The multitude of memories with a dash of metacognition: A psychological perspective

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Abstract: Psychologists have generally focused on memory from a very narrow perspective: an individual, alone with their thoughts, remembering their own personal past. Yet, our memory is an eclectic mix of autobiographical details, vicarious memories, stories from our friends and family, general knowledge, and filled-in blanks with imagination. It is indeed a reconstructive process, yet I want to argue that this reconstruction is social, collective, and extended. The excerpt studied here serves as a rich example of the multitude of memory, and how they collide and intertwine within a single narrative to bring meaning to a particular past. I will propose a critical reflection on the way cognitive psychologists generally approach the concept of memory and how micro-analysis can help broaden this perspective. Finally, I will reflect on my particular position in the context of this special issue.

Keywords: psychology perspective, micro memory, autobiographical memory, family, transmission, extended memory

What is memory and where is memory? These are the two challenges that Thomas van de Putte laid upon us, an eclectic group of researchers from different disciplines, as we gathered in Trento in 2022. Today, I will attempt to answer his questions from my own perspective, this of a cognitive psychologist by training who has worked in interdisciplinary teams for most of her career.

Let us start with the first question "What is memory?" and the answer I first learned. Memory is often taught to psychology students as the processes at play when an individual encodes, stores, and retrieves information from their mind. They learn about Atkinson and Shiffrin (1968) who described in their multistore model how information present in the environment first enters the mind through the sensory register, before being briefly encoded in the short-term memory store (also called working memory) and, upon rehearsal and categorization, is stored in long-term memory. Students are also taught that there are different types of memory depending on their content: procedural memory pertains to action and motor skills; semantic memory is comprised of decontextualized knowledge about the world; and episodic memory refers to memory for specific personal past events, associated with a feeling of traveling back in time to relive it called "autonoesis" (Tulving, 1985b). More importantly, they are told that autobiographical memory is (re)constructive. Following in the footsteps of Bartlett's seminal work (Bartlett, 1932), many researchers have demonstrated how memories are not literal reproductions of the past; they are malleable, evolving mental representations that are prone to errors, distortions, and adaptations (Loftus, 2005; Schacter, 2012; Tulving, 1984). Indeed, autobiographical memories seem to be organized into lifetime periods, general events, and event-specific knowledge, and they are reconstructed based on the individual's self-image, their personal semantic knowledge, and the goals pursued (Conway and Pleydell-Pearce, 2000).

Psychologists have thus excelled at (over)defining and categorizing memory. However, as we will see in this paper, locating different types of memory within a narrative to answer the "where is memory?" question is more challenging. For non-psychologists, you can find a mini glossary of the categories and terms related to memory I will use in this article in Table 1.

** * * Insert Table 1 here ****

Locating individual memory using a cognitive psychologist approach

In most psychological research on autobiographical memory, the role of "others" is typically minimal. Classical experiments are generally set in controlled laboratory settings, where the participant is alone or with just the researcher, minimizing external interference. If someone else is present, it is usually a confederate (i.e., a person acting as a participant but who is, in fact, part of the experiment). For instance, studies on social contagion use a confederate to provide false recalls in order to contaminate the memory of the "real" participant, and thus investigate the formation of false memories (Roediger et al., 2001). When not regarded as disruptive or a source of memory errors, others are generally considered as a mere part of the situational context in which the memory is brought to mind. We share with others to teach or inform, to create and maintain intimacy (Bluck et al., 2005; Harris et al., 2014). In this configuration, the listener is relatively passive. Their presence triggers the recall, maybe even slightly modifies the way the event is narrated depending on the desired effect one seeks in its confidant, but the other is rarely seen as actively influencing the recall process. The focus is on the teller and their own personal memory.

Once a participant has recalled an autobiographical memory, researchers code the narratives using a pre-established coding scheme. One of the most used coding schemes in psychology is the Autobiographical Interview created by Levine et al. (2002). This technique has a clear focus on episodic details. The first step of the coding scheme requires the coder to segment the narratives around central episodic events. An event is considered episodic when it can be situated in a particular place, at a particular time, and lasts less than 24 hours. Then, the rest of the narrative is further segmented into separate details that are placed into internal or external categories. Episodic details about the central event (such as details about where, when and what) are coded as internal details, whereas any other details, such as personal and general semantics, extended episodes (events that last more than 24 hours), and episodic details related to another event than the central one of the segment are labelled external details (e.g., Addis et al., 2008; Levine et al., 2002; Strikwerda-Brown et al., 2019). External details, representing all that is not directly relevant episodic details, are thus often considered as undesirable, with studies linking high levels of external details with aging or dementia (Addis et al., 2008, 2009).

