

Further characterisation of self-defining memories in young adults: A study of a Swiss sample

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Several individual differences affecting four dimensions of self-defining memories (SDMs)—structure, content, affect, and autobiographical reasoning (Blagov & Singer, 2004; McLean & Fournier, 2008; Singer & Salovey, 1993)—have been observed in young adults (principally in North America). In this study we aimed to investigate the relationships between the different dimensions of SDMs, providing further evidence of the content validity of the Self-Defining Memory task. It was possible to discern two specific profiles from the three SDMs collected from each participant. Almost half the participants retrieved specific SDMs with little autobiographical reasoning and tension; the other participants retrieved an opposite profile, suggesting that there are individual differences in the cognitive and affective processes related to the construction of SDMs. The second aim of the study was to conduct a cross-cultural extension of research on SDMs, using a sample of Swiss young adults. The results were similar to those obtained by previous studies, suggesting a certain cultural invariability. The only difference observed concerned the number of SDMs containing meaning making. Swiss young adults attribute more explicit meanings to their memories than North American young adults, suggesting that they are more engaged in autobiographical reasoning.

Keywords: Self-defining memories; Self; Memory dimensions; Content validity.

According to the Self-Memory System (SMS), a model proposed by Conway and Pleydell-Pearce (2000), autobiographical memory and the self are intimately related. In this model, three major

interconnected cognitive-affective structures work together. The first structure, named the working self, is organised by a complex set of active goals and mediates the formation of

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memories by modulating the encoding, consolidation, and accessibility of long-term autobiographical knowledge. The working self organises current activities, categorises and ranks goals by activating them as a function of the demands of the current task, and maintains coherence between goals, memories, and self-images. During the pursuit of immediate goals, the second structure, named the episodic memory system, forms specific experience-near memories representing information about progress in goal attainment. These memories consist of summary records of sensory-perceptual-conceptual-affective processing, reflecting recent states of consciousness (Conway, 2005; Conway, Singer, & Tagini, 2004). Most episodic memories are rapidly lost but those related to current goals and conceptual knowledge are integrated into long-term autobiographical knowledge. The last structure of the SMS is the long-term self, which is considered as the database of the self (Conway, 2005). This structure consists of two components: the autobiographical knowledge base and the conceptual self. The autobiographical knowledge base is organised hierarchically from more-abstract to less-abstract levels of knowledge structures (life-story schema, lifetime period, general events). The conceptual self corresponds to semantic knowledge about the self that includes attitudes, beliefs, and all information about what the self is, has been, and can be.

This model is particularly interesting because it provides a pertinent framework for the interpretation of a class of autobiographical memories known as self-defining memories (SDMs). SDMs are a set of highly significant personal memories that are vivid, evoke strong emotions at the time of recollection, are repetitively recalled, are linked to thematically similar memories, and are focused on central goals, enduring concerns, or unresolved conflicts in the individual's life (Singer & Salovey, 1993). These memories play a crucial role in the construction of a sense of identity. In daily activities, the working self holds enough information to ensure the pursuit of goals. Nevertheless, when the goal activity is frustrated by an obstacle, a retrieval mode for autobiographical knowledge is activated. If the threatened goal is particularly relevant to a developmentally significant theme within the self-concept, an SDM will be retrieved, triggering a rapid response to situational demands (Singer, 2006).

DIMENSIONS OF SELF-DEFINING MEMORIES

Recent studies have highlighted four major dimensions along which individual SDMs vary (e.g., Blagov & Singer, 2004; McLean & Fournier, 2008).

Structure

The first dimension, and one of the most explored, is the memory structure, which reflects the level of narrative specificity (Singer & Blagov, 2000–2001). As we have already mentioned, autobiographical knowledge is hierarchically organised; therefore an autobiographical memory retrieval process can lead to the construction of a specific memory, containing many sensory details and a lot of spatiotemporal information, or to more general or summarised memories.

Content

Memory content is the second dimension of SDMs that has been investigated. Content is the principal theme emphasised in the narrative and reflects one of the person's primary concerns (Thorne & McLean, 2001). As suggested by Thorne, McLean, and Lawrence (2004), another characteristic that can vary in memory content is the presence of tension in memory narratives; that is, an explicit reference to discomfort, disagreement, or unease in one of the characters. Moreover, memories containing tension can concern a bad event that turns good, which McAdams, Reynolds, Lewis, Patten, and Bowman (2001) call a *redemption sequence*, or a good event that turns bad, which they call a *contamination sequence*.

Affect

Another dimension that has been investigated in SDMs is affective responses to memory retrieval (Blagov & Singer, 2004). According to their definition (Singer & Salovey, 1993) SDMs should evoke strong feelings and affects at the time of recall. Thus, individuals' affects after the memory retrieval can change in valence and intensity. In most previous studies (e.g., Blagov & Singer, 2004; Singer, Rexhaj, & Baddeley, 2007), individuals'

affect was assessed after the memory retrieval by presenting a list of emotions and asking them to rate their affect at the time of the memory recall.

Autobiographical reasoning

Finally, autobiographical reasoning is another dimension of SDMs that is interesting to explore (e.g., Habermas & Bluck, 2000; Singer & Bluck, 2001; Staudinger, 2001). Autobiographical reasoning refers to a cognitive process associated with self-reflective thinking about past experiences. Researchers have proposed various ways to assess individuals' capacity for autobiographical reasoning. For example, Singer and Blagov (2000–2001) have created a manual for the analysis of meaning making statements. These statements make explicit connections between an event and the self. Individuals can learn from past experiences and integrate these new meanings into the self structure, creating integrative memories. McLean and Thorne (2001), in their manual, proposed a further distinction for meanings, referring to *lessons* for specific meanings learned from the event that direct future action in similar circumstances (e.g., “Don’t talk back to parents.”) and to *insights* in the case of larger meanings that involved a transformation (emotional, psychological, or relational) and that the individual can apply to broader areas of his or her life (e.g., “I have become more aware and conscious.”).

