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BROADENING THE AUTOBIOGRAPHICAL RECORD TO INCLUDE MEMORIES OF FICTION

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Introduction

Thinking about the first time you met your significant other. Reliving a car crash. Reminiscing about a cooking project gone wrong. Trying to remember a procedure depicted in a YouTube video. These are examples of *autobiographical memories*: memories of specific events, which one believes happened in one's life, often accompanied by vivid imagery and a sense of reliving. Decades of research have revealed a great deal about autobiographical memory (see Chapter 2 for a discussion of some of these findings). For example, we remember very little from our lives before the age of four (*infantile amnesia*; Harley & Reese, 1999); negative memories lose their sting faster than positive ones (*fading affect bias*; Walker, Vogl, & Thompson, 1997); and older adults are more likely to retrieve memories from their adolescence, compared to other parts of their lives (*reminiscence bump*; Koppel & Rubin, 2016).

A thorough review of the field is beyond the scope of this chapter; instead, our interest is in how the field has gradually expanded the scope of autobiographical memory research. In the context of the recovered memory debate, for example, researchers focused on memories of events that never happened (e.g., being lost in a shopping mall, Loftus & Pickrell, 1995; taking a hot air balloon ride, Wade, Garry, Read, & Lindsay, 2002) to understand how such memories could be recollected and believed despite the events in question never having occurred. Recent work focuses on simulations of the future and how the same brain regions support such simulations and autobiographical remembering (e.g., Schacter & Addis, 2007; Schacter, Benoit, & Szpunar, 2017). The field now accepts that autobiographical remembering can include events that never happened (see Rubin & Umanath, 2015), broadening the autobiographical record.

In this chapter, we push for an even more porous boundary, with an examination of the role of agency in autobiographical memory. That is, we ask whether memories of events that one did *not* personally experience can play a similar role as memories from one's own life. We review the scant literature on this topic, before arguing that memories of fictional events—such as from novels, short stories, television shows, and films—should sometimes be considered part of the autobiographical record. Memories of fictional events can be rich, serving some of the same functions as autobiographical memories, even though they are not strictly *auto*biographical, in the sense that someone other than the self is the agent.

Functions of Autobiographical Remembering

In 1988, Alan Baddeley famously challenged memory researchers to stop focusing on "collecting elegant orderly results" and to address a more foundational question: "But what the hell is it for?" (Baddeley, 1988; see also Baddeley, 2009; Pillemer, 2009). In the intervening decades, researchers in the field of autobiographical memory made a concerted effort to answer this call. This functional approach complements the view of memory as information processing, with its focus on accuracy and capacity, to ask what such memories might be useful for (Bluck, Alea, Habermas, & Rubin, 2005).

There is long-standing theoretical consensus for three umbrella purposes of autobiographical memory: they help us to maintain a continuous sense of self, to form new and maintain old relationships, and to plan our next steps (Hyman & Faries, 1992; Bluck, 2003; Fivush & Waters, 2014). From an ecological perspective, this latter *directive* function is key: we remember past events to avoid repeating our mistakes, for motivation, to plan our actions, and in our searches for solutions to our current problems (Pillemer, 2003). Of course, our memories are not limited to those useful for making adaptive decisions. Indeed, part of the reason so-called *flashbulb* memories intrigued researchers was their unnecessary level of detail. Instead, such memories likely serve social functions, arising as people share their stories of "hearing the news" with each other, following the standard newspaper script of who-what-when-where, plus a little human interest (Bohannon III, 1988; Brown & Kulik, 1977; Talarico & Rubin, 2003, 2007).

The functions of autobiographical memories are largely assessed with questionnaires, such as the Talking About Life Experiences scale (TALE; Bluck et al., 2005). The TALE questionnaire asks participants to report how often ('never' to 'very frequently') participants use their memories of lived experiences for directive, self, and social instances. Sample items for each subscale include: I think or talk about my life experiences when: "I want to make plans for the future," "I am concerned about whether I am still the same type of person that I was earlier," and "I want to develop a closer relationship with someone." Initial studies showed that participants do endorse functions on each of these subscales for memories of lived experiences. Subsequent studies using the TALE and similar measures include explorations into whether functions differ across distinct event types (e.g., single versus recurring events; Waters, Bauer, & Fivush, 2014), how care-givers shape children's understanding and preferences for using memories (Fivush, Berlin, McDermott Sales, Mennuti-Washburn, & Cassidy, 2003), and the extent to which directive, self, and social functions are in fact intertwined in the complex world of real memories (Wong & Watt, 1991; Pillemer, 2009).

Dimensions of Autobiographical Memories

One way to organize existing work is to think about the dimensions upon which autobiographical memories vary. We begin by briefly describing two established dimensions: memory accuracy and feelings of reliving, before moving on to more novel dimensions.

Accepted Dimension of Autobiographical Memories: (In)Accuracy

The field has long accepted that ~~being accurate~~ is not a prerequisite for autobiographical memory, with early demonstrations including Binet's work on inaccurate child eyewitnesses and Barlett's subjects misremembering a folk tale (Bartlett, 1932) and more recent work involving false memories for childhood pranks (e.g., Lindsay, Hagen, Read, Wade, & Garry, 2004) and alien abductions (Clancy, McNally, Schacter, Lenzenweger, & Pitman, 2002). The

field has shifted, however, in how such errors are conceptualized within the larger memory system. That is, such errors are not random; they are better conceptualized as byproducts of an adaptive memory system (Schacter, 1999; Schacter, Guerin, & St. Jacques, 2011). The constructive nature of memory allows the simulation of the future based on past experiences; such flexibility is crucial given that future events will never be identical to past ones. When faced with a threatening dog, for example, remembering a past attack verbatim would not be as useful as drawing on that experience to simulate an escape strategy. This example shows the directive function of autobiographical memory, with memories guiding and informing present actions in a new situation. A constructive memory system is also adaptive given social functions. When sharing memories to entertain friends and colleagues, we tell stories, selecting the relevant parts and exaggerating as needed to make our points clear (Marsh & Tversky, 2004). A constructive memory system also helps one to maintain a consistent sense of self, biasing one towards remembering the past as consistent with the present (Ross, 1989). All of these functions are adaptive, but also mean that our memories are not restricted to events exactly as experienced.

Accepted Dimension of Autobiographical Memories: Reliving

The ability to relive a past event is perhaps the most defining characteristic of an autobiographical memory (Rubin, 1988). *Recollection*—termed autonoetic consciousness by Tulving—is the core of autobiographical remembering and considered by some to be a prerequisite. However, not all autobiographical memories are equally likely to be recollected; in one sample of vivid memories, for example, injuries/accidents, sporting events, and opposite-sex interactions were more likely to be produced than other types of events (Rubin & Kozin, 1984).