Since psychologists have primarily focused on memory from an individual perspective, I thought I would start by attempting to detect instances of episodic autobiographical memory[1] within this excerpt. At this stage, I will disregard the interviewer's[2] parts, as one would in classical memory experiments.

The first autobiographical memory we encounter begins at line 13, relating the story about her father's eye, and immediately poses a challenge. Indeed, purists might argue that the narrative does not strictly describe a specific episodic event but rather a repeated event, one that has occurred multiple times ("it was a story he would tell", line 13). In classical coding schemes, such as the one developed by Levine et al. (2002), repeated events and extended events are categorized as external events, and thus distinguished from episodic, internal events. This differentiation stems from the literature on overgeneral memory (i.e., a tendency to predominantly recall general memories), which links it with mental health issues like depression or post-traumatic stress disorder (Gibbs and Rude, 2004; Ono et al., 2016). Moreover, in this narrative, it remains unclear whether it is her personal recollection or if she shares the memory of her children ("that my kids remember very well", lines 13-14), a phenomenon known as "vicarious memory", which represents the recollections people have of events that were told to them by another person (Pillemer et al., 2015). The manner in which the story is presented, not only through her children's eyes but also through the perspective of an undisclosed other ("the other hears it clearly", lines 16-17) is peculiar, as if she intends to assume a more passive role in this memory.

To find the first clear instance of episodic autobiographical memory, we must proceed to line 23, where she uses reported speech to describe the moment she finally asked her father about his wartime injury. The event description is brief and contains very few episodic details. Contextual information is lacking, all we gather are her question and his response. An interesting side note is that in her memory, her father answers her "where" question with a vague "when" statement, perhaps as a way to deflect the true question. The memory concludes there, as, according to her, it is only later on that she silently reflects on the content

[1] Here, I explicitly refer to episodic autobiographical memory to distinguish it first from personal semantics, which are often considered part of autobiographical memory, but also from other forms of episodic memory, such as vicarious memory (see below).

[2] As you may or may not be aware, the interviewer of this particular interview is me. However, I am initially approaching this exercise as any other researcher of this special issue; this is why I will refer to "the interviewer" instead of using personal pronouns such as "I" or "me". At the end of this paper, I will revisit this point to reflect on how my own positionality has influenced my analysis.

of that exchange. Even then, she offers very little detail about her meaning-making process at the time. She links the three ideas — “Wounded. The eye. Shrapnel” (line 25) — without explaining her take on the connection between them, leaving the interviewer to draw her own conclusions.

The next instance of episodic autobiographical memory surfaces at line 31, again through reported speech. In this sequence, she asks her brother whether he knows about their dad receiving a pension from Germany (lines 31-32). She discovers that he helped their father by correcting a letter written in German but insists he does not know anything (lines 34-39). Once more, the interviewer is left with little information to go on and not temporal or spatial context grounding the story in her past. Furthermore, the “story” referred to on line 34 is left implicit and gives the impression that it is more than just about the pension. Indeed, on lines 38 and 39, as the discussion between the siblings continues, the brother insists he does not know anything, not referring to the German pension per se but more about why their father was entitled to it in the first place.

After this segment, there are no more instances of episodic autobiographical memory. Over this three-minute excerpt, we find few personally experienced recollections. Consequently, focusing only on these memories brings a disjointed and unclear understanding of the family’s past. They reveal her desire to understand what happened during the war, yet an apparent hesitancy to delve deeper into her questioning. In both instances, she enquires about the past, first to her father and then to her brother, receiving unclear answers and seemingly leaving it at that. From her perspective, we sense an ambivalence between her eagerness to know (she asks her father and brother questions) and, perhaps, a fear of discovering something she may not want to be true (she does not seem to take the discussions to the point where she gets an unequivocal answer).