Pasupathi, Mansour, and Brubaker (2007, p. 87) analysed self–event connections, defined as the “relationships between a given experience and one’s sense of self constructed within a particular narrative”. Linking the past to the present allows one to develop and maintain personal continuity. Connections between self and event can be represented in narratives in different forms, for example as a description of personality traits, an attitude about the world or a description of personal growth (McLean, Fernandez, Ngan, Smith, & Teebi, 2005). As compared to meaning making, the coding of self–event connections, as proposed by McLean et al. (2005) in their manual, constitutes a more subtle assessment of different levels of autobiographical reasoning. In fact, McLean and Fournier (2008) found that the cognitive effort required to make a self–event connection (i.e., the presence of reflective words such as “thought about”, “analysed”) and the emotional evaluation of a connection (i.e., growth-promoting or limiting one’s

development) varied across the content connections. More specifically, the most cognitively effortful kind of self–event connection, and those evaluated as most positive, were connections involving personal growth. On the other hand, the least effortful self–event connections, and those perceived as least positive, were connections involving personality traits. Thus, while analyses of meaning making statements provide information about the presence or absence of deep and explicit autobiographical reasoning in the memory, self–event connections provide data on the depth of this cognitive process. McLean and Fournier’s findings suggest that the content of self–event connections can be represented on a continuum of reasoning levels, ranging from the least elaborated (referring to personality connections) to the most elaborated (referring to personal growth connections).

INTERACTION AMONG DIMENSIONS OF SDMS

Most studies have explored the various dimensions of SDMs in young adult samples (i.e., college students and individuals from the general population aged between 18 and 21 years old) and were conducted in North America (USA or Canada). The results of these studies show that between 74% and 83% of the reported memories were specific, and that 23% to 31% contained integrative meaning making statements (Blagov & Singer, 2004; McLean, 2005; Singer & Blagov, 2000–2001; Singer & Moffitt, 1992; Singer et al., 2007; Thorne et al., 2004). The content of SDMs was distributed as follows: relationship (30–44%), life-threatening event (15–24%), achievement (12–23%), and leisure (7–20%) (Blagov & Singer, 2004; Singer et al., 2007; Thorne & McLean, 2002; Thorne et al., 2004). In addition, Thorne et al. (2004) observed that 69% of SDM narratives contained an explicit report of tension. Considering affective responses to memories, Moffitt and Singer (1994) found that 63% of the memories produced more positive than negative affect, 36% of the memories produced more negative than positive affect, and 1% of the memories produced similar levels of positive and negative affect. To the best of our knowledge, only two studies of autobiographical reasoning have coded the number of self–event connections in SDMs. McLean (2008) and McLean and Fournier (2008) found a mean 3.74–3.82 self–event connections in three

SDM narratives. The main types of self–event connections observed by McLean and Fournier (2008) were personal growth (20%), dispositional (18%), outlook (16%), and values (10%). Personal growth connections focus on maturing or developing confidence, strength, or other aspects of one’s personal development (e.g., “This event made me feel as if I was beginning a new life, in a more independent way.”). Dispositional connections focus on personality at the trait level (e.g., “I wrote this to say that I am very prudish.”), while outlook connections focus on attitudes or perspectives about the world (e.g., “Today, I wonder why it is necessary to go through such painful experiences to realise such obvious things.”). Finally, value connections focus on morality and beliefs (e.g., “For me, getting closer to my family is very important because my family constitutes the basis of my education.”).

The dimensions of self-defining memories are not completely independent but present some interactions. Most earlier studies explored relationships between one or two dimensions of SDMs and specific personality traits (e.g., Blagov & Singer, 2004; McLean & Fournier, 2008), personal strivings (e.g., Moffitt & Singer, 1994), age (e.g., McLean, 2008; Singer et al., 2007), or psychopathological states (e.g., Raffard et al., 2009; Sutherland & Bryant, 2005); only a few have explored the interactions among the different SDM dimensions. One of the most interesting findings of previous studies was a negative correlation between memory specificity and the presence of meaning making (Blagov & Singer, 2004; Singer et al., 2007). Blagov and Singer (2004) suggested that providing summarised memories has two independent functions. Individuals can provide non-specific memories in order to protect themselves from threatening information and negative affect. On the other hand, the ability to link an event to other thematically similar experiences by providing a summarised memory facilitates meaning making and self-understanding. In this context, Singer et al. (2007) have shown that older adults retrieve more summarised SDMs that contain more meaning making than college students. Those findings are consistent with the fact that older adults are more prone to self-reflection and life review (e.g., Erikson, 1980). Moreover, Blagov and Singer (2004) have shown some relationships between memory content and structure; in particular, achievement memories were found to be less specific while memories of life-threatening

events were more specific. In addition, and not surprisingly, achievement memories were associated with enhanced positive affect and decreased negative affect, while life-threatening events produced an increase in negative affect.

Thorne et al. (2004) showed a positive correlation between meaning making and the presence of tension in SDMs, arguing that the presence of tension in memories contributes to meaning making. Moreover, meaning making and tension vary with memory content. In fact, the memories containing the most meaning making and tension were memories of relationships and life-threatening events. In contrast, memories of positive events, such as achievements and leisure activities, contained less meaning making and tension. Finally, as shown by McLean and Breen (2009), redemption sequences and meaning making are positively correlated, while McAdams et al. (2001) found that the presence of redemption sequences is negatively correlated with the presence of contamination sequences.

Considering these findings, the first aim of our study was to examine the relationships between the different SDM dimensions. In fact, no previous study had provided a general picture of all the relationships among the main dimensions of SDMs, showing how each of them interacts with the others. This more detailed characterisation of SDMs should lead to a better understanding of how SDMs interact with the self, identity construction, and personal goals. Thus, in this study we were also interested in investigating whether some profiles representing individual differences in the pattern of relationships between several dimensions would emerge from the data. To the best of our knowledge, no previous study has investigated whether coherent patterns of relationships between multiple memory dimensions are apparent when recalling SDMs. In the present study we aimed to create groups of participants as a function of patterns of associations between multiple dimensions of SDMs (e.g., between memory specificity and meaning making or between meaning making and tension) that were first obtained in simple correlational analyses. If patterns can be discerned, this will be very useful for further research examining relationships between individual differences in the characteristics of SDMs and other variables, such as motives or personality traits.

CULTURAL DIFFERENCES IN SDMS

It has been suggested that personality and culture are intimately related (McAdams, 1995; McAdams & Pals, 2006; McCrae & Costa, 1999). Indeed, culture shapes the characteristic adaptations that humans develop (such as values, personal strivings, motives, social roles) and their life stories. Furthermore, as McCrae's (2001) study suggested, personality traits seem not to be totally impervious to cultural influences; there are slight differences in those basic traits between cultures. Moreover, previous studies observed some cultural differences in SDMs. More specifically, the SDMs of Asian participants have been found to contain more relatedness themes than those of Australian participants, which contained more autonomous themes (Jobson & O'Kearney, 2008).