In a pioneering study, Rubin and colleagues adapted the Galton-Crovitz word-cuing technique to understand what characteristics of memories are associated with a feeling of reliving. To explore what predicts reliving, undergraduates retrieved personal memories in response to each of 15 cue words (e.g., *party*, *flower*, *ocean*), answering 15 questions about each one (Autobiographical Memory Questionnaire or AMQ; Rubin, Schrauf, & Greenberg, 2003). Across studies, memories rated as having greater visual and auditory imagery were more likely to elicit reliving. Emotionality and having a coherent story were also strongly related to experiencing a sense of reliving. These results were correlational, but similar findings come from experimental studies where encoding is manipulated to remove one of these factors. For example, subjects who were blindfolded while experiencing to-be-remembered events (removing visual information) were less likely to later report a sense of reliving when retrieving their memories (Rubin, Burt, & Fifield, 2003).

An Emerging Dimension: Belief

In the literature, belief in a memory sometimes refers to belief that one's memory is *accurate*, and other times to the belief that the event *actually happened*, without necessarily implying anything about how well that event is remembered. Here we focus on the latter definition, given that it has received much less attention in the literature, and treat it as separate from the notion of accuracy. That is, you could believe a memory to correspond to a real event (believe it) but doubt the details of how you remember it (accuracy). Using this lens, traditional autobiographical memories are believed, as are false memories.

Thus, as Scoboria et al. (2014) point out, most research into everyday memory is in fact the study of believed memories. And yet many people have vivid memories that they do not

believe actually occurred. Developmental psychologist Jean Piaget describes one such example anecdotally, as reported by Mazzoni, Scoboria, and Harvey (2010):

> For much of his life, Piaget had a detailed memory of a man attempting to kidnap him at the age of 2 while he was out with his nurse. Piaget described vividly visualizing such details as the scratches on his nurse's face caused by the attacker. Thirteen years later, Piaget's former nurse confessed that she had fabricated the story. On the basis of this evidence, Piaget stopped believing that he was nearly kidnapped as a child. However, he was unable to stop remembering the event as if it had occurred. (p. 1)

Non-believed memories are defined as autobiographical memories with vivid recollective features no longer believed to have occurred, such as this example reported by Piaget. While previously assumed to be rare, Mazzoni et al. found that 20–25% of samples reported having at least one non-believed memory (2010). These memories tended to occur in childhood, with the mean age at 7.19 years (SD = 3.41) and often became non-believed when refuted by someone else, as in Piaget's case. For example, a parent might explain that it was in fact a sibling who truly experienced the event. Others come to disbelieve their memory for reasons such as event plausibility, alternative attributions, general memory beliefs, internal event features, inconsistency with external evidence, views of self/others, personal motivation, and numerous subcategories (Scoboria, Boucher, & Mazzoni, 2015).

A New Dimension: Agency

The agent in autobiographical memories might appear obvious: it is the rememberer. But individuals do not exist in isolation; we experience events with others and hear others' accounts of their own memories. Historically, other people's memories have been considered primarily as a source of memory errors: for example, twins dispute the ownership of memories (Sheen, Kemp, & Rubin, 2001) and individuals repeat errors made by a confederate (Roediger, Meade, & Bergman, 2001; Meade & Roediger, 2002). People sometimes "try on" other people's memories, borrowing them and telling them as if they were their own (Brown, Croft Caderao, Fields, & Marsh, 2015). In one large survey, nearly half of participants reported borrowing someone else's memory, a likely underestimate given the social desirability of truth-telling and the possibility that people simply forgot some relevant instances. In short, it is clear that other people's memories can influence our own autobiographical memories.

More intriguing for present purposes is the idea that we can have recollective event memories where we are not the agent of the memory. For example, the first author of this chapter has a vivid memory of her husband's experiences on a recent flight from Los Angeles, where the oxygen masks came down without warning, requiring the depressurized plane to rapidly drop 20,000 feet before diverting to Memphis. The memory is vivid (aided by passenger photos), emotional, and has a clear narrative—and there is no question about who the agent is. This memory would be useful in a future depressurization event (a situation with which the authors do not have direct experience) and also serves a social function as an interesting conversational nugget.

Such memories have been labeled *vicarious memories* (Pillemer, Steiner, Kuwabara, Thomsen, & Svob, 2015). To document these phenomena, Pillemer and colleagues asked participants to describe two memories: one they had recently told to someone else, and one that someone else had recently told them. Participants were asked to rate both memories on

various dimensions (e.g., emotionality), the Centrality of Event scale (Berntsen & Rubin, 2006) and an adaptation of the TALE (Bluck et al., 2005; Bluck & Alea, 2011). Participants had no problems retrieving other people's memories, and rated vicarious memories similarly to their own memories, albeit at a lower level (e.g., less vivid).

Extending the Model to Fiction

So far, we have discussed how autobiographical memories vary in accuracy, feelings of reliving, belief in their occurrence, and agency. In Figure 3.1, we lay out the intersections of two of these dimensions, isolating *belief in occurrence* and *agency* as two under-studied dimensions fruitful for organizing past research and illuminating theory-driven future directions. In doing so, we dichotomize these continua for conceptual ease and collapse across other possible dimensions, such as reliving and accuracy.

Most existing research falls in the upper right quadrant: memories of events that one believes one has experienced in the world. This cell includes canonical autobiographical memories, regardless of whether they are true or false memories (both are believed to have occurred). As noted above, emerging research examines vicarious memories (where people believe the event happened, but to someone else) and non-believed memories (where people do not believe the event happened, to oneself).

