanden haben, möchte ich, dass Sie in eigenen Worten wiederholen, was Sie jetzt machen sollen." … [Notfalls erneut erklären] "Jetzt können Sie anfangen. Ich werde Ihnen zuhören und Sie nicht unterbrechen."

Participants were asked to repeat the instruction to make sure they had understood it. Interviewers did not intervene in the narrative but encouraged participants to continue whenever necessary.

## 4.2.3 Repeated life narratives and intervention in Wave I

Only in wave I we asked for life narratives twice, using a different interviewer at time 2 who had not heard the first life narrative. The aim had been to test whether an indirect training in autobiographical reasoning would boost life narrative coherence (which it did not). Half of each cohort participated in an interview regarding one additional memory which included a series of question regarding temporal, causal-motivational and thematic connections between the event and other parts of life. The other half of the sample participated in an interview regarding knowledge of water (non-temporal knowledge) of equal length and comparable difficulty. No effects were found.

We also added 8 participants equally distributed across cohorts and gender who were not asked for the seven most important memories and provided only one life narrative to explore potential effects of the requirement to include seven specific memories and of the second narrating in later waves. No effects were found.

## 4.3 Additional narratives in Wave IV (deposited at Qualisrvice)

In wave IV, following the life narrative, we next asked for four additional single-event narratives regarding an event that had shaped one's values and one's personality, respectively, as well as an intergenerational narrative (a story from the parent's own life from before the narrator was born) from mother and from father. respectively. The order was: 1) value, 2) personality, 3+4: systematic variation of order of mother and father narrative. Due to time constraints, probing tended to be not systematic.

**Value-formative experience**

**English:** Please think about an experience in your life that influenced you the most in your goals and values. So this is about an experience that has influenced your beliefs about what is right and important for you in your life. – Have you already narrated the experience? [If yes, please select a different event] --- Please tell me everything that happened back then and how and why this influenced your values." Probes: [If necessary: "When did that happen?"] "What exactly about the experience changed your way of thinking? Why?"

**German:** Bitte überlegen Sie sich ein Erlebnis in Ihrem Leben, das Sie in Ihren Zielen und Werten am meisten beeinflusst hat. Es geht also um ein Erlebnis, das Sie beeinflusst hat in Ihren Überzeugungen, was für Sie richtig und wichtig ist in Ihrem Leben. – Haben Sie das Erlebnis bereits erzählt? [Falls ja: Wählen Sie bitte ein weiteres Ereignis] --- Bitte erzählen Sie, was damals alles passiert ist, und was Sie wie und warum beeinflusst hat in Ihren Werten." Nachfragen: [Ggfs.: „Wann ist das passiert?"] „Was genau an dem Erlebnis hat Sie zu einem Umdenken bewogen? Warum?"

**Personality-formative experience**

**English:** Please think about an experience that you have not yet narrated that influenced and changed your personality, what kind of person you are. --- Please tell me everything that happened back then and how and why this influenced your personality." Probes: [if necessary: "When did that happen?"] "What exactly about the experience influenced you? Why?"

**German:** „Bitte überlegen Sie sich ein Erlebnis, das Sie noch nicht erzählt haben, das Sie in Ihrer Persönlichkeit, in dem, was für ein Mensch Sie sind, beeinflusst und verändert hat. --- Bitte erzählen Sie, was damals alles passiert ist, und was Sie wie und warum beeinflusst hat in Ihrer Persönlichkeit." Nachfragen: [Ggfs.: „Wann ist das passiert?"] „Was genau an dem Erlebnis hat Sie beeinflusst? Warum?"