These findings can be interpreted in the light of Markus and Kitayama's (1991) argument that American culture presents a construal of the self from a more independent viewpoint (i.e., oriented to the individual), while Asian culture presents a more interdependent view (i.e., oriented to relationships). In order to understand where Swiss culture is situated along this continuum, Hofstede's (2001) study is key. Hofstede compared 50 countries on a number of dimensions such as power distance (i.e., extent to which the less-powerful members of institutions accept and expect the fact that power is distributed unequally), uncertainty avoidance (i.e., extent to which a culture programs its members to feel either uncomfortable or comfortable in unstructured situations), and individualism (i.e., degree to which individuals are supposed to look after themselves or to remain integrated in groups). Hofstede found some slight differences between Swiss and North American cultures. More specifically, compared to the USA and Canada, Switzerland obtained a lower score for power distance, a higher score for uncertainty avoidance and a lower score for individualism. Referring back to Markus and Kitayama (1991), one can therefore argue that, although it is similar to the North American view, the Swiss culture conveys a slightly more interdependent view of the self. Therefore, the second aim of this study was to explore the SDMs of Swiss young adults and to provide a cross-cultural extension of the findings of earlier studies conducted with North American young adults

on the dimensions of structure, content, affect, and autobiographical reasoning (meaning making and self-event connections) in those memories. We hypothesised that the SDMs of Swiss participants would present generally similar characteristics to those reported in earlier studies of North Americans, but that subtle differences might be observed, taking into account the differences between the two cultural areas observed by Hofstede (2001). More specifically, these cultural differences could lead to differences in memory content. Thus we anticipated that Swiss young adults might retrieve more SDMs describing relationships with others. In fact, the identity of a Swiss adult should be defined more as a function of the specific place in his/her social network than that of a North American adult.

METHOD

Participants

The sample was composed of 89 Swiss young adults (76% female), aged from 18 to 22 years old ($M = 20.6$, $SD = 1.3$), selected from the general population. Two females were removed from the initial sample because they did not follow the task instructions properly.

Material

Self-Defining Memory task. In this task (Singer & Blagov, 2000–2001; Thorne & McLean, 2001) participants were given an oral definition of SDMs, which explained that they are personal memories with some specific attributes. An SDM has to be at least 1 year old, to be a memory from their life that they remember very clearly and that still feels important to them, to be a memory that helps them to explain who they are as an individual, and to be the memory they would tell someone else if they wanted that person to really understand them. In addition, an SDM is a memory about an important and enduring theme, issue, conflict, or concern from their life and is linked to other memories sharing the same theme. The memory may be positive or negative; the only important aspect is that it generates strong feelings. It is a memory that they have thought about many times and that should be as familiar as a picture or a song. While listening to this description, each participant had a sheet of paper

in front of them summing up the principal points. After this definition, participants had to imagine a situation in which they met someone they liked very much and, during a walk, each one agreed to help the other get to know the “Real Me”. In the course of the conversation, several memories are evoked, memories that convey powerfully how one has become the person one currently is. Participants were told that these memories constitute SDMs. Then they were given three sheets of paper on which they had to write down, for each memory, a title or a one-sentence summary and a description of the event with enough details to help the imagined friend to see and feel as they did. For each memory retrieved, participants had to estimate how long ago the event had occurred (in years and months). The SDM instructions were translated into French and then back-translated into English by a bilingual person. The back-translation was then compared to the original version.

Positive and Negative Affect Schedule. We used the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988): participants were asked to rate the extent to which they were experiencing 10 positive and 10 negative affects at that specific moment, using 5-point rating scales (1 = *very slightly or not at all* to 5 = *very much*). This self-reported questionnaire was translated and validated in French by Gaudreau, Sanchez, and Blondin (2006).

Procedure

Participants were interviewed individually in a quiet setting. The experiment was introduced orally by informing participants that they would have to retrieve some important personal memories and that they would be asked to fill out some written questionnaires. The order of the questionnaires was fixed. After each participant had signed a written informed consent form, their current mood state was assessed with the written form of the PANAS. Thereafter participants completed the Self-Defining Memory task, receiving oral instructions on the task and writing down the three memories. After the retrieval of each SDM, the PANAS was administered again in order to assess changes in positive and negative affect.

Scoring

SDMs were analysed using three scoring manuals.

Content. Memory narrative content was evaluated with Thorne and McLean’s (2001) manual. These authors observed that several categories of content emerge in young adults’ SDMs. According to this classification, we retained four mutually exclusive categories: life-threatening event, leisure, relationship, and achievement. Events were coded in the life-threatening category if themes of basic safety or mortality emerged (for the self or others). Leisure events were events describing exploration and fun, relationship events concerned positive and negative interpersonal relationships, and achievement events described effortful mastery or attempts to achieve goals. Events that did not fit into one of these categories were considered as non-classifiable events. Following Thorne et al. (2004), narratives were also coded for presence or absence of tension. Tension was defined as an explicit reference to discomfort, disagreement, or unease of one of the characters. Finally, the presence or absence of redemption and contamination sequences was also coded in the narratives. According to the manuals provided by the Foley Center for the Study of Lives (1998, 1999), a redemption sequence was defined as an explicit transformation in the memory narrative from a demonstrably negative affective state to a demonstrably positive affective state. In contrast, a contamination sequence was defined as a move in the narrative from a clearly positive event to a very negative outcome.

Structure. Singer and Blagov’s (2000–2001) manual was used to assess the structure. Structure analysis consisted in assessment of specificity. A memory narrative was considered to be specific if it contained at least one single event statement with a unique occurrence and duration of less than 1 day. Specific memory narratives could describe a single event, contain some generalisations, or describe multiple single events. On the other hand, memory narratives that did not contain at least one single event statement were considered as non-specific. A non-specific memory could be a generalised narrative of sequential events forming a story or be composed of many similar events that occurred many times over a long time-frame.

Autobiographical reasoning. Two kinds of autobiographical reasoning were assessed: meaning making statements and self–event connections. The memory integration analysis proposed by Singer and Blagov’s (2000–2001) manual consisted of an assessment of the presence of a statement about what the memory taught the participant about himself or herself, someone else, or life in general. A memory narrative was considered to be integrated if the individual stepped back from the event description and added a statement about a lesson or an insight extracted from the memory. Those memories are also called memories with meaning making. If the narrative only contained an event description (without a lesson or insight), it was considered as a non-integrative memory; that is, a memory without meaning making. On the other hand, self–event connections were analysed with McLean et al.’s (2005) manual. The presence of a connection between an event and the self was established if there was an explicit connection in the narrative linking some aspect of the event to some aspect of the self. Only two types of self–event connections are presented: personal growth and personality connections. Personal growth connections focus on maturing or developing confidence, strength or other aspects of the self, and personality connections focus on personality at the trait level. We decided to present only the results obtained with those two categories because of poor inter-rater reliability for the other categories proposed by McLean et al.