Critically, Figure 3.1 highlights a quadrant not yet discussed: memories where the agent is *not* the self and the rememberer does *not* believe the event really happened. This quadrant could include memories of events from works of fiction, such as novels, short stories,

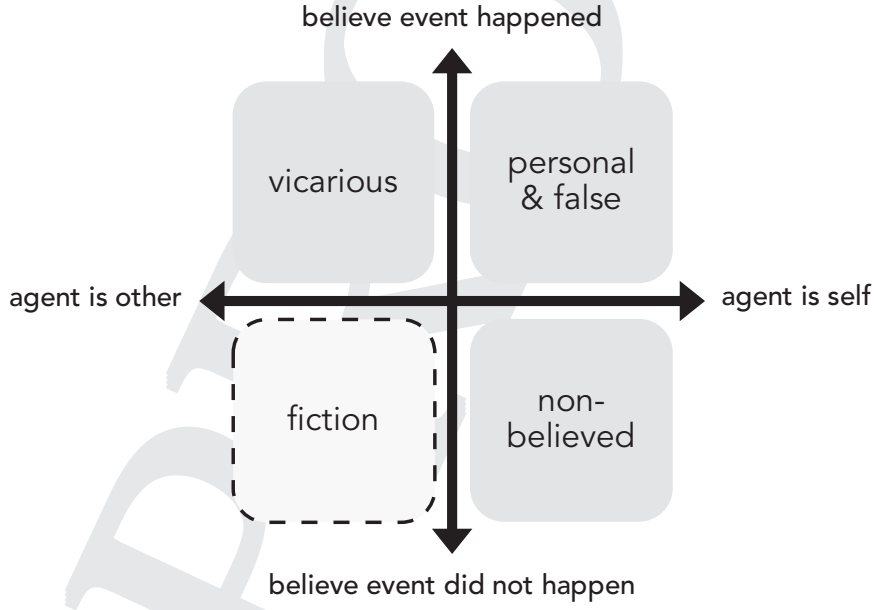

Figure 3.1 Categorization of autobiographical memories by belief and agency, two of the many dimensions by which autobiographical memories may be categorized. Crossing dimensions highlights different types of memories and allows identification of under-studied areas. Note that this figure collapses over the accuracy dimension and thus each cell could refer to true or false memories. Adapted from Yang, Deffler & Marsh (under review at Journal of Experimental Psychology: General).

television shows, and films; *non-believed vicarious memories* would also fall into this category (e.g., remembering a child's account of an event that a teacher subsequently refuted).

In this chapter, we focus on *memories of fiction*. These event memories can surface in conversation (e.g., discussing a memorable scene from *The Matrix*), be cued involuntarily (e.g., thinking of the relevant *Seinfeld* episode when a colleague double dips at a department party), and be retrieved for direction or inspiration (e.g., drawing courage from Atticus Finch's closing statement in *To Kill a Mockingbird*), among other reasons. We focus on memories of fiction for two reasons. First, it allows us to build upon a large psychological literature documenting how people process works of fiction: readers build mental models of stories (Johnson-Laird, 1983; Kintsch & Van Dijk, 1978), and the same brain areas are activated by fictional actions as enacted ones (Speer, Reynolds, Swallow, & Zacks, 2009; Yarkoni, Speer, & Zacks, 2008). Second, narrative media is a large part of people's lives. That is, works of fiction make headlines and create cultural moments; universities devote buildings and departments to the scholarly analysis of literature, film, and other forms of narrative art. Such memories are of inherent interest to psychology—a science concerned with describing and understanding all aspects of human behavior—and of particular relevance to memory researchers. We would argue that any theory of memory that does not allow for how and why people retrieve fictional events fails to capture key aspects of remembering.

In our work, we adapted standard methods for eliciting autobiographical memories to cue memories of events from fictional works. In one study, we asked participants to retrieve a frequently rehearsed memory (i.e., one they had thought or talked about often) and in another we used concrete nouns such as "flower" or "dress" to cue memories (Rubin, 1981). These methods allow us to directly compare the retrieval of autobiographical memories and memories of fiction, with the latter explicitly defined as any specific event from a book, television show, or movie. Participants had no issues describing specific events from fictional events, retrieving memories such as, "Neo walks by a very attractive woman, which ultimately distracts him from danger within the Matrix simulation" and "the scene from the *Wizard of Oz* when the main characters fall asleep in the field of poppy flowers and the flying monkeys come after them."

In short, participants have memories of specific events from fictional works. We turn now to the functions of these memories, before returning to the dimensions of autobiographical memories identified earlier: accuracy, reliving, and belief.

Functions of Fiction

Lived experiences are remembered in part because they are useful. Do *memories of fiction* serve similar functions, despite being invented and often even fantastical? In other words, do people report using memories of fiction to plan and make decisions (directive functions), to maintain identity and a continuous sense of self (self functions) and to nurture new and existing relationships (social functions)? To this end, we adapted the TALE questionnaire (Bluck, 2003; Bluck et al., 2005) to measure the frequency with which people report using memories of lived experience and fiction for directive, self, and social functions. We used established TALE items for personal memories, and then created parallel items to reference fiction. For example, we adapted ~~an~~ item from the directive function subscale "I think back or talk about my life when I want to make plans for the future" to memories of fiction: "I think or talk about events from fictional works when I want to make plans about the future." In summary, people reported using memories of fiction for the expected directive, self, and social functions regularly, albeit less frequently than for memories of lived experience.

The TALE scale was not designed to investigate memories of fiction, raising the question of whether there might there be other functions, not captured by existing measures, for which fiction might be especially suited. As an exploratory study, we sampled a specialized population so that we could probe reports of remembering a specific book as well as a very specific fictional event. Specifically, we recruited listeners of the podcast *Kurt Vonneguys* (Schmidt & Swaim, 2018), an audio show discussing written works by the author Kurt Vonnegut. We again adapted the TALE questionnaire for these Vonnegut enthusiasts to ask about one of the author's most frequently read novels, *Slaughterhouse-Five*, e.g., "I think or talk about *Slaughterhouse-Five* when I think about my future goals." Briefly, the novel describes the events of an American soldier who participated in the firebombing of Dresden in the Second World War and uses science fiction devices (time travel, alien abduction) to communicate the traumas of war (Vonnegut, 1969/2009). All surveyed participants had read the novel at least once (albeit with some noting it was not their favorite Vonnegut work). We also asked participants to report any other times they think or talk about *Slaughterhouse-Five* that were not already discussed in the existing items.

Participants' reasons for recalling events from *Slaughterhouse-Five* often related to the three functions captured by the TALE questionnaire. For example, reasons such as "I want to remind myself of both my power and my limitations" and "I'm thinking about novels I enjoy" are consistent with maintaining one's sense of self. In addition to directive and self functions, participants frequently cited social reasons for thinking or talking about *Slaughterhouse-Five*, such as when they "want to relate to someone who also read the novel," "meet another Vonnegut fan or someone who appears to have similar taste in books," or need to make small talk.