In essence, this analysis offers an initial grasp of the narrative, primarily from her perspective. Nevertheless, it is shallow and incomplete, overlooking various memory types present in the narrative and neglecting the multiple embedded contexts (Cordonnier and Luminet, 2024). Indeed, we are asking her to discuss distant memories, which are memories about events that occurred before she was born (Hirst and Manier, 2008). Consequently, she does not hold autobiographical memories of WWII, but she can provide recollections of discussions about that past and vicarious memories. Importantly, she holds personal semantic memories, which

encompass general knowledge about oneself and close others (Renoult et al., 2012), as well as semantic and collective memories about WII. Thus, as a second step, I will analyse the data once more, but this time by going beyond episodic memories.

The multitude of memories

An emerging field of psychological research emphasises the importance of considering the individual within their social, collective, and cultural contexts (e.g., Cordonnier and Luminet, 2024; Fivush, 2022; Hirst et al., 2018; Sutton et al., 2010). Indeed, our memory is an eclectic mix of autobiographical details, vicarious memories, stories from our friends and family, general knowledge, cultural, historical and collective representations, and filled-in blanks with imagination. When remembering events, we thus combine details from an array of sources, fit them within socially and culturally structured narratives and shape them in coherence with our perceived Self, the situation in which the remembering takes place, and the goals we are trying to achieve (Fivush, forthcoming). It is a reconstructive process and beyond the cognitive element of this reconstructive process, I argue it is also social, cultural, collective, and extended.

This excerpt is a great case to study memory in a broader social and connective context as it focuses on a particular case of family memory: family historical memories (i.e., family memories that are related to historical events; Cordonnier et al., 2021; Cordonnier and Luminet, 2024). First, family memories hold a particular status. While they may not fit the strict definition of autobiographical memories, they often carry great importance for individuals, integral to their identity. Pillemer et al. (2015) noted the similarities, both in terms of the phenomenological experience and the functions served, between autobiographical memories and vicarious memories, which are episodic memories people have in reference to events not experienced personally but were told to them by someone else. Second, family historical memories emerge when individuals undergo events meaningful to their group’s history. Their own memory is thus always confronted with and influenced by the collective memories of the community. Additionally, family memories, values, and representations shape an individual's perception of collective history (Cordonnier et al., 2022).

With these considerations in mind, I will now examine the excerpts segment by segment, highlighting how individual memory intertwines with collective memories within this specific social interaction.

Segment 1: When the father was imprisoned (lines 1-11)

The beginning of the excerpt starts with an interesting instance of personal semantic memory. On line 2, the participant responds to the interviewer's query by confirming that her father was imprisoned, and she "imagined" it was during the war. In other words, she holds a personal semantic memory of her father being a prisoner, yet her knowledge does not include the period of this extended event, prompting her to fill in the blank. Consequently, we are left with what one might describe as a "reconstructed personal semantic memory," even if these terms have never been articulated together.[3] For this reconstruction, she likely relied on general semantic knowledge about WWII or on schemas about wars in general. In other words, she deduced that if her father was made a prisoner, it must have occurred during the war.[4]

This is when the social context truly comes into its play. The memory could have ended there; however she is talking to someone there to discuss her family's past, someone who also holds specific knowledge about Belgium's involvement during WWII. The interviewer inquires whether her father was imprisoned by the Germans (implying that it was during the war as indicated by the participant) or if his imprisonment occurred post-war, at the hands of the Belgians due to his collaboration with the Germans (lines 3-5). In light of this exchange, the participant is compelled to reconsider her representation by delving into her memory. She recalls that her father spent a long time after the war in a hospital in Germany (lines 6-7), and thus, she uses deduction (as indicated by linguistic markers such as "so") to reach the conclusion that he was a prisoner of the Belgians/Allies (line 8). The interviewer is also left to infer that the participant knows that the episode at the hospital occurred before his

[3] At least according to both a Google search and a Google Scholar search on the terms "reconstructed personal semantic memory" and "reconstructed semantic memory" on the 6th of March 2024.
[4] Alternatively, one could also reflect on whether this could be an example of "vicarious extended event memory" as the participant has most likely formed a mental representation of an extended event that occurred to her father and that has been transmitted to her. The difference might depend on whether she holds episodic details of this event or just general knowledge. Nevertheless, there is a clear lack of conceptual clarity about some of these terms in the current literature.

imprisonment. The segment ends with the interviewer seeking confirmation that the father was indeed made captive after the war (line 9), and the participant confirming it (line 10).

