Nordic Psychology
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/rnpy20

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Published online: 10 Jul 2013.

To cite this article: Sharda Umanath & Dorthe Berntsen (2013) Personal life stories: Common deviations from the cultural life script, Nordic Psychology, 65:2, 87-102, DOI: 10.1080/19012276.2013.807662

To link to this article: http://dx.doi.org/10.1080/19012276.2013.807662

Nordic Psychology, 2013
Vol. 65, No. 2, 87–102, http://dx.doi.org/10.1080/19012276.2013.807662 ARTICLE

Personal life stories: Common deviations from the cultural life script

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Abstract

Autobiographical memories are typically thought of as people's memories for personal life events. Yet, life stories do not exist in isolation; they are shaped by the shared social norms and prescriptions of one's culture as to the order and timing of important transitional events: a cultural life script. An individual's knowledge of their culture's standard life script does *not* arise from compiled individual life events, but is learned detached from particular personal experiences. When probed, many people's most important personal life events do not match the cultural life script exactly. We note that even some commonly experienced life story events do not match the life script and that their qualitative differences have not been systematically investigated. Why are some common life story events in the cultural life script whereas others are not? To begin exploring these differences, we examined what distinguishes two main types of commonly nominated events within people's personal life stories: events that *do* overlap with what they conceive of as their culture's life script and events that do *not*. We offer a secondary data analysis of the Rubin, Berntsen, and Hutson's (2009) life story data, exploring American life story data using the proposed categories of events, the various ratings the authors previously collected, and unused demographic information of interest. Given that this is simply a first step in characterizing the nature of common important life story events, we also provide some speculation for future avenues of investigation and the broader relevance of this work.

Keywords: autobiographical memory, cultural life script, life stories.

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Introduction

With ever increasing cross-cultural communication, knowledge and understanding of the diversity between and within cultures becomes vital for building amiable and mutually beneficial relationships. This kind of research can be informative for immigration, for internal conflicts that cultural groups experience, and for many other issues we face today. One way to begin empirically understanding the effects of diversity on people's actions and conceptions of their own lives is to investigate this diversity within a given culture. Here, we examine how people's personal life story memories agree with or deviate from their culture's life script – that is, their culturally shared expectations as to the order and timing of important transitional events (Berntsen & Rubin, 2004). We are especially interested in examining shared themes among memories that *deviate* from the script to see whether people's remembered lives have more in common than what the life script prescribes. We first briefly describe the notion of autobiographical memory. We next discuss the relationship between personal life story memories and cultural life scripts. Finally, we present our analyses of the correspondence between life story memories and the cultural life script in an American sample of university students as a first step toward understanding these issues.

Autobiographical memory: Remembered lives

When one thinks of "memory," one may generate a variety of different ideas: one could remember having lunch with a friend yesterday, that plants release oxygen, or one's 12th birthday party. Cognitive psychologists sort such memories into different categories. Memories for general knowledge such as factoids about the way plants live tend to be devoid of connections to particular instances of learning; these sorts of memories are referred to as semantic memories. Memories for specific events, such as a lunch one had yesterday or one's 12th birthday party, usually include details such as location, time, and the mood one was in, and are called episodic or autobiographical memories. But autobiographical memories can also be more abstract in nature; that is, they can refer to experiences that are not tied to a specific time, such as remembering what it was generally like to attend school parties while growing up. Although there are a number of types of memories that cognitive psychologists distinguish, here we will consider the relationships among these particular types of memories.

As mentioned earlier, one way that memories for specific events (episodic memories) are typically distinguished from those for facts (semantic memories) is by their rich contextual details. A possible relationship between the two is that semantic memories are formed from compiled episodic memories as contextual details (e.g., source) are forgotten over time (e.g., Tulving, 1985). This type of relationship between episodic and semantic memories has been investigated in a broad literature in terms of learning episodes and general knowledge (e.g., Barber, Rajaram, & Marsh, 2008; Conway et al., 1997; Hanley & Collins, 1989; Nelson, 1993). However, the interplay between episodic and semantic memories has not been as comprehensively examined within autobiographical memory, especially within personally important events.

What we typically think of as autobiographical memories are episodic: people's memories for personally experienced events (life story events; for other names for life story-related events, see McAdams, 2001). Yet life stories do not exist in a vacuum, developing only from specific

experiences; they are also shaped by shared norms and prescriptions of one's culture (Conway & Bekerian, 1987; Lubrosky, 1993; Settersten & Hagestad, 1996). As a result, people share an idea of the prototypical life, a cultural life script (Berntsen & Rubin, 2004; see also cultural concept of biography in Habermas & Bluck, 2000). A cultural life script is organized by society's dictates and expectations of a certain idealized order and timing of a variety of life events (Collins et al., 2007; Neugarten, Moore, & Lowe, 1965). In turn, cultural life scripts are thought to regulate behaviors across societies (Erdoğan et al., 2008; Settersten & Hagestad, 1996; Rubin & Berntsen, 2003; see also Zaragoza Scherman, 2013), as well as influence people's memories for and recall of their life stories (Bohn, 2010; Rubin & Berntsen, 2003; Thomsen & Berntsen, 2008).