Intriguingly, some participants reported using *Slaughterhouse-Five* for emotion regulation, which has been proposed as a distinct fourth function for autobiographical remembering (e.g., Raes, Hermans, de Decker, Eelen, & Williams, 2003). For example, one participant wrote, "One particular way in which I think about *Slaughterhouse-Five* is when I'm confronted with unpleasant memories. I try to take a Tralfamadorian (i.e. non-linear) perspective of the past and just focus on the pleasant parts, ignoring the unpleasant ones." Others wrote they think or talk about the novel when "events challenge the vision I previously held for my life," "I'm struggling to understand why something is happening," or when they are "experiencing sadness or loss and want to feel less alone." Indeed, these participant responses echo themes and reflections of war veterans reflecting on the "moral clarity" of this novel in helping them make some sense out of the senseless (e.g., Powers, 2019).

Memories of fiction may be particularly valuable when they involve situations or places with which the rememberer has no direct experience. For example, one podcast listener wrote that they think of *Slaughterhouse-Five* when they see or hear "difficult news related to young men trapped inside a set of conditions they are not prepared to deal with (soldiers)" and another said they reference the novel to "grasp the horror of firebombings." This suggests that one might rely on experiences of war relayed through fiction, supplementing existing knowledge of soldiers or war, especially when one's own experience is sparse. More generally, when asked to make decisions in a novel situation (e.g., What would you do if you became trapped on a desert island?), people may draw on facts and images from a mix of sources, including works of fiction (e.g., *Castaway*).

Overall, our work provides evidence that people readily endorse using memories of invented events for traditionally autobiographical functions of remembering across several distinct studies.

Dimensions of Memories of Fiction

Past work established that people glean information about the world (i.e., facts, semantic information) from works of fiction which is incorporated into their knowledge bases (Marsh, Meade, & Roediger, 2003; Marsh, Butler, & Umanath, 2012). But what about memories of *events* which occurred in works of fiction—what are these memories like? This question has received little attention in the memory literature. In the remainder of this chapter, we apply the dimensions of event memory we previous delineated—including accuracy, reliving, belief, and agency—as it relates to *memories of fiction*. In our own work, we begin exploring this domain of remembering by utilizing previously established measures and constructs from autobiographical memory to ask if they hold for memories of fiction.

Accuracy of Remembered Fictional Events

By accuracy, we refer to the accuracy of one's memory for a fictional event. This is distinct from the veridicality of the fictional event with respect to the world. For example, "the Hogwarts School of Magic is located in Scotland" is accurate to the world of *Harry Potter*, but not veridical to our own world because (to our knowledge) magical schools do not exist; "Hogwarts is located in New Zealand" is both inaccurate with respect to the work of J.K. Rowling and not veridical.

A wealth of psychological research suggests that people vary in how accurately they remember events from fiction. Although not traditionally treated as "remembering fiction," experiments on text comprehension, for example, routinely involve remembering stories. Similarly, eyewitness simulations often involve remembering crime scenes from movies or TV episodes. The reader who misremembers the details of the "pregnant Nancy" story is misremembering a fictional story (Owens, Bower, & Black, 1979), as is the "eyewitness" asked to remember a violent scene from the commercially available movie *The Professional* (Marsh, Tversky, & Hutson, 2005). In short, memories of fictional events vary in their accuracy, in the same way that memories of lived experience do.

Reliving of Fictional Events

Can memories of fictional events evoke a sense of reliving in the same way that autobiographical memories do? For memories of fiction to "keep up" with previously established forms of event memory—from memories of lived experience to simulations of future events—memories of fictional events should feel similarly phenomenologically. Intuitions about remembering scenes from a favorite novel or film suggest that such event memories do share qualities of subjective experiencing similar to those of events one has experienced in the world. Previous research (Gordon, Gerrig, & Franklin, 2009) and our own data bear out this intuition.

As noted above, we adapted the Galton-Crovitz word-cueing technique and asked participants to retrieve memories of fiction and memories of lived experiences in response to concrete nouns. In response to these cues, participants described vivid scenes, such as:

> I will never forget the house from *Harry Potter* where they showed the scene of Voldemort coming in and killing Harry's mother. The room was kinda [*sic*] small, lightly colored, Harry was in the crib and when Voldemort went to kill him the mother had jumped in front to protect her son.

And:

> The scene was from a TV show called *Friends*. Monica and Chandler took Joey to their new house in the suburbs and Joey ran into the little girl who lived in the house they were buying and she explained why it's okay to let his friends be happy. The scene is warm, the house was lightly colored very open and bright. Monica and Chandler sat on two white couches where they watched their new neighborhood and Joey talked to the little girl in his bedroom that was pinkish.

These descriptions suggest a vivid sense of reliving, including sensory imagery and some evocation of spatial layout. And indeed, people readily ascribed such phenomenological characteristics to these memories of fiction when asked to rate events using the Autobiographical Memory Questionnaire (Rubin et al., 2003). Figure 3.2 depicts these ratings for word-cued memories of experienced events and memories of fiction. We note two broad patterns. First, the pattern of ratings is noticeably similar across the two types of memories, and indeed, highly correlated between conditions. And second, when a statistically significant difference exists between memories of fiction and of experienced events, memories of fiction tend to be rated lower. In this and other studies, we reliably find reports of reliving and re-experiencing for memories of fiction, albeit at lower levels than personally experienced memories.

