

Review

Collective Memory from a Psychological Perspective

William Hirst,^{1,*} Jeremy K. Yamashiro,² and Alin Coman³

Social scientists have studied collective memory for almost a century, but psychological analyses have only recently emerged. Although no singular approach to the psychological study of collective memory exists, research has largely: (i) explored the social representations of history, including generational differences; (ii) probed for the underlying cognitive processes leading to the formation of collective memories, adopting either a top-down or bottom-up approach; and (iii) explored how people live in history and transmit personal memories of historical importance across generations. Here, we discuss these different approaches and highlight commonalities and connections between them.

Memories Held Across a Community

Members of a community often share similar memories: Germans know that their country participated in the mass murder of Jews; Catholics, that Jesus fasted for 40 days; and a family, that grandfather immigrated from Ireland. Such collective memories can shape a community's identity and its actions. Germany's struggles to come to terms with its troublesome past, for instance, define to a great extent how Germans see themselves today as Germans [1]. Similarly, the current debate around whether to dismantle Confederate memorials speaks to the struggle of the United States to come to terms with its past embrace of slavery [2].

Since Halbwachs [3] published his foundational work on collective memory over 93 years ago, sociological work exploring the close tie between collective memory, identity, and action has flourished (Box 1). Psychologists have only recently begun to explore the ways their discipline might contribute to the study of collective memory [4–12], often adopting the perspective of an **extended mind** (see Glossary) [13]. In their studies, they have brought to bear the substantial psychological literature on individual memory, examining collective memories in small or large groups, as well as collective memories of both historically relevant national events and fairly inconsequential material, that is material without any historical or national relevance (Box 2).

In this paper, we review various approaches psychologists have adopted in their studies of collective memory. We divide them here into two separate sets of concerns. The first set of concerns explore either (i) how collective memories are subjectively represented (i.e., how they are represented not in, for instance, text books, but in an individual's head), or (ii) how they are formed and retained. The line of research studying the formation and retention of collective memories adopts either a top-down or bottom-up approach. Researchers with a top-down approach start with an extant collective memory and then probe for the cognitive processes that might account for its formation and maintenance. Researchers with a bottom-up perspective identify cognitive processes that might play a role in the formation and maintenance of collective memories and then show how these processes accomplish these tasks. Whereas the top-down approach is typically interested in how specific collective memories are formed, usually ones of historical, national importance, the bottom-up approach is more about how

Highlights

Collective memories can involve small communities, such as couples, families, or neighborhood associations, or large communities, such as nations, the world-wide congregation of Catholics, or terrorist groups such as ISIS. They bear on the collective identity of the community.

Many studies focus on either the representation of extant collective memories or the formation and retention of either extant or new collective memories.

Those interested in the formation of collective memories can approach the topic in a top-down or bottom-up fashion.

Other studies explore the relationship between personal or autobiographical memories and historical memories. How do people live in history? How do they pass down their experiences from one generation to the next?

¹New School for Social Research, New York, NY, USA

²Washington University in St. Louis, St. Louis, MO, USA

³Princeton University, Princeton, NJ, USA

*Correspondence:
hirst@newschool.edu (W. Hirst).

Box 1. On Definitions of Collective Memory

Definitions of collective memory abound. Generally, they fall into two classes: one that treats collective memories as consisting of publicly available symbols maintained by society [97,98], and another that defines collective memory as individual memories shared by members of a community that bear on the collective identity of that community ([4,6]; see also [99]). Although Halbwachs [3] was never clear about which of these two definitions he might embrace, many who follow in his footsteps have adopted the first definition. As a result, they have largely focused on the efforts communities make to shape and maintain collective memories, including their use of cultural artifacts, memory practices, and mnemonic technologies. They have, for instance, examined the political and social forces surrounding the construction of the many Holocaust memorials around the world [100], the rewriting of Jewish history in order to build an Israeli collective memory [101], or the use (or misuse) of archives to shape collective memories and ensure 'effective' governance [102,103]. The more individualistic, and hence more psychological approach captured in the second definition, is often critiqued as treating collective memory as a 'mere' aggregate of individual memories. For these critics, the definition neglects the adage that the sum is often more than the parts and ignores the 'life' social institutions can often have beyond the contribution of their individual members. Although these concerns are legitimate, the focus on the individual has allowed scholars of collective memory to examine why certain social efforts at shaping and maintaining a collective memory succeed and others fail. Moreover, the second definition acknowledges what to many is apparent: that, in the end, it is individuals who remember the past, even if they are remembering as members of communities. These individual acts of remembering, those adopting the second definition aver, must be either facilitated or constrained by the mechanisms and principles governing human memory, even if what they reflect are memories pertinent to a community's identity. By treating collective memory as shared individual memory, the second definition is offering a space to consider these psychological mechanisms and principles. For us, the most productive course is to see these two definitions not in opposition, but as two sides of the same coin. The student of collective memory needs to consider both societal efforts and psychological mechanisms.

Box 2. Collective Memories: Their Content and the Group's Composition

Collective memories can involve small groups, such as families, or large groups, such as nations. Moreover, the groups can consist of individuals with little common background (fellow travelers exploring Egypt on a package tour) or individuals with substantive commonality (citizens of the same nation).

Many researchers treat the nation as the container of collective memories and hence investigate the way citizens remember their nation's past. Such memories are usually consequential for that community. This line of research can, and often does, erroneously conflate collective memory with history. For Halbwachs [3], history is that part of the remembered past to which people no longer have an organic relation, whereas collective memory involves an active past that forms a community's identity. For others, the difference between memory and history rests more on the claims one makes about the past [23,24,104–107]. Laypeople are not responsible for the accuracy of their memory claims about history, whereas professional historians are, given their professional standards.

By contrast, some researchers have focused on issues of mnemonic convergence, without necessarily considering historically relevant material. After all, the collective memory of a group of friends is usually of no historical consequence. These researchers often adopt a bottom-up approach. They intentionally leave concerns about the relation between the community's memory and its identity unaddressed. The tacit understanding is that issues concerning convergence can be explored separately from issues concerning identity. In this line of research, the consequentiality of the memories may vary greatly across studies.

Because of these two distinctive approaches, confusion can arise when relating one study of collective memory with another. Is a piece of research that is exclusively about collective memories of historical events relevant to a discussion about the formation and retention of shared memories of ahistorical material? How can studies of the formation of collective memories in arbitrarily assembled groups involving ahistorical material speak to those concerned with the formation of collective memories of historical events? Does the size and composition of the group matter? The present review rests on the belief that the psychological study of collective memory has and will continue to discover connections between the formation of collective memories of historical material and the collective memories of ahistorical material, as well as connections between the formation of collective memories in small and large groups. Whereas critical differences no doubt exist, similar underlying processes should not be neglected.

memories come to be shared, without reference to any extant collective memory, historically important or not.