**Intergenerational narratives of mother and father**

**English:** Now please consider two stories that your parents told you about their own lives; a story from your mother's life that she told you and a story from your father's life that he told you. Please write down a key word for each story. --- Please tell me the story from your *mother's* life, everything that happened back then and how your mother told it and commented on it." Probes: [If necessary: "When in your mother's life did that happen? --- When did she tell you the story?"] "Why do you think your mother told you the story? Did she want to clarify or teach you something? --- What was it like for you that your mother told you the story? --- Did you and do you agree with the moral of the story? Why?" Please tell me the story from your father's life, everything that happened there and how your father told and commented on it." Questions: [possibly: "When did that happen in your father's life? --- When did he tell you the story?"] "Why do you think your father told you the story? Did he want to illustrate a point or teach you something? --- How was it for you that your mother told you the story? --- Did you then, and do you now agree with the moral of the story? Why?" [The same instruction is then given for the father's story]

**German:** Bitte überlegen Sie jetzt zwei Geschichten, die Ihnen Ihre Eltern aus ihrem eigenen Leben erzählt haben; also eine Geschichte aus dem Leben Ihrer Mutter, die sie Ihnen erzählt hat, und eine Geschichte aus dem Leben Ihres Vater, die er Ihnen erzählt hat. Bitte schreiben Sie sich kurz ein Stichwort zu jeder Geschichte auf. ---
Bitte erzählen Sie mir nun die Geschichte aus dem Leben Ihrer Mutter, was da alles passiert ist und wie Ihre Mutter sie erzählt und kommentiert hat." Nachfragen: [Ggfs.: „Wann passierte das im Leben Ihrer Mutter? --- Wann hat sie Ihnen die Geschichte erzählt?"] „Was meinen Sie, warum Ihre Mutter Ihnen die Geschichte erzählt hat? Wollte sie Ihnen damit etwas verdeutlichen oder beibringen? --- Wie war das für Sie, dass ihre Mutter Ihnen die Geschichte erzählt hat? --- Waren und sind Sie mit der Moral der Geschichte einverstanden? Warum?" [Im Anschluss wird dieselbe Instruktion für den Vater gegeben]

## 4.4 Additional interview regarding memory of earlier narratives in Waves II, III, and V (not deposited)

In three waves we tested the memory of past narrations. In **wave II**, cohorts 2, 3 and 4 were asked to remember which events they had remembered four years earlier, and then to briefly narrate two of these events anew. If they did not remember at least two events, interviewers cued them for up to five of the seven most important memories from the second testing in 2003 (excluding first and last memory to exclude primacy/recency effects). The problem with the task was that some participants named events they had just told anew in their life narratives, while others named events they had not yet told anew.

In w**ave III** we repeated the test with all cohorts regarding life narratives from wave II and added that we specifically asked for events told four years earlier *but not included in the life narrative this time*. We also added a question regarding reasons for not including the event anymore in the present life narrative (results published in Camia & Habermas, 2020)*.

In **wave V**, we asked for re-narrations of two preselected events that had been nominated eight years earlier in wave III. We then asked participants whether they thought that earlier they had told things they had left out this time, and whether they thought they had told something this time that they had not told 8 years ago, how they had interpreted the event then and how they interpreted it today. Participants then rated positivity, negativity, agency, and biographical consequentiality from their perspectives in 2011 and in 2019. The task was inserted in-between questionnaires after about 2/3 of the entire data collection session.

## 4.5 Implicit motives in Wave IV (not deposited)

The Picture Story Exercise (Schultheiss & Pang, 2007) was used with four pictures to measure implicit motives. Motives were coded using Winter (1991).

## 4.6 Fluid and crystalline intelligence in Waves I, II, and III (deposited at GESIS)

In the first three waves, we used the WAISC-subtests vocabulary and number-symbol tests as measures for crystalline and fluid memory.

## 4.7 Questionnaires (deposited at GESIS)

Table 3 provides an overview over which tasks and which questionnaires were used in which wave. More information is contained in the technical report provided by GESIS.