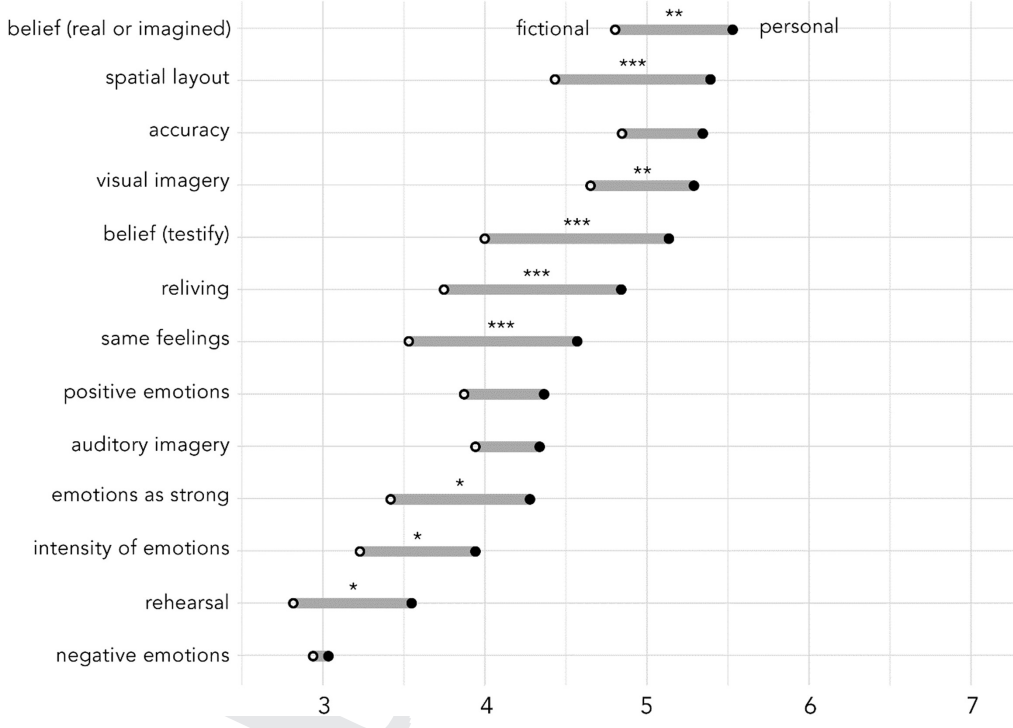

Figure 3.2 Phenomenological properties of personal memories and memories of fiction. Closed circles (●) refer to personal memories and open circles (○) refer to memories of fiction. Asterisks indicate statistical significance. Adapted from Yang, Deffler & Marsh, under review at Journal of Experimental Psychology: General.

(Lack of) Belief in Memories of Fiction

Previous work described how memories of imaginations might be mistaken for memories of lived experience through source-monitoring errors (reality monitoring; Johnson, 1988). While people do confuse, intentionally or otherwise, lived experience and fiction (as in the infamous case of the "memoir" *A Million Little Pieces* by James Frey), what is particularly interesting and rich about memories of fiction is that their influence is *not* dependent on mis-identifying source. It is curious that people are relatively willing to incorporate events that they believe never happened into their decision-making and social worlds, and to relive such events with vivacity.

The idea that one of the key dimensions outlined here—belief in event occurrence—is not as significant to our memory systems as one might assume is an oddity, but one of general theoretical interest to understanding how memories are structured. Indeed, key works in the philosophy of fiction have maintained that fiction is processed differently from nonfiction (Currie, 1990; Walton, 1990). This fits with intuition that real events seem to obviously overshadow invented ones (Busselle, Ryabovolova, & Wilson, 2004; Potter, 1986). For example, a documentary about tragic events might move the viewer to act (e.g. sign a petition), whereas this would not be possible for a fictional cause.

However, our work supports the idea that while the dimension of *belief* is a useful *a priori* theoretical construct in delineating categories of experience, in practice it may not be a deeply coded psychological distinction. This idea is supported by a body of work suggesting that labeling something as *fiction* or *nonfiction* has few, if any, downstream consequences on how persuasive a work is (Appel & Malečkar, 2012; Green, Garst, Brock, & Chung, 2006; Mikkonen, 2006; Strange & Leung, 1999), how much emotional impact a work has (Goldstein, 2009; LaMarre & Landreville, 2009), or how the event is remembered (McDaniel, Hines, Waddill, & Einstein, 1994; Hartung, Withers, Hagoort, & Willems, 2017). While the expectations people bring to a work may shape, for example, how they read it and what they remember (Zwaan, 1994), such expectations are distinct from the construct of *belief*. For example, sometimes fiction can be read to learn about the world we live in (e.g., historical fiction), and nonfiction can be read for diversion and entertainment (e.g., engaging popular science).

While de-emphasizing the psychological role of *belief* may seem counterintuitive, it becomes less surprising in the context of other research. Our cognitive systems are likely built on an assumption of truth, in that belief rather than skepticism is the default (Gilbert, 1991; Asp et al., 2012). This can be applied to works of fiction as well, in contrast to the lay conception that disbelief must "suspended." Moreover, applying a more critical lens may run counter to the goals people bring to fiction, such as following the narrative, emotional involvement, and overall enjoyment. This is supported by work demonstrating that people are less likely to notice false notes if they are more transported into the narrative (Green & Brock, 2000).

Conclusion

While we acknowledge that understanding memories of fiction through theories and measures traditionally reserved for autobiographical memories is indeed *quirky*, our work suggests that people remember events from fiction regularly, vividly, and for many of the same reasons they recall memories of lived experiences. We view experiencing narrative fiction as mental simulations of events, integrated with our knowledge of the world.

It is not surprising that our data suggest that memories of events from works of fiction are not typically more functionally useful or vivid than memories of lived experience. However, what is interesting is that this pattern is not a strict rule. In one study, we asked participants to describe one directly experienced and one fictional event that they had thought or talked about often. They also provided ratings of how significant the event was to them in their own life, operationalized as the Centrality of Event scale (Berntsen & Rubin, 2006). When we compared these two events for each participant, we found that 13 percent of participants rated their frequently rehearsed fictional event as more significant than their frequently rehearsed personal event. This suggests that while the distributions for memories of fiction on characteristics such as reliving, usefulness in everyday life, and significance are on average lower than those of lived experiences, the two categories ~~non-trivially~~ overlap. In other words, it is quite possible that a formative work of fiction is more vivid and significant to a given individual than a quotidian experience from one's life.

We would like to leave the reader with a claim and a question (paired with two of many possible answers). For the claim, we argue that *some memories of fictional events can be meaningfully considered part of the autobiographical record*. Rubin has argued that understanding memory in terms of key dimensions (Rubin, in preparation) can reveal hitherto unstudied aspects of memory; Figure 3.1 demonstrates that this approach can be fruitful by helping us understand where *memories of fiction* fit into existing research on memory and simulation. We see that memories of fictional events demonstrate similar functionality and phenomenology in our data, and also exert downstream effects on judgments and behavior (Shanahan & Morgan, 1999; Green, Strange, & Brock, 2003; Marsh, Meade, & Roediger, 2003; Bandura, 2006; Marsh & Mullet, 2016).

Studying memories of fiction as fundamentally similar to event memories of lived experience provides us with theoretical and explanatory power. However, drawing these similarities allows us to pursue a second stage of investigating memories of fiction—which brings us to the question we wish to leave with the reader: *how do memories of lived experience and fiction differ, and what are the consequences of these differences?* This question is, excitingly, unexplored territory. It is beyond the scope of this chapter to speculate on the many possible answers to this question, so we leave the reader with two examples of interesting differences worthy of further research: access to what others are thinking and the nested structure of *memories of fiction*.