A second set of concerns of psychologists reaches beyond the collective memory *per se* and explores the way people relate their personal lives to historically important events. The bombing

Glossary

Cultural attractor theory: a naturalistic and evolutionary based approach to the study of culture that focuses on the biasing factors shared across a population that promote the emergence of cultural attractors and, in turn, cultural stability. The theory explains macrolevel features of a culture, such as its stability, by exploring microlevel interindividual transmission. Cultural attractors are the likely outcome of this transmission process.

Extended mind: the treatment of the mind as extended beyond the surface of the skin, so objects in the world (including persons) function as part of the mind.

Mnemonic conversational influences: when speaker and listener(s) shared memories of the same material, the effect a speaker's recollection has on both his memory and the memory of the listener(s).

Reminiscence bump: the tendency of older adults to remember events from a specific temporal period in their life when prompted for an autobiographical memory using a variety of different probes.

Retrieval-induced forgetting: a memory phenomenon in which the act of retrieval elicits forgetting for unretrieved memories related to the retrieved ones. Retrieval-induced forgetting can be observed in an individual undertaking the retrieval (within-individual retrieval-induced forgetting), as well as in individuals listening to others remember (socially shared retrieval-induced forgetting).

Schematic narrative template: a schema or framework for recounting this history of a country that is specific to citizens of that country.

Social representation theory: the framework for studying social representations, which are the collection of values, ideas, metaphors, beliefs, and practice shared among members of a group or community.

Temporal construal theory: a well-researched theory that posits that the more psychologically distant an object is from an individual, the more abstract its representation.

of Dresden toward the end of World War II will mean more to a person if he or she personally experienced it. Moreover, it will be more meaningful to a younger generation if personal stories are transmitted from one generation to the next. Consequently, some studies exploring the intersection of the personal with the historical investigate how people, as individuals, remember living through historically important events, whereas others focus on intergenerational transmission.

Overall, the psychological studies of collective memory in some researcher's hand have focused on the representation, formation, and retention of collective memory themselves, whereas in other researcher's hands, studies have examined the way the personal intersects with the historical.

Collective Memories: Their Representation, Formation, and Retention

Representations of History

Social Representation Theory

According to the guiding intellectual force for the study of social representations [14,15], social representations are 'the elaborating of a social object by the community for the purpose of behaving and communicating' (see [15], p. 251). One such object can be the history of a group. Psychologists who build on **social representation theory** seek to understand how groups 'elaborate' their history in memory and how this elaboration or representation influences the groups' collective attitudes and behaviors [16]. The general research strategy is to map out the social representation of history a group holds, usually through surveys, and then articulate its impact on collective attitudes and behaviors.

The resultant research has identified at least three functions for social representations of history: (i) managing potential conflict by keeping track of the social group's friends and enemies, (ii) building social identity, for instance, by varying access to or altering the interpretation of past actions that might elicit collective guilt, and (iii) avoiding future mistakes by supplying 'lessons from history' [17]. The outcome of these functions will depend on the particular social representation a social group holds. For instance, a social group's current sense of shame about past actions might be minimized by forming a social representation that reflects a tendency to selectively recall positive aspects of its past and to forget negative aspects [18]; see also [19]). Generational differences can also arise as social representations of history shift. For instance, older Belgians who grew up during the period when the Congo was a Belgian colony are more likely to remember Belgian colonialism as being largely benevolent and paternalistic, while those who came of age after colonialism ended are more likely to remember that history as being characterized by exploitation and brutal human rights violations. As a result, younger Belgians expressed more collective guilt over the exploitation of the Congolese than older Belgians [20].

Importantly, history can serve as a symbolic reservoir to call upon when constructing a historical narrative [21,22]. The nature of these narratives may differ, depending on the group. Successful narratives are likely to involve distinctive figures (heroes, villains, and fools) and be memorable [21]. What matters more is the narrative's verisimilitude, not its factual accuracy. This is why a layperson's narrative account of history is more likely to have the characteristics of 'memory' than the histories told by professional historians [3,23,24]. This is not to say that narratives of social representations of history are constructed by individuals alone. As many have pointed out, they often reflect the efforts of a political elite [25].

Social representation theorists have considered in detail 'foundational myths,' specifically, historical charters [25]. Charters are normative, constitutive, and dynamical (allowing continuity amidst change). Moreover, events with charter status can have a privileged impact on a nation's attitudes. The foundational event of the signing of the Treaty of Waitangi in New Zealand, for instance, has profoundly affected New Zealand's attitudes toward biculturalism and indigenous rights, whereas a noncharter event such as the cutting down of a British flagpole by a Maori chieftain has not [26].

A substantial effort has also been made toward discovering what might be viewed as the universal versus the culturally specific aspects of different countries' social representations of history. In the World History Survey [27], participants from over 30 countries were surveyed about what they thought the most important events and figures were in history. Among the many results is the finding that, across all countries, events could be classified along a universal dimension that includes historical calamities on one end, such as a major war, and historical progress on the other, such as the introduction of new technology. Interestingly, citizens who identified calamitous events as 'most important' were more willing to fight on behalf of their country than were citizens from countries who identified an event involving progress as most important.

Generational Cohort Effects

Although not normally viewed within the theoretical frame of social representations, other researchers have used the same methodology of asking respondents on surveys to list important historical events to assess generational, rather than national, differences. Building on Mannheim [28], these researchers argue that the notion of a generation needs to be conceptualized in terms of how members of a cohort think, feel, or remember rather than simply when they were born. Repeatedly, the research shows that each generation identifies the historical events that occurred in their late adolescence–early adulthood as 'most important' [29]. For those presently in their mid-60's, for instance, the Vietnam War looms large, whereas for their parents, World War II (WWII) is featured. This pattern is similar to the one psychologists have found for autobiographical memories, often dubbed the **reminiscence bump** [30]. When asked to list, for instance, the five most important events from one's life, people will mention events from their late adolescence and early adult life. Why this generational effect emerges, and whether the same cognitive processes underlie both the generation effect and reminiscence bump, is still debated [29,31]. There is little doubt, however, that different generations represent the historical past in different ways.

Formation and Retention: Top-Down Approaches

Although social representation theorists might note that the narratives of history must be memorable, they do not routinely consider what makes them memorable (but see [32]). Other researchers have taken up this mantle, melding the cognitive science of individual memory with the study of collective memory. For those adopting a top-down approach, the general strategy has been to identify persistent historical or cultural collective memories, determine what it is that people within a community have retained, and then probe for the cognitive principles or mechanisms that might account for the acquisition and the enduring quality of the memory, be it an accurate memory or not. Researchers adopting a top-down approach have either: (i) identified general principles of memory derived from laboratory studies that can also account for persistent historical or cultural memories, (ii) articulated specific cognitive processes that might 'attract' memories and hence ensure their retention, or (iii) particularized the general mnemonic principles to specific communities.