Such cultural life scripts seem to involve a form of cultural learning (Tomasello, 2001) and are semantic knowledge. Even young people who have not experienced many life script events still know their culture's life script (Berntsen & Rubin, 2002, 2004; Bohn & Berntsen, 2011; Janssen & Rubin, 2011), with this knowledge increasing in normativity into adolescence (Bohn & Berntsen, 2008; Neugarten, Moore, & Lowe, 1965). Thus, it appears that life scripts are *not* formed from compiled individual life events but are instead learned detached from specific personal experiences (Bohn, 2010; Rubin & Berntsen, 2003).

The relationship between personal life stories and cultural life scripts

Imagine that you are asked to think about important life events. If you were to come up with the seven most important events in your life, which events would you nominate? Then, you are asked to imagine an ordinary newborn infant and what his/her life will be like. Which seven events would you nominate as the most important events that will occur through the course of this newborn's completely prototypical life ahead? Both tasks are likely to be easy to complete, taking little effort to come up with personal and typical important life events. Thinking about the two lists of events, you might speculate that they would have *some* overlap, but that the two lists would not be identical. That is, you might list some events only as personally important life events, whereas you might select others solely for the more generic important life events list.

Rubin, Berntsen, and Hutson (2009) studied the overlap between the events that people nominated as the seven most important events in their own lives and in the life of a hypothetical person living a completely ordinary (prototypical) life. Their participants were 100 undergraduate students with a mean age of 18.7 years. For the personal life events, the participants imagined that they were to tell their life story to a new friend, whom they had just met and who therefore did not know anything about their past. They imagined telling their personal stories to this (fictitious) friend with whom they were absolutely confident and with whom they could be completely honest. Their task was to note seven memories of events from their own personal lives – from their birth to their present age – that they thought were most central to their life story. For the life script task, in contrast, the instruction was the following: "Imagine a quite ordinary infant (choose according to your own gender). It cannot be a specific infant that you know, but a prototypical infant in our culture with a quite ordinary life course ahead. Your task is to write down the seven most important events that you imagine are most likely to take place in this prototypical infant's life, from birth to death."

Compiled across participants, the latter is a conceivably empirical measure of life events that a given population considers important; individuals are not constrained by experimenter

conceptions of what particular events are important. The cultural life script has been operationalized as those events which four or more individuals (out of 100) nominate as among the seven most important events that are likely to occur in a typical newborn's life course (e.g., Bohn, 2010; Bohn & Berntsen, 2008, 2011; Berntsen & Rubin, 2004; Erdoğan et al., 2008; Janssen & Rubin, 2011; Rubin, Berntsen, & Hutson, 2009). Of note is that, one's personal life events do not typically match one's cultural life script exactly, although it is used as a structure for organizing and recalling life story memories (Berntsen & Rubin, 2004; Rubin, Berntsen, & Hutson, 2009; Bohn, 2010). Here, it may be even more so because participants, especially the American participants, are constrained in nominating life story events by their age. Having collected the first set of such data from Americans, the authors found less overlap between life script events and personal life story events in Americans (46%) as compared with those in Danes (70%). That is, only 46% of what Americans nominated as the most important events in a typical person's life overlapped with what they listed as the most important events in their own lives. The Danes, in contrast, showed a great deal more overlap (70%) between what they believed were the most important events in a typical person's life and in their own lives (for a replication, see Bohn, 2010). Citing greater diversity in American culture as the possible reason for this large difference, the authors did not add further to that explanation. We later discuss this finding in greater detail.

Beyond distinguishing life scripts and life stories as mentioned earlier, what qualitatively characterizes similarities and differences between personal life stories and cultural life scripts has not been empirically investigated. Whereas it is contextual details that seem to be forgotten or discarded in the transition from episodic to semantic memory for information, the qualitative characteristics that differentiate personal life stories and cultural life scripts are unknown. We propose one way of broaching this question through the specific examination of what distinguishes two types of important events within people's personal life stories: events that *do* overlap with what more broadly is conceived of as their culture's life script and events that do *not*.

Common life stories

Based on the standard collection of life story and life script event data as described earlier, life story events, those that people nominate as the most important in their own lives, can be broadly categorized according to their overlap (or lack thereof) with the generated cultural life

Table 1: Categories of commonly nominated life story events

Event type	Life script	Examples
Cultural Life Script (CLS) event	Present in the Life script (nominated in the life script task by four or more people)	College, other's death, high school, and leaving home
Non-Cultural Life Script (Non-CLS) event	Nominated in the life script task by more than one, but less than four people	Long trip, having siblings, accident/injury, and learning to read/write
Unique Life Story event	Never nominated in the life script task	Moving, playing a sport, playing an instrument, and having an epiphany/realization

script of a relevant group (Table 1). We have all experienced completely exceptional events that we might describe as among the most important of our lives (e.g., volunteering at the Olympics), and it comes as no surprise that these wholly distinctive events do not overlap with one's culture's life script (note: we do not further discuss these entirely singular events, which are never nominated as part of the life script and are mentioned by fewer than four individuals as life story events). However, there do exist "common" life story events, which many people have experienced (e.g., moving to a new city; see Table 2 for the list of commonly experienced life story events from Rubin, Berntsen, & Hutson, 2009). Here, we define the commonness of life stories across people in the same way that a cultural life script is operationalized: for a life story event to be "common," four or more individuals (out of 100) must nominate it as among the seven most important events they have personally experienced. All further discussion referring to life stories focuses on these commonly experienced life story events; Table 2 displays the commonly nominated life story events from Rubin, Berntsen, and Hutson (2009) along with their frequency of nomination in the life script task and the life story task.