First, some works of fiction provide veridical access to the mental states of other people. A first-person narrative invites us into the narrator's mind; in an omniscient style, we move between the mental lives of multiple characters in a way that is not possible in our actual experiences. One possible consequence of having access to mental states is that reading works of fiction may be a "bootcamp" for improving social cognition, more so than experience in the real world. Some have argued that practice following others' minds is the true evolutionary function of fiction (Mar & Oatley, 2008; Oatley, 1999), and that reading literary fiction improves social cognition (Kidd & Castano, 2013).'

Second, another distinct quality of *memories of fiction* is that such memories are often intrinsically nested: the consumption of fictional events is always part of the fabric of one's personal experience. For example, one may remember the personal event of seeing the film *Titanic* in theaters (e.g., in the front row, neck craning upwards, with one's partner) as well as fictional events within the film (e.g., Rose and Jack dancing below deck). Each of these events contains distinct information about spatial layout (the movie theater; the ship), emotional intensity (frustration at not getting to the theater early enough; joy for the protagonists), sensory vivacity, etc. Moreover, one may sometimes recall the personal context of a fictional memory without remembering the fictional contents (e.g., recollecting a trip to the

movie theater last Thanksgiving but not remembering anything about the movie seen), or vice versa (e.g., recollecting the events of *Harry Potter* without knowing when and where you read it). Of course, this embedded structure is not unique to just memories of fiction, but memories of fiction may be particularly rich grounds for investigating the nature of such laminated event memories. Very little empirical work has examined memory for such contexts (see Long and Spooner, 2010 for one of the few experimental investigations) outside of the related but separate question of reality-monitoring (separating imagined or otherwise internally generated memories from those of events that were actually experienced; Johnson, 1988), and there remains many avenues for continued investigation.

Overall, our work on *memories of fiction* continues the functional tradition of studying memory systems (Baddeley, 1988; Neisser, 2000; Pillemer, 2009). While it may be surprising at first to consider memories of works of fiction as kin to traditional autobiographical remembering, the functional approach eschews a focus on accuracy ("Did it really happen this way?") in favor of exploring ecological function ("What is this for?"). Using this lens, all event memories—whether they originated in sensory experience or imagination or a combination thereof—are flexible acts of construction and reconstruction. We welcome *memories of fiction* to the fold to join other exemplars of event remembering with functional significance and phenomenological vividness, and point to richly promising questions in this arena.

References

Appel, M., & Malečkar, B. (2012). The influence of paratext on narrative persuasion: Fact, fiction, or fake? *Human Communication Research*, *38*(4), 459–484. https://doi.org/10.1111/j.1468-2958.2012.01432.x

Asp, E., Manzel, K., Koestner, B., Cole, C., Denburg, N. L., & Tranel, D. (2012). A neuropsychological test of belief and doubt: damage to ventromedial prefrontal cortex increases credulity for misleading advertising. *Decision Neuroscience*, *6*, 100. https://doi.org/10.3389/fnins.2012.00100

Baddeley, A. (1988). But what the hell is it for? In M.M. Gruneberg, P.E. Morris, & R.N. Sykes (Eds.), *Practical Aspects of Memory: Current Research and Issues* (pp. 1–18). Chichester, UK: John Wiley & Sons.

Baddeley, A. (2009). What's it for? Why ask? *Applied Cognitive Psychology*, *23*(8), 1045–1049. https://doi.org/10.1002/acp.1608

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, *1*(2), 164–180. https://doi.org/10.1111/j.1745-6916.2006.00011.x

Bartlett, F.C. (1932). *Remembering: A Study in Experimental and Social Psychology*. Cambridge: Cambridge University Press.

Berntsen, D., & Rubin, D.C. (2006). The centrality of event scale: A measure of integrating a trauma into one's identity and its relation to post-traumatic stress disorder symptoms. *Behaviour Research and Therapy*, *44*(2), 219–231. https://doi.org/10.1016/j.brat.2005.01.009

Bluck, S. (2003). Autobiographical memory: Exploring its functions in everyday life. *Memory*, *11*(2), 113–123. https://doi.org/10.1080/741938206

Bluck, S., & Alea, N. (2011). Crafting the TALE: Construction of a measure to assess the functions of autobiographical remembering. *Memory*, *19*(5), 470–486. https://doi.org/10.1080/09658211.2011.590500

Bluck, S., Alea, N., Habermas, T., & Rubin, D. C. (2005). A tale of three functions: The self-reported uses of autobiographical memory. *Social Cognition*, *23*(1), 91.

Bohannon III, J. N. (1988). Flashbulb memories for the Space Shuttle disaster: A tale of two theories. *Cognition*, *29*, 179–196.

Brown, A. S., Croft Caderao, K., Fields, L. M., & Marsh, E. J. (2015). Borrowing Personal Memories. *Applied Cognitive Psychology*, *29*(3), 471–477. https://doi.org/10.1002/acp.3130

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

Busselle, R., Ryabovolova, A., & Wilson, B. (2004). Ruining a good story: Cultivation, perceived realism and narrative. *Communications-Sankt Augustin Then Berlin*, *29*, 365–378.

Clancy, S. A., McNally, R. J., Schacter, D. L., Lenzenweger, M. F., & Pitman, R. K. (2002). Memory distortion in people reporting abduction by aliens. *Journal of Abnormal Psychology*, *111*(3), 455–461. https://doi.org/10.1037//0021-843X.111.3.455

Currie, G. (1990). *The Nature of Fiction*. Cambridge: Cambridge University Press.

Fivush, R., Berlin, L., McDermott Sales, J., Mennuti-Washburn, J., & Cassidy, J. (2003). Functions of parent-child reminiscing about emotionally negative events. *Memory*, *11*(2), 179–192. https://doi.org/10.1080/741938209

Fivush, R., & Waters, T.E.A. (2014). Sociocultural and functional approaches to autobiographical memory. In *The SAGE Handbook of Applied Memory* (pp. 221–238). London: SAGE Publications.

Gilbert, D.T. (1991). How mental systems believe. *American Psychologist*, *46*(2), 107–119.

Goldstein, T.R. (2009). The pleasure of unadulterated sadness: Experiencing sorrow in fiction, nonfiction, and "in person." *Psychology of Aesthetics, Creativity, and the Arts*, *3*(4), 232–237. https://doi.org/10.1037/a0015343

Gordon, R., Gerrig, R.J., & Franklin, N. (2009). Qualitative characteristics of memories for real, imagined, and media-based events. *Discourse Processes*, *46*(1), 70–91. https://doi.org/10.1080/01638530802629117

Green, M.C., & Brock, T.C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, *79*(5), 701–721. https://doi.org/10.1037/0022-3514.79.5.701

Green, M.C., Garst, J., Brock, T.C., & Chung, S. (2006). Fact versus fiction labeling: Persuasion parity despite heightened scrutiny of fact. *Media Psychology*, *8*(3), 267–285.