Identifying General Principles

Can one account for extant collective memories by referring to general psychological principles? When asked to recall or recognize the US Presidents, people exhibit a pattern of retention and forgetting that one might expect from classic studies of memory (e.g., standard serial position curves and the traditional power-function forgetting curves) [33]. Moreover, their false recognitions (e.g., recognizing Alexander Hamilton was a President) reflect the close relation between familiarity and false alarm rate found in the lab [34]. In a similar vein, studies of the widely shared memories people have of counting-out rhymes such as 'eenie meenie miney mo' indicate that retention over multiple generations reflects the general principle of memory that highly structured material is more likely to be remembered than loosely structured material [35]. Not only are well-structured counting-out rhymes more likely to be retained over multiple generations, but any changes over time are likely to respect this structure. When misinformation about the Iraq war was followed by a retraction, Americans were less likely to update their 'collective' memory and beliefs about the war than were individuals from another coalition country (Australia) or a country opposed to the war (Germany) [36]. This result would be expected from what one knows about how schemata shape memories and how schemata are shared within a community.

Attracting Memories

In the above examples, researchers start with an extant collective memory particular to a community: memories for US Presidents, a counting-out rhyme, or a political retraction. They then identify psychological mechanisms that might account for what is or is not retained by the community. Other researchers with a top-down approach, working under the label of **cultural attractor theory**, have taken as their starting point ideas prevalent not just in one culture or community, but found across cultures ([37,38], see also [39]). For instance, most or all communities have fairy tales or myths as part of their cultural repertoire. They refer to these pervasive ideas or cultural artifacts as attractors. Once an attractor has been identified, cultural attractor theorists seek to understand what cognitive and environmental processes and mechanisms might account for it.

For instance, when considering fairy tales, one might wonder why some fairy tales are better known than others? What leads some fairy tales to be 'pulled into' the cognitive system and not others [40,41]. A basic psychological principle often cited by cultural attractor theorists is that minimally counterintuitive concepts are more memorable than maximally counterintuitive beliefs. And, indeed, well-known Grimm fairy tales (e.g., Rapunzel) are more likely to contain minimally counterintuitive elements than lesser-known ones (e.g., Brother Scamp). The fairy tales a community knows and preserve across generations are more likely to be those that reflect certain cognitive constraints.

Particularizing the General Principles

Of course, communities might tailor the application of these general psychological principles and mechanisms to their own community-specific attitudes and needs. An excellent example of this approach is the work on **schematic narrative templates** [42], or what others have referred to as master narratives [44]. Since Bartlett's [43] groundbreaking explorations, psychologists have understood that remembering involves schema-guided reconstruction. Schematic narrative templates are schemata that citizens of a particular country have that guide how they tell their country's history. Russians, for instance, might have the narrative schematic template [42]: (i) an initial situation, in which Russia is peaceful and not interfering with others; (ii) the initiation of trouble in which a foreign enemy treacherously and viciously attacks Russia without provocation; (iii) Russia almost loses everything in total defeat as it suffers from the

enemy's attempts to destroy it as a civilization; and (iv) through heroism, and against all odds, Russia and its people triumph and succeed in expelling the foreign enemy, thus justifying its claims of exceptionalism and its status as a great nation. This framework is used to describe not just one historical event, but many: for instance, Russia's involvement in the Napoleonic Wars, WWI, and WWII. Russia is not the only country with a schematic narrative template, of course. An often-cited one for the US is the 'reluctant hegemon' [45].

Schematic narrative templates are deep, in the sense that people do not realize that the templates are shaping what they recall. Moreover, the templates are relatively stable and long-lasting, guide the way people tell their nation's history not just for one generation, but for several generations, and respect geographical and cultural boundaries. The Russian narrative schematic template is about Russia and it can be seen in the way not just Russians today, but Russians a hundred years ago told their history. These characteristics run counter to the growing concerns of students of collective memory outside the field of psychology, who emphasize that memories 'travel' and are 'multidirectional' [46,47]. These characterizations are meant to underscore that nations, ethnicity, or specific cultures are not always (in fact, are often not) the containers of collective memories, especially in a globalized world in which ideas cross borders easily. National boundaries have become extremely porous. The characterizations also reflect the realization that collective memories 'do not hold still for their portrait' [48], something psychologists embracing a reconstructive view of memory would readily accept. Rather than being stable, collective memories are often constantly in flux. Whereas these concerns need to be more actively embraced by psychologists, there is no doubt that people inculcated in their nation's history through schooling and the media will often tell their nation's histories in ways that reflect an overarching narrative schematic template.

Formation and Retention: Bottom-Up Approaches

One can approach the formation and maintenance of collective memory from the bottom up rather than from the top down by assuming that local, microlevel psychological processes can lead to global, macrolevel social outcomes [49,50]. Such an approach would treat the study of collective memory as an epidemiological project, in which one wants to understand why some memories spread across a community and others do not [38,51]. It starts with basic psychological mechanisms rather than an extant memory. As is the case for cultural attractor theory, at its core is the understanding of the effects of communication on memory. What happens when one member of a community communicates a memory to another, especially about a topic one might already know something about? Such conversational remembering is inevitably selective [52–54], rarely of high fidelity [55], and capable of altering the memories of both speaker and listeners [56].

At least three psychological mechanisms govern conversational influences on memory [57]: (i) reinforcing extant memories [58], (ii) implanting new or misleading memories (social contagion) [59], and (iii) inducing forgetting through selective selective retrieval (retrieval-induced forgetting) [60]. Each of these can have long-lasting effects. For instance, although initially reported to be short-lived [61], recent independent reports [62,63] have documented **retrieval-induced forgetting** after a delay of a week or more. Moreover, the effects of these psychological mechanisms on memory can be moderated by the social relationship between speaker and listener. This work builds on the observation that people are epistemically and relationally motivated to create a shared reality [57]. With respect to relational motives, **mnemonic conversational influences** are more likely to be observed if the speaker and listener belong to the same social group [64], and less likely to be observed in listeners if their social identity is threatened by what the speaker says [65]. Critically, their effects are similar on speaker and

listener, so that as a result of a conversation their memories will be transformed through reinforcement, social contagion, and retrieval-induced forgetting to be more similar after the conversation than before the conversation [66].

The work on the effects of communication on memory has mainly examined dyadic exchanges. However, as noted, the bottom-up approach asserts that what one observes at this local level shapes what emerges at the global level. To advance this claim, researchers have developed means of measuring collective memories across large groups [66–68]. Using such measures, they have examined how public communications, such as a speech by a political figure, can shape the public's memory (Stone, C.B. *et al.*, unpublished) or how discussions outside a classroom can shape the collective memories of the class [69]. Importantly, this research indicates that conversational interactions can promote mnemonic convergence even when community members have never spoken to each other directly. That is, conversational influences can propagate [70].