Affect data reduction. The affect dimension was represented by two variables: positive affect (PA) changes and negative affect (NA) changes. Affect was measured with four PANAS scores: a baseline affect assessment (PA0 and NA0) and an affect assessment after each memory recall (PA1 and NA1, PA2 and NA2, PA3 and NA3). Consequently, for each memory it was possible to rate the intensity of positive and negative emotional changes, subtracting the PA and NA scores before memory retrieval from the PA and NA scores after memory retrieval. For some analyses, in order to obtain only one measure per participant, the scores of PA and NA changes were averaged across the three memories.

Reliability. The first author of this study scored all 267 SDMs and the second author scored 20% of the memory samples, which were randomly selected from the entire sample. Inter-rater reliability was calculated using percentage agreement

and Cohen’s κ (Cohen, 1960). Reliability was very good for structure (% agreement = 96.2, $\kappa = 0.90$) and content (% agreement = 84.9, $\kappa = 0.80$); very good to good for content of self–event connections (personality: % agreement = 94.3, $\kappa = 0.86$ and personal growth: % agreement = 88.5, $\kappa = 0.73$); and good for meaning integration (% agreement = 88.7, $\kappa = 0.77$) and tension (% agreement = 81.1, $\kappa = 0.62$). Moreover, reliability was very good for contamination sequences (% agreement = 96.2, $\kappa = 0.81$) and good for redemption sequences (% agreement = 88.7, $\kappa = 0.72$). The reliability coefficients (Cronbach’s α) of the PANAS questionnaires ranged from acceptable to high (PA0: 0.71, NA0: 0.86, PA1: 0.79, NA1: 0.90, PA2: 0.84, NA2: 0.87, PA3: 0.83, NA3: 0.90).

Analyses. To compare frequencies we applied the Pearson Chi Square test. To compare averages we applied parametric tests (Student *t* test and analysis of variance) unless the underlying assumptions were violated, in which case we applied their non-parametric counterparts (Mann-Whitney test and Kruskal-Wallis test, respectively). The dependence between continuous normally distributed variables was tested with the Pearson correlation coefficient. If these variables were non-normally distributed, Spearman’s *r* was calculated, and if variables were dichotomous, phi correlations were performed. Finally, in order to establish profiles of the participants’ SDMs, cluster analyses were performed. Cluster analysis permits a data set to be partitioned into subsets called clusters, so that the data in each subset share common traits.

RESULTS

Descriptive analyses conducted on the 267 SDMs (using memories as the unit of analysis)¹ are presented in Table 1.

Interaction among dimensions of SDMs

Content. In this section we present the analyses of the relationships between memory content (including tension and redemption/contamination sequences) and the other dimensions. Table 2

¹ Preliminary analyses to test whether hierarchical-type models were more adapted to the data were computed (i.e., empty models). The results suggested that there was no interdependence among memories of a single person. This justifies taking memory as the unit of analysis.

TABLE 1

Descriptive analyses (frequency or mean and *SD*) of the 267 self-defining memories

	%
Content	
SDMs with relationship events	33
SDMs with achievement events	28
SDMs with life-threatening events	16
SDMs with leisure events	13
SDMs with non-classifiable events	9
SDMs with tension	59
SDMs with redemption	23
SDMs with contamination	17
Structure	
Specific SDMs	76
Autobiographical reasoning	
Integrative SDMs	57
SDMs with personal growth connections	28
SDMs with personality connections	12
M (SD)	
Self-event connections	0.40 (0.54)
Affect	
PA changes	-0.54 (4.73)
NA changes	-0.38 (5.59)
Time frame (months)	75.34 (56.60)

shows the details of the relationships between each content category and the other dimensions.

Our results showed that the frequencies of specific memories, $\chi^2(4) = 10.58$, $p < .05$, and memories with tension, $\chi^2(4) = 61.62$, $p < .001$, depended on content. Memories of life-threatening events were the most specific, followed by memories of relationship events, leisure events, and achievement events. In addition, all the life-threatening event memories contained tensions, as did almost half of relationship event memories and achievement event memories, but only a fifth of leisure event memories.

Another finding was that the number of self-event connections in the memories, $H(4) = 9.26$, $p = .06$, tended to vary with memory content. (For the Kruskal-Wallis test performed, memory content was set as the independent variable and number of self-event connections as the dependent variable.) Specifically, self-event connections were most frequent in memories of achievement events and were least frequent in memories of leisure events. Analysis of the distribution of the types of self-event connections showed that the number of memories with personal growth connections, $\chi^2(4) = 15.64$, $p < .01$, varied according to memory content. More specifically, personal

TABLE 2
Frequency or mean and SD of the different self-defining memories regarding memory content

	Integrative memories		Self-event connections		Personal growth connections		Personality connections		Tension	Redemption	Contamination	PA changes	NA changes	Time frame
	(%)	M (SD)	(%)	M (SD)	(%)	M (SD)	(%)	(%)	(%)	(%)	(%)	M (SD)	M (SD)	M (SD)
Relationship events	78	0.45 (0.54)	19	0.45 (0.54)	26	0.45 (0.54)	19	56	18	21	-0.71 (4.25)	-0.07 (5.37)	75.22 (58.16)	
Achievement events	68	0.51 (0.58)	7	0.51 (0.58)	44	0.51 (0.58)	7	49	31	8	-0.43 (4.04)	-1.95 (5.10)	61.20 (45.51)	
Life-threatening events	93	0.28 (0.50)	12	0.28 (0.50)	16	0.28 (0.50)	12	100	35	35	-2.00 (5.47)	2.56 (5.91)	78.33 (58.63)	
Leisure events	77	0.26 (0.44)	6	0.26 (0.44)	20	0.26 (0.44)	6	20	9	3	1.29 (6.11)	-2.34 (5.97)	79.54 (61.99)	
Non-classifiable events	68	0.32 (0.56)	16	0.32 (0.56)	16	0.32 (0.56)	16	84	16	20	-0.32 (4.09)	0.84 (4.33)	107.12 (59.55)	

growth connections were particularly likely to be present in achievement memories. An analysis of personality connections was not done because of the low expected frequencies for each content category. In contrast, the presence of meaning making, $\chi^2(4) = 5.92$, $p = .21$, did not vary with memory content.