To quantify the degree of overlap that a common life story has with a group's cultural life script, we created three categories of event types (see Table 1 for examples and criteria of each type). Although such events are widely experienced, only some "common" life stories overlap with the cultural life script, whereas others are never suggested as life script events by even a single individual. The first category of common life story events consists of those events that *are* in the group's cultural life script. That is, these events are those in the cultural life script (Culture Life Script events) that overlap with people's most important life story events. One can then consider those events that are not in the group's cultural life script (Non-Cultural Life Script events): these are the common life story events that were nominated by *fewer* than four people in the life script task. Conceptually, this grouping lumps together those events that were occasionally nominated as life script events (but less than four times) *and* the events that were *never* nominated as life script events by any individual. Therefore, a natural third category consists exclusively of the commonly experienced life story events that no one ever nominated as among the most important events in a typical newborn's life course (Unique Life Story events). That is, the Unique Life Story events conceptually consist of a subset of the Non-Cultural Life Script events – those that were never nominated in the cultural life script task. However, for the analyses that follow, these two categories of events have been completely separated: Non-Cultural Life Script events represent the common life story events which participants did occasionally nominate as life script events (i.e., life story events that were listed as life script events one to three times); Unique Life Story events refer to the common life story events that were never nominated as among the most important events in a typical newborn's projected life.

Secondary data analyses

As a first step to understanding differences among the categorizations of common life stories discussed earlier, we conducted a secondary data analysis of the Rubin, Berntsen, and Hutson (2009) life story data, applying these event types. This dataset includes responses from 100 American undergraduates, including 55 females with an age range from 18 to 28 years, and 111 Danish undergraduates, including 92 females with an age range from 21 to 49 years. Our

Table 2: Frequency of common life story events in the life script and in life stories

Event type	Event	Frequency of nomination in life script events	Frequency of nomination in life stories
Cultural Life Script events			
	College	54	86
	Begin school	48	20
	High school	46	60
	First job	38	5
	Begin talking	29	7
	Begin walking	27	7
	Go to school	22	20
	Other's death	20	32
	Own birth	18	13
	Fall in love	14	26
	Begin driving	13	13
	First sex	9	8
	Leave home	8	10
	Begin daycare	5	4
	First kiss	4	7
Non-Cultural Life Script events			
	Having siblings	3	23
	Accident/injury	3	10
	Learning to read/write	3	5
	Long trip	2	20
	Events with family	2	5
	Having peers	2	5
	Serious disease	2	5
	Develop a belief system	1	9
	Parent's divorce	1	9
	Meeting a true friend	1	5
	Earn first money	1	4
	Fights involving parents	1	4
Unique Life Story events			
	Moving	0	42
	Major achievement	0	38
	Playing a sport	0	22
	Playing an instrument	0	11
	Bar/Bat Mitzvah	0	8
	Meeting current significant other	0	8
	Long-term relationship	0	8
	Living in another country	0	6
	Parents (re)marry	0	5
	Having an epiphany/realization	0	4
	Vacation	0	5

secondary data analyses focused exclusively on the American students. Each participant nominated the seven most important events in his/her own life and in a prototypical ordinary life. For both types of event nominations, participants rated how common the event is in people's lives generally (prevalence), how important the event is (importance), at what age he/she experienced the event (age), and how emotionally positive or negative the event is (valence). Prevalence ratings were made on a scale of 1–100. The importance ratings were made on a scale of 1–7. Valence was rated on a scale from −3 to +3 with −3 being highly negative and +3 being highly positive. The American participants were also asked whether they were native speakers of English.

In terms of commonly experienced life story event nominations, overall, participants listed ~553 *common* life story events and 116 events that they did not share with at least three other people (31 event nominations were excluded from the following analyses because they were not interpretable or were repeated nominations). Thus, on average, a given participant nominated 5.53 life story events that were shared with at least three other people and 1.16 events that were not. There were no participants who did not nominate *any* common life story events.

In the secondary data analyses that follow, all results, unless otherwise stated, were significant at the 0.05 alpha level. A Geisser–Greenhouse correction was used for violations of the sphericity assumption of ANOVA.