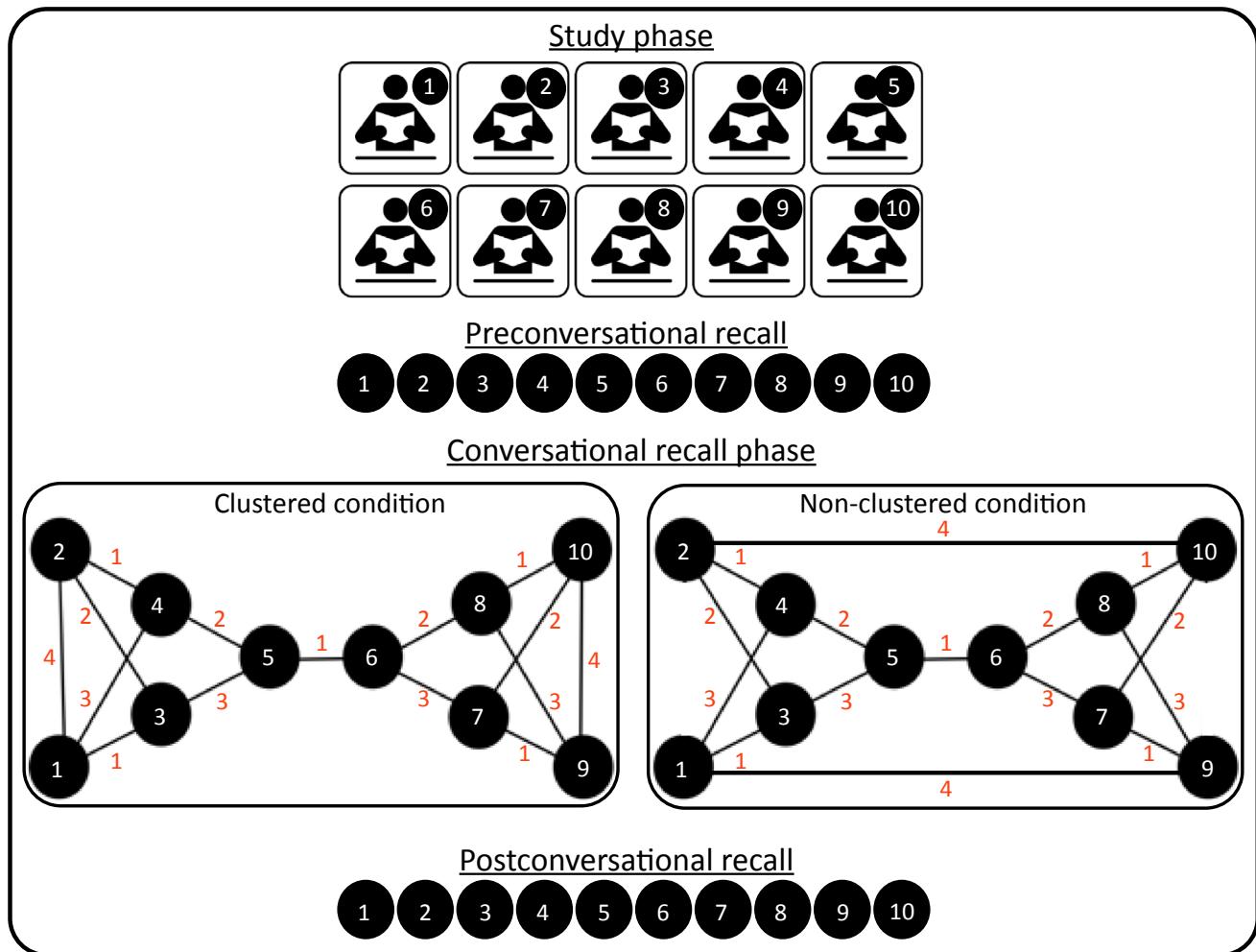
Researchers have also explored how network topologies affect mnemonic convergence, examining experimenter-created networks of conversationally interacting individuals. For instance, a study employing an innovative methodological advancement that allows for relatively large groups to be studied in experimental settings found that global mnemonic convergence was greater for nonclustered than clustered networks [67] (Figure 1). And, in an agent-based model in which the agent's memories could be affected by reinforcement and retrieval-induced forgetting, mnemonic convergence at the network level could be attributed to conversational influences as they were manifested at the local, dyadic level [68]. Moreover, convergence became less evident as the number of agents exceeded 30. A more structured network, such as hierarchical networks, might be needed for individual memory mechanisms to drive mnemonic convergence for networks larger than 30.

Although all this work does not speak about the specific collective memories of a nation or indeed any pre-existing group, it does allow one to understand the dynamics of collective memory formation. What might be viewed as a weakness of human memory, the low fidelity of mnemonic transmission, is in a way a strength, in that it allows for memories to be transformed in such a way that initially disparate memories become more similar across the community. Rather than memory being just a faculty to serve individual needs [71], it turns out to be a social organ designed to promote the formation of collective memory. Moreover, the research suggests that it does so by strengthening within-group rather than building between-group collective memories.

The Personal Intersecting the Collective

Although collective memories, especially those concerned with a nation's past, are usually thought to involve events that occurred long ago (referred to as distant collective memories), some collective memories, even of national importance, involve events that occurred during one's life time, labeled as lived [72,73]. For the first author of this paper, the Vietnam War is a lived historical memory. He did not need to directly experience the event, in the sense of having fought in it, for the memory to be lived. It was, and is, an integral part of his life. One could not say the same for distant collective memories. He may know a great deal about the War of 1812, but it has little personal resonance for him.

According to a widely embraced social psychological theory, **temporal construal theory**, the more psychologically distant an object is from an individual, the more abstract its representation [74]. From this perspective, distant historical memories should be more 'abstract' than lived



Trends in Cognitive Sciences

Figure 1. Phases of the Experimental Procedure for Coman et al. [67]. Groups of participants study a story and then they individually recall the story in a preconversational recall phase. In the conversational recall phase, participants jointly remember the information in dyadic sequential conversations (circles represent participants, links represent conversations, and numbers in red indicate the temporal sequence of conversational interactions). In the clustered condition, the conversational sequence creates two network clusters, whereas in the non-clustered condition, no such clusters exist. Finally, participants are once again asked to individually recall the initially studied story. Mnemonic convergence, calculated as the average mnemonic similarity between all pairs of participants in the network, is computed for both the preconversational and the postconversational recalls. The results show that non-clustered networks reach higher convergence than clustered networks.

ones. Consistent with this notion is the finding that lived memories are often remembered in terms of specific events, whereas distant memories are described ‘expansively.’ For example, those who lived through WWII tend to remember specific events (‘D-Day’) whereas younger generations, for whom memories of WWII are distant, tend to place the war into a larger context, (e.g., ‘Hitler was elected Chancellor’) [75]. Along the same lines, lived memories of the Argentine junta of 1976 contain more contextualizing statements and more causal statements than distant ones [76].