Green, M.C., Strange, J.J., & Brock, T.C. (2003). *Narrative Impact: Social and Cognitive Foundations*. Taylor & Francis.

Harley, K., & Reese, E. (1999). Origins of autobiographical memory. *Developmental Psychology*, *35*(5), 1338–1348. https://doi.org/10.1037//0012-1649.35.5.1338

Hartung, F., Withers, P., Hagoort, P., & Willems, R.M. (2017). When fiction is just as real as fact: No differences in reading behavior between stories believed to be based on true or fictional events. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.01618

Hyman, I.E., & Faries, J.M. (1992). The functions of autobiographical memory. In M.A. Conway, D.C. Rubin, H. Spinnler, & W.A. Wagenaar (Eds.), *Theoretical Perspectives on Autobiographical Memory* (pp. 207–221). Retrieved from http://link.springer.com/10.1007/978-94-015-7967-4_12

Johnson, M.K. (1988). Reality monitoring: An experimental phenomenological approach. *Journal of Experimental Psychology: General*, *117*(4), 390–394.

Johnson-Laird, P.N. (1983). *Mental Models: Towards a Cognitive Science of Language, Inference, and Consciousness*. Cambridge, MA: Harvard University Press.

Kidd, D.C., & Castano, E. (2013). Reading literary fiction improves theory of mind. *Science*, *342*(6156), 377–380. https://doi.org/10.1126/science.1239918

Kintsch, W., & Van Dijk, T.A. (1978). Toward a model of text comprehension and production. *Psychological Review*, *85*(5), 363.

Koppel, J., & Rubin, D. C. (2016). Recent advances in understanding the reminiscence bump the importance of cues in guiding recall from autobiographical memory. *Current Directions in Psychological Science*, *25*(2), 135–140.

LaMarre, H.L., & Landreville, K.D. (2009). When is fiction as good as fact? Comparing the influence of documentary and historical reenactment films on engagement, affect, issue interest, and learning. *Mass Communication and Society*, *12*(4), 537–555. https://doi.org/10.1080/15205430903237915

Lindsay, D.S., Hagen, L., Read, J.D., Wade, K.A., & Garry, M. (2004). True photographs and false memories. *Psychological Science*, *15*(3), 149–154. https://doi.org/10.1111/j.0956-7976.2004.01503002.x

Loftus, E.F., & Pickrell, J.E. (1995). The formation of false memories. *Psychiatric Annals*, *25*(12), 720–725.

Long, D.L., & Spooner, A. (2010). Placing a text in context. *Psychonomic Bulletin & Review*, *17*(2), 237–242. https://doi.org/10.3758/PBR.17.2.237

Mar, R.A., & Oatley, K. (2008). The function of fiction is the abstraction and simulation of social experience. *Perspectives on Psychological Science*, *3*, 173–192. https://doi.org/10.1111/j.1745-6924.2008.00073.x

Marsh, E.J., Butler, A.C., & Umanath, S. (2012). Using fictional sources in the classroom: Applications from cognitive psychology. *Educational Psychology Review*, *24*(3), 449–469.

Marsh, E.J., Meade, M.L., & Roediger, H.L.R. (2003). Learning facts from fiction. *Journal of Memory and Language*, *49*(4), 519–536. https://doi.org/10.1016/S0749-596X(03)00092-5

Marsh, E.J., & Mullet, H.G. (2016). Stories and movies can mislead: Why Biloxi (Mississippi) sometimes relocates to Tennessee after reading *The Great Gatsby*. In R.A. Nash and J. Ost (Eds.), *False and Distorted Memories*. London: Psychology Press.

Marsh, E.J., & Tversky, B. (2004). Spinning the stories of our lives. *Applied Cognitive Psychology*, *18*(5), 491–503. https://doi.org/10.1002/acp.1001

Marsh, E.J., Tversky, B., & Hutson, M. (2005). How eyewitnesses talk about events: implications for memory. *Applied Cognitive Psychology*, *19*(5), 531–544. https://doi.org/10.1002/acp.1095

Mazzoni, G., Scoboria, A., & Harvey, L. (2010). Nonbelieved memories. *Psychological Science*, *21*(9), 1334–1340. https://doi.org/10.1177/0956797610379865

McDaniel, M.A., Hines, R.J., Waddill, P.J., & Einstein, G.O. (1994). What makes folk tales unique: Content familiarity, causal structure, scripts, or superstructures? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *20*(1), 169.

Meade, M.L., & Roediger, H.L. (2002). Explorations in the social contagion of memory. *Memory & Cognition*, *30*(7), 995–1009. https://doi.org/10.3758/BF03194318

Mikkonen, K. (2006). Can fiction become fact? The fiction-to-fact transition in recent theories of fiction. *Style; DeKalb*, *40*(4), 291–313, 390, 392.

Neisser, U. (2000). Memory: What are the important questions? In I. Hyman and U. Neisser (Eds.), *Memory Observed: Remembering in Natural Contexts*. New York: Worth.

Oatley, K. (1999). Why fiction may be twice as true as fact: Fiction as cognitive and emotional simulation. *Review of General Psychology*, *3*, 101–117. https://doi.org/10.1111/j.1745-6924.2008.00073.x

Owens, J., Bower, G. H., & Black, J. B. (1979). The "soap opera" effect in story recall. *Memory & Cognition*, *7*(3), 185–191. https://doi.org/10.3758/BF03197537

Pillemer, D. (2003). Directive functions of autobiographical memory: The guiding power of the specific episode. *Memory*, *11*(2), 193–202. https://doi.org/10.1080/741938208

Pillemer, D.B. (2009). Twenty years after Baddeley (1988): Is the study of autobiographical memory fully functional? *Applied Cognitive Psychology*, *23*(8), 1193–1208. https://doi.org/10.1002/acp.1619

Pillemer, D.B., Steiner, K.L., Kuwabara, K.J., Thomsen, D.K., & Svob, C. (2015). Vicarious memories. *Consciousness and Cognition*, *36*, 233–245. https://doi.org/10.1016/j.concog.2015.06.010

Potter, W.J. (1986). Perceived reality and the cultivation hypothesis a cultivation symposium. *Journal of Broadcasting & Electronic Media*, *30*, 159–174.

Powers, K. (2019). "The moral clarity of 'Slaughterhouse-Five' at 50." *The New York Times*, March 6. www.nytimes.com/2019/03/06/books/review/kevin-powers-kurt-vonnegut-slaughterhouse-five.html.