Life story phenomenology based on life story–life script overlap

We conducted a series of repeated measures ANOVAs to examine any differences in the various ratings collected by Rubin, Berntsen, and Hutson (2009) based on the event categories in personal life stories. In terms of the number of common events nominated as important personal life story events, we found that participants nominated the event types with different levels of frequency, $F(2,198) = 88.84$, $\mathrm{MSE} = 1.70$, $\eta_p^2 = 0.47$ (Table 3). First, participants nominated significantly more Cultural Life Script events ($M = 3.18$) than Unique Life Story events [$M = 1.58$; $t(99) = 7.50$, $\mathrm{SEM} = 0.21$]. The high number of Cultural Life Script event nominations indicates the validity of the life script task as tapping those events that are experienced broadly by a group of people within a given culture (e.g., Collins et al., 2007) and supports Berntsen and Rubin's (2004) claim that the Cultural Life Script is used to process and organize life stories (see also Clarke, 1995). Second, both Cultural Life Script events and Unique Life Story events were nominated more often than Non-Cultural Life Script events [$M = 0.77$; $t(99) = 13.44$, $\mathrm{SEM} = 0.18$, and $t(99) = -5.25$, $\mathrm{SEM} = 0.15$]. This suggests that among common

Table 3: Nominations and ratings of commonly experienced life story events

	Cultural Life Script events	Non-Cultural Life Script events	Unique Life Story events
Number of events	3.18	0.77	1.58
Prevalence of events	64.43	45.96	40.00
Importance of events	6.07	5.87	5.78
Valence of events	1.36	0.88	1.70

Notes: The number of events is out of a total of seven nominated in the life story task overall; the prevalence ratings were on a scale of 1–100; the importance ratings were on a scale of 1–7; and valence was rated from −3 to +3.

life story events, events that are unique to people's life stories (and are never implicated as part of the life script) stand out more in people's minds as key personal events as compared with events that are more commonly shared (and are tentatively nominated as being part of the life script). Speculatively, this may be because the former play a more distinctive and salient role for life story and identity, especially in an individualistic culture.

These findings are corroborated by participants' prevalence ratings of these event types: participants demonstrated an accurate awareness of how typical these different types of events are in people's lives (Table 3), matching the trend of commonality seen in Table 2, [$F(2, 92) = 7.84$, MSE $= 973.04$, $\eta_p^2 = 0.15$]. They rated Cultural Life Script events as significantly more prevalent in people's lives ($M = 64.43$) than either Non-Cultural Life Script events [$M = 45.96$; $t(53) = 4.42$, SEM $= 4.52$] or Unique Life Story events [$M = 39.99$; $t(83) = 7.49$, SEM $= 4.26$].

Interestingly, participants did not rate the importance of events differently based on the type of event, $F < 1$. The pattern of the means for each event type shows a trend suggesting that participants rated Cultural Life Script events as more important ($M = 6.07$) than either Non-Cultural Life Script ($M = 5.87$) or Unique Life Story events ($M = 5.78$). Thus, the data show a hint that events that overlapped with the cultural life script were considered mildly more important than those events that did not. However, given that this pattern was not significant, it seems that commonly experienced life story events are considered equally important in participants' minds, regardless of how much or how little they overlap with the cultural life script.

Finally, we found evidence for differences in valence ratings across these event categories, $F(2,92) = 4.10$, MSE $= 1.91$, $\eta_p^2 = 0.08$ (Table 3). Follow-up *t*-tests revealed that participants rated Unique Life Story events ($M = 1.70$) as significantly more positive than Non-Cultural Life Script events [$M = 0.88$, $t(46) = -2.40$, SEM $= 0.34$], whereas Cultural Life Script events were valenced no differently from either of the other event types ($M = 1.36$). This was surprising as Berntsen & Rubin (2004) postulated that events that are part of the cultural life script are typically more positive than other events. Thus, we expected that Cultural Life Script events would be rated more positively than the other event types. Furthermore, contrary to the idea that deviations from the cultural life script might represent problems, unhappiness, or pursuits that did not work out in one's life (Rubin & Berntsen, 2003), in this case, events that are uniquely part of people's life stories do not appear to be negatively valenced and are, in fact, the most positively rated. One possible explanation is that the events people commonly choose to nominate that are not part of the cultural life script are events that were remembered as positive instances of having exerted control over one's life (e.g., entering a long-term relationship or having an epiphany; Gluck & Bluck, 2007). It could also be the case that it is *uncommon* life story events that fit the postulated description of deviations from the cultural life script. We found some evidence supporting this possibility as we examined valence ratings of life story events that were nominated by one to three individuals (Uncommon Life Story events) to Cultural Life Script events, finding that Uncommon Life story events were significantly less positive [$M = 0.67$; $t(69) = 3.65$, SEM $= 0.26$]. Another explanation is that a sample with more stressful events in their past (than college students are most likely to have) would show more valence-related differences between life script events and other events. This is supported in a study of considerably older Danish university students (mean age $= 26.5$ years), in which important autobiographical memories that did not correspond to the life script more frequently referred to stressful events than those that did correspond (Berntsen & Bohn, 2010).

These secondary data analyses revealed differences in the number of nominated life story events, ratings of prevalence, ratings of importance, and ratings of valence based on whether commonly experienced events are part of the cultural life script, sometimes considered part of the cultural life script or unique to personal life stories. Such evidence is just the beginning for our understanding of the relationship between life story and cultural life script events.