Seeing One's Personal Life as Intersecting with History

Not surprisingly, lived memories of historical events (by which we mean nationally consequential event that are expected to figure in history) are more likely to be described in personal terms than distant historical events. As noted, such personal recollection can give what could seem like rather abstract historical events personal resonance. In studies of generational cohort effects, those who lived through WWII remembered the war in personal terms: 'Lost part of my hearing [in North Africa],' 'My husband was away from me for three and a half years,' whereas the younger generation remembered it from a less personal perspective: 'Changed world relations,' 'Affected more people than any other war' [77]. In a similar manner, those who lived through WWII or through the Argentine junta were likely to include personal memories in their accounts of the different conflicts, whereas for those for whom these conflicts were a distant historical memory, inclusion of their parent's or grandparent's personal experiences of the war or junta was less common [76,78].

Brown and his colleagues have approached the topic of how and under what circumstances personal memories are shaped by historical event (what they called living-in-history) by asking people to date personal events [79]. Participants from seven countries supplied personal events in their lives and then dated them. Individuals from countries that had undergone substantial historical transitions (often in a physical way, as was the case for Kosovo) were more likely to date a personal event in historical terms ('It happened before the war') than were individuals from countries that had not experienced such dramatic transitions. For instance, New Yorkers who lived through the 9/11 attack did not date their personal memories by referencing the attack. Whereas the attack was consequential, it was not transitional. New Yorkers lives continued after the attack much like they had proceeded before the attack.

Finally, when considering personal memories intersecting with history, there are flashbulb memories: personal recollections of the circumstances in which one learned of a public, often historically important event [80,81]. For most events, even extremely consequential, lived, and potentially historic events, people do not remember the circumstances in which they learned of the event. The first author does not remember the circumstances in which he learned of the confirmation of US Supreme Court Judge Neil Gorsuch, even though the confirmation is profoundly consequential for him and for the United States. He, and most Americans, however, remember the circumstance in which they learned of the attack of September 11, 2001 [82]. Although Americans do not date personal events in terms of the 9/11 attack [79], they nevertheless see themselves as participating in the event, as evidenced by their vivid flashbulb memories. Even though they may not have directly experienced the event (most were not at Ground Zero when the World Trade Towers fell) their autobiographical memories of learning of the event allow them to bear witness to the event [83]. Their memories make them feel as if they were part of history. In this regard, it is interesting that there is a close relation between flashbulb memories and social identity [84]. African Americans have a flashbulb memory of the assassination of Malcolm X, whereas European Americans do not [80]; French citizens have a flashbulb memory of the death of President Mitterand, whereas French-speaking Belgians do not [85]; Danes who lived during WWII tended to remember the weather at the time the Germans invaded Denmark as worse than it was; they remember the weather as better than it was when the Germans withdrew [86]. Interestingly, the high confidence associated with flashbulb memories may derive, in part, from one's identity with the affected country [87]. A year after the attack, Germans used such features as ease of retrieval to guide their confidence rating when recollecting how they spent the day of September 11, 2001, whereas Americans did not. Americans assigned high confidence without regard to ease of retrieval. Americans may simply believe that they must accurately remember the circumstances in which they learned about

something of such dramatic importance for their nation and hence assign a high confidence rating regardless of the ease of retrieval. Germans may not hold such normative beliefs and hence search for attributes that might guide their judgments.

Intergenerational Transmission of Historically Related Personal Memories

Just as remembering where you were when you learned about 9/11 gives the attack personal meaning, so too does transmitting this flashbulb memory to a younger generation potentially provide the 9/11 attack with more meaning for this younger cohort. Assmann [88] called community-relevant memories transmitted from person to person, often through conversations, communicative memories. The family memories a parent conveys to their child are prototypical of communicative memories. When such memories become transformed into 'objectivized culture,' they become what Assmann called cultural memories. Cultural memories constitute the institutionalized heritage of a society and take the form of what Assmann called 'cultural formations,' such as monuments, memorials, commemorations, or textbooks. Although Assmann classified both communicative and cultural memories as forms of collective memory, he noted that communicative memories have a limited temporal horizon, at least compared with cultural memories. The first author knows what happened to his father during WWII, but he has no knowledge of what happened to his great-great grandfather during the American Civil War.

The study of the transmission of personal memories of nationally consequential events falls under the concerns of communicative memory. As we are using the term here, a grandchild's 'personal memory' from WWII would be a memory of what happened to his grandfather during the war. Such intergenerational personal memories do not represent the institutionalized heritage of a society, but they nevertheless can affect the way individuals view both themselves and their relation to their nation. This influence can be seen in a story a French-speaking Belgian with a Flemish background told about her mother's experiences during WWII, a story that spoke to the fierce ethnic conflicts between French-speaking and Flemish-speaking Belgians present both during WWII and today. In speaking about how her Flemish mother's head was shaved by French-speaking Belgians at the end of war (presumably because the French-speaking Belgians believe her mother's husband was a collaborator), she underscored how this event fundamentally influenced how she viewed her identity as a Belgian and her Flemish heritage [89].

History books rarely contain the personal memories of randomly selected individuals. Personal memories need to be transmitted through conversations. In a study of three generations of Belgian families, the transmission of historically relevant personal memories was largely limited to a single generation [90]. The middle generation knew about grandparents' personal experiences of WWII, but the younger generation (the grandchildren) did not. In another study, the memories children of immigrants had of their parents' life in the 'old country' tended to involve events from the parent's reminiscence-bump period [91]. Moreover, events that occurred when the 'home country' was in turmoil, or in transition, were more likely to be remembered than events from more tranquil times. Finally, even when transmission does occur over multiple generations, accuracy is not guaranteed, in sometimes disturbing ways. Younger Germans often claimed that their grandfather was not a Nazi, when, in fact, he was [92]. Not only did grandchildren report that 'grandpa wasn't a Nazi' even when grandfather indicated that he had talked about his Nazi involvements with them, but grandchildren additionally went on to 'heroize' the role their grandparents played during the war.

Concluding Remarks

Where does the study of the psychological aspects of collective memory go from here? Clearly, the field is beginning to develop distinctive approaches to the topic. Some are descriptive and comparative and more concerned with the consequence of remembering history than memory *per se*. Others are interested in how individual psychological mechanisms promote the formation of a collective memory. Still others probe the intersection of personal memories with what are expected to become historical memories. Some identify an extant collective memory and try to figure out how it came to be, whereas others focus on how a memory is transmitted and transformed as it becomes shared across a community.