**Table 3  MainLife Questionnaires**

| Instruments | 1 - 2003 | 2 - 2003 | 3 - 2007 | 4 - 2011 | 5 - 2015 | 6 - 2019 |
|---|---|---|---|---|---|---|
| **Biographical**<br>Frequencies of biographical practices (constructed on basis of: Zinnecker, J. (1985). Literarische und ästhetische Praxen in Jugendkultur und Jugendbiographie [Literary and aesthetic practices in youth culture and youth biography]. In A. Fischer, W. Fuchs & J. Zinnecker (Hg.), *Jugendliche und Erwachsene 1985, Bd. 2* (pp. 143 - 348). Opladen, GE: Leske & Budrich.<br>Starting wave IV we added items regarding internet – variable BIO1plus | X | | X | X | X | X |
| Biographical knowledge: Age norms (negative values) (Habermas, 2007)<br>The items and norms can be retrieved from Tilmann Habermas | X | | X | X | --- | --- |
| Biographical knowledge. Biogr. Salience (negative values) (Habermas, 2007)<br>The items and norms can be retrieved from Tilmann Habermas | X | | X | X | --- | --- |
| Personal change in past 4 years (constructed by MainLife in 2010)<br>Change in personal life circumstances, 7 items | - | | - | X | X | X |

| | | | | | | |
|---|---|---|---|---|---|---|
| Change in personality, 4 items<br>Feeling of self-discontinuity, 4 items<br>Satisfaction with personal development, 4 items<br>Attempts to change personality and life, 4 items | | | | | | |
| Confiding in father, mother, male and female friend (BIO2, from wave III onward also partner BIOplus) | X | | X | X | ? | X |
| Self continuity (Sedikides et al., 2015) | | | | | | X |
| TALE - Functions of autobiographical remembering (Bluck & Alea, 2011; German version Demiray & Habermas, unpublished) | | | | | | X |
| **IQ + Personality**<br>WAICS / HAWIE vocabulary (z-standardized per age and measurement point) | X | | X | X? | ---- | --- |
| WAICS / HAWIE number symbol test (z-standardized per age + measurm. point)<br>Waves I and II Ages 8 and 12: HAWIK-R (Tewes, 1983); above 14 yrs: HAWIE-R (Tewes, 1991).<br>Wave III HAWIE III: von Aster et al., 2006) | X | | X | X | --- | --- |
| NEO Short Form, 60 items (Borkenau & Ostendorf, 1993) | - | | - | X | X | X |
| Identity status – UMICS Friends (BF) and College/Job (VOC) (Crocetti et al, 2008 – German back- and forth translation by MainLife) | - | | - | - | X | --- |
| Self clarity (Stucke, 2002) | - | | - | - | X | X |
| Loyola Generativity scale, 20 items (Hofer et al., 2008) | - | | - | - | X | |
| ERQ Emotion regulation Questionnaire Gross, 10 items (Abler & Kessler, 2009) | | | | | | X |
| Resilience rs-13, 13 items (Leppert et al., 2008) | | | | | | X |
| Self-efficacy 10 items (Schwarzer & Jerusalem, 1990) | - | | - | - | X | X |
| Webster Time Perspective Scale (Webster et al, 2011) | | | | | | |
| **Symptoms**<br>Brief Symptom Inventory Derogatis, 53 items (Franke, 1990) | - | | - | X | X | X |
| Depression BDI-II (Hautzinger et al., 2007): Wave: II: only cohorts 3-6 | - | | X | X | X | X |
| Depressions Inventar für Kinder iund jugendliche DIKJ (Stiensmeier-Pelster et al., 2000); Wave II: only cohorts 1-2 | | | X | --- | --- | --- |
| Trait depression and anxiety STADI 20 items (Laux et al., 2013) | - | | | X | X | |
| Response Style Questionnaire, subscales Rumination + self-reflection, Treynor, 10 items RSQ (Huffziger & Kühner, 2012)<br>Perseverative Thinking Questionnaire PTQ, 15 Items (Ehring et al., 2011)<br>Subscale Reflection of Rumination-Reflection Questionnaire Campbell, 12 items (Post, 2004) | - | | - | - | X | X |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well-being**<br>Well-being Ryff scales (Ryff & Keys, 1995); Wave III 18 items (Fleck, 2007), Waves IV+V: 54 items (Risch et al., 2005); Between the two versions the translation differed for two items; we added these 2 items from the short form in waves IV and V to be able to also construct identical short form scores in theses waves: RYFF18_xxx) | | | | X | X | X |
| Satisfaction with Life Scales (SWLS) Diener et al., 1985, 15 items (Trautwein, 2004) | | | | | X | X |
| Scale of Positive and Negative Affectivity (SPANE), 12 items (Diener et al., 2009) | | | | | | X |
| Well-being (Berner Fragebogen zum Wohlbefinden; Grob et al.; 1991) only cohorts 1-4 | | | X | --- | --- | --- |