Cultural influences on life story–life script deviations: Native language as a proxy for cultural background

As mentioned earlier, Rubin, Berntsen, and Hutson (2009) suggested that cultural diversity was the likely cause of Americans having much less overlap between their personal life stories and the American cultural life script (compared with Danish life stories with their life script). Interested in exploring that cultural diversity, we hypothesized that focusing on the deviation of life story events from life script events may be an informative approach. One possibility is that a person's individual deviations from events that are *typically* most important in life indicate that one is living a life different from the culturally prescribed and idealized life. Perhaps the deviations indirectly express one's identification (or lack thereof) with the culture in which one lives and the nature of that identification. We can consider the Unique Life Story events as "common" deviations from the life script. To explore whether such a possibility is credible, we analyzed differences among these common life story event categories based on a demographic factor: native speaking of English.

Twenty-one percent of participants in the American dataset were not native speakers of English. Although they collected the information, Rubin, Berntsen, and Hutson (2009) did not investigate specific differences based on native speaking of English. Note that it is not native language *per se* that we are interested in, but rather, native speaking of English as a rough indicator of a cultural background other than the mainstream American one. Although not a perfect measure of one's inclusion in a society, one's native tongue does suggest some form of identification with an associated culture. Thus, the fact that English is *not* one's native language could certainly affect that individual's conception of the most important events in his or her own life as well as in that of an ordinary newborn in American society.

Using a 2 (Native Speaker of English: Yes, No) $\times$ 3 (Event Type: Cultural Life Script, Non-Cultural Life Script, Unique Life Story) repeated measures ANOVA, we explored the effect of native speaking of English on the various ratings provided for each event. In terms of the number of events that participants nominated, native and non-native speakers of English differentially nominated events within each event category. Although interaction between native speaking of English and life story event type was not significant [$F(2, 196) = 2.34$, $\mathrm{MSE} = 1.67$, $\eta_p^2 = 0.023$, $p = 0.10$], we suspected that this may be due to the small number of non-native speakers of English in the sample. Furthermore, we specifically expected that native and non-native speakers of English might differ on the number of Unique Life Story events they nominated (see Figure 1 for the number of events nominated for each event category). In a planned comparison, we found that non-native speakers nominated significantly more common life story events that occurred *uniquely* in life stories than native speakers of English [$M = 2.05$ vs. 1.46; $t(98) = 2.17$, $\mathrm{SED} = 0.27$]. This result lends some credence to the idea that deviation from the standard culture of the society in which one lives can be indicative of cultural diversity;

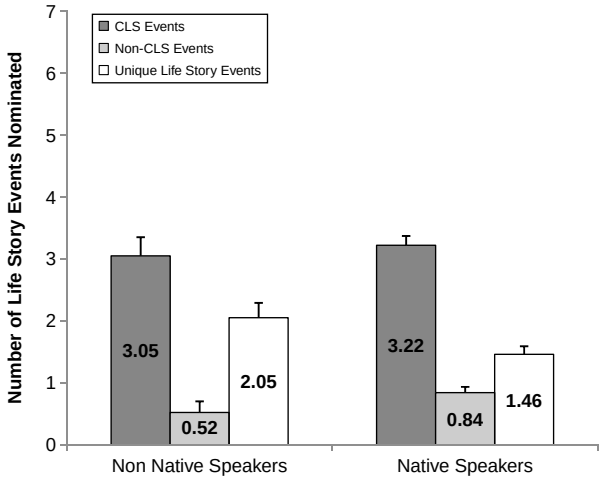

Figure 1: Number of nominated commonly experienced life story events based on event type and native speaking of English.

one must keep in mind, though, that the Unique Life Story events are still commonly experienced. One possibility is that these non-native speakers of English are adhering to another cultural life script or a sub-cultural life script within the broader standard American one (see Haque & Hasking, 2010).

Non-native speakers of English also rated their Cultural Life Script events as occurring at a significantly older age than native speakers [$t(98) = -2.17$, SED $= 0.94$], driving the significant interaction between native speaking of English and life story event type on what age the event occurred [$F(2, 90) = 3.54$, MSE $= 23.53$, $\eta_p^2 = 0.07$]. This may be because they entered the American culture at an older age and, therefore, experienced the milestones of Cultural Life Script events later than native speakers typically do (see Figure 2 for age for all event categories). Of note here is that the non-native speakers *were* significantly older ($M = 19.2$) than the native speakers ($M = 18.5$); however, an average age difference of 7 months between the two age groups is unlikely to be the driving factor behind the $\sim$2.5-year age difference for Cultural Life Script event occurrence.