All these approaches are legitimate, and each captures an aspect of what psychologists might want to know about collective memory. Each also is in its infancy. The bottom-up approach is just beginning to develop a methodology that allows one to take what is known about communicative effects on memory at the dyadic level, itself a rather new field, and explore how these effects shape global network outcomes. Similarly, we are only beginning to understand how basic psychological mechanisms come into play when remembering historical events. Moreover, the historical events that have been studied have largely been relatively recent events. Few study what people know about ancient Greece. In addition, the top-down psychological work has mainly focused on national collective memories rather than collective memories that transcend national boundaries. It does not examine how the flow of immigrants or refugees affects the formation of collective memories. It also does not explore collective memories in smaller groups, such as families or even couples (but see [93,94]). Finally, the work on the psychology of collective memory has focused mainly on memory, that is, how people remember the past. It has not to date incorporated the notion that memory is about mental time travel and that similar psychological mechanisms are engaged when one remembers the past and imagines the future (but see [95,96]).

Although the different approaches presented here explore the topic of collective memory in different ways, there are, of course, commonalities and connections between them. For us, a central theme is the issue of transmission: communities hold the collective memories that they do, in part because memories of past experiences are transmitted across a community, either in person-to-person communication or communication through cultural artifacts, such as textbooks, movies, or documentaries. Understanding this process could account for why a community holds one social representation over another, or why one cultural attractor emerges over another. In a similar way, it can also account for intergenerational transmissions of memory. Successful transmission will depend on the learnability and memorability of some material over others, of course. Hence, most of the different approaches articulated here are, in the end, engaged to varying degrees with issues of learnability and memorability. The cognitive processes identified in our discussion of the formation and retention of collective memories, whether from a top-down or bottom-up perspective, articulate some of the cognitive processes governing this memorability. They hardly constitute a complete list. One concept that figures in most approaches, albeit in different forms and using different terminology, is some variant of Bartlett's [43] notion of schema. For instance, schemata are important in defining what constitutes a minimally counterintuitive fairy tale, and they may play a role in understanding why the memories German grandchildren have of their grandfather's Nazi affiliation are distorted toward 'heroization.'

As to how to relate the burgeoning psychological literature on collective memory to the extant sociological and humanities-based literatures, one immediately sees a huge lacuna. Since Halbwachs, students of collective memory have been interested in the cultural artifacts, the

Outstanding Questions

How might we better understand the connection between local communicative influence on memory and mnemonic convergence at the global, network level? Initial work has been undertaken, but much more needs to be done.

Does examining collective memories of extremely distant historical events change what we know about the formation and retention of collective memory? Is this also true when studying collective memories of small groups, such as families?

How might one study collective memories that transcend national borders? How can one do so in a way that takes into account globalization, migration, and refugee status?

How might collective future thinking build on remembering the collective past?

How might one relate the current psychological work to the robust research on collective memory undertaken by the nonpsychological social sciences, historians, and those in the humanities?

public symbols society builds to form, shape, and maintain collective memories. As suggested in [Box 1](#), what is absent from most of the discussion is why some public symbols have a profound effect on memory, whereas others do not. Why is the Lincoln Memorial so effective as a 'shaper' of the American collective memory of Lincoln, assuming that it is [\[4\]](#)? A closer connection to the sociological literature on collective memory might be possible if psychologists studied the effectiveness and psychological impact of cultural artifacts more intensely.

A decade ago, psychologists would not have considered collective memory a legitimate topic for any serious student of the cognitive science of memory. This perspective has changed markedly. To be sure, a generalized theory of the psychology of collective memory is yet to be proposed, but the host of different approaches discussed here suggests that the field is rapidly moving forward (see [Outstanding Questions](#)).

Acknowledgments

We gratefully acknowledge the support of National Science Grants SES-1423727 to W.H. and BCS-1748285 to A.C.

References

- Olick, J.K. (2007) *The Politics of Regret: On Collective Memory and Historical Responsibility*, Routledge
- Fausset, R. (2017) Temps flare over removal of Confederate statues in New Orleans. *New York Times* 7 May
- Halbwachs, M. (1992) *On Collective Memory* (Coser, L.A., ed.), University of Chicago Press
- Hirst, W. and Manier, D. (2008) Towards a psychology of collective memory. *Memory* 16, 183–200
- Roediger, H.L., III and Abel, M. (2015) Collective memory: a new arena of cognitive study. *Trends Cogn. Sci.* 19, 359–361
- Wertsch, J.V. and Roediger, H.L., III (2008) Collective memory: conceptual foundations and theoretical approaches. *Memory* 16, 318–326
- Pennebaker, J.W. et al., eds (2013) *Collective Memory of Political Events: Social Psychological Perspectives*, Psychology Press
- Barnier, A.J. and Sutton, J. (2008) From individual to collective memory: theoretical and empirical perspectives. *Memory* 16, 177–182
- Klein, O. (2013) The lay historian: how ordinary people think about history. In *Narratives and Social Memory: Theoretical and Methodological Approaches* (Cabeceiras, R. and Abadia, L., eds), pp. 25–45, University of Minho
- Meade, M.L. et al., eds (2017) *Collaborative Remembering: Theories, Research, and Applications*, Oxford University Press
- Stone, C.B. and Bietti, L., eds (2016) *Contextualizing Human Memory: An Interdisciplinary Approach to Understanding How Individuals and Groups Remember the Past*, Routledge
- Hegarty, P. and Klein, O. (2017) Recent advances in historical cognition, special issue. *Mem. Stud.* 10, 243–248
- Clark, A. and Chalmers, D. (1998) The extended mind. *Analysis* 58, 7–19
- Moscovici, S. (2001) *Social Representations: Essays in Social Psychology*, NYU Press
- Moscovici, S. (1963) Attitudes and opinions. *Annu. Rev. Psychol.* 14, 231–260
- Hilton, D.J. and Liu, J.H. (2017) History as the narrative of a people: from function to structure and content. *Mem. Stud.* 10, 297–309
- Liu, J.H. and Hilton, D. (2005) How the past weighs on the present: social representations of history and their role in identity politics. *Br. J. Soc. Psychol.* 44, 537–556
- Sahdra, B. and Ross, M. (2007) Group identification and historical memory. *Pers. Soc. Psychol. Bull.* 33, 384–395
- Doosje, B. et al. (1998) Guilty by association: when one's group has a negative history. *J. Pers. Soc. Psychol.* 75, 872
- Licata, L. and Klein, O. (2010) Holocaust or benevolent paternalism? Intergenerational comparisons on collective memories and emotions about Belgium's colonial past. *Int. J. Confl. Violence* 4, 45–57
- László, J. (2008) *The Science of Stories: An Introduction to Narrative Psychology*, Routledge
- White, H. (2009) *The Content of the Form: Narrative Discourse and Historical Representation*, Johns Hopkins University Press
- Nora, P. (1989) Between memory and history: les lieux de mémoire. *Representations* 26, 7–24
- Confino, A. (1997) Collective memory and cultural history: problems of method. *Am. Hist. Rev.* 102, 1386–1403
- Hilton, D.J. and Liu, J.H. (2008) Culture and intergroup relations: the role of social representations of history. In *Handbook of Motivation and Cognition Across Cultures* (Sorrentino, R.M. and Yamaguchi, S., eds), pp. 343–368, Academic Press
- Liu, J.H. et al. (2014) History matters: the impact of culture-specific symbols on political attitudes and intergroup relations. *Polit. Psychol.* 35, 57–79
- Liu, J.H. et al. (2012) Cross-cultural dimensions of meaning in the evaluation of events in world history? Perceptions of historical calamities and progress in cross-cultural data from thirty societies. *J. Cross Cult. Psychol.* 43, 251–272
- Mannheim, K. (1936) The problem of generations. In *Essays on the Sociology of Knowledge* (Mannheim, K., ed.), pp. 276–322, Routledge and Kegan Paul
- Corning, A. and Schuman, H. (2015) *Generations and Collective Memory*, University of Chicago Press
- Rubin, D.C. and Schulkind, M.D. (1997) The distribution of autobiographical memories across the lifespan. *Mem. Cogn.* 25, 859–866
- Koppel, J. (2013) The reminiscence bump for public events: a review of its prevalence and taxonomy of alternative age distributions. *Appl. Cogn. Psychol.* 27, 12–32
- Wagoner, B. (2015) Collective remembering as a process of social representation. In *Cambridge Handbook of Social Representation* (Sammat, G. et al., eds), pp. 143–162, Cambridge University Press
- Roediger, H.L., III and DeSoto, K.A. (2014) Forgetting the presidents. *Science* 346, 1106–1109
- Roediger, H.L., III and DeSoto, K.A. (2016) Recognizing the presidents: was Alexander Hamilton president? *Psychol. Sci.* 27, 644–650