Other findings showed that PA changes, $F(4, 262) = 2.44$, $p < .05$, and NA changes, $F(4, 262) = 6.35$, $p < .001$, also varied with memory content. (For the one-way ANOVAs performed, memory content was the independent variable and PA changes and NA changes the respective dependent variables.) More specifically, leisure memories gave rise to the greatest increase in PA and life-threatening events to the greatest decrease in PA. In addition, life-threatening events were associated with the greatest increase in NA, and leisure memories with the greatest decrease in NA. When one examines life-threatening events in more detail, it is interesting to note that memories describing death, aggression, accidents, or illnesses of others (e.g., family members or friends) produced a significantly larger decrease in PA than events in which the authors were the participants, $t(41) = -2.41$, $p < .05$. This kind of difference in affect was not observed for NA, $t(41) = 1.15$, $p = .25$. However, life-threatening events affecting the self differed from other life-threatening events in time frame ($U = 147.5$, $p < .05$) as well. Specifically, life-threatening events involving others produced a bigger decrease in PA and were more recent. Regarding the changes in emotional tone in the narratives, redemption sequences, $\chi^2(4) = 12.04$, $p < .05$, and contamination sequences, $\chi^2(4) = 20.14$, $p < .001$, also varied with memory content. Both kinds of sequences were particularly common in memories of life-threatening events and uncommon in memories of leisure events. Finally, time frame, $H(4) = 10.71$, $p < .05$, also varied with content. (For the Kruskal-Wallis test, memory content was set as the independent variable and time frame as the dependent variable.) The most recent memories were achievement memories, while relationships and leisure events were the oldest memories.

Differences between memories that contained tension and memories that did not were observed for content (see above), PA changes ($M = -1.69$, $SD = 4.53$ vs $M = 1.13$, $SD = 4.52$), $t(265) = 5.00$, $p < .001$, and NA changes ($M = 0.86$, $SD = 6.02$ vs $M = -2.19$, $SD = 4.34$, $t(265) = -4.54$, $p < .001$). Memories containing tension produced a decrease in PA and an increase in NA, and

memories without tension produced an opposite change in affect. Redemption sequences and contamination sequences were observed only in memories containing tension. Specifically, within the SDMs that contained tension, 38.6% also presented a redemption sequence and 29.1% a contamination sequence. In contrast, no differences were observed for structure, $\chi^2(1) = 0.45$, $p = .50$, meaning making, $\chi^2(1) = 1.36$, $p = .24$, number of self-event connections, $U = 8321$, $p = .64$, $p = .59$, or time frame ($U = 8214.5$, $p = .52$). Nevertheless, a tendency towards a difference between memories that did and did not contain tension was observed for personal growth connections (personal growth connections were present in 23% of memories with and 34% of memories without tension), $\chi^2(1) = 3.57$, $p = .059$.

Moreover, redemption sequences were related to content (see above), tension (see above), structure (redemption sequences were present in 19% of specific memories and 35% of non-specific memories), $\chi^2(1) = 6.82$, $p < .01$, meaning making (32% of memories with and 10% of memories without meaning making contained a redemption sequence), $\chi^2(1) = 18.19$, $p < .001$, personal growth connections (38% of memories with and 17% of memories without a personal growth connection contained a redemption sequence), $\chi^2(1) = 13.05$, $p < .001$, and time frame ($M = 79.89$, $SD = 58.55$ vs $M = 59.97$, $SD = 46.69$, $U = 5113.5$, $p < .05$). In sum, memories containing redemption sequences were less specific, contained more meaning making and personal growth connections, and were more recent. No differences were observed between redemption sequences and the number of self-event connections ($U = 5433$, $p = .11$), PA changes and NA changes, $t(265) = 1.46$, $p = .15$ for PA and $t(265) = -0.82$, $p = .41$ for NA.

Contamination sequences were related to content (see above), tension (see above), structure (contamination sequences were present in 21% of specific memories and 6% of non-specific memories), $\chi^2(1) = 6.84$, $p < .01$, number of self-event connections ($M = 0.43$, $SD = 0.55$ vs $M = 0.24$, $SD = 0.48$, $U = 4133$, $p < .05$), PA changes ($M = -0.29$, $SD = 4.60$ vs $M = -1.74$, $SD = 5.17$), $t(265) = 1.90$, $p = .058$, NA changes ($M = -0.75$, $SD = 5.44$ vs $M = 1.35$, $SD = 6.05$), $t(265) = -2.33$, $p < .05$, and time frame ($M = 69.42$, $SD = 53.84$ vs $M = 103.72$, $SD = 61.41$, $U = 3356$, $p < .001$). Overall, memories containing contamination sequences were more specific, contained fewer self-event connections, were older and, not

surprisingly, were related to an increase in NA changes and tended to be related to a decrease in PA changes. In contrast, no differences were observed for meaning making, $\chi^2(1) = 0.43$, $p = .51$. The other analyses involving redemption and contamination sequences and types of self-event connections were not done because of the low expected observations in each case.

Structure. In this section we present the analyses of the relationships between memory structure and the remaining dimensions (not described in the previous section). Significant differences between specific and non-specific SDMs were observed for the following dimensions: NA changes ($M = 0.01$, $SD = 5.16$ vs $M = -1.68$, $SD = 6.70$, $t(265) = -2.12$, $p < .05$), personal growth connections (personal growth connections were present in 24% of specific memories and 40% of non-specific memories), $\chi^2(1) = 5.89$, $p < .05$, meaning making (meaning making was present in 52% of specific memories and 70% of non-specific memories), $\chi^2(1) = 5.92$, $p < .05$, content (see above), and redemption and contamination sequences (see above). Moreover, the number of self-event connections tended to differ significantly between specific and non-specific SDMs ($M = 0.37$, $SD = 0.54$ vs $M = 0.51$, $SD = 0.54$), $U = 5496$, $p = .07$. Specific memories presented a bigger increase in NA after memory retrieval, tended to contain fewer self-event connections and contained fewer personal growth connections in particular, and contained less meaning making than non-specific memories. In contrast, no differences were observed between specific and non-specific memories in terms of tension (see above), PA changes, $t(265) = 1.34$, $p = .18$, or time frame ($U = 6054$, $p = .49$).