I want to argue that this exchange has led the participant to construct an updated memory about her father, one where he is not just a prisoner, but a prisoner of the Allies after the war. While this notion may have crossed her mind in the past, I would reason she never took it as a certainty, merely a possibility sometimes entertained, sometimes ignored. It is likely that when she previously had considered this part of her father's life, there was sometimes no necessity to frame it in its precise historical context. For example (and this is purely speculative), she may have brought to mind this episode as an explanatory example of why her father did not like closed-up spaces. In this instance, knowing where the prison was or why he was imprisoned was not necessary for the function the memory was seeking to fulfil. Instead, she held the knowledge of her dad's imprisonment separated from other details about his past, overlooking the causal links between them. But the context of this interview forced her to explicitly state these causal links, creating new relations between elements that will influence subsequent recalls. This instance exemplifies the constructive and malleable nature of memory, as influenced by external context. Although constructed, I do not insinuate this memory is false or incorrect. However, acts of remembering such as these highlight the difficulty in definitively categorizing details as purely episodic, semantic, or speculative. Furthermore, this example also relates to the philosophical notions of socially distributed and extended memory, which refer to the idea that memory processes are not necessarily confined to the brain but can extend and be distributed across biological and non-biological spheres (Clark and Chalmers, 1998; Hutchins, 1995; Sutton et al., 2010). While I do not assert this example unequivocally represents a case of extended memory, these concepts can help us understand the complex phenomena at play in this exchange.

Segment 2: Wounded (.) the eye (.) shrapnel (lines 12-27)

The second segment begins on line 12, where the participant shares "the story". As discussed above, this story seems to have been told — and heard — multiple times. Moreover, it serves as both an autobiographical memory and a vicarious memory of her children who "remember (it) very well" (line 14). The story starts with another repeated event — one that could be regarded as a semantic fact about her father: when he scratched his eye, it produced an unusual sound (lines 15-17). One day (making it now clearly an episodic memory), this fact

prompted her children to inquire about the cause of this noise (line 18). The children's grandfather explained: "it is when there was a shell that exploded and I was hit by shrapnel (…) in the eyes" (lines 19-22) — an episodic memory shared with few contextual details. When pressed by her daughter to disclose "where" he got it (line 23), the father vaguely responds: "when I was wounded" (line 24). In the exchange with the interviewer, the participant does not elaborate on whether her father referred to the wound in his eyes or another wound she knows about. She simply describes her thought process afterward, linking the fact that he was wounded to the shrapnel in his eye. Once again, the interviewer is left to make her own deduction, at least with the knowledge that this man spent a long time in a hospital in Germany after the end of the war (or at least after the liberation of Belgium). At the end of this segment, the participant expresses uncertainty, stating that she does not know whether "it" is false or true (line 26), leaving us pondering the specific referent of "it." Despite this ambiguity, the participant assumes that the interviewer comprehends her intended meaning, affirming twice her lack of knowledge, "I couldn't tell you. I couldn't tell you." (lines 26-27).

In this narrative, we encounter what could be considered a family myth, a story that has been recounted multiple times to different generations (Cordonnier et al., 2021). Its existence may be attributed to the humorous association with the word "shrapnel" and the presence of a physical reminder (his eye) of the story. However, the conversation about the full narrative behind the anecdote appears to be evaded by all parties involved.

Segment 3: Discussion with her brother (lines 27-47)

This segment starts with a contextual tangent about the state of her relationship with her brother. Once again, information is divulged sparingly. She imparts what can be considered a semantic memory: she has a brother that she, and the rest of the family, has not seen for three years (lines 27-29). Accidentally, we learn another semantic fact: her father passed away more than three years ago, since at the time she was still in contact with her brother (lines 29-30). The participant then shifts to an autobiographical memory of a discussion with him when they managed their father's paperwork after his death. However, it is presented in a non-linear fashion mixing multiple events and timelines, resulting in low narrative coherence. The discussion is about a previous event where her brother helped their father write a letter in German regarding a pension that he wished would continue (lines 35-36), an event she most