Native speaking of English did not seem to affect how participants rated the importance of events in the different categories. Again, we suspected that this may be because of the small number of non-native speakers of English in the sample, given the trend seen in Figure 3. Therefore, we probed further into the relationship between event categories and native speaking of English. Non-native speakers rated their Unique Life Story events as *less* important compared with Cultural Life Script events (5.35 for Unique Life Story events vs. 6.20 for Cultural Life Script events), though with so few participants, the difference is not significant, $t(18) = 1.75$, SEM $= 0.48$, $p = 0.098$. Native speakers of English, however, seem to value the Unique Life Story events that they experience as equally important as Cultural Life Script events, $t < 1$ (the rating of Unique Life Story events does not significantly differ from Non-Cultural Life Script events, however, $t < 1$). One explanation for this trend is that non-native speakers are highly motivated to fit into their (potentially) new culture and, therefore, find their experiences of Cultural Life

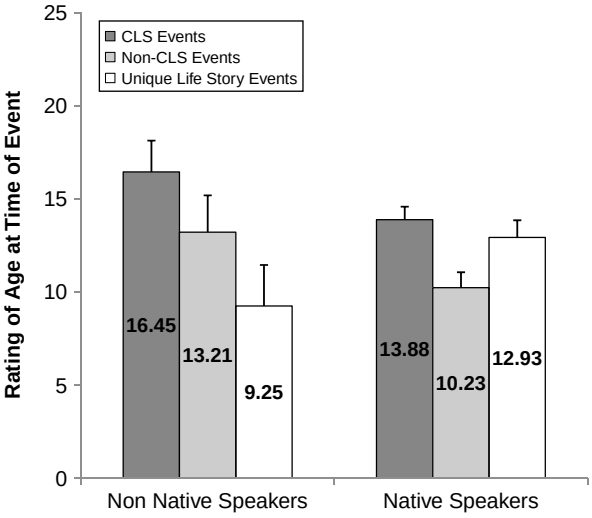

Figure 2: Age ratings of nominated commonly experienced life story events based on event type and native speaking of English.

Script events to be more momentous in their lives than events that are uniquely in life stories, which are then de-valued in importance. Regarding the native speakers, it is interesting that they rate their unique life story events as just as important as Cultural Life Script events, which tend to be highly important events. One possibility is that native speakers consider the unique life story events in their lives as key to their lives in the very fact that they deviate from the cultural life script. Speculatively, it could be that this is a finding that would be specific to the American culture as it is quite important to Americans' sense of self that they are individuals, special in his/her own right, and differ from the crowd (Sayre, 2002; Settersten & Hagestad,

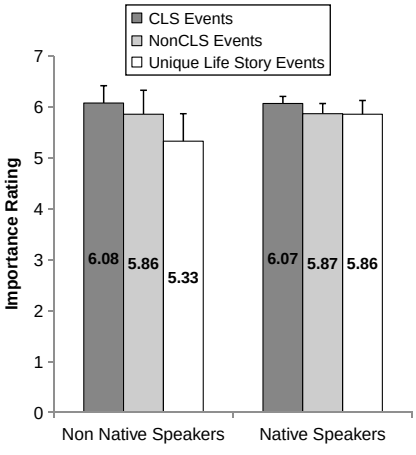

Figure 3: Importance ratings of nominated commonly experienced life story events based on event type and native speaking of English.

1996). That is, in other cultures, Unique Life Story Events could potentially be rated as somewhat less important than Cultural Life Script events. Although native speaking of English affected participants' importance ratings of events in their lives, this demographic factor did not affect participants' prevalence or valence ratings. That is, regardless of whether or not they were native speakers of English, participants similarly rated how typical life story events were as well as the emotional nature of those events (Fs < 1).

We can draw several tentative conclusions from this investigation of the influence of Native English speaking, a proxy for one's cultural background potentially being other than the mainstream American culture, on different aspects of commonly experienced life story events. First, non-native speakers of English seem to have been less influenced by the Cultural Life Script in their nominations of life story events as they listed more unique life story events than native speakers. Interestingly, however, these same non-native speakers rated the Cultural Life Script events that they did include in their life stories as slightly more important than their uniquely experienced life events. Furthermore, an intriguing finding here is that native speakers rated Unique life story events as no less important than Cultural Life Script events, suggesting that these experiences outside the standard American cultural life script are quite important to them.

Future directions

Although the secondary analyses of the Rubin, Berntsen, and Hutson (2009) American dataset on life script and life story events are informative, they are just the first step toward understanding the relationship between people's most significant life stories and what they consider to be the most important events for a typical person in their culture. For example, whether one is a native speaker of the mainstream society's language (e.g., English in the USA), as a rough indicator of cultural background, seems to affect people's nominations of important life story events as well as their subscription to the relevant cultural life script. However, before examining the nature of an individual's identification with a culture, we must first understand *why* some common life story events overlap between personal life stories and cultural life scripts, whereas others only appear in personal life stories.

While categorizing events that people commonly include in their life stories may give us an overview of the events (Cultural Life Script events, Non-Cultural Life Script events, and Unique Life Story events), the question remains, what specific qualities of these "common" life stories lead some of them to manifest in the cultural life script whereas others do not? If these two types of events are both commonly experienced by people within a culture, what about Unique Life Story events makes them so? Where does the sense of importance come from if not from culturally shared ideas? There appear to be some differences between such events and Cultural Life Script events and even Non-Cultural Life Script events as described earlier. But prevalence, importance, age, and valence ratings as reported and analyzed here are not enough to understand and characterize the qualitative differences underlying the distinctions between these event types.

