

# Intergenerational Transmission of the Reminiscence Bump and Biographical Conflict Knowledge

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## Abstract

In the study reported here, we investigated intergenerational transmission of life stories in two groups of young adults: a conflict group and a nonconflict group. Only participants in the conflict group had parents who lived through violent political upheaval. All participants recalled and dated 10 important events from one of their parents' lives. There were three main findings. First, both groups produced sets of events that displayed a reminiscence bump related to the parent's estimated age at the time of the event. Second, the majority of the events in both groups were transitions that were perceived to have exerted a significant psychological and material impact on a parent's life. Third, in the conflict group, 25% of recalled events were conflict related. This finding indicates that historical conflict knowledge is passed from one generation to the next and that it is understood to have had a personally relevant, life-altering effect. Moreover, the findings suggest that transitional impact and perceived importance help determine which events children will remember from a parent's life.

## Keywords

intergenerational transmission, autobiographical memory, reminiscence bump, conflict knowledge, collective memory, transition theory, war, social cognition, immigration

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Historical knowledge can be acquired through life stories that are passed on from one generation to the next (Assmann, 1995). Memory is selective, however, and the stories originally shared by one generation might not be the same stories remembered by future generations (Schuman, Akiyama, & Knäuper, 1998). To investigate the intergenerational transmission of personal experiences and historically significant public events, we asked young adults to list the 10 most important events in one of their parents' lives and to think aloud as they estimated the date of each event. Participants also indicated why they believed that these events were an important part of their parent's life story. Two groups were compared: young adults whose parents lived through violent political upheaval (the conflict group) and young adults whose parents grew up in Canada (the nonconflict group).

Given these data, it was possible to identify those aspects of a parent's biography that are considered important and to determine why they are considered to be so. Also, because we collected data from people whose parents had lived through periods of military conflict or social upheaval, it was possible to determine whether parental biographies serve as a conduit for the intergenerational transmission of *conflict knowledge*. In other words, we wanted to understand what people know of their parents' lives, including the external circumstance that

shaped those lives. This is an important issue because it grounds collective memory in the experience of a generation and demonstrates how this form of knowledge can be absorbed vicariously by the next generation.

There has been much research on cultural transmission. For instance, a number of factors are known to play a role in the intergenerational transmission of parental values and behaviors. These include the selectivity of transmission (what, where, when, how), speed of transmission, and direction of transmission (e.g., vertically across generations, horizontally among peers; Nauck, 2001; Schönplflug, 2001, 2009; Tomasello, 2001; van Geert, 2009). In contrast, little is known about the characteristics of the events selected for remembrance by subsequent generations.

Although little work has been done on the memorial mechanisms implicated in intergenerational transmission, the research that exists suggests that sharing and recalling family stories is important for optimal cognitive and psychological functioning. For instance, family knowledge has been shown

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to be a predictor of successful functioning in children and adolescents: Greater knowledge of family history has been linked with lower levels of anxiety, higher self-esteem, and greater abilities for overcoming educational and psychological challenges (Duke, Lazarus, & Fivush, 2008; Fivush, Bohanek, & Zaman, 2011). More elaborative parental reminiscing styles have also been shown to enhance recall and narrative abilities in preschool-age children (Fivush, Haden, & Reese, 2006). Further, sharing memories with children has been shown to promote problem-solving capabilities, enhance interpersonal relationships, and help regulate emotions (Kulkofsky, Wang, & Koh, 2009). Most of the studies on the mnemonic aspects of intergenerational transmission have focused on child development, however, and have mostly targeted shared memories rather than events specific to a parent's life.

The way a parent's life is understood and remembered by his or her children when they reach adulthood has received little attention. The issue is, nonetheless, of substantial importance, especially when a parent has lived through historical events, such as war, terrorism, or revolution. The degree to which personal memory is transformed into historical memory has implications for the construction and maintenance of group identity, as well as the persistence of group conflict (Bar-Tal, 2007; Halbwachs, 1952/1992; Hirst & Manier, 2008; Pennebaker, Paez, & Rimé, 1997; Tessler, Konold, & Reif, 2004). By examining the mnemonic mechanisms implicated in the intergenerational transmission of autobiographical events, we provide insight into the ways recent history is represented and understood, and the mechanisms involved in selecting events from a parent's life for future recall.