likely did not experience herself but has a vicarious memory of. The participant, maintaining her pattern, refrains from explicitly stating how and when she learned about it or even the implications of the pension's existence. However, this information is paramount in understanding the topic at stake. To appreciate its significance, one needs to possess some general knowledge about the pension system for soldiers, as well as a collective memory of the involvement of Belgian soldiers within the German army during WWII. As Belgium was under occupation, some people joined anticommunist legions (such as the *Légion Wallonie* associated with the Rex party in Wallonia or the *Vlaams Legioen* associated with the Vlaams Nationaal Verbond party in Flanders) to fight on the Eastern Front, first alongside and then as part of the *Waffen-SS* and the Wehrmacht (Aerts et al., 2017; De Wever, 2003). It is thus likely that her father fought as a soldier as part of the *Waffen-SS*, making him entitled to a war pension from the German government after the war. As the participant does not explicitly reflect on the meaning of the pension, we are left with two potential explanations. The first is that she does not hold the necessary historical knowledge to reach this conclusion and is thus still unsure of what it means, but probably feels it is not right. This version could be supported by the rest of the exchange where she recounts asking her brother if he knows "some things" (lines 38-39). Her brother, despite assisting in translating the letter, claims ignorance, adding he did not ask any questions (lines 38-39). The second explanation, although probably more unlikely, is that she understands what it means and assumes that the interviewer also possesses the necessary knowledge to reach the same conclusion without forcing her to state it explicitly. Although the interviewer is silent during this part of the exchange, she is very much a part of it, allowing the participants to “say without saying” a difficult truth.

At this stage, the participant provides an evaluation regarding her brother’s alleged lack of knowledge by casting doubt on his character and intentions. She reminds the interviewer of his fall-out with the family without disclosing the reasons (lines 40-41) and suggests he might "know more things about the family," including the possible existence of a half-sister (lines 42-44). This personal semantic fact comes out of the blue, lacking a clear connection with the current topic. She then continues her opaque evaluation of her brother by wondering whether "he wants to distance himself from that" (without specifying what "that" refers to) or if he is engaged in "a kind of provocation and that all of this isn’t true" (again without specifying what is not true or the provocative stance) (lines 45-46). The segment concludes once more with her expressing uncertainty, a sentiment seemingly tied to the narrative involving her brother and the broader story of her father. Overall, this part is remarkable, both by the

revelation about her father having most likely served as part of the *Waffen-SS* and by the fact this astounding information is never actually uttered by the participant.

Segment 4: Putting the pieces together (lines 48-64)

This last segment diverges from the previous one by showcasing an interaction between the participant and the interviewer where they collaboratively reconstruct the family's historical memory. The interviewer takes the lead, suggesting a review of the information gathered so far by piecing "all the pieces together" (line 48). Her approach is methodical, starting with calculating the father's age at the beginning of the war based on the semantic knowledge of his birth year, likely shared earlier (lines 48-49), and then confirmed by the participant (line 50). Relying on her general knowledge of enlistment age at the time and awareness that the Belgian Army only fought for 18 days in 1940, she deduces out loud that he had been too young to fight then (lines 51-53). Interestingly, the participant steps in to finish the interviewer's sentence, confirming he could not have fought "the real war" (line 52), while the interviewer used the more academic expression of "the 18-day campaign" (line 53). The choice of "real" implies a comparison with a "fake" war, as if the battles in Belgium in 1940 were somehow more legitimate than those elsewhere, such as the Eastern Front. Then, cautiously, the interviewer pushes her thoughts further, suggesting it is likely he "sided with the German army" (line 54), once again confirmed by the participant (line 55). The interviewer's restraint in using terms with harsher connotations, such as the Waffen-SS, epitomises the difficulty in openly discussing such a sensitive topic.

The discussion continues along the same lines, with the interviewer revisiting the father's wound and shrapnel, attempting to estimate whether the participant knows the context in which he received them, suggesting it may have been on the Eastern Front (lines 56-60). Again, the participant acquiesces (lines 59). The last part of this excerpt returns to the initial question, now with a clarified idea that he fought at the end of the war, implying his condemnation was post-war for collaborating with the enemy (lines 61). The participant confirms one last time, stating that "there would have been at a certain moment a stance on his part in this regard," which I read as a final way of saying her father sided with the Germans

without uttering the words (line 62).[5] It concludes with both participant and interviewer agreeing on this final conclusion.