Autobiographical reasoning. In this section we present the analyses of the relationships between autobiographical reasoning and the remaining dimensions (not described in the previous sections). In comparing memories with and without meaning making, significant differences were observed for structure (see above), redemption sequences (see above), number of self-event connections ($M = 0.63$, $SD = 0.57$ vs $M = 0.10$, $SD = 0.31$), $U = 4518$, $p < .001$, and particularly personal growth connections (46% of memories with and 3% of memories without meaning making contained a personal growth connection), $\chi^2(1) = 60.29$, $p < .001$, and personality connections (17% of memories with and 7% of memories without meaning making contained a

personality connection), $\chi^2(1) = 5.65$, $p < .05$. Memories containing meaning making presented more self-event connections, particularly personal growth and personality connections. In addition, memories with meaning making tended to be more recent than memories without meaning making ($U = 7547$, $p = .053$). In contrast, no significant difference was observed between memories with and without meaning making for the following dimensions: content (see above), tension (see above), PA changes, $t(265) = -1.24$, $p = .21$, NA changes, $t(265) = -0.52$, $p = .60$, and contamination sequences (see above).

As mentioned above, the number of self-event connections varied significantly with contamination sequences and meaning making, and almost significantly with structure and content. No other relationship between the number of self-event connections and the following dimensions was observed: tension (see above), PA changes ($r = -.04$, $p = .48$), NA changes ($r = -.01$, $p = .83$), redemption sequences (see above), or time frame (Spearman $r = -.03$, $p = ns$). Examining the types of self-event connections in more detail, it was observed that memories with personality connections produced a decrease in PA, $t(265) = 1.99$, $p < .05$, and memories containing personal growth connections contained more redemption sequences (see above). Finally, memories containing personality connections were generally older ones ($U = 2922$, $p < .05$) and those containing personal growth connections were more recent ($U = 5859$, $p < .05$).

Affect. In this section we present the analyses of the relationships between affect and the remaining dimensions (not described in the previous sections). As mentioned above, relationships were observed between PA changes and NA changes and content, tension, structure (but only for NA changes), and contamination sequences. In contrast, PA changes and NA changes were not related to the presence of meaning making (see above), the number and type of self-event connections (except a relationship between personality and PA changes, see above), redemption sequences (see above), or time frame (Spearman $r = -.06$, $p = ns$, for PA and Spearman $r = -.01$, $p = ns$, for NA). Not surprisingly, PA changes and NA changes were negatively correlated ($r = -.39$, $p < .001$). Moreover, positive and negative affect changes did not differ in their average values, $t(266) = -.29$, $p = .77$. These results

suggest that the retrieval of SDMs produces similar changes in both positive and negative affect.

Individual profiles

In order to establish profiles of the participants' SDMs, cluster analyses were performed. Starting from the findings of the correlational analyses, the cluster analyses were performed with the different dimensions of SDMs that presented an association. The aim was to find clusters that shared a similar pattern across the selected dimensions. Among the different analyses performed, the most interesting and theoretically grounded clusters were extracted from the analysis performed with structure, autobiographical reasoning, and tension. More specifically, we clustered participants into two groups based on their scores on the three dimensions using K-means clustering (choosing observations to maximise initial between-cluster distance). The correlational analyses already showed some interesting relationships between these dimensions, and cluster analysis constituted an additional step providing more comprehensive information on those relationships. The two clusters selected from the analysis were particularly interesting because they displayed two opposite profiles of SDMs and were relatively equally represented in the sample. Cluster 1 ($N = 46$) was composed of individuals who produced few specific SDMs, but their memories were integrated and contained several self-event connections and some tension. In contrast, individuals in cluster 2 ($N = 43$) presented more specific SDMs, but these were less integrated and contained fewer self-event connections and less tension. Group difference analyses confirmed that cluster 1 and cluster 2 were significantly different in terms of structure ($U = 708$, $p < .05$), number of integrative memories, $t(87) = 15.50$, $p < .001$, number of self-event connections ($U = 214$, $p < .001$), and tension, $t(87) = 2.50$, $p < .05$. More specifically, for self-event connections, significant differences between the two clusters were observed for the number of personal growth connections ($U = 343$, $p < .001$) and personality connections ($U = 639.5$, $p < .01$). Interestingly, cluster 1 and cluster 2 also differed in terms of the number of redemption sequences ($U = 594.5$, $p < .01$): the SDMs of individuals in cluster 1 contained more redemption sequences.

DISCUSSION

In the past few years there has been a growing interest in SDMs, which represent a momentary expression of identity and of a person's psychological functioning. These memories are a filter for memory retrieval and for the encoding of new information, guiding future actions and giving meaning to new experiences (Singer, 2005).

The first aim of the present study was to explore the relationships between the different dimensions of SDMs in order to present a more comprehensive picture of those memories. Regarding memory content, the main results showed that life-threatening events were the most specific memories; all such memories contained tension and all produced a decrease in positive affect and an increase in negative affect. Moreover, the findings showed a different pattern for events describing a death, accident, aggression, or illness of others vs a life-threatening event in which the participant was an actor. In particular, life-threatening events involving others produced a bigger decrease in positive affect and were more recent. As Thorne and McLean (2002) suggested, life-threatening events are important for young adults because they are the ultimate challenge in identity elaboration. In fact, these kinds of events disrupt the everyday routine and may permanently change relations with some of the significant persons in one's life. It is also relevant to note that the life-threatening memories were those that contained the highest number of redemption and contamination sequences. This finding is not completely surprising considering that all of those memories contained tension, but the interesting thing to note is that some of those memories were narrated in order to emphasise the redemption while other memories focused on the contamination aspect of the sequence of the events.

When it comes to relationship memories, half of them contain some tension, indicating that those themes are linked to the participants' enduring concerns. In fact, during adolescence relationships play a crucial role in the development of cognitive and social competences. For example, adolescents try to achieve greater autonomy by renegotiating their relationships with their parents and improving their socialisation through romantic and peer relationships (Collins, 1997). Achievement memories were the least-specific memories and described recent

events. Finally, our findings concerning leisure event memories indicated that they contained the least tension, the fewest redemption and contamination sequences, and the fewest self-event connections; they produced a big increase in positive affect and a decrease in negative affect. Moreover, leisure memories were generally the oldest events. In addition, our findings showed that, as one would expect, memories containing tension produced an increase in negative affect and a decrease in positive affect.