## Transition Theory

We contextualized the intergenerational transmission of personal and historical events within a theory of autobiographical memory. This is because the representation of and process of recalling autobiographical and biographical events may be similar. Moreover, recalling important events from a parent's life may include shared experiences, which include both autobiographical and biographical details. As such, it is reasonable to suspect that characteristics observed in autobiographical memory might also be observed in the recall of events from a parent's life.

The temporal distribution of autobiographical memories often reveals a *reminiscence bump*—an overrepresentation of events that occurred between 10 and 30 years of age (Rubin & Schulkind, 1997). Several theories attempt to explain the factors underlying the reminiscence bump, including the potential role of biological mechanisms (Janssen & Murre, 2008), the prevalence of novel events during one's formative years (Rubin, Rahhal, & Poon, 1998), cultural-life-script expectations (Berntsen & Rubin, 2004), and the self-defining characteristics established throughout adolescence and early adulthood (Conway, 2005). We propose, however, that the transition theory of autobiographical memory (Brown, Hansen,

Lee, Vanderveen, & Conrad, 2012) might best account for the reminiscence bump, as well as predict the recall of important events from a parent's life.

According to transition theory, autobiographical memories are organized around major life transitions. A *transition* can be defined as an important point in a person's life in which several salient features change simultaneously (e.g., people, places, things). The transition thereby becomes a referent for the end of one period of stability and the emergence of another (Brown & Lee, 2010; Brown et al., 2009).

There are at least three types of transitional events that can disrupt the stability of a person's life. First, there are normative and culturally specific events, such as graduating from high school and getting a job. Berntsen and Rubin (2004) refer to these as *cultural-life-script events*. Second, there are non-normative, idiosyncratic events, such as personal failures or car accidents (Pillemer, 1998). Third, there are unexpected, externally imposed events that affect an entire group of people, such as outbreaks of war or natural disasters (Brown & Lee, 2010; Brown et al., 2009); we refer to these as *collective transitions* (Brown et al., 2012; Brown & Svob, 2012). Transition theory accounts for all three forms of transition and predicts that the most important events recalled from a parent's life will be transitions.

Following transition theory, we made three predictions about the distribution and organization of important events recalled from a parent's life. First, because the majority of cultural-life-script transitions accumulate during the formative years (Berntsen & Rubin, 2004), we expected that the reminiscence bump would also be observed in the temporal distribution of events from a parent's life. Second, we expected to observe a bump for other major transitions, as well, such as immigration. Third, we expected transitions, including collective transitions, to be used as reference points for dating the recalled events, which would suggest that transitions aid in the organization of events from a parent's life.

In sum, the present study explored the way that events from a parent's life were remembered by subsequent generations, particularly when a parent had "lived in history" (Brown et al., 2009) and the child had not. We expected that, in accordance with transition theory, results would show that most important events recalled from a parent's life would be transitions perceived to have exerted both psychological and material changes. Further, we suspected that the distribution and organization of events from a parent's life would resemble the distribution and organization of autobiographical memories, including a reminiscence bump and participants' use of transitional incidents to date the events they recalled.

## Method

### Participants

Sixty psychology undergraduates at the University of Alberta participated in the study in exchange for partial course credit.

We divided participants into two groups. The conflict group had 30 Canadians (14 males, 16 females; mean age = 18.8 years) whose parents had emigrated from a country with violent political upheaval, including Iran, Kurdistan, Lebanon, South Africa, Sierra Leone, and the former Yugoslavia. The nonconflict group had 30 Canadians (13 males, 17 females; mean age = 19.0 years) whose parents were born and raised in Canada. The average parent's age at the time of the study was 51.3 years in the conflict group, and 51.8 years in the nonconflict group. Further, the average parent's age at the participant's birth was 33.0 years and 32.3 years, respectively. Finally, the average age of parent's immigration in the conflict group was 23.4 years.