35. Rubin, D.C. (1997) *Memory in Oral Traditions: The Cognitive Psychology of Epic Ballads, and Counting-Out Rhymes*, Oxford University Press

36. Lewandowsky, S. *et al.* (2005) Memory for fact, fiction, and misinformation: the Iraq War 2003. *Psychol. Sci.* 16, 190–195

37. Buskell, A. (2017) What are cultural attractors? *Biol. Philos.* 32, 377–394

38. Sperber, D. and Hirschfeld, L. (2004) The cognitive foundations of cultural stability and diversity. *Trends Cogn. Sci.* 8, 40–46

39. Richerson, P.J. and Boyd, R. (2005) *Not by Genes Alone: How Culture Transformed Human Evolution*, University of Chicago Press

40. Norenzayan, A. *et al.* (2006) Memory and mystery: the cultural selection of minimally counterintuitive narratives. *Cogn. Sci.* 30, 531–553

41. Barrett, J.L. and Nyhof, M.A. (2001) Spreading non-natural concepts: the role of intuitive conceptual structures in memory and transmission of cultural materials. *J. Cogn. Cult.* 1, 69–100

42. Wertsch, J.V. (2002) *Voices of Collective Remembering*, Cambridge University Press

43. Bartlett, F. (1932) *Remembering*, Cambridge University Press

44. Hammack, P.L. (2011) Narrative and the politics of meaning. *Narrat. Inq.* 21, 311–318

45. Kagan, R. (2006) *Dangerous Nation*, Vintage

46. Erll, A. (2011) Travelling memory. *Parallax* 17, 4–18

47. Rothberg, M. (2009) *Multidirectional Memory: Remembering the Holocaust in the Age of Decolonization*, Stanford University Press

48. Clifford, J. (1988) *The Predicament of Culture*, Harvard University Press

49. Epstein, J.M. (2006) *Generative Social Science: Studies in Agent-Based Computational Modeling*, Princeton University Press

50. Smaldino, P.E. (2014) Group-level traits emerge. *Behav. Brain Sci.* 37, 281–295

51. Sperber, D. (1996) *Explaining Culture: A Naturalistic Approach*, Blackwell

52. Rajaram, S. and Pereira-Pasarin, L.P. (2010) Collaborative memory: cognitive research and theory. *Perspect. Psychol. Sci.* 5, 649–663

53. Harris, C.B. *et al.* (2011) We remember, we forget: collaborative remembering in older couples. *Discourse Process.* 48, 267–303

54. Marsh, E.J. (2007) Retelling is not the same as recalling: implications for memory. *Curr. Dir. Psychol. Sci.* 16, 16–20

55. Schacter, D.L. (2002) *The Seven Sins of Memory: How the Mind Forgets and Remembers*, Houghton Mifflin Harcourt

56. Hirst, W. and Echterhoff, G. (2012) Remembering in conversations: the social sharing and reshaping of memories. *Annu. Rev. Psychol.* 63, 55–79

57. Echterhoff, G. *et al.* (2009) Shared reality: experiencing commonality with others' inner states about the world. *Perspect. Psychol. Sci.* 4, 496–521

58. Roediger, H.L., III *et al.* (2009) The role of repeated retrieval in reshaping collective memory. In *Memory in Mind and Culture* (Boyer, P. and Wertsch, J.V., eds), pp. 138–170, Cambridge University Press

59. Roediger, H.L. *et al.* (2001) Social contagion of memory. *Psychon. Bull. Rev.* 8, 365–371

60. Cuc, A. *et al.* (2007) Silence is not golden: a case for socially shared retrieval-induced forgetting. *Psychol. Sci.* 18, 727–733

61. MacLeod, M.D. and Macrae, C.N. (2001) Gone but not forgotten: the transient nature of retrieval-induced forgetting. *Psychol. Sci.* 12, 148–152

62. Storm, B.C. *et al.* (2012) On the durability of retrieval-induced forgetting. *J. Cogn. Psychol.* 24, 617–629

63. Garcia-Bajor, E. *et al.* (2009) Script knowledge modulates retrieval-induced forgetting for eyewitness events. *Memory* 17, 92–103

64. Coman, A. and Hirst, W. (2015) Social identity and socially shared retrieval-induced forgetting: the effects of group membership. *J. Exp. Psychol. Gen.* 144, 717–722

65. Coman, A. *et al.* (2007) Justifying atrocities: the effect of moral-disengagement strategies on socially shared retrieval-induced forgetting. *Psychol. Sci.* 25, 1281–1285

66. Stone, C.B. *et al.* (2010) Building consensus about the past: schema consistency and convergence in socially shared retrieval-induced forgetting. *Memory* 18, 170–184