Another finding about the relationships between the SDM dimensions was that specificity of SDMs was inversely related to the presence of meaning making, personal growth connections, and redemption sequences. These results are consistent with the findings of some other recent studies (Blagov & Singer, 2004; McAdams et al., 2001; Singer et al., 2007), which observed that the capacity for autobiographical reasoning is related to high levels of socioemotional maturity, personal adjustment, and well-being. As Bluck and Habermas (2000) argued, with repeated autobiographical reasoning, memories of specific events are linked to thematically similar memories and to the self. Consequently, those memories become more abstracted and are integrated into the life-story schema. Moreover, we noted that SDMs containing more personal growth connections, more redemption sequences, and fewer contamination sequences were generally recent memories. Normally, the process of autobiographical reasoning about past events, in order to integrate them into a coherent and meaningful life story, is long and needs time, so one might expect to find more autobiographical reasoning in older memories (e.g., Bluck & Habermas, 2000). However, the particular life stage of our participants may explain our findings. In fact, according to McLean et al.'s (2005) definition, the personal growth connections that we highlighted in our own sample of SDMs focused on gains in maturity, confidence, and independence. This kind of personal development appears in late adolescence, a period of life that is particularly important for identity construction and in which life reflection emerges (Erikson, 1980). Here is an example of a non-specific narrative containing a personal growth connection and meaning making, produced by a young man in our sample:

(The end of the beginning) First romantic break-up. I was with my ex-girlfriend in a park. I was 15 and we had been together for

three or four months. The passage of time has erased the places and words, but this was nonetheless a pivotal moment of my adolescence. It pushed me to face my first big challenge, which was to ask myself who I was and what I really wanted deep down.

Another result that must be discussed concerns the affective response to memory retrieval in memories containing tension and autobiographical reasoning. As a reminder, we found an increase in negative affect and a decrease in positive affect in SDMs containing tension (and an opposite pattern in memories that did not contain tension) and no relationship with meaning making or personal growth connections. Hence, these findings may help to clarify the weak relationship between tension and autobiographical reasoning that we found. In fact, although some researchers have suggested that individuals learn more and faster from negative and stressful events than from positive events (for a review, see Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), we found only a weak relationship between tension and autobiographical reasoning (these results were consistent with McLean & Thorne's, 2003, and Thorne et al.'s, 2004, studies). In order to understand this apparent discrepancy, the SDMs collected can be divided into different groups as a function of the tension dimension. In the first group there are SDMs without tension, which describe positive events (such as leisure events); these produce an increase in PA and a decrease in NA. Moreover, these kinds of memories can be a simple description of an event or may be accompanied by autobiographical reasoning. The other group consists of memories describing negative events, which contain tensions and which are not resolved. Those memories lead to an increase in NA and a decrease in PA. However, there is a third group of SDMs, composed of memories with tension, which describe negative events but are resolved (recall that 39% of memories with tension contained a redemption sequence). Thus those memories contain meaning making and personal growth connections. In conclusion, both the affective response to memory retrieval and the redemption dimension are crucial for understanding the relationships between tension and autobiographical reasoning. Additional studies should be conducted to further investigate the impact on the cognitive process of autobiographical reasoning of the valence of the event described, how the event changes (from

bad to good or from good to bad), and the affective response.

Finally, another relationship between the SDM dimensions that we observed was that memories containing personality connections tended to be the oldest memories and were associated with a decrease in PA. The personality connections made by the participants focused on events related to the description of a stable personality dimension (“I have always been a friendly person”) or to an event that contributed to the emergence of a new one (“After that, I became timid and withdrawn”). Furthermore, the personality dimensions described by the participants in their SDMs were generally undesired (almost 80% described negative personality dimensions such as timidity or mistrust), which could explain the decrease in positive affect. In fact, SDMs often express enduring concerns or unresolved conflicts (Singer & Salovey, 1993). Consequently, individuals may repeatedly recall unpleasant memories in order to resolve the conflict raised by the memory and then integrate it into the narrative identity (Singer, 2004). Recall that McLean (2008) showed in her recent study that young adults tend to retrieve more SDMs containing change connections (i.e., connections referring to changes in the self) than explanatory connections (i.e., connections that explain a pre-existing part of the self that was always there). According to these findings, individuals probably retrieve more SDMs containing negative personality connections because these represent their main goal at this period of life. By working through these memories, an individual can strive to change the unwanted personality dimension.

Our results also showed two interesting individual profiles of SDMs for structure, meaning making, self-event connections and tension. Almost half of the participants retrieved specific memories that were not very integrated into the self and contained few tensions, while the other participants retrieved less-specific memories that contained more autobiographical reasoning and tensions. According to Blagov and Singer (2004), these two profiles could be related to a difference in the two groups’ socioemotional maturity levels. Moreover, as suggested by Taylor (1991) and Thorne et al. (2004), tension facilitates autobiographical reasoning. In fact, reflecting at greater length on stressful events than on non-stressful events is adaptive, because it tends to lessen the tension associated with memory retrieval and promotes efforts to avoid such events in the

future. This might explain the fact that individuals who presented more autobiographical reasoning and more memories with tension also presented more redemption sequences. It could be interesting in future studies to increase the number of self-defining memories requested from each participant in order to explore whether memory content is also related to clusters. In fact, according to Singer (2005), three SDMs are probably not enough to obtain a stable representation of the individuals’ main concerns. If five SDMs were collected, a more stable profile of memory content could emerge. Thus, it would be interesting to explore whether more-specific and less-integrated memories concern more life-threatening and leisure events, or whether individuals who retrieve memories that engage with achievement and relationship themes are seeking a greater investment of meaning making and self-event connection. Moreover, further studies could be conducted to examine how other variables such as personality dimensions, socioemotional maturity, emotional regulation abilities, cognitive flexibility, and motives are related to these two profiles. It might even be interesting to investigate whether individuals in one cluster (particularly individuals retrieving memories that are specific and less redemptive, with less autobiographical reasoning and tensions) are more prone to psychopathology that interferes with insight, self-awareness, and cognitive integration.