This segment is noteworthy for the participant's stance on the reconstitution. While previous segments were characterized by her repeated expressions of uncertainty and lack of knowledge, she concludes with a clear representation of her father's past, as someone who joined the German army in combat — which entitled him to a war pension later on — got wounded, hospitalized in Germany before being imprisoned by the Allies for collaborating with the Germans. This formation of a new and less ambiguous family historical memory was only made available by the social context of the interaction, but also by the knowledge and collective memory of the interviewer. This could be viewed as a case of extended and socially-distributed memory, where this particular narrative can only exist within the interaction of these two people (Sutton, 2010).

Conclusion

Through the micro-analysis of this 3 minute-excerpt, we reach the conclusion that memory is a complex and multifaceted phenomenon. When it comes to family historical memory, individual experiences are intricately intertwined with vicarious memories and general knowledge. Mental reconstructions of past events thus evolve depending on social dynamics and collective representations. In narratives such as this one, applying conventional cognitive psychological approaches to memory, which tend to focus on one's capacity to recall episodic details of personally experienced events can be both challenging and limiting.

For one, the conventional dichotomy between episodic and semantic memories struggles to capture the complexity of real-life recollections. The narrative is woven with personal semantics, repeated and extended events, revealing a rich tapestry where the lines between episodic and semantic blur (Bontkes et al., 2023; Renoult et al., 2012). Other instances of memory are also hard to categorize, especially with regards to the multiple categories found in psychology research that are not always clearly defined and differentiated.

[5] This interpretation is also reinforced by the original text in French. Although the translation is technically correct, it could also be translated slightly differently as "Yes (.) there would have been at a certain moment a stance on **this side**", with the "side" referring to the side chosen during the war: the Germans or the Allies.

Furthermore, within this intricate web of memory lies multiple layers of reconstruction. At one level, there are the participant's personal memories and knowledge, shared within the context of the interview, reflecting her subjective experiences and interpretations. Simultaneously, there are her father's memories, gleaned from various sources, and reconstructed to form a semi-structured representation. However, this reconstruction is often blurry and incomplete, punctuated with doubts of its authenticity. And then, the interaction with the interviewer — who may lack personal memories of the participant's father but possesses semantic and collective knowledge related to the historical context of the events discussed — adds a new dimension to the process. This collaborative dynamic goes beyond the mere categorization of memory; it exemplifies a process of meaning-making and extended memory, where the past is reconstructed not only in coherence with one's representation of the self, others, and the world, but also to correspond with reality (Conway and Pleydell-Pearce, 2000). Historical family memories, especially those surrounding wartime events, transcend individual boundaries and become embedded in the collective consciousness (Cordonnier and Luminet, 2024). The collaborative reconstruction of these memories illustrates how the social and collective contexts shape narratives about the past. It reinforces the idea that memory is not solely an individual endeavour but can be a socially distributed and extended process (Sutton, 2010).

Another noteworthy aspect relates to the centrality of uncertainty and ambiguity in this excerpt. Despite the numerous pieces of evidence available to the participant, she persistently expresses ignorance and doubts the reliability of what she knows. Interestingly, we observe the transmission of certain memories across generations, while others remain shrouded in silence or ambiguity. This silence surrounding the topic of collaboration during WWII in Belgium reflects a systemic absence of collective memory of this particular historical period within the French-speaking part of Belgium (Aerts, 2021; Rosoux, 2021). The collective shame has resulted in a difficulty to share personal experiences, even within the sanctity of the family.

Postscript

This consideration leads me to my last point, as it is now necessary for me to reflect on my own positionality within the context of this special issue. Indeed, I am the interviewer of the

excerpt examined. During the original data session in Trento where we worked on this excerpt for the first time, I was asked to remain silent to prevent my intimate knowledge of the case from interfering in the analytical process. In this manuscript, I have endeavoured to approach the exercise from an outsider's perspective, relying solely on the available text and not on my knowledge of the rest of the interview. Nevertheless, I inevitably approached this excerpt with the background of someone who has studied family memory transmission about collaboration in Belgium for the past six years. The dozens of interviews about similar family stories have enriched my collective memory and knowledge of this historical period. Furthermore, I still vividly recall the thoughts and feelings I experienced during this particular exchange. This excerpt stood out to me as the "aha moment", where after one hour of rapid exchanges which seemed to bounce all over the place, I finally reach the point I was there to discuss (to know more about the research contex, see also the epilogue of this special issue: Cordonnier, 2024). Yet, I also had the strange feeling of having been an integral part in the reconstruction of that memory. It is for this reason I chose this excerpt to share with my colleagues. So, if the initial exercise aimed to locate memory without context, it is impossible for me to examine it from a completely naïve perspective. My own episodic and collective memory has undoubtedly influenced my analysis.