### Procedure

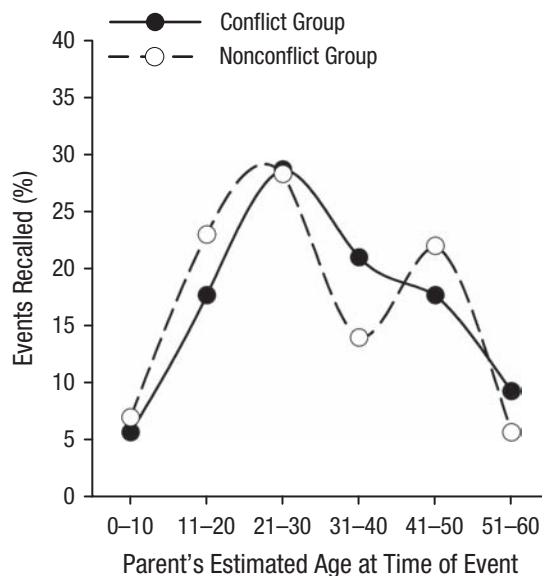
This experiment consisted of three phases. In Phase 1, participants identified the 10 most important events in one of their parents' lives and wrote a brief description of each event on separate index cards. They were told that the event could be from any period, from the time their parent was born up to the present. Additionally, participants were asked to restrict the birth of children to one index card, if they chose to include that event in their list, unless there was something distinct about the birth of a child. Further, subjects were asked to exclude their parent's birth as one of the important events.

In Phase 2, the events were randomly re-presented, and the participants were asked to estimate the year of each event while talking aloud. The verbal protocols were recorded on a digital recorder. In Phase 3, the events were re-presented once again, and the participants were asked to rate the degree to which their parent discussed each event with them (0 = *not at all*, 1 = *rarely*, 2 = *frequently*); the degree of psychological impact each event had on their parent, including their thoughts, attitudes, and emotions (0 = *none*, 1 = *a little*, 2 = *a lot*); the degree of material impact each event had on their parent, including changes to the people, places, and things in their parent's life (0 = *none*, 1 = *a little*, 2 = *a lot*); and the degree to which each event was related to a historical event, such as war (0 = *not at all*, 1 = *a little*, 2 = *a lot*).

### Results and Discussion

The groups were comparable in which parent was chosen: In the conflict group, 13 participants chose their mother, and 17 chose their father; the nonconflict group chose each parent equally. The choice of parent did not affect the main pattern of results.

In both groups, the temporal distribution of important events exhibited a reminiscence bump related to parents' age at the time of the recalled events, with the conflict group's peak being slightly later than the nonconflict group's peak (see Fig. 1). Parents' mean estimated age at the time of the reported events was 32.1 years ( $SEM = 0.91$ ) for the conflict group and 28.7 years ( $SEM = 1.07$ ) for the nonconflict group. The mean

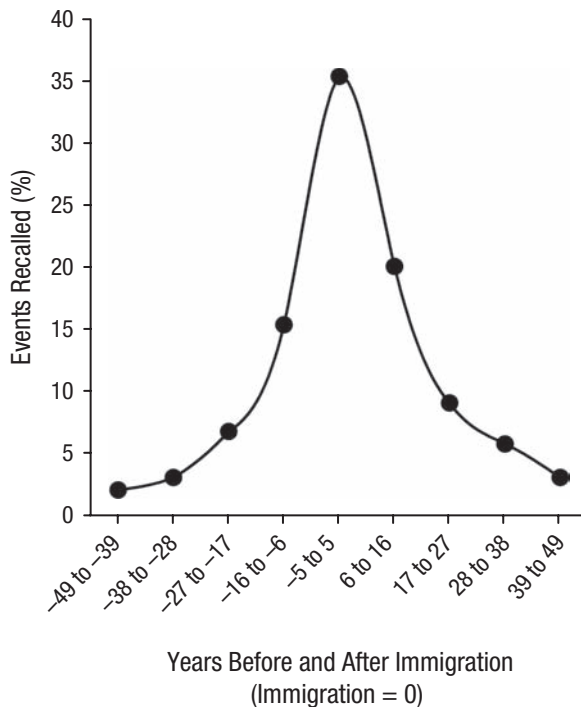


**Fig. 1.** Distribution of events that children recalled from one of their parents' lives as a function of the parent's estimated age at the time of the event and group type.

difference between groups was statistically significant,  $t(58) = 2.41$ ,  $p < .05$ ,  $d = 0.62$ , 95% confidence interval = [0.57, 6.21]. This difference may be due to increased memory for events at the time of immigration in the conflict group. Additionally, both groups demonstrate a minibump from the time the participant was born up to the present. This bump was particularly pronounced in the nonconflict group and may signify a recency effect (i.e., an accumulation of recent events), which is often observed in distributions of autobiographical memory (Rubin & Schulkind, 1997).