The study’s second aim was to explore the SDMs of Swiss young adults, thus providing a cross-cultural extension of previous findings. The main descriptive results showed that the characteristics of the memories collected from Swiss young adults are globally similar to those observed in North American young adults. The number of specific memories, the proportions of memory content and the number of memories containing tension are comparable to previous research (e.g., Blagov & Singer, 2004; Singer et al., 2007; Thorne & McLean, 2002). In fact, most of the memories were specific (76% in our sample and 74–83% in previous studies) and relationship and achievement events were the most represented in participants’ SDMs, followed by life-threatening events and leisure events (respectively, in our sample: 33%, 28%, 16%, and 13%; and in previous studies: 30–44%, 12–23%, 15–24%, 7–20%). Considering that the most accessible memories are those with the highest goal relevance for the self (Conway & Pleydell-Pearce, 2000), these findings confirm that relationships

and achievements are important goals and enduring concerns for both North American and Swiss young adults. These findings do not confirm our hypothesis. In fact, we expected to find a higher number of SDMs of relationships in our sample than in North American samples. This lack of difference could be due to the limited number of SDMs, as discussed above. In addition, according to Thorne and McLean's (2001) manual, relationship SDMs may describe the efforts made by an individual to find a place in his/her network of relationships and conflict resulting from attempts to achieve a more independent state. Consequently, in further studies, the kind of relationship contents needs to be described more precisely.

The present study showed that over half of SDMs contained tension (in our sample: 59%, in previous studies: 69%), confirming that those memories are frequently linked to enduring conflicts. Memory narratives also contained more redemption than contamination sequences. This last finding is consistent with McAdams et al.'s (2001) study, which showed that North American adults who scored high in generativity measures presented life stories containing a similar preponderance of redemption sequences compared to contamination sequences. It is important to note that redemption is related to well-being and is important for the making of identity (McAdams et al., 2001).

In fact, only one clear difference was observed. The participants in our sample retrieved more SDMs containing meaning making than North American young adults tend to do (in our sample: 57% of the SDMs contained meaning making vs 23–31% of the SDMs in previous studies). We do not have a single and definitive explanation for this finding. However, some comments and hypotheses can be presented. First, it should be noted that this difference in meaning making cannot be attributed to a difference in the age of the samples or to the percentage of women in the samples (e.g., Blagov & Singer, 2004; McLean & Thorne, 2003; Singer et al., 2007). This finding therefore suggests that Swiss young adults are more engaged in the construction of a life story and make an additional effort to extract meaning from their experiences and integrate those themes with other related episodes from their lives. One possible explanation of this difference can be derived from the cultural differences observed by Hofstede (2001). Recall that North American culture seems to favour personal autonomy and self-sufficiency more than Swiss

culture. Swiss adults are more conformist and more prone to collectivism than North American adults (but less so than Asian adults). We do not have a definitive explanation of why lower self-focus should lead to more meaning making. Nevertheless, a more detailed investigation of variation in SDM integration according to content could provide elements explaining the difference in the number of meaning-making SDMs that we found.

In the present study meaning making did not vary with memory content. In the only study we found that was conducted with a similar procedure but with North American young adults (Thorne et al., 2004), the authors obtained equal percentages of meanings in relationship and life-threatening event memories (respectively, 29% and 27%), followed by achievement memories (16%), and an almost total absence of meaning in leisure memories (3%). Therefore the main difference between the present study and the Thorne et al. study consists in the number of integrated leisure events, which was higher in Swiss young adults' SDMs (46%). The leisure event SDMs collected in the present study often described trips in distant places, far away from family and friends, and lasting for long periods of time. These kinds of life experiences may play an important role in developing an individualistic, autonomous sense of self. Because this autonomy is comparatively less encouraged by the Swiss culture, we can tentatively argue that some Swiss young adults might need to reflect more on the meaning of important life experiences far away from home to develop an independent sense of self. Nevertheless this explanation is clearly *a posteriori*, and needs to be further investigated in future studies.

Another possible explanation for the observed differences in meaning making between Swiss and American participants is that differences in the data collection setting could have influenced the findings. In fact, in the present study individuals received oral instructions for the Self-Defining Memory task (whereas most earlier studies used written instructions) and this may have created a more reassuring and intimate setting, which encouraged individuals to provide more meaningful and elaborated memories (McLean, 2008).

Regarding self-event connections, it is not possible to compare our findings concerning the number of connections raised with the results of previous studies because of the difference in the number of categories chosen. Nevertheless, it is

possible to observe that our sample made slightly more personal growth connections and slightly fewer personality connections than previous studies (McLean, 2008; McLean & Fournier, 2008). It should be recalled that, of all the kinds of self-event connections described by McLean and Fournier, personal growth connections are the result of the most effortful cognitive processing of experiences and are perceived as the most positive and growth promoting, while personality connections are those that involve the least cognitive effort and are evaluated as the least positive. In fact, according to McAdams (1995), personality connections sketch an outline of the person, while personal growth connections contribute to identity construction. The presence of more personal growth connections may contribute to explaining the higher number of integrative memories that we found in our sample. Moreover, our findings on personal growth connections, and on autobiographical reasoning more generally, provide further evidence of the content validity of the Self-Defining Memory task. In fact, the meaningful memories collected suggest that the Self-Defining Memory task is a valid tool for analysing the manifestation of ongoing identity. In his life-story model of identity, McAdams (2001) argues that identity takes the form of an internalised and evolving story of the self. This “narrative identity” is composed of crucial memories of life, which are highly accessible because of their self-defining properties. Those memories are analysed to extract meanings that help individuals to situate themselves in their culture and provide a sense of continuity among their past, present, and future (Conway, 2005; Singer, 2004). SDMs are therefore a momentary expression of identity.

Another finding that should be discussed concerns the affect changes associated with SDM retrieval. Moffitt and Singer (1994) suggested that retrieval of SDMs leads to a bigger increase in positive affect than negative affect. This is surprising considering the instructions of the SDM task, which specify that a SDM may be either positive or negative. One possible explanation of this puzzling finding is related to the fact that most of the studies measuring affects associated with SDM retrieval did not consider the participants' affective state before the task. For example, Moffitt and Singer (1994) administered the affect rating scale only after each memory description, without establishing a baseline. It is known that healthy people already present more

positive than negative affect in normal conditions (e.g., Watson et al., 1988). This mood state could bias the interpretation of the affective response to memory retrieval. Consequently, the present study controlled affective responses against the affective state before the memory retrieval. Using this procedure, no differences between positive and negative affects were found.

In conclusion, the present study presents some further characteristics of SDMs in young adults. It explored the relationships between the different SDM dimensions. Our findings provide further evidence of the content validity of the Self-Defining Memory task. Moreover, this study indicates that there are few cultural differences between the SDMs produced by young adults in North America and Switzerland. Only a difference in the number of SDMs containing meaning making was observed. Finally, it is possible to argue that SDMs are an interesting and valid way to study the interactions between an individual's self and his or her goals.

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