# 5 Data processing

## 5.1 Preparation of narrative transcripts

Narratives were **transcribed** verbatim following the GAT 2-basic procedure (Gesprächsanalytisches Transkriptionssystem; Selting et al. 2009); audiotapes were then destroyed for data protection. Narratives were then **divided into propositions**, or main and subclauses following a manual detailing how to deal with specific linguistic cases and with incompleteness and oral variations of syntax. Propositions were numbered, so that each proposition could be used as a unit for coding. Then life narratives were **divided into thematic segments**, again following a manual. Basically, segments cohere thematically and prototypically correspond to a memory of a specific event. The maximum length was two pages. Transitions between segments are typically marked by pauses and by concluding, transitional, or opening statements. We invented a heading for each segment pointing to the central theme. Segments also served as units to be coded/rated. This originated in the study in which life narratives were compared with single event narratives (Habermas, Diel & Welzer, 2013).

## 5.2 Anonymization – Using pseudonyms in narratives

The person who transcribed from the audiotapes also, in a second step, replaced all names of people and places as well as nationalities and professions and any other details that might allow identifying the narrator with pseudonyms. We tried to choose pseudonyms such that they would not grossly distort the narrative. In each wave, the pseudonyms used were marked in a table so as to use the same pseudonyms in the next wave. Because across 16 years this is a highly instable procedure, we again checked all pseudonyms in all narratives of participants from waves IV and V for consistency in preparation for handing them over to Qualiservice. Also, we offered participants of the last two waves to send them all of their life narratives (in the pseudonymized form, originals had been destroyed). The same pseudonyms were used for the seven most important memories.

Life narratives were stored with only a number, which was related to a participant number in a data file only, so that coders/raters could use transcripts unaware of participants age and gender and unrelated to other life narratives. The information identifying participants will be destroyed by the end of 2022.

## 5.3 Coding and rating of narratives

Narratives were coded and rated in multiple ways. More detailed information will be provided once data regarding codings and ratings are deposited at GESIS in a second step (ca, 2025). Basically, we wrote manuals defining rating scales and the points of the scale or defining Codes. These were applied, depending on the construct, to proposition, or segments, or entire life narratives. Coders/raters were trained (and manuals refined) by this author or a PhD student in an iterative process. Once the manual was no longer changed, we calculated interrater reliabilities on the basis of 15-25% of the transcripts. Once satisfactory reliability was reached, all transcripts not used for calculating the reliability were divided between the two coders/raters. To avoid/document coder/rater drift, we also calculated a follow-up reliability based on transcripts interspersed among the transcripts to be coded/rated by each unbeknownst to the coders/raters. A problem in coding longitudinal data is that we could not wait with coding for the last wave to be finished. Therefore, some codings/ratings were done by three different sets of raters at three different points in time, potentially leading to differences between the pairs of coders. We tried to minimize these by training coders with transcripts already coded by earlier coders.

## 5.4 Numerical/questionnaire data

Data were entered into spss, and data entry was controlled by one person reading aloud and the other checking. All sum and other scores were calculated, and outliers corrected by this author throughout the entire project. Data errors discovered later were corrected by comparison with the original paper versions. The main data set was always administered by the present author.

# 6 References

## 6.1 Publications from MainLife (July 2022)

Pilot study:
- o   Habermas, T., & Paha, C. (2001). The development of coherence in adolescents' life narratives. *Narrative Inquiry, 11*, 35-54.

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- o   Habermas, T. (2007). How to tell a life: The development of the cultural concept of biography across the lifespan. *Journal of Cognition and Development, 8*, 1-31.
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- o   Köber, C., & Habermas, T. (2017). The development of temporal macrostructure in life narratives across the lifespan. *Discourse Processes*, *54,* 143-16210.1080/0163853X.2015.110561
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