In order to generate what qualities might be relevant, we can look to the definition of the cultural life script. Berntsen & Rubin (2004) were the first to lay out a list of 10 specific attributes of the cultural life script: (1) It consists of semantic knowledge of events that an individual may not have experienced yet, (2) it includes a sequence of temporally ordered events, (3) it is a series

of slots and requirements for those slots to be filled with particular events, (4) it forms a hierarchical arrangement with transitional events forming a higher order "scene" within which a number of subordinate events are nested, (5) it is used to process and organize life stories, (6) it consists of culturally important transitional events with culturally sanctioned timing, (7) it is not extracted from personal recurrent experiences but passed on through tradition, (8) it represents an idealized life rather than a typical life, (9) it has an over-represented number of positive events, and (10) it favors events expected to occur within the time period of the reminiscence bump. Quantifying these attributes across the different categories of commonly experienced life stories may allow us to pinpoint which aspects of the cultural life script are particularly poignant for a life story event to be even considered as part of a culture's prescribed prototypical life.

It is also important to consider the nature of life stories. Habermas & Bluck (2000) provide four types of coherence that define a "good" life story: temporal, biographical, causal, and thematic. Temporal coherence refers to a sense of linear ordering in time of the events in one's life story. Biographical coherence comes from a cultural concept of biography and seems to overlap greatly with the idea of a "cultural life script," citing "the normative cultural notion of the facts and events that should be included in life narratives . . . defin[ing] conventional life phases" (Habermas & Bluck, 2000). Causal coherence refers to the explanatory nature of the life story, including offering rationale for one's actions and changes in one's values or personality over time. Finally, thematic coherence regards an evaluative component in the life story, interpreting the events in one's life to give them meaning within the context of one's set of life experiences. These forms of coherence help identify what ought to be included when one is telling his/her life story. Although the life story task in Rubin, Berntsen, and Hutson (2009) and other studies (e.g., Bohn, 2010; Erdoğan et al., 2008) does not necessarily lead to participants considering how they would tell their full life story in narrative form, these types of coherence likely influence which events they choose to include among the seven most important events from a lifetime of experiences.

Taking together the characteristics of cultural life scripts and the coherences involved in making a "good" life story, we can begin to systematically distinguish which aspects of a cultural life script and people's individual life stories are integral for whether commonly experienced life events are also part of the cultural life script (Cultural Life Script events), sometimes thought to be part of it (Non-Cultural Life Script events), or remain uniquely important to individuals' life stories. For example, through these definitions and other work (Clarke, 1995; Neugarten, Moore, & Lowe, 1965; Plath & Ikeda, 1975; Settersten & Hagestad, 1996), we can note that the timing of events, even culturally sanctioned events, is key. Researchers even suggest that when asked to recall a life story event, people are likely to consider when their culture (and thus, cultural life script) prescribes the event to occur as a reference point for the memory (Berntsen & Rubin, 2004; Haque & Hasking, 2010). Some events are likely to be more time-locked than others; by time-locked we mean that a given event is expected to occur within a particular time window and that it is only appropriate or culturally acceptable during that time frame. Therefore, this is one potential factor that distinguishes the different types of commonly experienced life story events: Cultural Life Script events could tend to be more time-locked, whereas events that are commonly experienced but uniquely in life stories could more easily happen at any time. In the dataset discussed here, we can see a hint of this idea; participants' ratings of their age for Cultural Life Script events had a smaller average standard deviation ($M = 3.91$) in comparison with Unique Life Story events ($M = 5.30$). Similarly, there are many other characteristics of

commonly experienced life events that could help to better define what sorts of experiences are likely to remain uniquely part of people's life stories and the role of these events in people's conceptions of their own lives.

Summary and conclusions

People show a high level of agreement as to which events belong in the cultural life script. However, at the same time, many events that they deem as important to their individual life stories are not part of the life script. Perhaps even more interestingly, many of these unique life story events are widely shared across individuals, as we have shown here. This shows that individual life stories have more in common than what the life script prescribes. More research is needed to disentangle exactly which factors are decisive for common life events to be either included in or excluded from the normative life script. Here, we have taken a first step.

We also began the exploration of the role of diversity within a given culture through differences between native and non-native speakers of English in this sample. We found that the non-native speakers had more unique life story events than the native speakers, which may suggest that the former is less well integrated in the overarching standard American culture. These analyses are also highly suggestive in terms of noting that it is important that we explore the role of subcultures within highly diverse societies such as the USA for furthering our understanding of life stories and cultural life scripts. In a wider context, this type of analysis may be promising as a method for gaining more fine-grained insights into how much concrete life events as experienced and interpreted within certain subcultures (including regional, gender-based, and ethnic groups) deviate from the life script of the overarching culture. Identifying specific life events that are central in the individual life stories in such social groups although of little centrality in the dominant life script of the culture may help in identifying potential points of conflict and thereby ease the integration and mutual understanding across different social groups.

Acknowledgements

The first author was supported by a National Science Foundation Graduate Research Fellowship, and the present investigation was supported by the National Science Foundation Nordic Research Opportunity awarded to the first author. This work was also supported by the Danish National Research Foundation (Grant number DNRF93) and the Danish Council for Independent Research: Humanities. The authors thank the Center on Autobiographical Memory Research for their comments regarding the theoretical questions addressed here.