Raes, F., Hermans, D., de Decker, A., Eelen, P., & Williams, J.M.G. (2003). Autobiographical memory specificity and affect regulation: An experimental approach. *Emotion*, *3*(2), 201–206. https://doi.org/10.1037/1528-3542.3.2.201

Roediger, H.L., Meade, M.L., & Bergman, E.T. (2001). Social contagion of memory. *Psychonomic Bulletin & Review*, *8*(2), 365–371.

Ross, M. (1989). Relation of implicit theories to the construction of personal histories. *Psychological Review*, *96*(2), 341–357.

Rubin, D.C. (in preparation). A Dimensional Organization for Applied, Real-World, and Laboratory Memory.

Rubin, D.C. (1981). Norms for 34 properties of 125 words. *JSAS Catalog of Selected Documents in Psychology*, *11*.

Rubin, D.C. (1988). *Autobiographical Memory*. Cambridge: Cambridge University Press.

Rubin, D.C., Burt, C.D.B., & Fifield, S. J. (2003). Experimental manipulations of the phenomenology of memory. *Memory & Cognition*, *31*(6), 877–886. https://doi.org/10.3758/BF03196442

Rubin, D.C., & Kozin, M. (1984). Vivid memories. *Cognition*, *16*(1), 81–95.

Rubin, D.C., Schrauf, R.W., & Greenberg, D.L. (2003). Belief and recollection of autobiographical memories. *Memory & Cognition*, *31*(6), 887–901. https://doi.org/10.3758/BF03196443

Rubin, D.C., & Umanath, S. (2015). Event memory: A theory of memory for laboratory, autobiographical, and fictional events. *Psychological Review*, *122*(1), 1–23. https://doi.org/10.1037/a0037907

Schacter, D.L. (1999). The seven sins of memory: Insights from psychology and cognitive neuroscience. *American Psychologist*, *54*(3), 182–203. https://doi.org/10.1037//0003-066X.54.3.182

Schacter, D.L., & Addis, D.R. (2007). The cognitive neuroscience of constructive memory: remembering the past and imagining the future. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *362*(1481), 773–786. https://doi.org/10.1098/rstb.2007.2087

Schacter, D.L., Benoit, R.G., & Szpunar, K.K. (2017). Episodic future thinking: mechanisms and functions. *Current Opinion in Behavioral Sciences*, *17*, 41–50. https://doi.org/10.1016/j.cobeha.2017.06.002

Schacter, D.L., Guerin, S.A., & St. Jacques, P.L. (2011). Memory distortion: an adaptive perspective. *Trends in Cognitive Sciences*, *15*(10), 467–474. https://doi.org/10.1016/j.tics.2011.08.004

Schmidt, A., & Swaim, M. (2018). Kurt Vonneguys. In *Kurt Vonneguys*. Retrieved from https://soundcloud.com/kurtvonneguys

Scoboria, A., Boucher, C., & Mazzoni, G. (2015). Reasons for withdrawing belief in vivid autobiographical memories. *Memory*, *23*(4), 545–562. https://doi.org/10.1080/09658211.2014.910530

Scoboria, A., Jackson, D. L., Talarico, J., Hanczakowski, M., Wysman, L., & Mazzoni, G. (2014). The role of belief in occurrence within autobiographical memory. *Journal of Experimental Psychology: General*, *143*(3), 1242–1258. https://doi.org/10.1037/a0034110

Shanahan, J., & Morgan, M. (1999). *Television and its Viewers: Cultivation Theory and Research*. https://doi.org/10.1017/CBO9780511488924

Sheen, M., Kemp, S., & Rubin, D. (2001). Twins dispute memory ownership: A new false memory phenomenon. *Memory & Cognition*, *29*(6), 779–788. https://doi.org/10.3758/BF03196407

Speer, N.K., Reynolds, J.R., Swallow, K.M., & Zacks, J.M. (2009). Reading Stories Activates Neural Representations of Visual and Motor Experiences. *Psychological Science*, *20*(8), 989–999. https://doi.org/10.1111/j.1467-9280.2009.02397.x

Strange, J.J., & Leung, C.C. (1999). How anecdotal accounts in news and in fiction can influence judgments of a social problem's urgency, causes, and cures. *Personality and Social Psychology Bulletin*, *25*(4), 436–449.

Talarico, J.M., & Rubin, D.C. (2003). Confidence, not consistency, characterizes flashbulb memories. *Psychological Science*, *14*(5), 455–461. https://doi.org/10.1111/1467–9280.02453

Talarico, J.M., & Rubin, D.C. (2007). Flashbulb memories are special after all; in phenomenology, not accuracy. *Applied Cognitive Psychology*, *21*(5), 557–578. https://doi.org/10.1002/acp.1293

Vonnegut, K. (2009). *Slaughterhouse-Five, Or, The Children's Crusade: A Duty-dance with Death*. Dial Press. (Original work published 1969.)

Wade, K. A., Garry, M., Read, J. D., & Lindsay, D. S. (2002). A picture is worth a thousand lies: Using false photographs to create false childhood memories. *Psychonomic Bulletin & Review*, *9*(3), 597–603. https://doi.org/10.3758/BF03196318

Walker, W. R., Vogl, R. J., & Thompson, C. P. (1997). Autobiographical memory: unpleasantness fades faster than pleasantness over time. *Applied Cognitive Psychology*, *11*(5), 399–413. https://doi.org/10.1002/(SICI)1099-0720(199710)11:5<399::AID-ACP462>3.0.CO;2-E

Walton, K. L. (1990). *Mimesis as Make-believe: On the Foundations of the Representational Arts*. Cambridge, MA: Harvard University Press.

Waters, T. E. A., Bauer, P. J., & Fivush, R. (2014). Autobiographical memory functions served by multiple event types: Autobiographical memory functions. *Applied Cognitive Psychology*, *28*(2), 185–195. https://doi.org/10.1002/acp.2976

Wong, P. T., & Watt, L. M. (1991). What types of reminiscence are associated with successful aging? *Psychology and Aging*, *6*(2), 272–279. https://doi.org/10.1037/0882-7974.6.2.272

Yarkoni, T., Speer, N. K., & Zacks, J. M. (2008). Neural substrates of narrative comprehension and memory. *NeuroImage*, *41*(4), 1408–1425. https://doi.org/10.1016/j.neuroimage.2008.03.062

Zwaan, R. A. (1994). Effect of genre expectations on text comprehension. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *20*(4), 920.