In conclusion, the intricacies of historical family memories challenge traditional models of memory classification from cognitive psychology. The exchange between the participant and the interviewer exemplifies the nuanced nature of memory transmission, highlighting its non-linearity and the shared dynamics that shape our understanding of the past. This exploration offers valuable insights into the complexity of memory processes, urging us to view memory as a dynamic and socially extended phenomenon.

Table 1. Glossary of memory-related concepts in alphabetical order

Concept	Short definition	Useful references
Autobiographical memory	Memory related to one's own life experiences and events, encompassing both episodic and semantic components	(Conway, 2005)
Collective memory	Memories and knowledge shared by members of a community that bear on the collective identity of that community	(Hirst and Manier, 2008)
Distant memory	Memory about an event that occurred before one’s lifetime	(Hirst et al., 2018)
Episodic memory	Memory of specific events that occurred at a particular time and place and lasted less than 24 hours	(Tulving, 1984)
Extended events	Prolonged or continuous events that unfold over an extended period, considered by some as different from episodic events	(Mark et al., 1992)
Extended memory	The concept that memory processes can extend beyond individual cognition, involving external aids, technologies, or social interactions	(Clark and Chalmers, 1998; Sutton et al., 2010)
Family historical memory	The collective memory and shared recollections of a family's past in relation to historical events	(Cordonnier and Luminet, 2024)
Family memory	Shared recollections and experiences within a family unit, often contributing to a collective understanding of the family's history	(Fivush and Merrill, 2016)
General semantic memory / general semantics	Generalized knowledge about the world, not tied to personal experiences but encompassing broader, non-personal information	(Binder and Desai, 2011)

Lived memory	Memory about an event that occurred during one's lifetime	(Hirst et al., 2018)
Long-term memory	Unlimited capacity storage system in the brain responsible for retaining and recalling information beyond a few minutes and potentially lasting a lifetime	(Atkinson and Shiffrin, 1968)
Overgeneral memory	A tendency to predominantly recall general memories such as repeated and extended events	(Gibbs and Rude, 2004)
Personal semantic memory / personal semantics	Individualized knowledge about oneself and close others, involving personally relevant facts and information	(Greenberg and Verfaellie, 2010; Renoult et al., 2012)
Procedural memory	Memory system responsible for storing information about how to perform various skills and tasks	(Tulving, 1985a)
Repeated events	Events or occurrences that happen more than once, contributing to the formation of personal semantic memories based on repetition	(Bontkes et al., 2023; Renoult et al., 2016)
Semantic memory	Memory for general knowledge, facts, and concepts, without the specific context of personal experiences	(Tulving, 1985b)
Sensory register	Temporary storage system that briefly holds incoming sensory information from the environment in its original sensory form	(Atkinson and Shiffrin, 1968)
Short-term memory	Temporary storage of information, typically lasting for a few seconds to a minute, and involves conscious processing of this information	(Atkinson and Shiffrin, 1968)
Socially-distributed memory	The concept that memory processes can extend beyond individual cognition, involving the collective sharing, transmission, and	(Sutton et al., 2010)

	storage of memories within social groups or communities	
Vicarious memory	Recollection of events or experiences learned from others' accounts, rather than through direct personal experience	(Pillemer et al., 2015)
Working memory	The cognitive system responsible for temporarily holding and manipulating information	(Baddeley, 1992)

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Acknowledgements

I am currently supported by a project titled “The transmission of memories related to stigmatisation: Official and family memories related to collaboration and colonisation in Belgium” (RE-Member), funded by an UCLouvain Concerted Research Action grant from the Fédération Wallonie-Bruxelles (ARC 20/25-110). My colleagues on this project are Olivier Luminet, Valérie Rosoux, Laurence van Ypersele, Anne-Sophie Gijs, Louise Ballière, Wouter Reggers, and Ségolène Cardon de Lichtbuer. I am also currently supported by another project titled “Memory transmission: Analysis of intergenerational transmission and vicarious memory of personal memories and memories related to historical events through top-down and bottom-up approaches” funded by the Fonds de la Recherche Scientifique (FNRS) from Belgium (PDR 40007917).