REFERENCES

Barber, S. J., Rajaram, S., & Marsh, E. J. (2008). Fact learning: How information accuracy, delay, and repeated testing change retention and retrieval experience. *Memory*, *16*(8), 934–946.

Bernsten, D., & Rubin, D. C. (2002). Emotionally charged autobiographical memories across the life span: The recall of happy, sad, traumatic and involuntary memories. *Psychology and Aging*, *17*(4), 636–652.

Berntsen, D., & Rubin, D. C. (2004). Cultural life scripts structure recall from autobiographical memory. *Memory & Cognition*, *32*(3), 427–442.

Bohn, A. (2010). Generational differences in cultural life scripts and life story memories of younger and older adults. *Applied Cognitive Psychology*, *24*, 1324–1345.

Bohn, A., & Berntsen, D. (2008). Life story development in childhood: The development of life story abilities and the acquisition of cultural life scripts from late middle childhood to adolescence. *Developmental Psychology*, *44*(4), 1135–1147.

Bohn, A., & Berntsen, D. (2011). The reminiscence bump reconsidered: Children's prospective life stories show a bump in young adulthood. *Psychological Science*, *22*(2), 197–202.

Clarke, D. D. (1995). Life scripts: Implicit representations of life-course patterns. *Journal of Social Behavior and Personality*, *10*(4), 871–884.

Collins, K. A., Pillemer, D. B., Ivcevic, Z., & Gooze, R. A. (2007). Cultural scripts guide recall of intensely positive life events. *Memory & Cognition*, *35*(4), 651–659.

Conway, M. A., & Bekerian, D. A. (1987). Organization in autobiographical memory. *Memory & Cognition*, *15*(2), 119–132.

Conway, M. A., Gardiner, J. M., Perfect, T. J., Anderson, S. J., & Cohen, G. M. (1997). Changes in memory awareness during learning: The acquisition of knowledge by psychology undergraduates. *Journal of Experimental Psychology: General*, *126*(4), 393–413.

Erdoğan, A., Baran, B., Avlar, B., Taş, A. C., & Tekcan, A. İ. (2008). On the persistence of positive events in life scripts. *Applied Cognitive Psychology*, *22*, 95–111.

Glück, J., & Bluck, S. (2007). Looking back across the life span: A life story account of the reminiscence bump. *Memory & Cognition*, *35*(8), 1928–1939.

Habermas, T., & Bluck, S. (2000). Getting a life: The emergence of the life story in adolescence. *Psychological Bulletin*, *126*, 748–769.

Hanley, G. L., & Collins, V. L. (1989). Metamemory judgments of the origin and content of course information: Comparing text and lecture materials. *Journal of Educational Psychology*, *81*(1), 3–8.

Haque, S., & Hasking, P. A. (2010). Life scripts for emotionally charged autobiographical memories: A cultural explanation of the reminiscence bump. *Memory*, *18*(7), 712–729.

Janssen, S. M. J., & Rubin, D. C. (2011). Age effects in cultural life scripts. *Applied Cognitive Psychology*, *25*, 291–298.

Luborsky, M. R. (1993). The romance with personal meaning in gerontology: Cultural aspects of life themes. *The Gerontologist*, *33*, 445–452.

McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, *5*(2), 100–122.

Nelson, K. (1993). The psychological and social origins of autobiographical memory. *Psychological Science*, *4*, 7–14.

Neugarten, B. L., Moore, J. W., & Lowe, J. C. (1965). Age norms, age constraints, and adult socialization. *American Journal of Sociology*, *70*(6), 710–717.

Plath, D. W., & Ikeda, K. (1975). After coming of age: Adult awareness of age norms. In T. R. Williams (Ed). *Socialization and Communication in Primary Groups*, Chicago, IL: Aldine Publishing Company (pp. 107–124).

Rubin, D. C., & Berntsen, D. (2003). Life scripts help to maintain autobiographical memories of highly positive, but not highly negative, events. *Memory & Cognition*, *31*(1), 1–14.

Rubin, D. C., Bertnsen, D., & Hutson, M. (2009). The normative and the personal life: Individual differences in life scripts and life story events among USA and Danish undergraduates. *Memory*, *17*(1), 54–68.

Sayre, J. (2002). Personal narratives in the life stories of older adults. *Journal of Geriatric Psychiatry*, *35*(2), 125–150.

Settersten, R. A., Jr., & Hagestad, G. O. (1996). What's the latest? Cultural age deadlines for family transitions. *The Gerontologist*, *36*, 178–188.

Thomsen, D. K., & Bernsten, D. (2008). The cultural script and life story chapters contribute to the reminiscence bump. *Memory*, *16*(4), 420–435.

Tomasello, M. (2001). Cultural transmission: A view from chimpanzees and human infants. *Journal of Cross-Cultural Psychology*, *32*, 135–146.
Tulving, E. (1985). How many memory systems are there? *American Psychologist*, *40*(4), 385–398.
Zaragoza Scherman, A. (2013). (In press). Cultural life script theory and the reminiscence bump: A reanalysis of seven studies across cultures. *Nordic Psychology*.