Out of 30 people in the conflict group, 28 listed immigration as one of the most important events in their parent's life. As predicted by transition theory, the distribution of important life events surrounding such a major transition creates its own bump, further suggesting that major transitions underlie the distribution and organization of memory for a parent's life (see Fig. 2).

The contents of the recalled events were independently analyzed by two coders and grouped into 21 event-type categories (see Table 1); interrater concordance rate was 80.0%. Fifty-seven percent of events recalled by the conflict group and 65% of events recalled by the nonconflict group were assigned to cultural-life-script event categories (Berntsen & Rubin, 2004). There was no statistical difference between the two groups in the types of events recalled,  $\chi^2(1, N = 600) = 0.25$ ,  $p = .13$ . Nonetheless, there were some qualitative differences. Specifically, 25 of the events remembered by the conflict group involved historical incidents (e.g., "Idi Amin kicks out non-African people"), immigration, military service, or the parent's first return trip to the homeland. In contrast, participants in the nonconflict group mentioned no events from



**Fig. 2.** Distribution of events that children in the conflict group recalled from one of their parents' lives as a function of the number of years before and after the parent immigrated.

these categories. However, they did mention sports events (5%) and dog-related events (1%). The frequency of other event types was comparable across groups, which suggests that the transitional impact of cultural life scripts and certain nonnormative events are involved in the retention and selection of important life events.

In accordance with transition theory, results showed that the majority of important events recalled from a parent's life were transitions perceived to have exerted both psychological and material changes. As Table 2 shows, participants in the two groups recognized that important events in their parents' lives tended to produce change of one form or another, and these two types of change were understood as being at least partially independent. That is, high degrees of material change tended to correspond to high degrees of psychological change. In contrast, high levels of psychological change did not necessarily produce correspondingly high ratings of material change.<sup>1</sup> This suggests that material change may predict psychological change, whereas psychological change might not be predictive of material change. Further, it implies that it is important to consider both forms of impact when assessing the role of transitions in memory.

To examine the mnemonic organization of events from a parent's life, two research assistants independently coded the verbal protocols according to the references and strategies that participants used for determining the date of each event (see Table 3). The prevalence of various reference points in the dating protocols was used as an index of the degree to which the

events structure and organize memory (Brown, 1990; Brown & Lee, 2010; Brown et al., 2009). The concordance between raters was 89.8%. Discrepancies in the coding were resolved through discussion.

The majority of the protocols included calendar knowledge; subjects tended to calculate the estimated year in relation to the current year or a parent's birth date. When calendar knowledge was not used, participants tended to use major transitional events as temporal landmarks (e.g., "that was before my parents got married," "that happened when the war broke out"). The loss or gain of material possessions was rarely used to date events, and contemporary cultural references were almost nonexistent. Specific to the conflict group, and paralleling the living-in-history effect (Brown et al., 2009), results showed that historical references were used to date personal events 5% of the time.

To examine the effects of rehearsal (the degree to which events in a parent's life were discussed with the participant), we asked participants how often their parent talked about each event with them. On average, the two groups did not differ on this measure,  $t(598) = 0.75, p > .05, d = 0.06$ , 95% confidence interval =  $[-0.07, 0.15]$ . More specifically, 9% of the events in the conflict group and 10% of the events in the nonconflict

**Table 1.** Distribution of Events Recalled by Children as Most Important in One of Their Parents' Lives

Type of event	Conflict group	Nonconflict group
Education or career <sup>a</sup>	17%	14%
Immigration	14%	—
Birth of children <sup>a</sup>	13%	9%
Death of family member <sup>a</sup>	11%	10%
Marriage <sup>a</sup>	10%	15%
Historical	5%	—
Children's accomplishments	5%	4%
Gain or loss of possessions	4%	5%
Moving cities	4%	5%
First return trip to homeland	3%	—
Family related	3%	4%
Military service	2%	—
Car accident	2%	5%
Health—self <sup>a</sup>	2%	4%
Health—others	2%	2%
Big trip <sup>a</sup>	1%	7%
Grandchildren <sup>a</sup>	1%	< 1%
Anecdote	1%	6%
Divorce <sup>a</sup>	< 1%	6%
Sports	—	5%
Dog	—	1%

Note: Participants were asked to recall the 10 most important events in one of their parents' lives. These events were then sorted into the categories listed here.