67. Coman, A. *et al.* (2016) Mnemonic convergence in social networks: the emergent properties of cognition at a collective level. *Proc. Natl. Acad. Sci. U. S. A.* 113, 8171–8176

68. Coman, A. *et al.* (2012) Mnemonic convergence: from empirical data to simulations. *Soc. Comput. Behav. Cult. Model. Predict. Lect. Notes Comput. Sci. Soc. Comput.* 7227, 256–265

69. Yamashiro, J. and Hirst, W. (2014) Mnemonic convergence in a social network: collective memory and extended influence. *J. Appl. Res. Mem. Cogn.* 3, 272–279

70. Christakis, N.A. and Fowler, J.H. (2009) *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*, Little, Brown

71. Schacter, D.L. *et al.* (2011) Memory distortion: an adaptive perspective. *Trends Cogn. Sci.* 15, 467–474

72. Hirst, W. and Manier, D. (2002) The diverse forms of collective memory. In *Kontexte und Kulturen des Erinnerns [Contexts and Cultures of Remembering]* (Echterhoff, G. and Saar, M., eds), pp. 37–58, UVK

73. Manier, D. and Hirst, W. (2008) A cognitive taxonomy of collective memories. In *Cultural Memory Studies: An International and Interdisciplinary Handbook* (Erll, A. *et al.*, eds), pp. 253–262, De Gruyter

74. Liberman, N. and Trope, Y. (1998) The role of feasibility and desirability consideration in near and distant future decisions: a test of temporal construal theory. *Attitudes Soc. Cogn.* 75, 5–18

75. Zaromb, F. *et al.* (2014) Collective memories of three wars in United States history in younger and older adults. *Mem. Cogn.* 42, 383–399

76. Muller, F. *et al.* (2016) Argentines' collective memories of the military Junta of 1976: differences and similarities across generations and ideology. *Memory* 24, 990–1006

77. Schuman, H. and Scott, J. (1989) Generations and collective memories. *Am. Sociol. Rev.* 54, 359–381

78. Stone, C.B. *et al.* (2014) Personally relevant vs: nationally relevant memories: an intergenerational examination of World War II memories across and within Belgian French-speaking families. *J. Appl. Res. Mem. Cogn.* 3, 280–286

79. Brown, N. *et al.* (2009) Living in history: how war, terrorism, and natural disaster affect the organization of autobiographical memory. *Psychol. Sci.* 20, 399–405

80. Brown, R. and Kulik, J. (1977) Flashbulb memories. *Cognition* 5, 73–99

81. Luminet, O. and Curci, A., eds (2018) *Flashbulb Memories: New Challenges and Future Perspectives*, Psychological Press

82. Hirst, W. *et al.* (2015) A ten-year follow-up of a study of memory for the attack of September 11, 2001: flashbulb memories and memories for flashbulb events. *J. Exp. Psychol. Gen.* 144, 604

83. Hirst, W. and Meksin, R. (2018) Aligning flashbulb and collective memories. In *Flashbulb Memories: New Challenges and Future Perspectives* (Luminet, O. and Curci, A., eds), pp. 201–218, Psychological Press

84. Berntsen, D. (2018) Flashbulb memories and social identity. In *Flashbulb Memories: New Challenges and Future Perspectives* (Luminet, O. and Curci, A., eds), pp. 182–200, Psychological Press

85. Curci, A. *et al.* (2001) Flashbulb memories in social groups: a comparative test-retest study of the memory of French President Mitterrand's death in a French and Belgian group. *Memory* 9, 81–101

86. Berntsen, D. and Thomsen, D.K. (2005) Personal memories for remote historical events: accuracy and clarity of flashbulb memories related to World War II. *J. Exp. Psychol. Gen.* 134, 242–257

87. Echterhoff, G. and Hirst, W. (2006) Thinking about memory for everyday and shocking events: do people use ease of retrieval cues in memory judgments? *Mem. Cogn.* 34, 7663–7775

88. Assmann, J. (2008) Communicative and cultural memories. In *Cultural Memory Studies: An International and Interdisciplinary Handbook* (Erll, A. and Nünning, A., eds), pp. 109–118, De Gruyter

89. Heenen-Wolff, S. et al. (2012) The Belgo-Belgian conflict in individual narratives: psychodynamics of trauma in the history of Belgium. *Mem. Stud.* 5, 58–73

90. Stone, C.B. et al. (2014) Personally relevant v. nationally relevant memories. *J. Appl. Res. Mem. Cogn.* 3, 280–286

91. Svob, C. and Brown, N. (2012) Intergenerational transmission of the reminiscence bump and biographical conflict knowledge. *Psychol. Sci.* 23, 1404–1409

92. Welzer, H. (2005) *Grandpa Wasn't a Nazi: The Holocaust in German Family Remembrance*, American Jewish Committee

93. Fivush, R. et al. (2010) Personal and intergenerational narratives in relation to adolescents' well-being. *New Dir. Child Adolesc. Dev.* 131, 45–57

94. Svob, C. et al. (2016) Intergenerational transmission of historical memories and social-distance attitudes in post-war second-generation Croatians. *Mem. Cogn.* 44, 846–855

95. Szpunar, P.M. and Szpunar, K.K. (2016) Collective future thought: concept, data and implications for collective memory studies. *Mem. Stud.* 9, 376–389

96. Merck, C. et al. (2016) Collective mental time travel: creating a shared future through our shared past. *Mem. Stud.* 9, 284–294

97. Olick, J.K. (1999) Collective memory: the two cultures. *Sociol. Theory* 17, 333–348

98. Olick, J.K. et al. (2011) Introduction. In *The Collective Memory Reader* (Olick, J.K. et al., eds), pp. 3–62, Oxford University Press

99. Zerubavel, E. (2009) *Social Mindscapes: An Invitation to Cognitive Sociology*, pp. 81–99, Harvard University Press

100. Young, J.E. (1993) *The Texture of Memory: Holocaust Memorials and Meaning*, Yale University Press

101. Zerubavel, Y. (1995) *Recovered Roots: Collective Memory and the Making of Israeli National Tradition*, Chicago University Press

102. Kammen, M. (2011) *Mystic Chords of Memory*, Vintage

103. Stoler, A.L. (2010) *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense*, Princeton University Press

104. Blight, D.W. (2009) Memory boom: why and why now. In *Memory in Mind and Culture* (Boyer, P. and Wertsch, J.V., eds), pp. 238–251, Cambridge University Press

105. Winter, J. (2012) The generation of memory: reflections on the "memory boom" in contemporary historical studies. *Can. Mil. Hist. Article* 5

106. Kansteiner, W. (2002) Finding meaning in memory: a methodological critique of collective memory studies. *Hist. Theory* 41, 179–197

107. Irwin-Zarecka, I. (1994) *Frames of Remembrance: The Dynamics of Collective Memory*, Routledge