<sup>a</sup>These events mirrored the cultural-life-script events defined by Berntsen and Rubin (2004).



**Table 2.** Distribution of the Perceived Material and Psychological Impact of Recalled Events

Material impact	Psychological impact							
	Conflict group				Nonconflict group			
	None	A little	A lot	Total	None	A little	A lot	Total
None	1%	8%	17%	26%	6%	13%	14%	33%
A little	4%	9%	14%	27%	1%	10%	14%	25%
A lot	< 1%	9%	37%	47%	1%	8%	33%	42%
Total	6%	26%	68%	—	8%	31%	61%	—

group were never discussed. In the conflict group, 42% were rarely discussed, and 47% were frequently discussed; in the nonconflict group, 45% were rarely discussed, and 45% were frequently discussed. These findings suggest that the majority of the events recalled as important from a parent's life were, at least at some point, discussed with a parent and that the selection of these events did not rely purely on generic knowledge. Moreover, these results suggest that rehearsal may have reinforced these events in memory and enhanced their perceived importance.

A final issue of interest was the transmission of historical conflict knowledge. Out of the 30 people in the conflict group, 29 mentioned at least one conflict-related event from their parents' lives. More specifically, participants indicated that 25% of the recalled events were directly or indirectly related to an historical event. It is worth noting that only 19% of these historically related events were experienced directly by the participants (after the age of 8 years). This suggests that historical knowledge is vicariously absorbed by children and is transmitted across generations, even when children are removed from the historical events by time, space, and culture. Historical events that affect a parent's life appear to remain particularly salient in a subsequent generation's memory and are understood to have had a personally relevant, life-altering effect. The finding that a quarter of the important events recalled

from a parent's life are conflict related has implications for future research on the maintenance of group identity and the persistence of socially mediated attitudes toward a parent's ethnic out-group in subsequent generations, particularly those out-groups not exposed to political conflict and upheaval.

## Conclusion

There are several findings and implications of this study concerning the intergenerational transmission of autobiographical events. First, transitional impact and perceived importance appear to have determined which events children remembered from one of their parents' lives. Second, cultural-life-script events were prominently featured in a parent's life story, which suggests that the transitional qualities of these events are used for selecting and retrieving a parent's important life events (Berntsen & Rubin, 2004). Third, both the distribution and organization of events from a parent's life resembled those observed in autobiographical memory, which supports theories that autobiographical memory and the reminiscence bump are influenced by sociocultural events. Finally, historical conflict knowledge was transmitted across generations and was present in both the distribution and organization of events from a parent's life.

## Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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## Note

1. In the conflict group, 37 out of 47 (79%) of the events that were rated as having produced a lot of material change were also rated as having produced a lot of psychological change. In contrast, only 37 out of 68 (54%) of the events that were rated as having produced a lot of psychological change were also rated as having produced a lot of material change. The same pattern was observed in the nonconflict

**Table 3.** Distribution of Strategies Used by Participants to Estimate the Date of Events From Their Parent's Life

Strategy	Conflict group	Nonconflict group
Calendar knowledge (e.g., age, birthday)	59%	65%
Major life transitions (e.g., marriage, immigration)	34%	33%
Loss or gain of material possessions (e.g., house, car)	3%	< 1%
Contemporary cultural references (e.g., sports, weather)	—	< 1%
Historical references (e.g., war)	5%	—

group: 33 out of 42 (79%) of the events that were reported as having produced a lot of material change were also reported as having produced a lot of psychological change, whereas only 33 out of 61 (54%) of the events rated highly on psychological change had correspondingly high ratings on material change.

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